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The role of information products and presentation in organisations

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Volume 2, Case studies

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Introduction

This volume presents the final reports on the case studies in the ten organisations whose practice in the areas of the research was investigated (including the detailed report on the second-stage project in Norwich Union, which involved an application of the IVMTM methodology).

The structure of the case study reports

Allowing for essential differences in the nature of the organisations, the presentation of the reports follows a generally similar pattern, designed to put the reader in possession of the essential facts and to allow comparison among the different organisations:

- An outline of the organisation's background
- Its objectives, strategies, mission, vision - or whatever else it uses to define itself and what it seeks to do
- Its structure and culture
- Its information products (including its electronic products in the form of web sites and intranets)
- Costs and budgets for information products (so far as ascertainable - the range is from a complete set of figures to an indication of magnitude)
- How decisions on information products are made
- The organisation's information resources and how and to what extent it draws on them to create information products
- The people responsible for information products, and how the organisation provides for such specialist skills as writing, editing and design
- The approach to visual presentation
- The technologies used in creating information products
- How the organisation tests, monitors and evaluates its information products, including any attempts to establish cost-effectiveness.

Each case study concludes with a section titled 'Evaluation' in which I make my own analysis of the situation as described, identifying positive features and those where there is reason to consider there are unresolved problems, opportunities not yet taken, etc.

The format of the reports is in fact very similar to that which I would write for the client at the conclusion of a consultancy assignment – and indeed it was part of the agreement with the organisations at the start of each study that such a 'report to management' would be presented, as a *quid pro quo* in exchange for access and time provided by the organisation. Again, as I would do in a consultancy assignment, I presented interim drafts to allow the 'client' to check for errors of fact, omissions and misinterpretations, while safeguarding my right to comment in the light of my own understanding, even if the organisation, or some of the people interviewed in it, disagreed with the comments. In practice, organisations were ready to devote a great deal of care to ensuring factual accuracy, and (apart from the disaster case study described in Chapter 12, which had to be abandoned at a fairly early stage because of irreconcilable differences over my freedom in the matter of evaluation) on only one occasion did an individual indicate some disagreement with a comment in an evaluation.

Influence of the researcher's background – advantages and dangers

The fact that parts of my career experience and background are similar to those of many of the people interviewed in case-study organisations, put me in a situation that has both advantages and dangers. It also meant that I could not maintain the role of a neutral asker of set questions, even had I thought it desirable; the interviews during the case studies have been exchanges of views and experience as between colleagues, motivated on my side by what Buchanan et al. describe as a 'sincere curiosity about the lives and experiences of others'.

Experience of doing a similar job to the person being interviewed was advantageous in establishing an easy footing of professional understanding, in getting quickly to essentials, and in 'speaking the same language'.

The dangers lay in the fact that experience conditioned the kind of questions I asked; that in turn could lead to assuming that I fully understood the answers, instead of asking the naive questions I would ask as an outsider, which might reveal something different from my expectations (the only instance where I can ask outsider questions is

when talking with IT/IS professionals). Again, the fact that I started with some assumptions and tacit 'theories' based on experience (as described in Chapter 4), put me in danger of trying to fit facts to preconceptions, or making premature judgements. An example is my initial assumption, born of that part of my career which has been spent in promoting ideas about information management, that having an information management function, managed by information professionals, is a necessary condition for organisations being able to make successful use of information, including using it in their information products. That one turned out not to be true in the light of what I found in some of the case study organisations.

I have tried in various ways to avoid the dangers of imposing interpretations that do not match the facts:

- 1 The 'theory' of the role of information products and presentation was not developed until the case studies were nearly completed. It was then used in looking at the findings from the case studies, *after* sorting out what they actually are – as described in the introduction to Part 3, this was a process of comparison which tests both the theory and the actuality.
- 2 In writing the case studies, as explained above, I submitted successive drafts to very patient and tolerant people in the organisations, so that everyone involved could check the parts to which they had contributed for factual accuracy, and judge whether my interpretations were a fair account of actuality as they knew it. In my own concluding evaluations, I used in an informal way the propositions set out in Chapter 4, together with criteria relating specifically to the information products themselves. These, like the 'theory', have grown over the years from experience, reading, and discussion with interested professionals from various disciplines, and have finally been fairly coherently formulated as shown in the checklist below.

Information products – an evaluation checklist

- 1 The role of the product:
 - What is the purpose of this product in relation to the organisation's objectives?
 - How are its readers meant to use it?
- 2 How it fulfils its role:
 - Does it tell the readers what they need to know in order to use it as intended?

- Does it give them:
The right amount of detail?
Too much?
Too little?

- Does it present information in a sequence which:
Makes it accessible?
Facilitates understanding?
Helps readers to act as intended?

- Does the presentation match the experience and expectations of readers in respect of:
Vocabulary?
Sentence structure?
Numerical data?
Graphics?

- Does the typography support the ways in which readers need to use the product, in respect of:
Legibility/readability?
Use of spacing as an aid to comprehension?
Choice of format?
Measure?
Choice of typeface?
Consistency of treatment of information elements?
Making the structure of the product clear?
Guiding readers through the sequence in which information is presented?

- Does the method of reproduction meet the purposes of the product and the needs of the readers?

- Are the materials appropriate for the purposes of the product and the needs of the readers?

Reference

Buchanan, D, Boddy, D, McCalman, J (1988)
 'Getting in, getting on, getting out, and getting back'
 In A Bryman (ed) *Doing research in organizations*
 London: Routledge

Case Study 1

ActionAid

Background

ActionAid was founded in 1972 in the UK, with the aim of helping children in the world's poorest countries through a programme of building sponsorship links between individual children and families in the UK. Today it works in more than 30 countries with over 5m of the world's poorest people in Asia, Africa and Latin America (there are also ActionAid funding-partner organisations in Ireland, France and Spain, and a branch in Italy. It now has over 120,000 supporters and is the UK's third largest development agency, with approximately 2500 employees throughout the world. They seek to give direct support to the communities in which they work; they are described as 'giving credibility to the organisation's power to communicate, to give a voice to the poor to influence governments.' The communication of information is seen as an essential part of the task of its field workers, both in feeding information to and receiving it from their central organisation, and in interchanging it with one another; and in its external relations the organisation as a whole depends critically on presenting information, by means of information products of various kinds, to those whose support it seeks, from individuals and schools to national governments and international bodies.

Vision, mission and organisational values

ActionAid currently (1999) defines its vision in these terms:

'ActionAid's vision is a world without poverty in which every person can exercise their right to a life of dignity.'

and its mission as to:

'work with poor and marginalised people to eradicate poverty by overcoming the injustice and inequity that cause it.'

The organisational values to which it is committed are:

Mutual respect, recognising the innate dignity and worth of all people and the value of diversity

Equity and justice, requiring us to work to ensure that everyone – irrespective of sex, age, race, colour, class and religion – has equal opportunity for expressing and utilising their potential

Honesty and transparency, requiring us to be accountable for the effectiveness of our actions and open in our judgements and communications with others.

Solidarity with poor and marginalised people, so that our only bias will be a commitment to the interests of the poor and powerless.

Courage of conviction, requiring us to be creative and radical, without fear of failure, in pursuit of the highest possible impact on the causes of poverty.

Humility, recognising that we are a part of a bigger alliance against poverty and requiring our presentation and behaviour to be modest.

Goals and objectives

The goals which ActionAid sets itself, all dependent on information for their achievement, are:

- Empowering the poor to secure basic needs and basic rights
- Promoting basic rights
- Responding to emergencies and complex conflict
- Building alliances in civil society
- Linking North and South to fight the injustice of poverty wherever its causes can be most effectively attacked
- Promoting pro-poor approaches to development co-operation – targeting donor governments to promote consistent pro-poor and rights-based agenda in policies affecting poor countries
- Reform of such multilateral institutions as WTO, World Bank, IMF and the EU in favour of the poorest (eg ending support for narrow cost-recovery mechanisms and target-led investments; debt-relief mechanisms for all indebted countries)
- Developing ability to influence large private corporations (a new area for ActionAid, in which it seeks to gain experience through working with a few firms)
- Addressing the root causes of gender inequity, expressed in the increasing malnutrition of women and girls, and the decline in women's access to farmland, water, firewood, grazing ground which have resulted from cost-sharing policies to meet donors' requirements for reduced social spending

- Working with women and men to find mutually empowering solutions to gender imbalance – seeking to build on local realities of gender interdependence, helping women to build confidence and skills, and use them to gain wider influence

The organisational objectives and strategies to support the achievement of the goals are to:

- Develop the existing culture of openness, self-criticism, boldness, flexibility, ability to change; build a supportive rather than directive culture, with willingness to learn together and from others
- Develop internal and external communications strategy for agreed identity and profile
- Strengthening devolution and decentralisation; core minimum organisational standards; further regional devolvement and accountability; investment in systems (especially IT) to encourage lateral communication and spread of information
- Maintain sponsorship financing and develop new methods of funding
- Develop systems and skills to ensure that ActionAid staff work as effectively across departmental and programme boundaries, and with external stakeholders and partners, as with colleagues in their own departments. Cross-functional team working, matrix management
- Develop an institutional framework for gender within ActionAid.

The development of corporate strategy

At the time when this case study was initiated (in mid-1994) the organisation was in the process of developing a new corporate strategy. The immediate context was provided by an outline of the Chief Executive's vision for the decade, produced in 1992 (*Moving forward in the nineties*). Features of that vision included: 'a commitment to enquiry and learning, both from donors and from beneficiaries', recognition of the need to communicate knowledge and understanding as well as to mobilise and use resources', a collaborative approach to other organisations, and pragmatic decision-making about the means of delivering both resources and messages.

Over the period of the study, ActionAid's strategy has changed and developed in response to change in the outside world with which it deals in its work. It has moved towards the premise that poverty is not inevitable but is 'fundamentally a result of choices made over time about how to organise societies'. This leads to the

understanding that poverty cannot be overcome in a sustainable way by addressing only its visible symptoms; for that, poverty must be addressed in terms of its causes, which lie in such forces as the institutions of states, the market,¹ and society, which operate in various ways in different places to maintain and exacerbate inequality and injustice.

Communication as part of the strategy

As part of its first corporate strategy, in 1995, ActionAid defined its communications aims as to:

- Improve communications abilities in programmes, publish global communications materials about field experience to help staff to share and learn.
- media campaigns on policy and research and influencing work; develop materials for use by supporters in reinforcing the influencing agenda.
- Demonstrate the 'human side' of its work, by publishing stories from its experience.
- Ensure that all communications materials and activities reinforce fundraising priorities and have consistency in message and quality, complying with best practice and corporate standards.
- Build global staff understanding and commitment through effective communications mechanisms, including internal publications.
- Use video effectively for internal and external communications.
- Maintain corporate standards in communications materials throughout the organisation.
- Develop regular and appropriate measurements of the effectiveness of main communications activities.

These aims were amplified in 1999 by strategies drawn up for internal communications and international publicity (*International Media and Publicity Strategic Plan 1997–2000* (1997), *Communications 2000* (1998), *Internal Communications Strategy* (1999 –

¹ The corporate strategy for the period 1999–2003 (*Fighting poverty together, ActionAid's strategy 1999–2003*, May 1999) says straightforwardly that 'The slender asset base of poor and marginalised people makes them particularly vulnerable to the vicissitudes of world markets. And the domination of poor countries by rich countries and private corporations massively reduces their ability to pursue policies that favour the poor.'

based on research on internal communications carried out in 1997; work was being done simultaneously on *Communications 2000* and the internal communications strategy). All these strategies imply even more strongly a key role for the use of information in their achievement, and require, explicitly or implicitly, information products directed both to the outside world and to the organisation itself.

Communications 2000 (drawn up by a group of staff from six countries where ActionAid works) answered the question 'Why should we pay attention to communication?' in two ways:

- To provide information required by others so that they may do their jobs more efficiently
- To share information that adds to the organisation's learning on how to achieve its mission most effectively.

Its analysis of the situation showed weaknesses in relation to:

- Lateral communications within regions and between programmes in different regions
- Lack of corporate information and direction from the centre
- The fact that channels of communication were paper-based.

It proposed three projects to improve matters:

- 1 *Agenda* (the existing staff magazine), should be further developed with an international editorial panel
- 2 A new product –*Bulletin* – for management material, which could be used for team briefing – to be introduced in 1999, in both printed and electronic form (on the organisational intranet)
- 3 A learning-based magazine, with intranet application, to be developed for launching at the start of 2000.

Staff communications skills and access to communications were shown to vary greatly from country to country; existing standards were rarely used; and there was no measure of how open and honest communications were. Proposals for improvement included developing core communications standards and applying them throughout the organisation, identifying core communications skills, and providing training in them.

Communications 2000 also drew attention to three information resources whose management has critical communications implications: the history of ActionAid, its organisational experience, and its decision-making. So far as the first is concerned, two appointments to manage the charity's archives were made to the Resource Centre.

The UK *Internal Communications Strategy* (February 1999) proposes as objectives that all staff should:

- Identify with and feel they belong to the organisation
- Understand the objectives of other departments and how they fit with their own
- Be clear about their own departmental, team, and individual objectives
- Use the methods of communication most appropriate to the audience and the messages.

All staff should have access to a full range of tools and to systems which are able to cope with change. The language used in documents should be simple, and the use of jargon appropriate. Lengthy documents should have a brief summary of the key messages. Open two-way communication (face-to-face wherever possible) should be actively used, with electronic tools to promote speed and efficiency and cut down the amount of paper produced.

An appendix to the strategy sets out methods for carrying out communication activities, who does what, and standards for information products and tools. These include the intranet, where the responsibilities are shared between

- The IT Department and Website Editor
- Departmental representatives (providing information to Website Editor)
- UK Internal communications for overall management of the system.

The content of the intranet is described as 'manuals, standard documentation, departmental updates and information relevant to other departments'. It appears that as yet there is no-one with responsibility for information-management decisions on the structure of intranet, eg to facilitate finding information.

Other Appendices set out 'Six things to consider when communicating to staff':

- 1 What do I want the communication to achieve?
- 2 What is the main message that I want to get across?
- 3 What/how does the target audience understand/feel about this topic at the moment?

- 4 What methods of communication will best deliver the message?
- 5 What are the key dates for actions?
- 6 Who will be doing what?
and define archives policy for ActionAid UK

The *International Media and Publicity Strategic Plan* has as its objectives:

- Develop a more explicit supporter communications strategies and products for different audiences
- Promote existing and new marketing products and appeals through mass media; style and messages of new products to be consistent with image and promotion strategies
- Enable other divisions to communicate effectively with audiences through providing high-quality services
- Generate human interest stories and features; develop in collaboration with IT division efficient electronic storage and retrieval systems
- Provide channels of mass staff communication, develop communications skills and standards
- Develop core communications standards for all constituent parts of ActionAid.

Meeting these objectives is the responsibility of the International Marketing and Publicity Division, whose role in the organisation is described below.

Organisational structure and culture

There have been many changes in the organisational structure of ActionAid over its 25 years of existence, which have reflected changes in the external and internal context of its work, and particularly the role of advocacy within it. Among the most important changes was the spreading of decision making to the regional level in countries in Africa and Asia where ActionAid works, so that it is exercised in multiple centres – a change with implications for information products among other things.

Up to 1992, the charity had no department of communications or of information; in a period of organisational change before that time, these responsibilities had been handled in the Fund Raising and Public Policy Departments. It is reported that under this dispensation, some very effective work was being done for discrete audiences, such as politicians, the media and schools, but that certain essentials were not provided for.

- 1 There was nothing at the 'corporate core' to form the basis for a communication policy.
- 2 A core briefing about the organisation was lacking.
- 3 No manager or department had functional responsibility for internal communications.

Some of the changes in progress when the present study began aimed to address these structural issues: a new department – International Marketing and Publicity (IMAP) – was set up early in 1994; its responsibilities today include external communications, campaigns, development education, press and public relations, maintenance of the corporate identity, and editorial and creative services for the UK market. It produces fact sheets and the supporter's magazine, and runs the ActionAid web site. It also offers consultancy to country programmes, which are taking more decisions and becoming more sophisticated in this area.

Information management has had varying fortunes in the organisation; a Resource Centre which existed in the 1970s was later disbanded, in a period when it appears there was not much commitment to information in the organisation. Re-established in 1992 as part of the International Division, its functions were then to:

- 1 Provide support for country programmes, for the interchange of information within ActionAid, and for awareness by ActionAid of other relevant agencies.
- 2 Act as a central information unit for UK staff, holding in-house and externally originating material.

By the end of the case-study period, the Centre had become a separate department within the Policy Division a change made during a restructuring of the Division, with the aim of ensuring that the Centre should be seen as an all-agency resource rather than one solely for the Policy Division.

Organisational culture

ActionAid is unusual among organisations in defining the culture it seeks to achieve in its work, which it expresses as being one of 'openness, self-criticism, boldness and flexibility', combined with the ability to change. The 1999 corporate strategy adds to this the need for an 'empowering' organisational culture, in which staff 'work creatively with and learn from colleagues, partners and other organisations'.

Change in organisational culture can be difficult to achieve in voluntary organisations, and in this particular case, it was perceived at the start of the study that the International Marketing and Publicity department had not been in existence for long enough 'to get an internal change in communications'.

To help promote cultural change, 'value workshops' to which all staff have access have been run since 1996. They deal with how the values have been arrived at, why they are needed, their impact on day to day work, and action planning to ensure that they are applied in work.

Information products

The ActionAid policies described above mean that decisions about many information products are taken in countries and regions in the light of local requirements. It is not possible in the context of the present research to look at the whole range of such products; the focus here must be on how ActionAid in the UK manages the information products directed to its outside world, and on internal products for it is responsible, including those which have a bearing on the factors which influence information products.

First, some initiatives need to be described, because they are relevant in various ways to how information products are managed.

In 1994, shortly before the start of the case study, an 'audit' of the whole range of information products created by all departments of ActionAid was carried out by an information working group, whose overall remit was to:

- Identify constraints in producing and disseminating information within ActionAid
- Identify gaps or surplus in information production and dissemination
- Recommend changes in the light of the findings
- Recommend a system of 'organising principles' for information management.

One of the outputs was a matrix of the whole range of products with brief details for each of the audience, the people responsible for the product, and comments on associated problems. The problems identified included the need for human interest material in many products and the ad hoc way in which it was acquired and used; the lack of a regular system for getting information on the policy and operational environment; the failure to assign 'ownership' and responsibility for specific kinds of information; and the need for standards and quality control. (It was illuminating to

learn that by the end of the case study the report of the working group could no longer be found; an instance which certainly reinforces the recommendation in the communications strategy for an archive and records of organisational decisions.)

In 1995, a cross-divisional Programme Information Group was set up, essentially to address some of the problems identified by the working group. Its terms of reference were to provide a forum where issues and problems of access to and provision of programme information could be identified, discussed and resolved, in order to make the use of such information more effective.

The Group created a guide which identified departments and contacts holding programme information.

A year later the Resource Centre carried out a survey, on the lines of an information audit, which addressed another aspect of the issues; this aimed to establish information needs across the agency, to create a profile of information use, identify gaps, and make suggestions and plans to improve and facilitate dissemination and flow of information round the organisation.

And finally, part of the development of the communications strategy was an audit by Marketing Department, designed to provide a basis for measuring the effects of change.

We turn now to look at the main external and internal information products.

Products for external readership

Common Cause

Two issues per year) a magazine for supporters, also used for internal communication. A4 format, news items, short articles; recent introductions include readers' letters and 'Fact or fiction' examination of common perceptions of third world poverty. Three-column grid, flexibly used to allow either three equal columns or one wide and two narrow. Justified setting for more formal features; news items unjustified. Strong use of colour and high quality half-tones.

Journalists' Bulletin

A product which highlights key issues; produced by the Editorial department and the Press Office. Information for it comes from people actually on the spot in the countries concerned, and is handled by the Emergency Unit which deals with critical issues. Daily meetings on urgent issues are held between the Editorial department, the Press

Office and the Emergency Unit, and all issues of the *Bulletin* have to be signed off by the operations manager in the Emergency Unit. A4 four-page folder, four-column grid.

Keeping good company

Sponsored by Barclay's bank, this product is a corporate document for businesses, designed to introduce ActionAid to them and to other major donors. It features companies which support ActionAid through project sponsorship, joint promotions, etc.

ActionAid week schools pack

Brochure and collecting box for children, with activities associated with ActionAid week.

Introductory leaflet

A4 gate-folder leaflet, with minimal text, and half-tones. Third leaf is FREEPOST card for potential supporters.

Fund-raising project leaflets

These deal with priority projects, and are based on material supplied from the countries concerned.

Research. Briefing papers for external audiences, for example for conferences such as the Social Summit, Bretton Woods. Mainly produced by the Northern Affairs Unit, the form of presentation depends on the budget and ranges from high-quality production (sometimes supported to external funding) to photocopying. Some examples are described below.

Listening to smaller voices

A report of research into the roles of children in developing countries and the work that they undertake at the household level, funded by the Overseas Development Agency. The major study was carried out in Nepal, and the findings indicated, among other things, that environmental degradation has compounded economic stress within households with resultant increased pressure on children, that the specific needs of children within a household are not usually understood or acknowledged, that poverty can exist within wealthier households for some of their

members, that girls do the hardest work and have the least say and least access to education, and that development work may 'inadvertently increase the poverty gap'.

A4, two-column grid, two-colour. Strong use of diagrams, line drawings, half-tones, 'maps' and tables; chapter 'icons' based on children's drawings.

The Reality of Aid

An annual review produced by ActionAid on behalf of non-governmental organisations, ICVA (the International Council of Voluntary Agencies) and EUROSTEP (an association of NGOs from 15 European countries, working for justice and equal opportunities for people North and South). It contains reports from NGOs on how aid from OECD donor countries is spent, and presents summaries of key facts and figures.

A4, four-column grid (left-hand column used for author details, notes, etc); numerical and text tables, graphics.

REFLECT Mother Manual (1996) and *Literacy in circles?* ActionAid working Paper No.2, Fiedrich, M (1996)

ActionAid has supported a great deal of work on literacy, based on the REFLECT Method² which involves members of literacy groups in creating the materials from which they learn. The *Manual* presented guidelines for adapting the method in different settings, and by 1997 REFLECT was in use in 25 countries. ActionAid itself carried out action research in three of the countries, which indicated that REFLECT groups achieved greater success than control groups using traditional methods; they also showed greater self-realisation, confidence, understanding and readiness to take action.

Fiedrich's paper is a follow-up which analyses the risks of distortion around issues of participation and empowerment and the power relations which affect the commitment of implementing agencies to handing over the agenda for change to poor communities. He analysed the ActionAid research in Uganda in the year after the original project. While finding that half the participants in the second year of learning were reading and writing in everyday life, he questions the broader context. He

² REFLECT stands for Regenerated Freirean Literacy through Empowering Community Techniques; the theoretical framework was developed by the Brazilian Freir, and a practical methodology, based on Participatory Rural Appraisal was added.

advocates asking what use of literacy learners want to make but cannot achieve without institutional support, and asks if literacy of itself can really empower. He attributes the unease of ActionAid when facing local power dynamics to 'A romantic but naive perception of rural society', poses the question of whether exploitation or 'social exclusion' is the main cause of poverty, and concludes that the REFLECT programme 'replicates dominant ideology.' These comments point to the core of ActionAid's values, while the fact that ActionAid itself published a report of this kind exemplifies its commitment to subjecting its activities to internal and external critical appraisal.

ActionAid won three awards for information products in 1996: it received the *TIMES Educational Supplement* Mixed Media Primary award for its education series *Village Life in India* (materials include a CD-ROM, pupil's and teacher's books and poster pack); took first place in the 1995/6 Charity Annual Report and Accounts Awards organised by the Charities Aid Foundation (UK) for its annual report, which was praised for its openness, clarity and visual appeal; and won the Popular Communications Corporate Publishing Staff Newsletter of the Year award for *Interaction* (see below).

Internal products

Agenda

International staff magazine, three issues a year, edited by an international editorial board. News of ActionAid programmes and developments in the organisation, with a strong emphasis on contributions by and about staff members.

A4 format, 3-column, 16 pages, with good use of the single colour, high-quality halftones, and strong typography.

InterAction

The newsletter for the UK staff of the charity, *InterAction* contains both organisational information and programme news. It aims to be self-critical but objective, and to combine openness with honesty.

A4, four-page folder; a visual partner *Agenda*; one colour; modest means, but typographically strong. Sophisticated compared with similar products from other case study organisations.

Education Action

A bi-lingual (English and Spanish) internal magazine originating from the Research department in Policy and Resources Division, with contributions from most countries. Started in 1994, it aims to provide a forum for 'exchange of experiences between field practitioners in the education sector'. Issues have so far been devoted to topics including adult literacy programmes, and the Monitoring and Evaluation process. The magazine is used as the basis for lunch-time talks for staff, which include such activities as role play.

A4 format, 3-column, black and white half tone illustrations, visually quite densely packed to accommodate a lot of content.

Current Awareness Bulletin

Produced quarterly by the Resource Centre, listing all material received by the Centre, and all ActionAid publications.

Products on policies and procedures

In ActionAid, information products which are intended to inform staff about procedures, existing policies, and proposed policies occupy an unusually important place; their significance is proportional to the complexity of the changing external world with which the charity deals, to the importance of all its staff understanding and applying its policies, and to the emphasis which is placed on openness in communication. So it is necessary here to look at some of the key documents.

Its *Policies and Procedures Manual* is a very substantial document. A critical section of it is the 34 pages devoted to the ActionAid Planning and Reporting System (APRS), which was introduced in 1989 and has undergone a number of revisions; the current version aims at a corporate system applicable to every part of the agency rather than upward accountability of country programmes. The objectives are:

- Appraisal and approval – of all major new initiatives; to ensure consistency with and contribution to corporate strategy
- Strategic planning – all strategic documents include a three-year plan which is reviewed annually and forms the basis for the Annual Plan and budget for each part of the agency
- Reporting and monitoring – all parts of the agency produce an annual report
- Evaluation, review and impact assessment – periodic reviews by either outside consultants or staff from other parts of the agency, using specific indicators and

judgements of different stakeholders, and identifying total expenditure and quantitative and qualitative benefits.

In meeting the requirements of the system, annually approximately 120 reports of 10–15,000 words are produced by staff in country programmes, with the aim of accountability and providing a measure of the impact on poverty of ActionAid's work. They are mainly addressed to corporate directors and trustees, who are required to approve some of them, to note others, and give feedback on some; copies also go for 'information' to the UK Resource Centre.

The reports produced should constitute a sound basis for monitoring and evaluation, learning, and information interchange as the basis for effective action; they are also potentially an information resource that could be used as a source for information products for various audiences – as well as being internal information products in their own right.

From the point of view of presentation, it has to be said that the document which is intended to inform and instruct staff about this critical aspect of ActionAid's work puts a number of obstacles in their way; the language is bureaucratic, syntax is turgid, and everything is put at great length; and the typography makes for difficult reading because the measure is much wider than the optimum.

An important recent internal product – the draft of the Corporate Strategy for 1999 – 2003 circulated to staff for comment – also presented some difficulties for the reader, in this case in the matter of essential pointers to the structure of the document. While a heading on the second page claimed to set out 'The structure of the strategy paper', the four sections listed there (Introduction, Foundation, Mission Related Strategy and Organisation Related Strategy) were in practice hard to find, because there were no headings which actually corresponded to any of these topics. The typographic coding of the heading hierarchy was also difficult to deduce. It may be said that these are too exacting standards to apply to a draft document, but it was one of great significance for the organisation; it was meant to be read and reflected on, and so its readers were entitled to maximum help in getting to grips with it. The final version, issued in May 1999, has dealt with most of these shortcomings, though the heading hierarchy is still hard to grasp, and the pagination convention of starting with 1 on the recto page is not observed. It is, however, a notably coherent, strongly argued and sensitively written text.

Electronic information products

ActionAid's web site and intranet were developed during the course of this study, the web site in 1996 and the intranet in 1999 (it started in test form in 1998 and went live to UK staff early in 1999). They are the joint responsibility of the head of International Marketing and Publicity and IT. Initially, the web site was hosted by One World Online, a member of ActionAid staff provided material and set its format; development of the pages was outsourced to consultants from One World Online. In 1998, a web site editor, who has good knowledge of ActionAid and is now developing technical skills, was appointed. Ultimately a global version of the intranet on CD will be available for remote distribution; it will include copies of all public web sites.

There is as yet no policy on web site content or definition of objectives, and no stakeholder management group. Moves are being made to integrate the web site with printed products; in future all print jobs will be integrated with online products, where this is appropriate. There will be editorial support in that the copy for print versions of products will be the basis of online versions. The view was strongly expressed at the close of this study that ActionAid needed to move towards having a global 'intranet/information manager' with responsibility for content, who would be guided by an international stakeholders group and 'liaise with designers and web page authors to ensure prioritisation and monitor progress.'

The appearance of the site at the time when this study concluded (April 1999) reflected this history, and suggested that it was probably in the process of transition to something more in line with the quality of ActionAid's printed products.

The main buttons on the web site at that time were: 'Getting involved'; 'Giving'; 'About ActionAid'; and 'LottoAid'. 'About ActionAid' was a fairly lengthy piece of scrolling copy, which was not too easy to read, because it was not designed for on-screen reading – a contrast with the charity's brief and well-designed print on paper products on the same theme.

A page with 'Latest news from ActionAid' had buttons for current news stories (which appeared to be media-oriented). Titles included: 'Labour Ministers demand policy change on Genetic Modification' (from the press office); 'Patents and food security' – the contents page of a publication from ActionAid's Northern Affairs Unit. The presence of some literals in the text suggested that proof reading had not been very thorough. In general, there was not much evidence of editorial policy, application of the communications strategies described above, or typographic judgement.

The recent comments from ActionAid quoted above indicate that positive developments are indeed being contemplated and that some changes are already in progress..

As noted earlier, the other people concerned in managing the intranet are the IT Department, the web site editor, departmental representatives who provide information, and UK Internal Communications for overall management.

Investment in information products

ActionAid's expenditure on information products comes under the head of 'Influencing, education and research' in its accounts. Expenditure on this area in 1997 was just under £3,000,000 out of a total expenditure for that year of £41,359,000 (the comparable figures for 1996 were £2,550,000 and £33,319,000). The allocation of finance for information products (editorial, design and print) forms part of the IMAP budget, along with UK campaigns, development education and press. The total IMAP budget for 1999 is approximately £900,000, which is predominantly spent on UK products.

Decisions on information products

Decisions on information products are taken by line management in the various departments; no department has any overall responsibility in this matter, and there is as yet no forum for stakeholders in different kinds of information and information products in the organisation. However a broad range of stakeholders take part in various working groups; and the communications strategy discussed earlier (see p12) recommends a group concerned with training and content.

Departments still take individual initiatives, and although ActionAid is working towards having all products 'signed off' by the people who act as 'guardians' of particular kinds of information on its behalf, and by key stakeholders, no policy on these lines is as yet established.

Decisions on the content of products for which Editorial and Publicity are responsible are the joint responsibility of the editorial staff involved and of the people who act as 'guardians' of the kinds of information concerned on behalf of ActionAid. The Journalists Bulletin, for example, is produced by the Editorial department and the Press Office, and signed off by the operations manager of the Emergency Unit; the introductory leaflet about ActionAid is written by the Information and Publicity Officer,

and signed off by a number of managers with a key interest in the content; *Interaction* has an editorial board with representatives from each division which at its meetings discusses the last issue and current projects to provide guidance for Editorial department, which is responsible for selecting and writing; and the supporters' magazine *Common Cause* now has an editorial board, representing all stakeholders.

Budgets for information products are prepared as part of the annual production of budget estimates by individual line management. Each proposal for information products has to be supported by a business case.

Information resources and information products

Information working group

In ActionAid, the fact that a working group (see p17) was formed to look at the production and dissemination of information products and to recommend on 'organising principles for information management' suggests an awareness of the potential connection between information resources and information products, and the basis of both in corporate goals.

Its recommendations included:

- Standards in communication, as an integral part both of corporate values and of specific functions or posts; job descriptions should recognise the communication responsibilities of job holders, and each department should acknowledge its communication obligations.
- 'Clarity about who is responsible for generating what information, and who is an authorised source for more sensitive information.' The 'ownership' of particular kinds of information should be shown in a proposed 'catalogue of information'.
- Joint planning of information products to avoid duplication.
- IT investment to support the work needs of the organisation.

While the report of this particular group has apparently sunk without trace, the connection between information resources and information products is certainly seen and pursued today, as indicated by the current communications strategies (see p12).

The Resource Centre

The Resource Centre was established because the organisation saw the need for access to past decisions, and the maintenance of continuity. Although its purpose was defined as to support the interchange of information within ActionAid, and to act as a central information unit for UK staff, it was not clear at the start of this study what information-management role was envisaged for it. For example the Editorial and Publicity department did not make much use of its resources, but instead relied primarily on first-hand material from the countries involved, held in its own set of files. On the other hand, the Resource Centre reported that its role in the context of corporate strategy had developed in step with the regionalisation of decision-making; it had become a source of advice for the setting up of similar centres in such countries as India, Kenya, Malawi and Uganda. It had also created a library database, and was encouraging its users to input material which they themselves created, as well as to use its services for output.

By the end of the study, as mentioned earlier the Centre had become a separate department within Policy Division. Before the change took place, its role was reviewed; a consultant interviewed a range of staff to establish what was wanted from a resource centre in terms of content, IT potential, information-management skills, resourcing, and regional role.

Its objectives are now to:

- 1 Develop systems for information management which facilitate the focused exchange of experience and best practice between programmes, departments and regions.
- 2 Provide a centralised information resource, contributing to the management of information for UK-based departments and staff.

The Centre now holds the Central UK Archive together with what are described as satellite collections of information. It aims to provide a smaller and more focused collection of external materials and a more comprehensive collection of internal ones. It is looking at how to present the information it holds in formats that meet the needs of ActionAid departments, and the holder of a recently created post of Programme Information Officer will be working on this question, which has a bearing on the use of information resources for information products.

It is also interesting to note that the current Resource Centre manager in 1996, at the request of her manager, put forward a proposal for an ActionAid information management strategy. The proposal defined the strategy in these terms:

'The information management strategy proposed for ActionAid identifies strategic aims for information management, and the principles which underpin them. These aims are linked to the long-term strategic themes of the Corporate Strategy, and define where information management adds value within each UK Division. The proposed strategy would help identify resource allocations and guide decisions within each Division. They would follow this strategy and develop (as appropriate) their own more detailed versions to operationalise the strategy within their own circumstances. An information management strategy flows from the basic principles underlying information management, which include quality standards and the values of the organisation. The strategy will define targets to be achieved within a specific time period. Progress will be measured against these targets on a regular basis.'

Problems identified by staff, which the strategy would address, included some of particular importance for information products: a lack of means for exchanging and communicating information between different parts of the organisation, and possible missed opportunities for proactive and reactive work.

As a footnote, which throws light on how useful initiatives can be lost from view in organisations, there was no follow-up to the proposal because the two corporate directors (of policy and human resources) to whom it was passed both moved on from ActionAid. However, it may surface again at a forthcoming seminar on knowledge management – and this too has lessons for those responsible for proposals that have apparently got lost in the works.

The people responsible for the products

ActionAid sees the people directly responsible for its information products as critical to the success of the products. It recruits some staff, such as designers, with relevant qualifications and experience, and provides appropriate training for others as part of job development. One comment made in discussing this question at an early stage was that the organisation's use of its own human resources in communication had been something of a neglected area; by the end of the study, while the communications strategy had addressed some of the issues, there was still a good way to go – for instance in measuring managers' communications against established standards. The

perceived lack of functional responsibility for internal communications has been addressed by expansion on both the in-house design and editorial sides.

Design

The organisation maintains an in-house design team consisting of three designers and a print buyer (first employed on a one-year contract in 1994; renewal of the contract depended on savings achieved; they were achieved, and in-house print buying continues). The in-house group designs most ActionAid products in the UK and some for certain regions; some direct marketing literature is created by agencies (one such item, the annual mail-order catalogue, which had previously been designed outside, was brought in-house in 1995). Towards the end of the study, the work of the design team was externally audited, and found to be highly cost-effective, as well as making a valuable contribution to achieving the organisation's aims.

Editorial

The Editorial and Publicity department was established in 1994 with three staff. Most writing and editing of external and internal products is done in-house, with occasional use of freelance writers (which is said to have mixed results). As explained above, in describing the range of ActionAid's information products, other people in the organisation, with 'guardian' or 'stakeholder' roles in relation to the types of information covered, are involved in many of the products, either in final authorisation of the content, or in pre-planning and post-evaluation. Where response forms are involved, as in the introductory leaflet about the organisation, editorial staff consult the people who will follow it through about the wording. In the case of the schools pack for ActionAid week, the text is written by the organisation's Education Officer, who briefs the design team; while fund-raising project leaflets on priority projects are written by fund-raising staff.

The editorial staff and the design team work closely with each other, and with the originators of the products they work on; they tend to take the initiative in developing briefs for the jobs they work on, as a basis for creative interaction with the originators.

Presentation

The current logo, designed in 1991, is rigorously applied. Guidelines for house style are at present minimal; an A6 binder is enough to contain them.

A brief (24-page) guide to presentation in words – *Text style guidelines* – produced by International Marketing and Publicity has sections headed:

- Why bother with a text style guide?
- Basic text style – rights and wrongs
- Terms to avoid, alternatives, and consistency – (a strong section)
- Tips for writing better text – (based on *The Plain English Guide* (Oxford UP))
- Proofing text – (sensible brief instructions, with examples of proof marks and their application to text)
- Index

It is also relevant to recall here the proposals of the *Communications 2000* information strategy for developing communications standards, identifying core communications skills, and providing training in them.

Technology used in creating information products

It was reported in 1994 that the organisation's use of information technology was generally low-level, and concentrated on databases rather than on internal or external communications. This was still the case in 1997, though developments in the technology were being monitored. By the end of the case study, early in 1999, this was described as an area of dramatic change in ActionAid in the UK: a new system had been installed; there is now a UK information technology management committee, and IT skills groups have been set up for the UK, and for the internet. Communication between managers and those responsible for systems and technology, which had been a problem, has improved with the appointment of a new and creative head of IT. There is, however, still a way to go before the potential of the new system for upgrading information interactions, and allowing ActionAid's information resources to contribute fully to its information products, can be realised.

The technology for actually designing the information products continues to be managed by the design team is Macintosh based, using QuarkExpress.

Given the economic situation of nearly all the countries in which ActionAid works, whatever IT is used for inter-country communications or recommended for on-the-spot use needs to be simple and appropriate. At present the IT applications consist of email, Frontpage for editing the web site, and the intranet (downloaded to CDROM for countries or areas that cannot access it).

Also in development is NK11, a new computer system to replace the existing onw, to enable storage, retrieval and communication of information about sponsored children and communities. And Office 97 is being introduced worldwide to ensure systems compatibility.

Monitoring and evaluation; analysis of cost-effectiveness

The communications strategies discussed earlier (see p12) make useful recommendations about establishing standards against which ActionAid's communication of all kinds, including information products, can be monitored and evaluated.

Measures of effectiveness

An interesting example of research and action on the findings relates to the magazine *Common Cause*. This was described as moving, in 1993, towards being a general development magazine, with an educational function, not necessarily covering the work of ActionAid. A proposal to divide it into two magazines, one with this purpose and one for supporters, had to be abandoned on financial grounds. Before taking a decision on the future orientation of the magazine, quantitative and qualitative research was carried out. A telephone survey of 300 supporters asked them about the most recent issue, and found that 75 per cent of them had not read it. The survey was followed up by four focus groups on the topic of 'what makes you want to read magazines?'

The findings from the survey and the focus groups showed that people did not throw the magazine away, even though they did not read it; they put it away for future reading if time allowed. Only 4 per cent of the respondents actually read the articles; flicking through is probably the most that the majority of readers will actual do. People did not want to lose the colour in the magazine, or the sense of its value. Name recognition was low - only 47 per cent of the sample knew its name by recall.

This was ascribed in part to design; the finding suggested that something in the cover was not working, and that the organisation's identity was not coming through. Respondents described the presentation of the inside material as 'relentless', and 'all so far away'; there was felt to be not enough typographic distinction between features and new items.

The decisions taken on the basis of the findings were:

- To re-orient it as a supporters' magazine
- To try to make it more conducive to flicking which would give readers something from the process
- To give it a clearer 'human interest' focus
- To try to make it more relevant to readers in the UK and to encourage them to identify with people in other countries
- To give it a clearer contents page and make the logo more prominent on the cover
- To introduce more pictures
- To change the typography, by introducing better spacing and page structure.

The next stage was decisions on content, and resolution of the problem of readability as against content that supports ActionAid objectives. The fact that *Common Cause* appears only twice yearly means that topicality continues to be a challenge.

The investigation was repeated after three issues of the new version. A small random survey (reported in the autumn/winter 1996 issue) showed that 78 per cent of respondents found it good or excellent; over a third reported they were reading more of the magazine following the recent changes.

Different measures of effectiveness of information products are used by the Press Office; here the criteria are the extent and the quality of coverage (as indicated by accuracy in the use of press statements, and support for ActionAid's stance).

Cost effectiveness

As noted above, in-house design has been independently investigated from this point of view and found to be a cost-effective solution. The criteria for this judgment include the benefits of flexibility and understanding of the organisation's ethos that come from having designers as part of the in-house team, and the fact that they are actually used by everyone for all jobs, and there is no temptation or opportunity for DIY adventures.

The research on *Common Cause* showed that almost half the respondents feared that producing it might divert funds from ActionAid's overseas projects; in fact the magazine at that time cost only 31p/copy to produce and mail, and was cost-effective in terms of attracting sponsors, donations and advertising. This is still the case; the income generated from sponsorships, inserts, donations, etc. means that it more than covers its print and production costs.

Another important perceived contribution to value-added is the strengthening of the visual identity of ActionAid through the logo.

Evaluation

ActionAid depends critically on communication both internally and with its outside world, and on information products as a major vehicle in communication to achieve its strategic objectives. It has to manage an unusually rich and complex content addressed for a variety of audiences.

Over the period of the study, corporate strategy developed markedly and communications strategy has been elaborated as part of it. Serious consideration has been given throughout the organisation to how ActionAid needs to manage communication and information interactions. The latest versions of the communications strategy imply a key role for the use of information in achieving strategic aims, and for information management. It is not, however, clear how much communication there is between IMAP and the Resource Centre; it appears that separate but related initiatives may have been taken at some points – for example an information audit and a communications audit.

The discovery that a valuable report from a working group, given to the researcher at the start of the case study, which looked both at production and dissemination of information products and 'organising principles for information management', was no longer to be found in the organisation, and that no-one had any knowledge of it, certainly reinforced the necessity for an archive of internal documents as part of ActionAid's information resources.

The internal communications strategy shows a good appreciation of the standards that internal information products should meet, of the need for training, and of the value of using the electronic medium as well as print on paper and integrating the two, although as yet implementation has not advanced very far. Some products designed to inform staff of really important matters of procedures and policies do not

exactly observe the principles of the strategy, but the final version of the current corporate strategy is a marked improvement.

The strategy also places welcome emphasis on the aims of communication, the content, what the audience understands and feels, how best to convey the content to them, and the necessity of standards.

ActionAid's printed products for the outside world are of outstanding quality, which reflects the strengths of its editorial and design teams, and is a tribute to the value which the organisation attaches to having these professionals as part of its staff. It is interesting and unusual that designers and editors tend to take the initiative in developing briefs for the jobs they work on, in order to concentrate the minds of the originators as to what is required. It is much easier for in-house professionals to take this essential role than it is for external agencies.

Some useful work has been done on measuring the effectiveness of at least one important product (*Common Cause*)

The web site does not as yet match the quality of the print on paper products, but it is encouraging to note the in-house support for development of a stakeholders management group, a web and intranet strategy and objectives, and a global intranet/information manager with responsibility for content etc.

Case Study 2

City University

Background

The institution which is today City University was founded, with support from the City Parochial Foundation and a number of City Livery Companies, as the Northampton Institute in 1894 to provide trade and craft education for 'individuals from the poorer classes' working in the Clerkenwell district. It presented its first candidates for London University degrees in 1908-1909, was designated a College of Advanced Technology in 1957, and gained the status of a university able to award degrees in its own right in 1966.

Objectives and strategies

The University's mission is 'to advance knowledge, wisdom and understanding by teaching, research and professional training.'

Its objectives (Annual Report, 1995-1996) are:

- To maintain a distinctive place in meeting the higher education needs of the professions and business enterprises, both in the City of London and in the wider metropolis.
- To develop major schools with a significant European reputation in professionally-related fields.
- To undertake research of national and international excellence.
- To support UK industry by promoting understanding of its engineering, financial, social and environmental aspects.
- To be a major regional provider of quality education and training for the National Health Service.
- To form developmental links with other education providers, through affiliation and validation.
- To meet local and regional needs for employment-related continuing education, in collaboration with the Further Education sector and other providers.

(These objectives still apply, but are under review as this study ends, in May 1999).

In the early stages of the case study, it was indicated that there was no discernible top-level strategy for achieving these objectives. At the end of the period (early 1999), a new corporate strategy was under discussion in the University, and there was anticipation that the recent arrival of a new Vice-Chancellor would lead to progress in this direction.

It is now an obligation for institutions of higher education to have an information strategy as part of the strategic plans which the Higher Education Funding Council requires from them each year. City University's start on this process was rather delayed by a change in the Vice-Chancellorship. When this case study ended a draft compiled by the Academic Registrar and the Director of Computing Services had been circulated and was being revised in the light of changes in the University's strategic aims and of comments by staff. It is understood that the revisions are likely to be quite extensive, in view of the fact that the draft was mainly focused on Computing Services, and did not take into consideration other aspects of information and its use in the University.¹

Organisational structure and culture

City University has the usual hierarchical structure of institutions of higher education. Within External Relations (ER), which reports to the Director of Academic Services, a Publications Team is responsible for the majority of the University's information products. ER is also responsible for press relations.

The University is said - like most such institutions - to have been built on very territorial lines, Budgets are devolved into individual schools, and at an early stage of this study it was said that there were 'no incentives for information sharing' or

¹ This is interesting, given that the *Guidelines* (1995) from the Joint Information Systems Committee of the Funding Councils for Higher Education, make it clear that information strategy is about 'the ways in which a higher education institution makes major decisions about the future of its teaching and research. *It is not just about computing or libraries.*' Other universities appear to have taken a rather different approach (see, for instance, the case study of the University of North London, in Orna, 1999).

negotiation over the use of information; instead, people were described as being 'protective' about such matters as their contacts. An early initiative of the development programme, which is dedicated to fund-raising and sponsorship, is the acquisition of a new data warehouse system to handle contacts data; one of the aims is to overcome this reluctance and reassure the 'owners' of contacts that their ownership will be respected and that information will be responsibly used, in consultation with them. And while schools now enjoy still more responsibility for their own management, new accounting and student records systems, implemented in 1998, will help to overcome the inherent tendencies to fragmentation and produce better management information

Responsibility for information products

Besides External Relations, the Public Relations Unit of the University's Business School, and the University's Computing Services Department are responsible for some information products.

External Relations

The immediate stimulus for setting up External Relations in 1990 was the coming centenary of the institution's foundation in 1994, which would require contacts and information products directed to the University's outside world. It was also recognised that the University needed a focus for its relations with that outside world to attract more students and to develop alumni relations. A central external relations strategy developed in 1990, with the support of the University's Vice-Chancellor, had as its objectives:

- To strengthen the University's academic base, by publicising its existing activities and building links with appropriate educational institutions.
- To promote higher education in relations with government, and to ensure that government appreciates the University's role and needs.
- To optimise the University's income from its facilities and services by marketing to appropriate audiences.
- To support the University's objectives by enhancing public perception of the University

- To recruit able students from a broader basis, and to increase the number of research students, by means of a schools liaison programme, market research, course development, etc
- To recruit able academic, professional and other staff, by enhancing the public perception of the University
- To increase research income by publicising the University's research strengths and successes.

External Relations' remit covers corporate communications, marketing and publicity, including publications (corporate and student recruitment publications in both print and electronic form), press and public relations, internal communications, advertising and events. The products for which it is responsible are the University's annual report, printed information on courses, and corporate information; it also has overall responsibility for the University's web site. Products containing research-based information are currently mostly the responsibility of schools and departments; and course information on the web site is handled by departments, with ER having a watching brief (both these were under discussion at the end of the case study). Material on adult and short courses is produced by a variety of originators, some from Continuing Education Department, but schools and departments also run their own short courses and produce publications about them.

ER also has a quality-assurance role in relation to course material produced by departments, to ensure that it conforms to University policies on information for potential students, in relation to dealing with applications, facilities, equal opportunities, fees etc.

In 1995, ER introduced a pilot publication service, selling layout, design and print production to the rest of the University, on the basis of a feasibility study which indicated a market for such a service. This service continues to operate.

Over the period of the case study, positive changes are reported in the relationship between ER and those who use its services; there is said to be more co-operation and greater understanding of what users want in terms of information. More thought is being given by originators to the content of products, why they are needed, and who is going to use them. An understanding also appeared to be dawning that committee papers are not the best way of distributing information. At the same time, external

users of printed and electronic products were being drawn into consultation to an increasing extent, particularly in relation to the University's web site.

Business School Public Relations Unit

The Public Relations Unit in the Business School is formally part of that School, but has 'professional' links with External Relations.

The objectives of the Business School are to develop teaching, executive education and research geared to the City of London's international clientele, and those of the Public Relations Unit are to reach these audiences using whatever methods are appropriate - principally literature, advertising, direct marketing, media relations, world wide web, and events management.

Computing Services Department

The Department has the objectives of providing an appropriate IT infrastructure to support all the academic, administrative and financial activities of the University, and of providing guidance for staff and students on using the facilities; a service level agreement has been agreed. Among the services it provides is that of offering to all departments a place to put up their own pages on the University's intranet.

At the start of this study its view of the University's organisational culture was of a traditional academic ethos, lacking any forum in which strategic decisions might be taken: 'The top doesn't exist in the sense of a Board of Directors who take strategic decisions'. As indicated earlier, however, this situation may now be changing.

Problems of the information culture of particular concern to Computing Services included the University's reluctance to accept electronic communication and the electronic form of documents (using postscript fonts, and capable of being printed out) as the master original; the fact that 'too much paper is shoved around', especially in the form of committee papers; the lack of provision to keep track of the rapid changes in the technology used, especially in the matter of being able to read materials created using earlier and now discarded technologies. This problem remained unresolved at the end of the case study.

By 1998 this situation had changed in some respects. A group to look at generating email documents had been set up, bringing together representatives from Computing Services, ER, and Personnel. There was also a WWW working group (consisting of ER,

Computing Services, and a number of academics and administrators – representing types of individual, rather than schools, including a librarian). Its work was in effect determining university policy in this area; it was acting as an advisory body, and laying down guidelines. (see p44 for a discussion of the web site)

Information products

At the start of this study, print on paper was the medium for almost all the University's information products, both externally and internally directed. By the end the emphasis was beginning to move to the web site, and there was a prospect of the printed version of some products becoming a secondary rather than a primary source of information (not all, by any means; print continues to be the most important medium for the prospectus, and in fact demand for the printed version has increased since the web site became available. The stage that these changes had reached by the end of 1998, is described below.

External Relations

ER handles the University's *Annual Report*, course prospectuses and such research material as departments decide to give it (see page 49 for how decisions about information products are taken).

Annual Report

The *Annual Report* at the start of this study consisted of three parts: a statement from the Vice-Chancellor with brief reports from the main academic areas; a detailed Academic Review of the departments; and a financial statement. The way of presenting these elements has changed over time. In the early 90s, the Academic Review and Accounts were bound in with a limited number of copies, while the main print run consisted just of the V-C's report and reports from academic areas, with brief financial statistics. From 1993/94, three separate volumes were produced: the main one with the Vice-Chancellor's statement, brief academic reports, and a page of statistics, the other two containing the Academic Review and the Financial Statistics.

Designed by an outside consultancy and edited by ER, the latest version of the main report (1998) is an A4 perfect-bound volume with a four-column grid (which makes for rather difficult reading because of the sub-optimal measure). The content consists of

short features about research, innovative developments, and achievements of staff and alumni. The Academic Review volume has been dropped since 1998; it was not remarkable for good typographic presentation; the content was typographically difficult to handle, consisting of long lists of publications and grants, and neither the layout nor the material (a shiny paper) helped.

Prospectuses

The undergraduate Prospectus is the University's main product for reaching and recruiting potential undergraduate students. Since a redesign in 1996, it has been a 2/3 A4 perfect-bound publication, designed by an outside group. Printed in black and colour (colour-coded by faculty, with colour used for headings and running heads) it uses a 3-column grid. The presentation of the copy is logical and consistent, which bears witness to conscientious editing; accessibility is rather hindered by a lack of 'colour' in the typeface, which makes it less readable than desirable at this size and on this paper.

The postgraduate Prospectus follows the same layout and presentation as the undergraduate one.

The prospectus of Courses for Adults is the same size as the others, and the internal presentation is similar, but has a graphic cover and internal graphics.

Brochures for individual courses are handled by ER, as is the factsheet about the University.

Despite its name, ER is also responsible for some internal information products; they include:

City News

A staff newspaper, which is edited and designed in house, and printed by the Print Unit. At the start of this study it was 4-page A4, with mainly short news items of a fairly anodyne nature and no editorial comment. In 1996 it was the subject of a readership survey, by students in the Social Statistics Research Unit, which led to recommendations for change in the direction of more controversial in-depth treatment of university policy, more content addressed to non-academic staff, and electronic distribution; it was also suggested that it should become more of a magazine, and appear less frequently. Changes to meet these suggestions were introduced in 1997; the number of pages went up to eight, and *City News* now carries articles on current

University issues, together with regular features on staff news, training, research, grants and awards, and an editorial column.

Guide to organisation, services, administration (the 'Orange Book')

At the start of this study, an A5 directory-type publication, word-processed origination, and not an easy read. The typographic problem of handling name and address-type data was not well solved (and there was a lot of inconsistency in how the elements were presented – some with phone numbers, others without, some with initials, some with the full name, some with just Mr, Ms or Dr); and it was difficult to find headings within the lists for Schools as they were all in light italic, with no differential spacing to help them to stand out. This product has now been transferred to the University's web site; it is no longer a single product – relevant information appears in appropriate parts of the site, much of it in Administration, some in Schools and Departments, some in About the University, etc.

A 'joining handbook' – the *University Handbook*

For new students, produced at the start of each academic year. (ER also provides some help for the Student Union in its production of the *Students Union Handbook*,).

The products for which ER was responsible at the start of this study were primarily print on paper; it had decided against producing videos because a survey showed that a video produced elsewhere in the University had not been much used. They also issued (under some academic pressure, it appears) one CD-ROM – a multi-media presentation with slides and voice overs done by journalism students. It has not been repeated, as it was not seen as a good use for money.

By the end of the case study, greater integration of printed and electronic products was under discussion. Some internal information was by then published exclusively or mainly on the web. The frequency of *City News* had been reduced from a fortnightly to a monthly schedule. Diary and 'what's on' information was on the web site.

Business School PR Unit

Prospectuses

ER is responsible for the School's course prospectuses; it seeks to establish a 'personality' for each course in line with the market defined by the academic staff responsible, and to provide factual material about the course and a realistic assessment of the career prospects it offers. Each course has its own prospectus; and there is also a single prospectus on the MBA day programme in various specialisms.

The prospectuses are A4 format, and are re-designed fairly frequently (there is no indication of the source of the design – see p53 for an insight into the process). Page layouts vary: some use a 2-column grid, others 3-column; setting is unjustified. Colour photographs are used for illustration, and it is rather disconcerting to find one or two photographs repeated in prospectuses for different courses.

Insight

Issued five times yearly, and distributed to alumni as well as present students .

Business News (twice a year)

Both addressed to alumni and used as a marketing tool for the Business School. (It was runner up in one of the Higher Education Information Services Trust awards.) The articles are described as being 'fairly dense and academic', and aim to appeal over a broad range of disciplines. This is something of a 'prestige' product, designed as a showcase for articles by staff of the School.

All prospectuses are updated annually; a major redesign of the prospectuses, and of *Business News*, was in progress at the end of this study.

Computing Services Department

The main internally directed products consist of an information pack for staff and students about Computing Services (available both on the University's Web site and as hard copy). The hard-copy products have changed somewhat in the course of this study. The 1995 version consisted of three A5 booklets, stitched 2 wires, written, edited and produced in-house: *Guide to Computing Services*, *Guide to PC Services*; *Guide to Unix Service*. The *Guide to PC Services* was not conspicuously well planned; a section on 'basics' for

readers new to computers came after a section on Computing Services' PC Windows system; the screen reproduction were too small to be easily accessible; and finding how to do anything users wanted to do would be difficult. The *Guide to Unix Service* was a distinctly idiosyncratic product (it seems to have been used as a vehicle for indulging the authors' enthusiasm for the old GWR – I don't know how else to account for the illustrations); apart from that, it was wordy, the measure was too wide for easy reading, and the presentation of the content descriptive rather than telling users how to do the things they needed to do.

The 1998 version (a single-volume A5 *Guide to facilities for staff and students*) consists of four sections on different coloured paper – the three of the 1995 version, together with a section on 'Internet and Communications'. The one on the PC service has a much improved layout, and is more accessible, in better sequence, and tells readers how to do things in a brief and clear way. The Unix section is not much better than its predecessor; there are yet more GWR pictures, the line length is a little improved (but the choice of a wide outside margin isn't much help in a binding which makes it hard to keep the book open for reference, and where text tends in consequence to disappear into the valley). The binding is indeed a major obstacle in using the book as it would normally be used – open on a desk alongside the computer, for reference while working.

All Computing Services documentation is in fact now on the web site, and people are recommended to use it there in preference to the printed page, because it is more up to date. In transferring the content to the web site, only minor changes appear to have been made in content and presentation, apart from the addition of links. In some instances, text has been shortened and broken down into smaller units; the *Guide to Unix* has actually become longer, though the GWR pictures have disappeared.

The Service also invites University departments to put up their own pages on the Web site.

Products for the outside world are in the form of pages on the University's Web site.

Electronic products: the University's web site

An initial experimental site, developed by the Department of Informatics has been described as a 'disaster', with 'people doing their own thing, wheels being reinvented', and lacking any unity of style. 'The first aim was to get key information on to the web; nobody cared how it looked at that point.'

External Relations had expressed its interest, in its 1994 *Review, Plans Services*, in investigating the use of the WWW in promoting the University. ER came to play a key part in the WWW Working Group which was set up in July 1997, with a membership drawn from academics, teaching and learning interests, administration, and library services. A Management Group for the web site, chaired by the Director of Academic Services, reports to the Working Group. This small management team is said to work well, with a good balance between information and technology requirements. The University has funded a full-time post of Web Co-ordinator for the web site (a joint appointment between External Relations and Computing Services); management is shared by two staff members, one from Computing Services Department, and the other from the Academic Registrar's Department.

A design brief for the web site was completed in September 1997 and went live in November of that year. By then the site was already operational and at any rate some departments had created their own pages. The design brief sets out some standards and principles for the home page and for general structure of the pages to which it provides routes. The specification for the home page is that 'It should be easy to use, attractive and have appropriate links to and from other information. Technically, it should comprise a single page that is fast to download, can be used with or without images and accessible/comprehensible by text-only browsers.' The top-level pages to which it links should form 'a logical push-button navigation tool to the detailed information ... which will be maintained by individual departments'; departmental pages themselves should provide links to such centrally maintained material as maps and admissions information, and to the relevant school pages, top-level pages and home page. While accepting that 'It is now too late (and not necessarily desirable), to impose a single design on the whole of the University' the brief outlines positive and negative points for design of top-level pages:

- If colour coding is used, avoid reversed out text because of printing out difficulties
- Avoid using frames because they break
- Put the logo on each page, preferably at the left with page title on the right (technically more reliable); avoid centring and never separate the image from the text of the logo.

Simple templates and buttons are offered as a help to departments in writing their own pages

The design brief provides a draft for the home page:

Main buttons

- About City University
- Courses
- Research
- Academic schools and departments
- Administration
- Student information
- Staff information

Specials

- News
- Getting to City University
- Computing services
- Library information services

Common buttons

- Search
- Help
- Feedback
- Home

and for the second and some of the third levels to which each of the main buttons lead.

The Level 1 button for Research, for example, leads to:

Level 2	Level 3
Main areas of research	(list as prospectus)
Academic Schools and Departments	(direct link to list on level 2)
Research Centres	list with links to departments
Research degrees	description

Fees (direct link)

Research ratings

list

Research grants and contracts office (direct link)

A comparison with the actual site structure shows that the top levels of the site follow the brief very closely. The acceptance in the brief that it is both too late and probably undesirable to introduce much standardisation in the pages of individual schools and departments is just as well; had it been otherwise, the originators of the brief would certainly have been disappointed. The home pages of schools and departments show a remarkable degree of variation, in structure, links, typography, use of graphics and of colour, and types of button. They vary also in their approach to users, from the straightforward presentation of Social and Human Sciences and of Engineering, which use the home page to get users as quickly as possible to what they want to find, to the visually noisy new home page of Informatics, with vertical and horizontal arrays of buttons and a rather self-consciously 'techie' introduction (with gratuitous condescension to 'all you non-PC/Mac users out there'), and the elegant tabulated contents page of Arts Policy and Management (rather unfortunately combined with a deep turquoise background and red print for buttons). The main aim, however, was to get information on to the web site, as there were some large gaps in coverage; many of these have now been filled, with the exception of the Finance and Registry sections.

The site provides some guidance for web authors ('Information for Web Authors') This offers some reasonable advice on features which make for difficult reading - such as underlining, text in caps, flashing and moving text - and on the use of colour, sound and frames, and places a welcome emphasis on the importance of coding to show structure. Its own sequence and presentation, however, are not of the easiest to follow, and it looks as though the originator lacked the time he/she would have wished to devote to producing a really useful product.

In the autumn of 1998 the WWW Working Group organised a University-wide consultation day among staff users, with the aim of finding out what they wanted from the site and how they wished to use it for their own purposes. The report posted on the web site indicates that participants agreed on a number of issues:

- Communication should be more interactive, provided the interaction was not driven by technology for its own sake.
- Integration of university databases – for example, staff, course, research publications – in a way that would allow cross-site searches was desirable.
- There should be elements of consistent corporate ID across the site, eg standard there should be standard navigation tools and templates.
- The corporate ID needed to be updated to take account of web presentation
- Target information pages for different types of user would be useful.
- A decision was needed on whether the definitive version of different types of information should be print or electronic.
- Responsibility for the site should be divided between the centre on the one hand and schools and departments on the other. The centre's role should be to provide information and expertise, support, and training, disseminate good practice, maintain general information about the university, and develop policy on standard software. Schools and departments should make decisions about their pages, develop them and keep them up to date.
- Information published on the site should be monitored in the same way as externally published information on paper is at present monitored.

Other points emerging in discussion included a proposal for an audit of common features/facilities of sites; the suggestion that departments should agree who is responsible for what and for style standards in their web sites; and a requirement for clearer definition and enforcement of standards, more resources for training and help, and recognition of the time requirements for web management.

At the policy level, there was a call for the web to be seen as part of the University's overall strategy, and to be put into the context of its information and marketing strategies (when these had been developed) which should inform decisions about resource priorities. The cost effectiveness of various courses of action should be considered (including costs incurred by not investing in web development) and potential benefits from developing the site should be identified. In the meantime, short-term priorities and possibilities for progress with the web site should be determined and acted on. Finally, if the essential long-term policy and strategy was to be developed, that required a senior management 'buy-in'.

In February 1999, as a follow-up to the Web Day, the Working Group presented a Web Strategy to the University's Information Services Committee (the strategy has since been accepted and the necessary resources granted). It has much in common with the model for university web sites proposed by Middleton et al. (1999); its aim is to create a web site which supports:

- Promotion of the University
- Student recruitment
- Research promotion
- Internal communication
- Teaching and learning

Among the objectives is integrating electronic and paper-based publishing activity to improve efficiency and ensure consistency and quality assurance.

The strategies proposed for structure, content and design are on the lines set out in the design brief quoted above, with a three-level structure; standardised content and strong corporate style at the top level and flexibility in content and style at the second). The strategy for technical issues covers a standard University Web authoring package, and takes up the point from the Web Day about the need to create web pages directly from databases (this will involve investigation of the problems of using one database to originate both print and electronic versions). On evaluation is proposes regular monitoring of use and visitor satisfaction, and performance criteria (to be developed by the Working Group). Finally, the strategy requests resources, primarily funding for two additional posts, to develop the site along the lines proposed.

One interesting argument in the case for improvements to the web site refers to the Continuation Audit which will be made of the University in 2000. It is apparently standard practice for the external audit team to search the web site of the institution they are visiting and to print off any directly relevant information, and in addition, one of the four main areas to be scrutinised is internal and external communications.

Decision making on information products; budgets

External Relations

For those University products which are the responsibility of External Relations, the decisions are to a large extent taken by ER in conjunction with the University's committee structure. ER submits proposals for major University publications to the

relevant committees, with the aim of establishing strategic objectives for them. The development in the presentation of the Annual Report is an example of the process at work. Previously it was a single very large volume; ER proposed in 1993 to the Academic Policy Committee that it should in future be issued in three parts, with different print runs: the Report itself (5000), the Statement of Accounts (1000), and the Academic Review (1500).

A redesign of the undergraduate prospectus in 1996 proposed by ER received an extra budget, and is said to have proved a good design education process for course directors on how to bring out selling points.

One product where there is a clear and well-founded wish for a change is the list of academic publications which continues to be published as hard copy, in spite of the fact that a database which can readily be maintained by those with an interest in having it up to date, and which could be linked with the web site, would be the most cost-effective solution.

So far as financing publications is concerned, the Publication Service piloted in 1995 by ER continues in being, as a self-financing operation, physically located within ER, which charges departments for work commissioned.

The University operates devolved budgeting, under which budget holders have to justify all expenditure and make a case for requests for extra budgets/ Budget proposals relating to specific publications are put in a year ahead. Departments make their own decisions about what they will produce, and how they will be produced (by ER, the University's Print Unit, or outside printers). Management of finance for course brochures is devolved to Departments, but all course brochures have to be handled by ER, which has the lead role in quality assurance. ER's quality assurance role was described at the end of the case study period as being quite a strong one on official printed publications, but still under discussion as regards the web site

Business School PR Unit

Whereas previously decision making had been led by the individual academic centres, at the start of this study the PR Unit was able to take an overall view of the range of information products, and to introduce a degree of standardisation in such matters as information on careers and details about how to apply for admission to courses. By the end of the study, the emphasis had changed to some degree, in that the PR Unit was moving to communicating the general 'key messages' of the School, while specific

product messages were in the hands of those concerned with individual courses – course directors and marketing officers

Computing Services

Computing Services took and continues to take its own decisions about what it offers, in the light of knowledge of user need. From the Service's point of view, no specific costs are involved; it is part of their job to offer products to help their users.

Information resources and information products

The idea of the university as an institution possessing a range of information resources going well beyond what is customarily described as management information is not one that has been readily entertained in most universities, still less the possibility of managing information resources so that they can readily be used in creating information products of various kinds. Some movement in this direction has taken place in recent years, though there is still far to go.

At the start of this study the University was involved in a long-term government-initiated project, the Management Administration Computing Initiative which aimed to standardise the presentation and management of certain types of information – primarily personnel, finance, payroll and library systems – across the university sector, for statistical purposes. At that time I observed that 'If this project leads to a successful outcome, in the form of an integrated resource of essential information, there will be great potential for the development of useful information products from it, to meet specific needs for the University's target markets, both internal and external. This is a long-term prospect; in the meantime, the all too common problems of maintaining and integrating databases of contacts and mailing lists stand in the way of using even these basic information resources in developing new information products to meet the needs of potential markets. The mailing lists maintained by individual departments, for example, both overlap and contain incompatible data, but little can be done to improve their integrity and make them potentially more useful, because they are regarded as departmental property.' By the start of the 1998/99 academic year, the parts of the system dealing with finance and students had been implemented, and the full system was due to be implemented during 1999.

At the end of 1998 the problem of contacts databases still existed, but its solution was part of the remit of a new development director, whose appointment was awaited. The Business School PR Unit meantime had been building its own databases for corporate marketing campaigns by what was described as 'laborious hand labour'; these were however due to be brought into the University's new data management system during 1999.

Computing Services by comparison has had a rather easier time in making use of appropriate resources of information in deciding on its information products. It draws on the questions it is asked in order to design the content of its products; it gets statistics from the advisory service about the most frequent questions, and the utilisation rate of different software packages, and draws on its own resources of information and knowledge to develop information products to meet the needs revealed.

The people responsible for information products

External Relations

ER had five full-time staff at the start of this study; a part-time press officer – also employed for 3 days a week at the Business School – joined them in 1997. A key post from the point of view of information products was that of the Information Officer whose responsibilities covered writing, editorial, corporate communications and the University's visual identity (see page 54 for more about the corporate ID and its application). The holder of the post for nearly all the period of the case study was an experienced writer and editor who also undertook a one-year part-time course on typographic design at the London College of Printing as part of her on-the-job training. By the end of the study the job title had become Publications Manager, with three staff, including a web editor; an additional post of Web Manager (joint appointment with Computing Services) had been created.

Much of the expertise for ER's products comes from in-house, although some services are bought externally; for example some jobs are put out to external designers who deliver camera-ready artwork. All members of staff are encouraged to take relevant courses, some external, like those of the Higher Education External Relations Association, others provided by the University itself. ER is described as trying ' to provide a value-added service through overview knowledge of university and of what

has worked well for others, and appreciation of different ways of presenting information'

Business School PR Unit

The staffing of the PR Unit has grown over the period; it had four staff in 1994, with all print, media relations and advertising out-sourced, and alumni relations handled by a half-time member of staff. By the end of 1998 there was a team of nine, consisting of Director, Press Officer, WWW Coordinator, Alumni Manager, three Marketing Officers, and two clerical staff.

Most of the writing of ER's products is done in-house. The articles in *Business News*, however, are by authors responsible for the research described; here the contribution of ER staff is editorial.

There are interesting differences in the approach to design as between the PR Unit and ER. While the latter uses in-house expertise on the design of its products, the former relies on ER Publication Service to which it provides a design brief, for design management. There appears to have been some use of design consultancies – for example in the original design of *Business News* and of one set of brochures; subsequently ER is described as 'adding its own ideas' and as 'tweaking' the solutions of the design consultancy in order to cut design costs (there seems to be a perceived necessity of persuading academics that the products will not cost too much). By 1997, most of ER's publications were done via ER, though ER continued to use outside designers for major projects such as the Day MBA brochure, and redesigns of *Business News*– University policy since 1996 is that all such publications should be handled through ER

Computing Services

The service does its own writing and design of its products; it has not been possible to ascertain if any members of staff have specific training or background in these areas, or whether it is seen as part of the job of the staff.

Presentation

The University has had a corporate identity since the mid 1980s, when a design consultancy developed an ID and a new logo. In 1992 it was decided that a revision was needed, and a different consultancy won the commission. The recommended typefaces are now Garamond and Univers, as against Melior, which was the basis for the earlier ID. Instructions for using the identity are distributed to all departments in the form of brief guidelines written in-house, designed by the consultancy. The aim in the guidelines is not to be too prescriptive, and to leave users some flexibility in such matters as size and shape of products; the mandatory features are the placing of the logo and the colours used (while it is not compulsory to use colour, if it is used, the colour standard is strictly defined).

ER has found it difficult to manage the application of the identity and the guidelines. As might be expected, while there are no problems with the publications which it handles on behalf of departments, it is impossible to insist on conformity to the recommended standards in those cases where departments exercise their right to go it alone, and where they are not even ready to acquire the recommended fonts. The Business School PR Unit described itself in 1997 as following the corporate ID guidelines 'more or less'. Similar problems are experienced by the University's Print Unit, which handles other departmental publications; the fact that the manager of the Print Unit has to be self funding puts ER in a weak position for insisting on adherence to standards. And apart from that, while theoretically all products are supposed to go through either ER or the Print Unit, some evade them entirely and are sent direct to outside printers.

At the end of this study, the corporate ID was being re-designed in the light of the new corporate plan; the re-design will take into account the electronic image as well as the printed one.

Technology

External Relations uses desktop publishing software (QuarkXpress) for originating the information products for which it is responsible. It works with a roster of regular printers, to whom it sends material on disk for production. While at the beginning of this study it was reported that the University's IT section was unable to offer relevant

support, advice or guidance to ER about purchasing the software it needed, this situation later improved somewhat, and IT support for ER's platform was available.

ER's Publication Service offers PC-based QuarkXpress typesetting to its clients. As mentioned earlier, individual departments are free to choose their own route to developing their information products, and this extends to a fair amount of DIY use of desktop publishing software, with little attempt to observe the recommended standards of presentation incorporated in the University's visual identity (this is particularly the case for documents which are to be photocopied, or research reports, for which no house style exists). As in many organisations, any fee for design, no matter how modest, can be thought excessive, while the costs of the time entailed in doing not very well something for which the doers lack training are not taken into account. By the end of the study, while there was less 'DIY DTP' than formerly, that was because a 'new toy' had supplanted DTP in the shape of the WWW, and there was anxiety that this might get out of hand, given departmental responsibility for their own parts of the web site, although the WWW Working Group was trying to promote the use of a single web authoring tool (front page 98) to standardise design assist with devolved site management.

Computing Services

The whole process of creating information products is in-house; Computing Services uses its own technology (Word 6, LaTeX scanning and HTML editors) for generating text, scanning in pictures, screen shots, etc.

Monitoring and evaluation; cost-effectiveness analysis

ER is aware that a more formal mechanism than at present is required for evaluating the effectiveness of its information products. A good deal of ad hoc market research, using agencies, is done in the field of student recruitment, but so far the only actual testing has been on the *Guide to organisation, services, administration*, where new staff members are invited to find specific pieces of information; the results have led to a reorganisation in the structure of the product, to help users identify the type of question they are seeking to answer. The Publication Service seeks post-publication feedback by issuing a questionnaire to the originators of the jobs it handles.

As described earlier (see p41) a reader survey was carried out on *City News* in 1996; the results indicated that readers thought it dull and something of a PR puff, with no opportunities for staff to put their own point of view. The changes introduced in response to the findings (except for a letter page – which received no letters) have been well received. ER sees the process of seeking readers' views as having helped to take the University's provision of information forward and to 'break out of the academic mould', and as allowing the editors to form a better idea of what people want to know and what makes a good story.

ER aims to achieve cost savings for its information products by careful print buying. The effects of rises in the costs of paper were said at the start of this study to have so far been contained by the use of in-house DTP.

So far as the Business School PR Unit is concerned, it is admitted that evaluation of products is likely to be 'primarily anecdotal', and no steps have as yet been taken towards anything more formal.

As this study ends the process of evaluating the University's electronic information products embodied in its web site is beginning. Apart from the statistics available from the system about users and what they look for, the institution of Web Days (see p47) has the potential to provide a valuable contribution.

Evaluation

At the start of this case study, the University presented a fairly classic example of the federal structure and territorial culture characteristic of seats of learning. For the areas which are the subject of the research, this created both direct difficulties, and problems deriving from a lack of overall strategy.

The direct problems arose from the fact that departmental autonomy led to variable awareness and use of the professional advice and services available. More seriously, the absence of an overall institutional strategy, let alone a strategy for the use of information, meant that there was no strategic framework in which information products might find an established place.

In the course of the study, significant changes were in progress, for which there seem to have been two main catalysts: the arrival of a new Vice Chancellor with a strong interest in information; and the development of the University's web site. The first lent support to a new corporate strategy, and development of the University's

information strategy, which is likely to be more comprehensive in its scope than originally proposed.

The creation of the University's web site has had quite a dramatic effect on breaking up log-jams and freeing channels for new interactions and new ideas which should feed constructively into both the development of strategies and the creation of information products. The World Wide Web Working Group provides a forum of a new kind for the full range of key stakeholders, who have made good use of their opportunity to shape university policy on the 'meta-information product' which is the University's web site.

By the end of the case-study period, a consultation day for users had led to serious strategic proposals covering the place of the Web in the University's overall strategy and in its information and marketing strategies, resources, its role in relation to other information products, and communications within the University and between it and the outside world; the proposals had been translated into a draft strategy and bid for resources; and the strategy had been accepted and resources granted. Among other matters, greater integration of printed and electronic products was under discussion at the conclusion of the study.

ER, in alliance with Computing Services Department, has played an initiating role in these developments, which have helped to bring it to a more central position where its professionalism can be recognised and more fully used - a further development of positive changes over the period in the relationship between ER and those who use its services. The excellent design brief has had a good influence on the quality of at any rate the top levels of the site.

Other technology developments such as the data-warehouse system to handle unified contacts data, and new accounting and student records systems, should also help overcome fragmentation of information resources, and make them available to support development of appropriate information products.

If the developments outlined are able to continue in the present direction, there are good prospects for the resolution of some questions as yet unresolved, such as integrating to an appropriate extent those information products, such as research-based material and course information on the web site, which are the responsibility of departments; and the lack of an 'archive policy' for machine-readable material of long-term validity.

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Case study 4

The Cochrane Collaboration and the UK Cochrane Centre

Introduction

This began as a case study of the UK Cochrane Centre, at a time when it had existed for only two years. Over time, the focus of the study has moved to the international organisation of which the Centre is a part, the Cochrane Collaboration (the Collaboration was established just before this research began, through the initiative of the UK Cochrane Centre). It has moved because many of the activities concerned with the creation of the major information product involved – the Cochrane Database of Systematic Reviews – have become primarily the responsibility of the Collaboration.

The Cochrane Collaboration focuses on finding sources of information of a specific kind in the medical and related literature, subjecting them to highly sophisticated critical analysis, and preparing structured reviews which are input to the database which constitutes the end product. (The NHS Centre for Reviews and Dissemination¹ at York University, which forms the subject of another case study in the present research, is particularly concerned with the 'outward-facing' aspects of managing and making use of the product within the NHS: the people who are the target users of the reviews, the ways in which they need and wish to use them, how to reach the intended audience, what helps them to make good use of the product and what hinders them.)

¹ The NHS Centre for Reviews and Dissemination:

- 1 Commissions or carries out reviews on behalf of the NHS, focusing mainly on effectiveness, cost effectiveness, management and organisation of health services.
- 2 Disseminates the results in the NHS to enhance effective decision making. It concentrates specially on the development of evidence-based clinical practice and service development. Both functions are supported by research on methods of conducting systematic reviews and effective dissemination. The Centre develops and maintains databases of published reviews and studies on economic evaluation of health care and offers an inquiry service.

Beginnings

The UK Cochrane Centre was established in Oxford in 1992. Like the international Cochrane Collaboration which has developed from it, the Centre takes its name and its mission from the work of Archie Cochrane, a doctor who first drew attention to the medical profession's ignorance about the effects of health care, and explained how evidence from randomised controlled trials (RCTs) could help towards the more rational use of resources. In his book *Effectiveness and efficiency: random reflections on health services* (1972), he suggested that, because resources would always be limited, they should be used to provide equitably those forms of health care which had been shown in properly designed evaluations to be effective. He stressed the importance of RCTs because they were likely to provide much more reliable information than other sources of evidence.

Such evidence, however, is not easily accessible to those who have to make decisions about health care; though it exists in quantity, the original reports of the relevant research are dispersed and hard to locate. The traditional answer to this problem is the review of research, which seeks to act as the link between research findings and those who should be able to make use of them. Unfortunately, reviews of RCTs have not been founded on respect for scientific principles, in particular the control of biases and random errors. The poor quality of most reviews has meant that advice on some highly effective forms of health care has been delayed for many years, and that other forms of care have continued to be recommended long after controlled research has shown them to be either ineffective or actually harmful.

The ideas that inform the Centre and the Collaboration were piloted over the period 1978–1989 by staff at the National Perinatal Epidemiology Unit in Oxford. Their work yielded a collection of RCTs relating to pregnancy and childbirth, which were then submitted to analysis by reviewers all over the world using a standard systematic approach. The results were presented in standard tabular form for input to a database. The first products were printed books (Chalmers et al., *Effective care in pregnancy and childbirth*), and Enkin et al. *Guide to effective care in pregnancy and childbirth* together with *The Oxford Database of Perinatal Trials*, which became available on disk in 1988, with biannual issues following from 1989. The database formed the model for the *Cochrane Database of Systematic Reviews* described below.

The opportunity to extend this work to other fields of health care came with developments in the NHS Research and Development Directorate. The NHS accepted a

proposal for a centre to carry forward the model established by the work in pregnancy and childbirth, and agreed to provide initial support for a period of three years. The UK Cochrane Centre was set up in Oxford at the end of 1992 as one of a trio of initiatives contributing to the Research Information Systems Strategy of the NHS R&D Programme; the others are the NHS Centre for Reviews and Dissemination at York University (as mentioned above, the subject of another case study in the present research); and a register of research projects.

In the months after the opening of the Centre, strong support was expressed all over the world for its aims. The idea of the international Cochrane Collaboration emerged naturally as a result of this global support, and within a remarkably short time the Collaboration became a reality, and established a basic structure and methods of work which continue today.

The Centres and the Collaboration – key objectives and strategies

The Cochrane Centres

The objectives and targets of the UK Cochrane Centre for the years 1992 – 1995 (the period for which it was initially funded by the NHS) were to:

- Identify module editors and reviewers.
- Support module editors and reviewers by means of:
 - A register of existing systematic reviews and of reviews in preparation or planned
 - A pilot edition of a 'tool kit' of standard documents and software for use throughout the Cochrane Collaboration
 - Contribution to an international register of RCTs maintained by a professional bibliographic organisation
 - Helping to stimulate the development of centres in other countries to support the Cochrane Collaboration
- Design and maintain a database of systematic reviews with the targets of:
 - Establishing a management system for incorporating edited modules of systematic reviews within a parent database
 - Developing an indexing system for reviews in the parent database
- Collaborate with others (including the NHS Centre for Reviews & Dissemination) in disseminating the information in the database by means of electronic distribution (floppy disc, compact disc and online).

The majority of the objectives were achieved on time. One which proved to take longer than had been envisaged was the production of the 'tool kit' to help editors and reviews. As the *Report* explained: 'it became clear that the reviewers' Tool Kit was only one of the documents required by the Collaboration.' There was a substantial demand for further help, which was met by a new product, the Cochrane Collaboration *Handbook*..

The Centre's objectives for the period 1995 – 1999 (agreed in July 1995) reflect the growth of the worldwide Cochrane Collaboration. The UK Cochrane Centre by 1997 was one of 15 such centres. While its first role was an initiating one, its future is envisaged more as working to a facilitating brief within a UK context, responding to people who want to do similar things, providing expertise and information for them to draw on – but leaving them to take the initiatives and to decide whether and if so how they carry them forward within the Cochrane Collaboration.

Many of the tasks which it initially envisaged having to address have already been taken on by other centres (the register of existing systematic reviews, for example, was taken over by the Centre for Reviews and Dissemination at York), and it aimed to transfer other activities to some other agency within the next few years.

By 1997, the shared responsibilities of the Cochrane Centres were:

- Maintaining directories of contributors to the Collaboration
- Helping to establish and support collaborative review groups, and to organise workshops
- Co-ordinating handsearchers of health care journals and monitoring and assisting review groups searching specialist literature
- Co-ordinating the Collaboration's contributions to the creation and maintenance of an international register of RCTs
- Developing successive editions of the Collaboration's guidelines and software to support the preparation of systematic reviews
- Exploring ways of helping the public, health service providers and purchasers, policy makers and the press to make full use of Cochrane Reviews
- Organising workshops, seminars and Colloquia to support and guide the development of the Cochrane Collaboration.

The Collaboration

The overall mission of the Cochrane Collaboration is to 'help people make well-informed decisions about health care by preparing, maintaining, and promoting the accessibility of systematic reviews of the effects of healthcare interventions.' (Cochrane Collaboration, 1996). Its work is based on nine key principles:

- Collaboration – by internally and externally fostering good communications, open decision making and teamwork.
 - Building on the enthusiasm of individuals – by involving and supporting people of different skills and backgrounds.
 - Avoiding duplication – by good management and co-ordination to maximise economy of effort.
 - Minimising bias – through a variety of approaches such as scientific rigour, ensuring broad participation, and avoiding conflicts of interest.
 - Keeping up to date – by a commitment to ensure that Cochrane Reviews are maintained through identification and incorporation of new evidence.
 - Ensuring relevance – by promoting the assessment of healthcare interventions using outcomes that matter to people making choices in health care
 - Ensuring access – by wide dissemination of the outputs of the Collaboration, taking advantage of strategic alliances, and by promoting appropriate prices, content and media to meet the needs of users worldwide.
 - Continually improving the quality of its work – by being open and responsive to criticism, applying advances in methodology, and developing systems for quality improvement.
- (Cochrane Collaboration, nd [1997?])
- Continuity – by ensuring that responsibility for reviews, editorial processes and key functions is maintained and renewed.

The goals identified in the strategic plan of 1996, which set out these principles, were:

- 1 To ensure that high quality systematic reviews are available across a broad range of healthcare topics.
- 2 To maximise access to them.
- 3 To achieve financial sustainability.
- 4 To develop an efficient and transparent organisational structure and management.

Development of the Collaboration is guided by an elected Steering Group and annual international Colloquia which allow the interchange of views at workshops, and by committee decisions.

The collaborative review groups

Reviewers work as members of international collaborative review groups whose members share an interest in a particular topic (while most collaborative review groups focus on specific health problems, such as stroke or breast cancer, the Collaboration addresses other dimensions of interest through 'field co-ordination' - a field may refer to a category of health service users, a group of health professionals, or a class of interventions such as physical therapies). Members of the review group seek funding for their activities from whichever sources they consider appropriate. Each collaborative review group is co-ordinated by an editorial team, which is responsible for assembling an edited module of the reviews prepared by group members, for inclusion in and dissemination through the *Cochrane Database of Systematic Reviews*. By the end of 1996 almost 40 review groups had either registered or were on the way to registration (Chalmers et al., 1997), and the number is now nearly 50, covering most of the important areas of health care.

The scope of the research in which the Collaboration is interested extends beyond randomised controlled trials, though these are still the priority area. Although systematic reviews of research about the effects of care are necessary for improved health care, they are not sufficient. The Cochrane Collaboration's Effective Practice and Organisation of Care Group, which has its editorial base in Aberdeen, is preparing and maintaining systematic reviews of studies evaluating the effects of strategies designed to improve professional practice. The necessity for these studies is underlined by findings such as those reported by David Sackett, Professor Clinical Epidemiology at Oxford, and Chair of the Collaboration's Steering Group between 1993 and 1995 (in a talk given at Oxford on 07 11 94). He cited research which shows that clinicians have been observed to need clinically important knowledge about 60 times a week (in contrast to the twice a week they themselves estimate). Eighty per cent of them never consult textbooks and journals; most get information by consulting colleagues. It is not surprising that their hold on important professional knowledge is reported to decline over time from the point when they graduate.

Organisational culture

The way in which the Collaboration, the various national Cochrane Centres, and the collaborative review groups see themselves and express the aims of their work owes much to the organisational culture that was characteristic of the original UK Cochrane Centre from the start. A small organisation, it attributes its progress so far to having a simple and understandable aim, and to being able to point to results which show that it works. Small size (in 1998 the Centre still employed only nine staff) was a matter of deliberate choice, as was its collaborative and non-hierarchical way of working. A staff member with long experience of the work which preceded the foundation of the Centre commented that, while there were plenty of strong personalities around, there was a genuine commitment to a non-hierarchical 'stake-holder' approach, which paid respect to each person's knowledge, and which had the effect of raising employees' self-esteem and their willingness to speak out. While things have moved very fast since the Centre was set up, and a 'bureaucracy' to handle them has had to develop equally fast to keep pace, the collaborative culture is seen as a safeguard against bureaucracy taking over.

The same non-hierarchical and non-exclusive spirit informs the Cochrane Collaboration's approach (though over time and with growth, this is said to have become rather more bureaucratic). While high standards of dedication and performance are required of those who work in review groups, it is seen as important to reduce any tendencies to exclude those with an unpopular approach in any field, railroad decisions through, or bid for dominance. As review groups are problem-based, rather than discipline-based, they bring together on an equal footing people from many backgrounds, without automatic priority for anyone (the stroke group, for instance, includes neurologists, neurosurgeons, speech therapists, physiotherapists, psychiatrists, and consumers). This approach implies a view of communication as a 'conversation' between equals, rather than as the transmission of 'messages' from an authoritative 'sender' to a passive 'receiver'. As Chalmers et al. (1997) put it, '... it should never be assumed that the results of Cochrane reviews "speak for themselves" ... In making decisions about the care of individual patients, for example, the results of the reviews must be integrated with the clinician's expertise ... and the patient's expertise, which derives from their knowledge of their condition ...'

In many ways the culture is an uncommon one. The director of the UK Cochrane Centre describes it as 'an ethos of giving', and, in that, it runs counter to some of

today's received wisdom in the management of health care (a circumstance that in the long run may perhaps protect it rather than making it vulnerable). The fact that to work for the aims of the Collaboration demands 'an ego that is satisfied by unselfish collaboration and group, rather than individual, recognition; a career-long commitment to the continuing, exhaustive search and analysis of all relevant trials; enormous numbers of hours of individual and group effort; and the subservience of personal convictions to scientific evidence.' (Sackett,1994) may actually make it refreshing and liberating for those only too accustomed to the dog-eat-dog relationships of much contemporary academic and clinical life.

The non-proprietary approach extends to the information products of the Collaboration; no-one has exclusive rights to distribute the *Cochrane Database of Systematic Reviews*, and there will be various publishers of the specialised databases derived from it, and of spin-off publications.

Information resources

As explained at the beginning of this study, the essential business of the Cochrane Collaboration is identifying sources for information that meet particular criteria, finding relevant information in the sources, analysing it to rigorous standards, adding value to it by reviewing the findings, and making it accessible to potential users through the database, and other products derived from it. This means that all the information resources it draws on are concentrated towards feeding this process, and that there is a very particular role for information specialists in its work.

The object of the initial stages is to find RCTs that have been completed and published (two other categories of importance are those which have been completed but remain unpublished, and those which are planned). Published RCTs are located by two means: on-line searches of databases such as Medline and EMBASE, and hand searching of relevant journals and conference proceedings to pick up RCTs which – because of indexing weaknesses in the databases – are not found through the very thorough on-line search strategies which have been devised. (One of the outcomes has in fact been some improvements in the indexing in key databases.)

A database of journals covered by hand searching has been set up, with details of the searchers responsible for each, in the various countries participating in the Collaboration. An innovative development initiated by the UK Cochrane Centre is the

training of non-specialist searchers (including students in the University of the Third Age).

RCTs which have been completed but remain unpublished constitute a 'dark area'. Failure to publish can arise from various reasons, including the decision by researchers that the results are 'uninteresting' – but from the point of view of the Cochrane philosophy there is no such thing as uninteresting results. The Collaboration aims to ensure that all RCTs are registered at the inception of the study, with details of the main research question.

Information products

This section outlines the products offered, together with some consideration of the management issues relating to their publication. For comments on the presentation of the products, see p102.

The work of the Collaboration is disseminated through one major continuously updated electronic information product (available on disk, CD-ROM and online) for external use: *The Cochrane Library* (first issue mid 1996). This consists of the *Cochrane Database of Systematic Reviews* (first published in 1995, available on the Internet from 1996), the *Database of Abstracts of Reviews of Effectiveness* (issued by the NHS Centre for Reviews and Dissemination), the *Cochrane Controlled Trials Register*, the *Cochrane Review Methodology Database*, together with a handbook on review methods, a glossary, contact details for Cochrane Collaborative Review Groups and other Cochrane entities, and a guide to finding relevant material on the Internet. *The Cochrane Library* as a whole became available on the Internet in 1998.

It supports the contributors to the database with a small range of 'know-how' information products, of which the most important is the *Cochrane Collaboration Reviewers' Handbook*.

Management issues

Arrangements for distribution of *The Cochrane Library* changed quite rapidly in the first year of its existence. Initially, it was available on CD-ROM and disks, and the BMJ Publishing Group managed distribution. Within the first year, however, with the aim of reaching more potential users, the Collaboration and the BMJ agreed to modify the original contract to allow others to distribute the *Library*. Update Software – the

company responsible for assembling and producing *The Cochrane Library* – was given responsibility for distributing the product. Update Software was responsible for producing the original *Oxford Database of Perinatal Trials*, *The Cochrane Pregnancy and Childbirth Database*, the *Cochrane Database of Systematic Reviews*, and finally *The Cochrane Library*. In 1996, Update Software entered into an exclusive agreement with the Collaboration, whereby it assembles, produces and distributes *The Cochrane Library* and all products derived from it. In exchange for these exclusive rights, Update Software agreed to act in accord with pricing and distribution policies established by the Collaboration.

Underlying these changes there are both commercial reasons (the need to ensure that the Collaboration retains control of production and distribution and gets adequate financial return), and quality considerations (the need to make the best use of close contact with the users of the databases). In connection with these changes, the Collaboration's Steering Group established a Publishing Policy Group as a standing committee to oversee the distribution and pricing arrangements for the Collaboration's products; this committee includes representatives from the Centre for Reviews and Dissemination, and from Update Software. It holds a teleconference three or four times a year.

Update Software, as publisher of *The Cochrane Library*, takes an approach to electronic publishing that differs in some fundamental ways from that taken by traditional publishers. It does not select, edit or modify the material it publishes, and it makes no claims on the copyright; while this reduces publishing costs, it places responsibility for quality control on the providers of the content – the Cochrane review groups and the Centre for Reviews and Dissemination. In addition, promotion, marketing and user training are seen as a responsibility shared between the publisher and the contributors; while Update Software commits a significant proportion of its budget to these activities, it relies on such help from contributors as the NHS Centre for Reviews and Dissemination 'trainer training' workshops.

This approach to publishing has so far (autumn 1998) been found to work well, but there is an acknowledged need to improve both product quality and dissemination, which depends upon commitment and support from the contributing groups. (See p106 for steps to upgrade editorial quality.)

Apart from the introductory brochure and Handbook, the Cochrane Collaboration has currently no printed products for outside use. It is acknowledged, however, that

people still like printed products, and some suggestions have been made for ways of meeting this preference, for doctors have requested a 'current awareness' printed list as a key to accessing the databases. (The Australasian Cochrane Centre initiated in 1997 a printed product - Χρονόμερο Νετσορκ Σύνοπσες - which gives brief synopses of new Cochrane reviews from the latest issue of *The Cochrane Library*. The aim is to provide information which is both accessible and accurate for interested lay users.)

The Cochrane Database of Systematic Reviews

This key database will eventually cover the whole of health care. The first issue, launched in April 1995, contained reviews on pregnancy and childbirth (derived from the *Oxford Database of Perinatal Trials*), subfertility, stroke, schizophrenia, and parasitic diseases, and the range has been extended over the successive quarterly issues.

By 1997, *The Cochrane Library* included a guide to material from other sources on the Internet, and work was in progress on two other projects: a 'Reproductive health library' for developing countries, on behalf of the World Health Organisation; and a cancer project integrating information on treatment and support groups, to provide a source for support agencies and groups. Further projects on these lines were added by 1998, for example on tropical medicine.

A further project which will integrate *The Cochrane Library* with other information systems, allow its readers access to a wide range of content and make it accessible to a wider audience, is now (1998) in progress; a collaboration between Ovid Technologies and Update Software has begun to produce *Evidence Based Medicine Reviews* - a product which integrates the *Cochrane Database of Systematic Reviews* and CRD material with MEDLINE and full-text journal collections (released in the third quarter of 1998).

'Know-how' products

The reviewers who contribute to the *Cochrane Database of Systematic Reviews* themselves need information tools to support them in their work. The main ones are the Cochrane Collaboration *Handbook* (Oxman & Mulrow, 1997), available both in print-on-paper form and, through the Internet, in a machine readable version; the 'Review Manager' (RevMan) software which is designed to give statistical and other support to reviewers; and 'Module Manager' (ModMan), which helps co-ordinating editorial teams to assemble protocols, reviews and information about their collaborative review group. Together,

they make up the 'Cochrane Collaboration Information Management System' ; this is now the responsibility of the Collaboration's Software Development Group, which has end-users and reviewers in training as members.

New versions of the Review Manager software for Windows and for Mac users were released in 1996 and 1997, and a fourth version will be issued in 1999.

'Awareness-raising' information products

An important part role of the Cochrane Collaboration is raising awareness among the relevant professional public by means of articles in specialist journals. Articles by specialists in various fields have been published in the journals of a wide range of specialisms, and accounts by journalists have appeared in the national press. A major product of this kind is the volume published in celebration of the 25th anniversary of Archie Cochrane's *Effectiveness and Efficiency* (1972) (Maynard & Chalmers, 1997)

Web sites

The availability of major Cochrane Collaboration products on the internet has been mentioned at various points. There are in fact two relevant linked web sites, one maintained by the Australasian Cochrane Centre on behalf of the Collaboration and mirrored at eight locations, and the other by Update Software, which is responsible for all information about *The Cochrane Library* , including the abstracts of Cochrane reviews. In this sense it both supplies information for the general Cochrane web site, and acts as one of the hosts of the general site. In addition it maintains its own web site, which includes information on the National Research Register and other products.

The Cochrane Collaboration site gives access to all the major information products:

- 'General information', most of which originated as hard copy: the brochure and leaflet, the Collaboration's strategic plan, steering group minutes, articles of association, newsletters, etc
- 'Guidelines, manuals and software': including the Cochrane Collaboration Handbook for reviewers; the RevMan, ModMan and contact management software; the Cochrane Library and abstracts of Cochrane Reviews
- Contact details for Cochrane Groups

It is well structured, and provides a variety of options for downloading and printing such products as the Handbook; navigation is straightforward, and there is a welcome alphabetical site index.

The Update Software site is devoted to the Cochrane Library and associated databases; it gives access to:

- Details of the Cochrane Library; Evidence-based Health Care Resources; Reproductive Health Library; Ovid's Evidence Based Medicine Reviews; National Research Register
- Software tools: Update products for creating and maintaining systematic reviews, and managing references
- Training resources: CASP (Critical Appraisal Skills Programme); the CRD's Cochrane Library training programme
- Scharr guide to resources on internet
- *The Cochrane Library, National Research Register, and Cochrane Library Abstracts.*

Costs and budgets

Probably close to 50 per cent of Cochrane Collaboration staff time is devoted to information management and information products. About 75 per cent of Update Software's revenue budget goes on management and development of information products, and about 20 per cent on R&D for future improvements.

Human resources for information products

Some of the people responsible for the information products described work in the Cochrane Centres throughout the world, others are dispersed in the Collaborative Review Groups.

The original role of the UK Cochrane Centre was to provide know-how and the benefits of experience, and to build confidence among the reviewers. The people concerned with this aspect of the Centre's work when this case study began were those responsible for:

- Strategies for searching on-line databases, and for hand searching of journals
- Co-ordinating the inputs from collaborative review groups
- Training and education for reviewers and others who contribute to the process
- Software support and database development.

So far as the first is concerned, there was and is strong emphasis on the active and initiating role of the Centre's information specialist in helping groups to identify strategies, and working with them as they moved into the review process. The information specialist is not regarded as an information manager in the usual sense of providing information support, but rather as an integral part of the review process.

Co-ordination was originally the responsibility of a Database Administrator who checked that the modules of reviews submitted by collaborative review groups met the required format and interacted with the review-group administrators, whose job it is to help reviewers to maintain standards. More recently, this role has been assumed by Update Software, which has also become responsible for software support and database development under the arrangements for distribution described on p94.

The process of developing review teams at the start of the original *Oxford Database of Perinatal Trials* was not an easy one; some of the participants were content experts who had little idea of methodology, some were strong on methodology but weak on content, and some were unreliable reviewers. Over time, a weeding process took place, and an excellent team of reviewers emerged. On the basis of that experience, careful challenges are today deliberately put to those who express an interest in setting up review groups, with the aim of identifying durable enthusiasm and commitment.

The members of Collaborative Review Groups are researchers, health care professionals, consumers and others with an interest in preparing and maintaining reliable, up-to-date evidence relevant to prevention, treatment and rehabilitation of particular health problems. Their work is supported by translators, people who make hand searches of journals for relevant material, and 'consumers'. Each group is required to prepare a plan, in consultation with the staff of one or more Cochrane Centres, outlining how it will contribute to the Collaboration's objectives, the scope of the group and the topics it will cover, and who will plan, co-ordinate and monitor the group's work. Each group has a co-ordinating editor, supported by an editorial team, and an administrator who manages day to day activities.

The process of creating a systematic review consists of these stages (as defined in *The Cochrane Collaboration Handbook*):

- State objectives of the review, and outline eligibility criteria
- Search for studies that seem to meet eligibility criteria
- Tabulate characteristics of each study identified and assess its methodological quality

- Apply eligibility criteria, and justify any exclusions
- Assemble the most complete dataset feasible, with involvement of investigators, if possible
- Analyse results of eligible studies, use statistical synthesis of data (meta-analysis), if appropriate and possible
- Perform sensitivity analyses, and subgroup analyses if appropriate and possible
- Prepare a structured report of the review, stating aims, describing materials and methods, and reporting results.

The training of reviewers and others who contribute, such as the people who make hand searches of journals, is evidently a critical one. The emphasis so far has primarily been on scientific quality, and the Collaboration has been successful in establishing what is recognised as a 'gold standard' in the process outlined above.

The Cochrane Centres provide training for experienced and novice reviewers. The *Handbook* on preparing systematic reviews is used as the basis for workshops which are intended to help reviewers to build up their competence in the areas where they most need it, and to open up understanding of the range of features which need to be taken into account, including economic and social factors, and patients' viewpoints. The UK Cochrane Centre has recently (1998) run a workshop on editing reviews for members of Collaborative Review Groups. Other courses are based on the RevMan software. Training is also provided for the people involved in hand searching journals for reports of RCTs. For the future, joint educational activities are planned with the recently established Centre for Statistics in Medicine at the Institute of Health Sciences in Oxford.

The Collaboration has recently set up an Education and Training Methods working group, coordinated by an educationalist in Seattle; among its tasks is searching educational journals for controlled trials on education projects. This development is linked to initiatives to establish an infrastructure, comparable to the Cochrane Collaboration, for preparing and maintaining systematic reviews of educational research.

Another area where a need to draw on professional support is becoming evident is that of editorial skills in relation to written presentation of reviews, which in some cases does not match the quality of the scientific content. Update Software and the Collaboration have recently (autumn, 1998) hired an editor on a short-term contract to edit existing reviews from this point of view; the reviews have then been sent back to

the originators with suggestions for changes. The outcome is not yet certain – the Collaboration is said to be 'not exactly clear on where it wants to go'; if it gives away part of the editing role, it changes itself, but the present editors for review groups have not seen this kind of copy editing as part of their responsibility. These unresolved questions are related to another area of less than complete agreement – *Who constitutes the audience for the reviews?*

From the point of view of the Collaboration, as expressed in a Steering Group statement, the target audience is 'people making decisions about health care', including 'health care professionals, consumers and policy makers with a basic understanding of the underlying disease or problem.' While Cochrane Reviews should be written so that they can be read by such a readership, they cannot be presented in such a way as to be 'understandable to anyone'; and '[T]he readability of Cochrane Reviews should be comparable to that of a well-written article in a general medical journal.' The view of the Managing Director of Update Software, as publisher in contact with a wide range of customers and potential customers and aware of the difficulties of access they encounter in seeking to use the database, is that the reviews tend to be by researchers for researchers, to use a lot of jargon, and to have little background and/or discussion. The experience contributed by the Centre for Reviews and Dissemination staff member who is responsible for Cochrane Library training in a variety of user contexts tends to complement this view. It should be noted that this issue is recognised, and is being discussed in the Collaboration.

While the UK Cochrane Centre has from the start been an information-intensive organisation by virtue of its objectives, the only information products for which it was originally responsible were the 1992 brochure with which it was launched, and the Cochrane Collaboration brochure produced the following year, together with the first version of the *Handbook* for reviewers. These were all written and designed in-house at the Centre, and it was not considered necessary or appropriate to recruit or commission people with specific experience in writing or design. Since then, the Centre's role has changed, and it is no longer responsible for creating information products.

Specialised skills for the Collaboration's main information product are today under consideration. When the new arrangements for distribution came into being in 1997, it was hoped that funds from trading would provide money which could be invested in them. In line with this, Update Software is seeking to expand in the design area, and is

carrying out surveys of designers and relevant email discussion lists. Expansion over recent months means that the company now employs staff who are responsible for managing design and quality issues.

These matters of human resources and specialist skills are inseparable from how information content is presented to those who wish to use it and transform it into usable knowledge which they can apply in action. So it is to the presentation of information that we now turn.

The presentation of information

Awareness of the significance, and the difficulty, of this aspect was there from an early stage: 'It is very important to present the evidence in a format and language appropriate to the user's needs, and we still have a long way to go in learning how best to do this.' (Chalmers, 1994)

The Cochrane Library

The first issues of *CDSR* were described as a short-term interim system – pending a full solution to the problem of indexing. Search facilities were limited to an index of text words, and to simple Boolean searches initiated by typing in character strings containing the required terms. The main problem was identified as terminology control of synonyms; a likely solution to this was the adoption of MeSH. The system incorporated browse and navigate facilities.

By the second issue of *Cochrane Library* (embodying the *CDSR*, the *Database of Abstracts of Reviews of Effectiveness*, the *Cochrane Controlled Trials Register*, the *Cochrane Review Methodology Database*, together with *About the Cochrane Collaboration* and *Other Sources of information*) it was claimed that the 'software for finding/displaying material is refined'; new entries could be specifically retrieved; new search options were available (searching on phrases, using parentheses to nest search terms, limiting searches to specific fields, and searching using MeSH terms – initially accessible only in the CD version), and it was possible to input comments and criticisms on Cochrane reviews.

Increased size and structural complexity brought new problems of presentation. The original version had a conceptual structure that was reasonably easy to grasp, and presented few difficulties in navigation. The main presentational weaknesses lay in visual design, screen presentation and typography; my comments on the original were that not enough thought had so far been given to such matters as:

- Consistency of screen layout
- Window size and shape
- Placing of buttons
- Use of icons vs text buttons
- Text measure (line length)
- Type faces
- Page structure for the text of reviews and other continuous matter.

Specific comments related to such matters as the mixture of symmetrical and asymmetrical layout; the layout of lists and of windows with a small amount of text; lack of standardisation in the placing of frequently occurring buttons; the fact that size, shape and spatial relationships of windows appeared to be planned on a screen-by-screen basis, rather than developed for the database as a whole; and the typography of graphs and tables. It was also suggested that it would be worth thinking about the implications of describing the database as an 'electronic journal'. 'Why not aim to follow that analogy in the visual presentation? In particular, in the reviews themselves, why not adopt a page structure, rather than scrolling screens full of text, with proper margins, perhaps a 2-column grid, page numbers and all the other clues to location etc which are so useful in the print-on-paper products which are the fruit of centuries of development?'

Apparently feedback from users was on similar lines, and some changes were made to meet their comments; placing of buttons was been standardised and inconsistencies in the use of text and icon buttons resolved, and it was planned to present simplified graphs embedded in the text of reviews.

By 1996, further changes had been made in the direction of simplification and ease of navigation, with more standardisation of searching and in screen presentation. (A welcome addition was a subtitle to the home page, to show that *The Cochrane Library* deals with the evidence base for health care – it was only at a late stage in the development of the database that it was realised that nothing in the main title indicated what lay within; yet another instance of the dangers of knowing one's own product so well that we cannot imagine that others can be ignorant of it.) No changes in design have been made since 1996, mainly because there was intense criticism that the interface was changing too frequently; the next major change is planned for issue 1, 2000.

On-screen presentation is another area where there are contradictions to be resolved. While those responsible for the design of the database are very aware of the importance of creating a structure which helps on-screen use, the originators of the reviews write their product in the way which they are accustomed to – in the typical scientific-communication tradition of printed journals; and that implies printing out for reading, which is indeed the way in which many end users work. (See below, p106, for the technological implications of reconciling the two approaches.)

Hard-copy products

The *Handbook* was in its original form a large and detailed print-on-paper work. Originated in-house, using word-processing software, it was presented both as a complete A4 format volume in a large ringbinder, and in the rather more convenient form of spiral-bound individual sections. The Editor's preface to the first edition said modestly that it was an 'organic' document which 'will change as we all get better at our jobs', and indeed a number of suggestions of ways in which it needed to change were forthcoming from people interviewed in the course of the case study.

In the words of one typical comment, it was seen as representing a danger of 'forward thinking combined with an old-fashioned presentation approach', too bound to medical culture, and lacking awareness of alternatives and of the kind of presentation to which some of the groups to which the Collaboration was trying to appeal were accustomed. This comment was accompanied by the suggestion that outside sponsorship might be sought for funds to improve the presentation, since cost was advanced as the reason for not seeking professional inputs in this area. The original hard-copy version consisted of sections on:

- The Cochrane Collaboration
- Establishing and supporting collaborative review groups
- Representing the interests of fields
- Cochrane Centres
- Establishing and maintaining an international register of RCTs
- Preparing and maintaining systematic reviews

Each section of the original version was a detailed volume in itself; the one on systematic reviews, for example, consisted of 75 pages plus a further 60 pages of appendices. By 1997, the hard-copy version of the last section had been discontinued in

favour of presenting it as part of the *Cochrane Library*; word-processed files for the remaining sections were maintained, updated as necessary, and printed out as required.

The current version (most recently updated September 1997) evolved from the section of the original on 'Preparing and maintaining systematic reviews'. It is available, under the title of *Reviewer's Handbook*, in various versions, including text and appendices on the World Wide Web. The Handbook in its present form is no longer open to a criticism which was made of the original edition, in an earlier version of this case study:

'The text is thorough and well written, in a primarily descriptive style; this applies particularly to the key section which sets out in detail what 'Reviewers should ...' do in a range of different circumstances. It is, however, open to question whether users, particularly at the start of their work as reviewers, will find the descriptive approach helpful, or whether they would do better with a task-based 'how to do it ...' approach. There is certainly a body of research on the presentation of instructional text (see, for example, Gold, 1992 and Carroll, 1990), which suggests that the latter is likely to be more successful.'

The present edition, written in a brisk and accessible style, avoids the 'reviewers should' approach and gives clear advice in logical sequence for tackling each stage of the process, with pertinent cautions and warnings (for example, the section on analysing and presenting results begins: 'Do not start here! Please read sections 3 - 6 before reading this section. It is sometimes tempting to jump directly into the analysis when undertaking a review. This is hazardous if appropriate attention has not been given to formulating the question (section 3), identifying, selecting and critically appraising studies (section 4 and section 5) and collecting data (section 6).')

It is supplemented by a printed Training Manual, published by the San Antonio Cochrane Center, which gives summaries, examples and exercises.

The small informative products, like the brochure, leaflets, etc have so far been the subject of *ad hoc* design decisions. The very appropriate and content-rich logo was the work of a local designer to a brief from the Director of the UK Cochrane Centre. The original brochure was designed by the Director of the UK Cochrane Centre; the current edition originated from the Dutch Cochrane Centre. Such small items are originated in-house and externally printed.

The technology supporting the information products

The same software designer has been identified with the development of the database, from its origins in the mid-80s at the National Perinatal Epidemiology Unit through to the present time.

His role in relation to the UK Cochrane Centre was initially that of consultant on information technology and software development. His company (Update Software) as described earlier (see p94) , in 1997 became responsible for publishing and distributing *The Cochrane Library*, taking over from the UK Cochrane Centre responsibility for dealing with the Cochrane Collaboration advisory groups including the Publishing Policy Steering Group, publishing partners such as the BMJ, and the NHS Centre for Reviews and Dissemination.

A conflict of interest between on-screen use of the database and down-loading to print out was mentioned above. The technological implications are intriguing; if printing out is to be the main way of using the content, HTML, despite its many advantages, is inflexible in that such typographical features as line length, page depth, and font cannot be controlled. The use of more flexible current markup languages would be helpful; the downside of that, however, is that they are more complex to use, and will require more skills of users. Alternatives are only now becoming possible. Longer term, Update Software looks to a solution through a new product which is really addressed to the users, as opposed to one which works but is not designed for specific users. Feedback from existing users suggests that a 'newspaper headline' approach would work, leading to a dialogue between user and system to establish the level appropriate to the user's needs, and the offer of relevant types of material. This would be very different from the information retrieval approach associated with library databases. A solution on these lines is thought possible by the end of the century. (For more about user feedback, see the following section).

Software support and database development are mainly the responsibility of Update Software and the Nordic Cochrane Centre. There are other advisory groups of the Collaboration which also have a potential contribution, such as the Coding and Classification Group, which has the remit of looking at search strategies, but which unfortunately meets only once a year.

Testing, monitoring and evaluation of information products

While there was from the start a strong commitment to seeking feedback from users, in the early stages of the UK Cochrane Centre events moved so quickly that the means of getting had to be fairly informal. There was, for example, not enough time for initial formal pre-trials of the *Cochrane Pregnancy and Childbirth Database*; but there was some informal testing of updates – the database designer sent out prototypes for screens, and sought user comments on them for possible incorporation in the next issue. The ‘next generation’ developments in software mentioned earlier involve focus groups and various advisory groups. *The Cochrane Library* itself now has a ‘comments and criticism’ button which allows users to comment on the software, and the web site also has a comments page for feedback on the products.

A start was made on more formal monitoring and evaluation with a postal survey of how the *Cochrane Pregnancy and Childbirth Database* was being used in the health service in 1994 (Hyde, 1995). A questionnaire sent to all 387 subscribers to the database sought details of users' organisations and jobs, and asked them about their purposes in installing the database, the people who have access to it, and difficulties encountered in using it. The response rate was high (71 per cent). The main body of users were in hospitals, with other significant groups in academic institutions and purchasing institutions. Three professional backgrounds predominated among the respondents: midwives (30 per cent), doctors (30 per cent), and librarians/information specialists (20 per cent). Nearly all subscribers who responded had made use of the database, the majority of them making multiple uses – most frequently to improve personal knowledge and the knowledge of others. The findings also indicated that use in 1994 of the *Cochrane Pregnancy and Childbirth Database* was substantially more widespread than use of the *Oxford Database of Perinatal Trials* in 1993. (By mid-1998, over 5000 copies of the CD-ROM version of *The Cochrane Library* were distributed every quarter, and the Internet product, also distributed on a subscription basis, gave access to thousands more.)

Today, quality assessment is the responsibility of advisory groups reporting to the Collaboration Steering Group. Products are assessed against the long-term objective of providing information about the effects of health care to inform decision making, and the short-term one of setting up review groups for all areas of health care. The performance indicators used are the production and quality of reviews, for which the Collaboration has developed high-level consensus standards. Attainment of the standards is confirmed by empirical studies which indicate that, compared to reviews

published in the peer-reviewed printed literature, Cochrane reviews are less likely to show evidence of publication bias (Egger et al., 1997), and are methodologically more rigorous (Jadad et al., 1998).

Update Software obtains and records feedback about *The Cochrane Library* by a variety of means:

- Direct teaching sessions and interviews with end-users
- Attending major health library conferences in the UK, Europe and North America
- Telephone, fax and e-mail requests for help and information
- Cochrane Collaboration advisory groups such as the Publishing Policy and Software Development Groups
- External quality assurance tests of other products using *The Cochrane Library* interface (the WHO *Reproductive Health Library* and the *National Research Register*)
- Pre-sale evaluations by major customers
- Workshops at national and international meetings

There is also an open email discussion list, and it is (1998) planned to form a *Cochrane Library* Users Group, whose initial role will be to advise on the next generation software.

Update Software works in close contact with the Centre for Reviews and Dissemination, through the staff member responsible for their *Cochrane Library* training programme, which provides valuable insights both into the range of people attending, and the comments they make. Many of them are librarians, and their main difficulty is in visualising the structure of records in *The Cochrane Library*, and in appreciating that they are full text rather than abbreviated bibliographic records, and are structured differently in different areas of the database. As the range of participants in training increases, more people without basic computer experience are encountered – including nurses, some doctors, paramedics, and staff from community health trusts – and their lack of experience causes real difficulties. The interface also seems to give problems to those who are accustomed to different standards – features particularly mentioned are the split screen with the menu at the top and the document at the bottom; and the rotation of the triangle as items within the main folder drop down. Once users reach the documents, however, they find them easy to manage; the Outline feature is particularly appreciated. Printing out complete reviews is usual when

librarians find something relevant; non-librarians like to print extracts, a procedure which is described as requiring 'a bit of a fiddle' .

In 1997, 250 medical libraries agreed to evaluate the July issue of *The Cochrane Library*; the evaluation was mainly carried out by the NHS Centre for Reviews and Dissemination, with financial support from Update Software. The results were more useful in providing information about who uses the database than about how they use it. The observation that emerges, however, about users is that 'People don't want collections of documents; they want information' - something which is true of most seekers for information in most situations.

So far, feedback from surveys of users shows that the majority interest is in searches by subject, rather than bibliographic features such as author or title. This means that assigning subject index terms, and terminology control which actually helps rather than repels the user are particularly important; it also raises issues of how much can be invested in this, and who should assign terms. In this respect, matters are said to have taken a backward step because of the Internet, because it is not possible to apply indexing of text in that context - a different world from that of text retrieval indeed. Update Software asked review groups in 1996 to organise information by topic and to provide a topic list; it is anticipated that this will be achieved by mid-1999, and that the first release of *The Cochrane Library* in 2000 should have more of a subject index.

As far as the *Handbook* is concerned, the section on preparing and maintaining systematic reviews at one stage incorporated an evaluation form which asked users:

- What about this section of the *Handbook* do you like?
- What could be improved and how?
- Other comments or suggestions.

Some of the changes made have been in response to feedback from users. A revised version of the evaluation form was being prepared in 1998.

An evaluation of the present situation

Given that the Cochrane Collaboration, is an 'information-intensive organisation', whose whole *raison d'etre* is to find, analyse, and add value to information so that it can be used productively, there are two questions to ask:

- 1 What features in the way it sets about its work are likely to support the creation of effective information products?

2 Are there any counterbalancing factors that may undermine its efforts?

This evaluation, at the concluding stage of case study, has more positive and fewer negative features than the evaluation drafted two years into the study.

Positive features

- The UK Cochrane Centre met its original objectives in terms of developing information products, and the Collaboration is making good progress towards achieving its principles and the aims of its strategic plan.
- Information resources and information management play a key role at all stages of the review process, and members of review groups are well supported in managing the information with which they deal. Information specialists are essential contributors to the review process.
- The organisational culture continues to be an open one; despite the rapid growth in size, the Collaboration is aware of the need to avoid bureaucracy and to retain the non-hierarchical structure and the 'ethos of giving' which permitted the original (UK) Cochrane Centre to make such rapid progress in developing its information products.
- With the Centre for Reviews and Dissemination, the Collaboration has been responsible for developing a whole new area of specialist skill in creating unique information products – the systematic reviews which make up *The Cochrane Library*, together with instructional products to support those who exercise this skill.
- A creative solution to management issues has been developed; the relationship between the Collaboration and Update Software ensures maintenance of quality, together with control of production and distribution and adequate financial return. Update is an essential partner in the enterprise, not a technology tail wagging an information dog.
- There is clear evidence of learning from experience in the presentation of both *The Cochrane Library* and the *Handbook*. So far as the databases are concerned, there is the prospect of a product informed by the needs of users, which allows them to select the appropriate level of presentation in relation to their existing knowledge and the ways in which they want to use information.

- The approach to the training of users provided by the Centre for Reviews and Dissemination is in line with this aim, and collaboration between Update Software and the Centre's training specialist contributes to systematic monitoring and evaluation of the effectiveness of *The Cochrane Library*, and to progressive upgrading.
- The need for professional inputs on the side of typography and information design in the presentation of the content of the reviews is recognised, and there are plans to invest in these specialist skills.

Potential problems and dangers

- The diversity of organisational forms and funding mechanisms that characterises the Cochrane Collaboration could turn out to be either a strength or a source of fragmentation and loss of common ethos. It is certainly seen as something that requires particular vigilance and effort in order to ensure that the Collaboration remains a truly collaborative organisation. The fact that such exacting standards have been set and documented for the key information products, and the effort that goes into supporting reviewers in maintaining them, should help to avoid the dangers, as should the Colloquia which bring Collaboration members together face to face, and the growing network of electronic communication. It is to be hoped that informality in communication goes on being the prevailing mode, and that not too much gets codified.
- There are some problems implicit in the publishing arrangements, in that responsibility for quality control rests with the Cochrane review groups, while promotion, marketing and user training are a shared responsibility between publisher and contributors. There is currently (late 1998) a perceived need to improve both product quality and dissemination.
- Editorial quality in the area of copy editing is seen by Update Software as needing improvement; the present editors for the review groups, however, do not see this aspect of editing as part of their responsibility.
- A similar difference in viewpoint touches on perceptions of the relative importance of end-user interests and those of reviewers in training.
- Views of the actual audience also differ as between Collaboration on the one hand, and Update Software and Centre for Reviews and Dissemination staff involved in *Cochrane Library* training on the other. How to provide for the skill and knowledge

which required to make high-quality content accessible to the whole range of potential users is a question still unresolved.

- One obstacle is that the originators of reviews continue to write in the tradition of printed scientific journals, which, while reasonable and natural from their point of view is not necessarily the most accessible format for on-screen presentation ²

² For problems of designing for on-screen display, see Souttar (1995).

Objective factors, deriving from how our eyes and brains function when we read, can be dealt with by choice of type faces, line length, spacing, colour etc. Subjective cultural ones, deriving from exposure to printing and determined by that medium, have become part of our expectations of what documents are – eg they are read sequentially, appear in portrait format, and using words as the primary means of communication. These expectations are much harder to accommodate on screen, where access is typically non-linear, the format is landscape, and low resolution makes continuous text harder to read than on the printed page. So ‘Good screen design will embody what might be considered “best practice” in information design, but it will also have to make allowances for the underlying technology’. There are also problems where documents need to be both displayed and printed; here, while applications like Adobe Acrobat can help facilitate creation and exchange of such documents, they don’t resolve the different requirements of screen and printer. ‘Ultimately, what we need is not so much new approaches for the design of documents for screen display, but new kinds of documents’ adapted to the way in which people need to use the material, and to take account of limitations of medium. ‘To reduce the discomfort of reading from the screen, these will need to minimize the amount of continuous text. They must also allow for readers who will hop from document to document ... rather than following an argument through to its conclusion. Information will have to be presented in discrete semantic chunks that integrate other media, such as images and voice, to make their point. Creating such documents will probably involve a much closer synergy between content and appearance, if indeed the distinction between author and designer persists. At the moment we are seeing a whole range of exploratory approaches towards such documents, some more successful than others, but without any real consensus. I would guess that as we begin to understand more about how readers relate to information presented on the computer screen ... these approaches will converge.’

- Although users search *The Cochrane Library* mainly by subject, subject indexing of the databases is still deficient, and the Web site at present actually represents a backward step in this respect, though it may well improve later [p22].

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Case study 3

The Co-operative Bank

Background

The Co-operative Bank was founded in 1872, as the Loan and Deposit Department of the Co-operative Wholesale Society, initially to support local retail co-operative societies with banking facilities. Over the years, it extended its services to personal customers, both through branches and banking points in Co-op stores. In 1975 it joined the Committee of London Clearing Banks. One of the smaller high-street banks, with a market share of 2.5 per cent, it currently employs 3900 staff and has 140 outlets and 248 Handybanks.

In spite of its small size, it enjoys a high degree of public recognition, primarily because of its well-known ethical policy; it is the only bank with such a policy and this is given as the reason by over one third of the customers who move their accounts to the Co-operative Bank from another institution (1993 *Annual Report*). Retention of customers is due to an unusually high degree of satisfaction with the services offered – 67 per cent of Co-operative Bank current account customers reported they were 'very satisfied' in 1997, as against 52 per cent for all current account holders (MORI Financial Services Survey).

Over recent years the Bank has grown and developed its services in several directions. It has consistently increased its market share and profitability while extending its customer services. The branch network has been re-structured; new outlets, ranging from secure automated banking 'kiosks' to full-service branches, have been introduced, and its personal current account customers can now make deposits and cash cheques at Post Offices in England and Wales. Its Financial Advisers are the fastest-growing supplier of independent financial advice in the UK.

The Bank has invested extensively in information technology, with very successful results. Its Armchair Banking service is the most widely used telephone banking service in the UK. It has made large investments in improving internal processing efficiency, centralised account maintenance, telephone banking, and network distribution, and in

March 1998 it became the first major UK bank to offer a full on-line Internet service to personal customers.

In corporate banking, an automated system has been successfully introduced, and a Business Administration Centre established for centralised handling of corporate accounts.

Its innovative approach is based on intensive use of information through the study of social change, and research on the response to its products and services among customers, staff and suppliers, which is supported by unusually close interactions with them. Its most recent development, the 'partnership approach' initiated in 1997, is a commitment to acknowledging the Bank's responsibilities to all who are involved in its activities or affected by them: customers; staff and their families; its single shareholder, the Co-operative Wholesale Society; suppliers; local communities; society; and past and future generations. The Bank has also become more involved with the co-operative movement as a whole; while it has provided financial services to the Co-operative Wholesale Society and the Co-operative Insurance Society, these have until recently been separate entities. They are now seeking to become more of a 'family', with closer links between the Bank and retail stores.

Aims, objectives and strategies

The Bank's top-level aims are set out in its mission statement:

'To develop a successful and innovative financial institution by providing our customers with high quality financial and related services whilst promoting the underlying principles of co-operation'

The principles of co-operation cover:

- Quality and excellence in services offered
- Participation, for customers in the development of the bank's services, and of staff in the local community
- Freedom of association for staff, and a non-partisan approach by the bank
- Encouragement of staff development and training
- Co-operation with organisations promoting fellowship
- Promotion of an environment that supports the quality of life
- Effective business management to ensure continued development
- Integrity and conformance with legislative and regulatory requirements.

They underlie the Bank's ethical policy, which was introduced in 1992 after consultation with its customers, and is regularly re-appraised. The main points of the 1999 version of the policy, which contains a number of new elements on which customers have voted, are:

- No investment in or services to oppressive regimes, or manufacturers of torture equipment
- No investment in or finance for manufacture, sale, licensed production or brokerage of armaments to such regimes
- Support and encouragement for fair trade, ethical sourcing with Third World suppliers, and organisations participating in the UK social economy
- No finance for money laundering, or investment and currency trading in developing countries which does not support productive purposes
- No participation in currency speculation which consciously damages the economies of sovereign states
- No investment in or financial services to tobacco product manufacturers
- Encouragement for business customers to take a proactive stance on the environmental impact of their activities, and investment in companies that avoid repeated damage to the environment.
- No investment in any business or organisation whose core activities damage the environment
- No investment in or financial services to businesses involved in animal experimentation for cosmetics or household products
- No support for persons or companies using exploitative factory farming methods, or for organisations producing animal fur, or involved in blood sports
- Regular re-appraisal of customers' views; and representation of their views on ethical issues.

The partnership policy introduced by the Bank in 1997 represents an extension of the principles of co-operation beyond the ethical policy and into an obligation to take account of the needs and interests of all who are either involved in its activities or affected by them. The extent to which it has fulfilled its aims is subject to regular independent auditing – the first audit took place at the end of a year and a comprehensive report was issued in 1998.

Key business objectives are set out in a three-year corporate plan, approved by the Bank's Executive. The corporate plan in turn is the foundation for an annual marketing plan, developed by marketing management. The marketing plan is the basis for campaign plans, and for annual objectives.

Marketing campaign plans are produced monthly for the personal sector, and quarterly for the corporate and commercial sector. The personal sector campaign plans are especially concerned with product launches, and with the display in branches of information products to support key current action. Those for the corporate and commercial sector identify key issues, objectives and targets for extending the Bank's market position in various areas.

Organisational structure

The Co-operative Bank Group structure consists of Divisions for Corporate and Commercial Banking; Personal Banking; Group Finance; Group Resources.

At the start of this case study externally and internally directed information products were the responsibility of a Group Public Affairs section in the Group Marketing Department, within the Group Resources Division. The Section's remit covered: Press and PR; Internal communications; Ethical policy development; Banking Code of Practice; Environmental Policy; Communication; Sponsorship and donations.

Changes introduced by the new Chief Executive who took up his appointment in 1997 have brought these activities closer to the centre of the Bank's structure. A new Corporate Affairs Department, directly responsible to the Chief Executive, now handles brand; ethical policy; press; sponsorship and donations; internal communications; and projects (conferences, etc). At the same time Group Marketing has now been divided into Personal Marketing in Group Resources division and Corporate Marketing in Corporate and Commercial Banking

The Bank has been engaged in business process reengineering for some time; this is described (in the Annual Report for 1993) as having led to 'radical changes in the Bank's organisation structure' and the shortening of management communication lines, and hence to some redundancies. In 1995, an agreement guaranteeing no compulsory redundancies together with a two-year pay deal was reported (*Guardian*, 06 04 1995) as having been agreed by the Bank and its employees. It was said to be unlikely that payments for redundancy on the scale of those made in 1994 (£5m) would again be necessary (staff numbers were reduced from 4500 in 1990 to 3200 in 1993).

Organisational culture

The Co-operative Bank's organisational culture is very different from that of other banks; it is strongly linked with its ethical stance, and to the traditions of the co-operative movement. Many staff have a family tradition of strong links to the co-operative movement, and many are involved in community affairs because of it. The organisational climate tends to be informal and non-hierarchical, and the Bank promotes open communication. It is probably significant that the organisation chart of the Co-operative Bank Group Structure puts 'Actual and Potential Customers' in the place normally occupied by the Chief Executive or Managing Director, and shows the CE and the Executive Directors of the different divisions at the bottom, rather than the top. The organisational structure has been a very flat one for over 10 years, with only five layers of management; and a lot of work is done by cross-functional teams on projects, whose members are free of the need to constantly refer decisions upwards.

The *Partnership Report*, published by the Bank in 1998 after the first year of operation of its Partnership Approach, throws interesting light on the organisation's culture as seen from the inside by staff. Staff attitudes were studied in a 1997 Staff Survey (at 30 per cent the response rate, was an improvement on the 12 per cent from a previous survey, but the Bank acknowledges that it is low and probably so because staff think it an exercise which will have little result). Key staff concerns were:

1 Salary package

Two thirds thought the Bank a good employer in terms of pay, one third thought it one of worst things about working for bank; comparative position around median of financial services sector. A quarter thought job security one of the best things about working for the Bank, but a fifth thought it one of the worst. A job security agreement with the union in 1997 agreed a three-year pay deal, and aims at no compulsory redundancies up to 2000, which is something of a contrast with the rest of the retail banking sector.

2 Personal recognition

Almost half the staff expressed dissatisfaction on personal recognition - and this will be followed up fully in the next Partnership audit.

3 Equal opportunities and employability came joint third.

On the first the Bank shows up reasonably well in the percentage of its female workforce (who make up nearly two-thirds of its staff) in management positions, though the balance is strongly towards junior posts - junior, 50 per cent; middle,

20; senior, 8. There is cause for concern on employment of ethnic minority staff (1.8 per cent as against 3.9 per cent in the local workforce, and the Bank has as yet no figures on disabled staff. It has now committed itself to develop a Diversity Policy) So far as employability is concerned, in 1997 the Bank became the first UK Clearing Bank to gain the Investor In People award. Two thirds of its employees consider the Bank good at providing on-the-job training, but there are mixed views of management development opportunities and of IT training; and the survey highlighted a gap in how the Bank plans, manages and evaluates training at the strategic level, so it has set this as an objective for 1998.

97 per cent of survey respondents approved of the Bank's decision to promote and implement ethical policy, the vast majority saying it has had a positive effect on customer service, recruitment and retention. 59 per cent thought it had had a positive effect on how the bank manages staff. While three quarters thought the Partnership Approach a good idea for Bank, 8 per cent showed a degree of cynicism about it.

One finding from the survey was certainly echoed among the people met in the course of this case study: the longer people have worked for the Bank, the stronger is their feeling of pride in it. Most of the people interviewed in the case study because of their management responsibility for information products showed high job satisfaction; some of them had come in at a modest level up to 20 years ago, and had been given the opportunity of 'growing with the job' and being trained to do so. Those who had worked on the *Partnership Report* itself particularly valued the non-hierarchical team approach to the project, which included working with the Chief Executive and interfacing at director level.

The development of the Bank's advertising strategy also reflects the culture it seeks to promote; it has a high information content which is constantly evolving. At the start of the ethical policy in the early 1990s, the aim was been to raise awareness of the 'money cycle' and the unethical things that can be done with money entrusted to banks; this moved in the mid-1990s to selling the idea of the Co-operative Bank as a 'proper bank' as well its difference from competitors in having an ethical policy; and then to seeking to integrate the product, service and ethical messages within a single 'co-operative' framework, with the sense of warmth and humanity which the co-operative principle implies. (The approach to the brand makes an interesting contrast

the 'protection' theme of Norwich Union, another case study organisation.) As this study ended, a project was in progress to evaluate the worth of the brand to the Bank.

Decision-making on information products

Decisions about externally directed information products for customers follow from marketing decisions. For personal customer products, decisions by product managers are taken in liaison with the Marketing Services Manager. Each campaign and its associated products is supported by a business case relating to business objectives, and giving a cost breakdown.

Example

A summary of a proposal for a customer newsletter, initially as a pilot for customers in the North West.



Objectives:

- To inform customers of developments at their bank
- To increase customer loyalty
- To cross-sell the Bank's products/services
- To obtain feedback from customers
- To become self-financing.

Target audience:

The Bank's personal customers

Style:

[Details of format, content, approach to readers, illustrations, paper, use of colour, frequency, distribution]

Content:

'The value of the newsletter to the customer has to be immediately apparent for it to be saved and read/skimmed rather than binned as junk mail ... This means information which is closely targeted and in a quickly assimilated form.'

Targeting:

[Analysis based on the assumption that the readership will be a cross-section of the customer profile; unique features of that profile suggest that the 'special partnership' between customers and Bank should be 'the pivot of the whole paper'; easy direct response should be made easy.]

Content – Regular:

'Each issue should provide customers with:

- Information on the Bank's repositioning, ie developments in the areas of corporate responsibility, ethics, Mission Statement, Customer Charter.
- Education on the Bank's products and services
- Advice on personal finances
- Regional information'

Average length of items:

200 words; 12 such items proposed for each issue (suggested content for first few issues given in appendix).

Editorial team:

[A small team of people whose areas of responsibility cover the relevant subject areas to support the editor (who will have editorial control of what goes in)].

Timing:

[Estimate of time required to produce an issue]

Monitoring:

'to assess the success of the newsletter and plan its future direction, an accurate means of customer research is necessary'. The recommendation (on the basis of the experience of research firms) is for follow up telephone interviews with a small sample, rather than a questionnaire included with the product.



The outcome was *In Touch The Co-operative Bank Customer Newsletter*, published from Autumn 1993 (subsequently developed further to become the present *Customers who care*).

Costs and budgets for information products

No figure is available for the Bank's total expenditure on information products and presentation; it forms part of the marketing budget, which is a large one, but is not published.

Provision for information products is made in the annual budget estimates by staff in the relevant product areas; occasionally an ad hoc budget is sought for a special product which could not be envisaged at the time of preparing the annual estimates.

Each campaign and the products associated with it has to be supported by a proposal related to key business objectives, and a cost breakdown. The cost information in the customer newsletter proposal quoted above was in the form of per-issue costs for:

- Design, typesetting and printing
- Mailing
- Postage

(excluding initial design and on-going photographic costs, and assuming in-house writing of copy).

The information products

A brief outline of representative products current during the period of the case study, with notes of development during the period.

Products for internal audiences

Banknotes

A quarterly staff newspaper (tabloid format, four-colour, 8-page), with a mixture of work-related and 'human-interest' content. It is designed and produced by an outside company. Visually it is fairly chaotic and the typography does not make for the easiest of reading. Recent issues contain features and news items on a biodegradable affinity credit card launched by the Bank with Greenpeace, the Bank's business banking services, its Investors in People award, a disability-awareness programme, EC ecological legislation, and Bank staff involved in conservation work and in charitable fund raising. Its future development will be towards being more of a magazine, to complement other forms of in-house communication such as email and the office system.

Personal sector marketing and sales campaigns

A bi-monthly, following up the progress of ongoing campaigns, carrying contributions from Customer Services and anyone else with promotional activity. The content consists of summaries of recent and current activities, priorities for action for the month, advance notice of forthcoming activities, contact points for queries, customer response phone numbers for different services, and product charts which give an annual overview for the activities of each product group. A4, spiral bound, word-processed origination. The typography is a mixture of symmetrical and asymmetrical. Text pages have 3-col grid, with one column devoted to marginal heads, and 2-3 forming single column for text. It scores well on legibility and accessibility (though the page of contact points and the product charts would benefit from some design input) and uses the same range of recycled materials as external products.

Corporate and Commercial marketing campaigns

A quarterly summary, with sections on Sectors, Product News, Projects and Activity charts. A4 spiral bound, word-processed origination, landscape format; it is well designed and structured.

Retail Banking (Sales) Division: Technical Training Guide (1995)

For staff in the Division, the Guide 'is designed to contain all the information you require for your personal development needs relating to technical training.' The content includes 'Training Tracks' - charts showing training and development progression for different jobs in the Division; and details of in-house and external courses available. A4 loose-leaf; carefully structured, and written in an accessible and non-condescending style.

Training Newsletter. Group Resources (1997)

First issue of planned quarterly newsletter on training in one of the Bank's Divisions - appropriately the one which includes Human Resources. A4 four-page folder, two-colour.

Business Briefings.

An innovation introduced in 1998 (in response to the 1997 Staff Survey) covering all business issues, and replacing an earlier (and not conspicuously carefully presented) photocopied product which was described as a kind of script with prompts to encourage managers to communicate with their teams, on key events

such as the Bank's annual results and profit share arrangements. *Business Briefings* is used in face to face team briefings, with provision for electronic feedback.

Grass roots initiative: Staff Guide

The Guide was produced in conjunction with a major communications campaign which started in May 1993, addressed to the Bank's own customers and those of other financial institutions, with the aim of making them aware of the Bank and what it stands for, by a variety of media, including, for the first time, a TV campaign. The Staff Guide was addressed to staff, introducing 'What we stand for', 'What we won't stand for', and what the campaign would mean for their own work. A large-format product, designed by the group responsible for the campaign materials for the public, and extremely successful in concept and execution. There could hardly be a better way of enlisting staff commitment to ethical and environmental policies than by designing their material as part of whole campaign package, to same standards.

Grass Roots Diary (1994-1995)

The *Diary* was distributed to all branches in connection with the Bank's Grass Roots Award for the branch which contributes most to local community activity. It gave the dates of national charitable events as a basis for planning local activity, provided suggestions for converting Grass Roots activities into sales, and allowed for recording activities, funds raised, presentations given, etc. This too was large format, designed by the same group; it was thought out to the last detail, including a pocket at the back for press cuttings, etc.

The *Grass Roots* products are no longer issued.

Staff video (1998)

Another product resulting from the findings of the 1997 Staff Survey, which identified a need for more effective and consistent internal communications

Products for external audiences

Financial Statements (Annual Report)

The Annual Report used to be a fairly conventional product. The 1993 version was typographically rather unappealing; spacing was poor, and the measure used in the report was too short for comfortable reading. There was little relation in design terms between the report section and the financial statements, where the text

measure was too wide. Coated paper and a bad choice of typeface for it made for low legibility.

Since 1996, the Bank has presented its financial report as a paired document with a report on its social policies, to create an unusual form of annual report. The first of these, *Strength in Numbers*, introduced its Partnership Approach. In 1997, the financial report was paired with the first report on the implementation of that approach, *The Partnership Report*. The reports have a distinctive typographic identity, and are designed by a company which has worked for the Bank for many years; the copy for the Partnership Report is also the product of a group with which the Bank has a long-term relationship.

Ethical policy

Initially (1992) a 24-page booklet – *What we are and what we stand for* – was produced. It argued the case for commercial concerns having an ethical policy from first principles, and outlined the historical background of the Bank's policy in the co-operative movement. Feedback suggested this was too wordy, so the next version (1993/94) was reduced in content, and presented as concertina folder with 8 pairs of YES/NO images and brief text. (It is characteristic of the Bank's approach to information presentation that changes with time are always in the direction of minimising text). This was the first of the square format leaflets which are now a familiar feature of the Bank's output. A set of 8 paired posters was issued at the same time. More recently (1998) the policy has appeared in an 8-page A5 brochure, with examples of how 'profits and principles can go hand in hand', and of the Bank's positive investment in ethical enterprises, and an updated version appears in the January 1999 issue of *Customers who Care*, embodying new commitments arising from consultation with customers (through a questionnaire in an earlier issue).

Word of mouth

An A4 2-colour folder to encourage customers to recommend a friend. It carries an outline of the ethical policy, together with details of services, service guarantees, and figures indicating the high level of satisfaction among the Bank's customers. The presentation of information through text is well structured and coherent; visually, however, there is little to tie the elements together, and use of figure and ground device on cover, while ingenious, doesn't really work.

In Touch. The Co-operative Bank Customer Newsletter (now *Customers who Care*)

This began as an A3 sheet, folding to A4 and then became an 8-page A4 magazine issued at irregular intervals. The proposal (see p65) was followed by a period of research, which looked at other products, distribution, etc. Although a pilot was proposed, in fact it went straight into nation-wide production. Big changes in typography were made between the first and second issues.

In 1998, it was re-launched and re-branded as *Customers who Care* issued quarterly. The content concentrates on brand stories and service messages, and the title links it with a campaign in which customers are invited to vote each month on charities to which the Bank will contribute. Recent issues have dealt with Internet banking, the arms trade, and the updated Ethical Policy. The format changed again with the re-launch, to a n eight-page folder. I noted at an earlier stage that *In Touch* went on getting better in content and design, the grid worked well for both two and three column layout, and accommodated all the elements comfortably. The re-launched product maintains the high standard of typography and written presentation.

Personal customer services material

Policy and customer leaflets

This includes a series of nearly square format leaflets, among them a set of three on current accounts for students (account details, bank tariff, and application form); the text makes a strong point of how the account is differentiated from other banks' student accounts in not offering facilities that could lead them into serious debt. Recent additions include leaflets on demutualisation of building societies, and the Bank's service for selling windfall shares, and its Customer Service Guarantees. The square format policy and customer service leaflets, designed by the group responsible for many of the Bank's products, make a coherent series in terms of approach to readers, typography, visual elements, and materials. (It is unfortunate that in the Visa leaflets conditions of use and other essential information falls prey to small print and poor spacing.)

Other products on customer services are in different formats; the telephone banking leaflet from the Business Registration centre for example is A4 gate folded, with a tear-off registration form, while leaflets on travel insurance are presented in a non-standard format. These are less successful; there is no family resemblance, they are typographically disorganised, though the text content is good, being both conceptually well organised and well written. The Customer Charter Chapter One is

a real typographic disaster; printed throughout in capitals, which notoriously makes for difficult reading, its measure is also too short for the type size used, interlinear and inter-word spacing is poor, and the placing of the charter seal is ill-judged.

It was intended in 1996 to aim at one or two standard formats for leaflet-type materials, as part of the implementation of the Bank's Corporate Identity programme; implementation of this change is now planned for 1999.

Standard letters

These are not often considered as an information product, though they deserve to be, as work by the Communications Research Institute of Australia has demonstrated (see, for example, Stasko, 1994, who reports on a case study which suggests that 'Standard letters are as normal a part of most large organisations as paper clips. Rarely are they given much thought unless you can't find one. Unlike paper clips however, the potential difficulties for organisations caused by standard letters can be equal to the actual number which are sent out each day.').

A multi-department project was carried out in 1994 to rationalise all standard letters, leading to a reduction in their number from 3000 to 600. The project, which looked closely at content and presentation was related to the development of the corporate design manual (see below). New standard letters were produced by professional copy writers to briefs prepared in-house; there is reported to have been 'intensive interaction in getting them right'; all were re-written to ensure that they all spoke 'in the same tone of voice', as well as following house style. In use, appropriate letters are generated by the computer system as events occur relating to customer accounts.

Products for business customers

Business advantage

This newsletter (2-colour, A4 stitched, 8 pages) was initiated in 1994 on the basis of research among business customers, and is mainly oriented to small and medium enterprises. Content of a recent issue includes: features on the Partnership Report, and on factors to consider when expanding a business; items on tax investigation of small businesses, the Information Society Initiative to promote the use of information and communication technologies in business, the Industrial Common Ownership Movement, new developments in the Bank's electronic business

banking service, and its GreenLease package; and a questionnaire about the magazine, and their own business, with particular reference to the internet to and to Year 2000 compliance.

The design of the first issues presented problems of legibility in reversed out panels over a tint at the edges of page, especially the ones which were set ragged left. Text was run round illustrations; the type size too small and the light sans face was not very legible. While the content was useful, the text was less accessibly written than that of some other products from the Bank. A re-design in 1998 changed from a three-column grid to one that allows two and three columns on the same page, while retaining the other features which make for difficulty in reading.

Business 2000 (2-colour, A4 4-page)

A product designed to keep business customers informed of the Bank's activities in relation to the millennium – not only Year 2K compliance, but European Monetary Union, the introduction of the euro, and the steps the Bank is taking to renew its install euro-compliant software and upgrade the processing power of its foreign currency system (from the start of 1999, customers have been able to transact, save or borrow in euro).

Financial Services for Business

A folder with 2 A4 brochures on the Bank's services for voluntary organisations, and on its independent financial advice. The graphics are weak and the text more spread out than the content warrants.

GreenLease

GreenLease is a product recently launched by the Bank to help businesses finance environmental improvements, which often require expensive capital equipment, through Asset Finance rather than loans. The Bank's Ecology Unit has expertise in both helping producers of such equipment to market it, and in developing asset finance packages for purchasers. The supporting information products (an A4 6-page folder, and a large-format A3 8-page brochure) are very distinctive. Their use of large areas of colour over half-tones is reminiscent of the earlier *Grass Roots* initiative products, and was selected in order to differentiate GreenLease. The copy is economic of words, and of high quality.

Electronic products

The Bank's web site was set up in 1996. Before that date the Bank had asked help from academics on a pilot web site. Their approach was simply to transfer existing products as they stood to the web pages they developed. The situation was changed by an approach from a small web site company, which took the initiative of designing some specimen pages for a Co-operative Bank site 'on spec'. The initiative paid off, and the company was commissioned to set the site up. In 1998 it received the FT Business Website of the year award.

The company provides technical input as web master. Management of content of the site is in-house, by a member of marketing staff, who acts as interface between the Bank and the company. Product managers go through her in updating and adding to their material on the site, and she works in daily communication with the company.

The site is rich in content, well structured, with a straightforward contents page, and easy to navigate. The main sections are:

- Internet banking
- Our ethical approach (Ethical Policy statement Ethical Policy slide show – 'see what we will and will not invest your money in'; Customers who Care campaign; Ethical Policy Questionnaire; Fair Trade Coffee Challenge; Strength in numbers; Profits and Principles; Ethics and you; The Landmine Debate; Mission statement and Ecology Mission statement)
- About the Bank (the Partnership Report; Financial Statements; Customer Service Guarantees; the Banking Code; Contacting the Bank)
- Accessing the Bank (Telephone Banking; Branches, cash machines; Banking at your Post Office; Interactive Television banking)
- Business Banking (Millennium issues; Year 2000 Compliance); Business Direct; Business Visa Card; Business Deposit Services; Financial Director for Windows; Business Banking Charges)
- Employment Opportunities
- Interest Rates
- Personal Banking (The Millennium Bug; Personal Loans; Current Account; the Debit card; Student Current Account; Save Direct Savings Account; Pathfinder Savings Account; Tessa Savings Account; Guaranteed Investment Bond; Home, motor and travel insurance; Travel service)
- Visa Credit Cards
- Online Application Forms

Full text of key documents such as the *Partnership Report* is available on the site; key sections of others, eg *Financial Statements*, are reproduced; other material is complementary to print on paper products – for example the Customers who Care campaign has a page which highlights some of the key issues supported, with a graphic to show the total contributed to charities.

One interesting feature of the site at the start of 1999 is a brief from the Royal College of Psychiatrists, sponsored by the Bank, for a student information design competition. The objective is to influence opinion formers in the media to change their attitudes around mental health. Content is to be based on a lecture by a psychiatrist, and the brief requires students to 'translate this conviction into print, taking full advantage of the components inherent in the medium – typography, imagery, colour, etc.'. Competitors are asked to produce a front cover and four spreads. The winner (s) will work with the Bank's long-standing design consultants (The Chase) to carry their entry into production.

Experience of developing the site has brought changes in ways of thinking about the relative roles of printed products and the web as vehicles for information. Initially printed literature was transferred as it stood to the web site; now, there is what is described as a 'whole new approach to content', taking advantage of the facility the web provides for creating links to other existing material, instead of repeating it in a number of individual contexts. The next step is envisaged as looking at how printed and web versions of information products can complement one another, to meet the various needs of users.

The Bank does not as yet have an intranet, but is considering it as a logical next stage; meantime email and the electronic office system are used for circulars, which are no longer issued in print.

Information resources

The Bank's customer database, set up in 1982, is potentially its most significant resource in planning information products – though in the early stages of this study that was said not to be fully appreciated outside Marketing Services. It was suggested that the Bank was 'just starting to learn how to make use of it'. The age of the database possibly accounted for the reported fact that, while most of the fields now held data, it was not yet possible to ask and get answers to the kind of questions that would guide the development of campaigns and products.

By the end of the study (late 1998), the importance of the database was said to be probably better recognised outside Marketing, while Marketing staff themselves,

the main users, were constantly learning; there was, however, still a long way to go. Its use is still system-driven; its origin as a system for matching products to customers, means that interrogation involves a special search which has to be done by IT. The long-term aim is to have it available for interrogation on desktops; meantime it still lacks flexibility and the solutions are still *ad hoc*. Meantime, Marketing is developing its customer contact strategy, to make more history available of what customers have received, and their response. Work has also been done on customer life styles and values. Restructuring of the marketing function has led to closer relations with the IT team and with credit management, and to an agreed view on what data need to be extracted, and on objectives and how to measure results. Information crossover has benefited the recruitment of customers, and increased knowledge of customer behaviour is used in making decisions on what to offer them; for example knowledge of customers' credit-worthiness is used in compiling Visa mailings, and so fewer applications are now declined.

So far as other information resources are concerned, in the early 1980s the Bank had an economic intelligence unit in the Marketing function, which scanned the press, monitored economic developments, and maintained international liaison with other co-operative organisations. This no longer exists (for reasons which are described as 'lost in the mists of time'); nor does a library which once existed in the Bank.

At the start of this study staff in Public Affairs and Marketing scanned the press against lists of key topics of interest to the Bank. Photocopied cuttings were circulated weekly to key managers, together with the output from an outside cuttings service. This continues, now that the organisational structure has changed.

The Bank also buys reports from commercial monitoring services for audio and TV; an annual roundup of these is circulated. Economic intelligence is sought in relation to specific products, to which the Bank might be alerted by topics which show up in the cuttings. This sometimes leads to the commissioning of research; a study was commissioned, for example, on money advice agencies. Ethical research products are bought 'off the shelf' from the Ethical Research Agency and Manchester Business School. One member of Public Affairs staff has special responsibility for research.

It is still not clear to me how the Bank decides what knowledge and information needs, how it is acquired and managed, and who has responsibility for the decisions, for any information strategy that exists, and for information management. Information interactions are certainly well developed, however. At the top level, a small executive team meets monthly, and this meeting is described

as the place for presenting new ideas upwards without layers of line management getting in the way. An example quoted was of a recent paper on relationships with credit unions put forward by a manager with particular knowledge of this field. It seems at any rate to be part of managers' responsibility to know the Bank's business plan, to take information initiatives based on it, and to know who to bring in on projects.

Human resources for information products

The Bank is described as employing a mixture of 'home-grown' skills developed on the job, and external recruitment of trained staff.

Writing and editorial

Some writing is done in-house. One staff member in Public Affairs divides her time equally between work on publications and PR. The decision about whether to use this in-house writing and editorial capacity or to go outside is left to the people responsible for particular products.

While requests for advice are received from other banks about how to run customer newsletters, the tendency in the Bank is to go outside for writing jobs rather than using the in-house capability.

For products which are to be written outside, a brief is produced in-house by the product managers concerned, and the writing entrusted to a copy agency. Strong emphasis is placed on briefing and on in-house consultation with stakeholders in the Bank (up to 65 parts of Bank may be involved in planning for some products), and there is what is described as 'intensive interaction' with outside writers. The Bank has a long-term association with its main copy writers; their in-house contacts provide a learning process for them, so that over time they have acquired the benefits of inside knowledge.

The 1998 *Partnership Report*, a major product, was a co-operative effort between the Partnership Management Team, who collected data, copywriters with whom the Bank has a long-term relationship, the staff member who prepared the design brief and the design group commissioned. Independent auditors were also involved.

Design

All design is commissioned from various outside agencies. One in particular has been used for several years, and is responsible for the ethical policy and related

materials which are the most distinctive of the bank's information products. All product managers are however free to go to whatever design groups they choose, so a range of design approaches is used. (The corporate identity which has been in the under development since 1994 is partly planned to move the Bank towards unified presentation – a process still continuing at the end of this study.)

Training

No training appears to be given in such activities as writing, editing, or working with designers and copy writers; skills and experience are acquired on the job by people who have a variety of backgrounds in the Bank.

The technology used for information products

Apart from word-processed documents for internal use, all information products are typeset outside. A few years ago, there was a cautious first venture into in-house desktop publishing. At that time, the intention was to develop the use of desktop publishing within Public Affairs for information products; on reflection, however, it was decided that this could lead to Public Affairs becoming a print unit, and so the department pulled out of it.

The presentation of information

For both internal and external products the Bank seeks to achieve professionalism in presentation, by means of text and visual organisation which match the information content and the intended readers, and which help readers in using the products for the purposes for which they are intended.

One aspect of this professionalism is embodied in the Bank's corporate identity. The first step in this direction was introduced in the mid-80s to overcome what were seen as the negative associations of the phrase 'Co-op Bank' with old-fashioned co-operative stores in the minds of the public. A process of revision started in 1991 on the basis of in-house thinking; a decision was taken not to follow the usual course of going outside to commission a concept from a specialist consultancy. The Bank worked with the design group which has been responsible for its most distinctive products, with which it has a long-standing association. The corporate identity is unusual in its high information content, which supports the underlying aim of setting the Bank apart from the competition. Ethical policy is the key

differentiator; the effect of its environmental aspects is reflected in the choice of earthy colours, and the use of black and white visuals.

The approach to corporate identity is made clear by the Corporate Design Manual:

'Design discipline must be used to organise and clarify but should not be seen as a dictatorial straitjacket that stifles initiative. We regard it as a framework that, above all, makes sense and into which creativity can be channelled.'

The manual's content covers:

- 1 Logotype, symbol, image (based on the old cornsheaf), typefaces (Gill Sans and Stempel Garamond, from Bitstream Library)
- 2 Stationery including forms
- 3 Publications:
 - In-branch literature
 - In-branch promotions
 - Statement inserts
 - Direct mail
 - Leaflets
 - Posters
 - Application forms
- 4 Signage
- 5 Vehicles
- 6 Uniforms

It includes grids, and examples of production errors, under the apposite heading of 'What we won't stand for!' The manual is now being applied to all Bank information products.

Production

The Bank uses a wide range of typesetters, printers and other professional services for its information products (not drawn from any 'approved list'). Liaison with them over any particular product may be handled direct by the in-house product manager concerned, or by the design group commissioned for the job.

Testing, monitoring and evaluation of information products

Pre-production research/testing on ideas for new products

Various methods are used. In some cases, design groups provide pilot versions of products for testing with a sample of the intended users. This involves asking them what they think the message is meant to be, and getting them to find specific pieces of information. The students' account brochure was piloted for eight weeks, looking especially at the balance between brand, product and service information. Formal feedback was sought via commissioned research and informal responses from everyone involved in launching the products in the branches. Focus groups are used on other occasions; they were used, for example, for the products on telephone banking.

Post-production research

Externally directed products. The Bank aims to build in the process of obtaining feedback on its information products where possible, by making it easy for readers to respond to key questions about them. It uses both printed and electronic questionnaires for the purpose. The *Partnership Report* on the web site, for example, has a straightforward and well designed questionnaire (only eight questions in all), which aims to find out how many people have read the report, the format used, motivation for reading, the 'partnership group' to which readers belong, their views on how well the report represents their concerns, their opinion of the ethical and ecological policies, their response to the quality of content, understandability, writing and design.

The comments of the independent assessors on the 1998 *Partnership Report*, as well as those of respondents to the questionnaire have been used in planning the next one which is in progress as this case study ends.

Follow-up research was carried out on *In Touch* by means of phone interviews with a sample of 200 customers. They were asked if they had read it; what features they found particularly informative, with prompts relating to specific features; and their ideas for other topics. The findings were published in *In Touch*. The main features spontaneously recalled, by the 33 per cent who recalled receiving a copy, were the ethical policy and the good presentation. There were few positive dislikes, and the things especially liked were the fact that it was well presented and easy to read, the useful information content, and the idea of producing a customer newsletter. A further round of research was undertaken for the re-launch in 1997 of

Customers who care, which replaced *In Touch*. Similar research was done on *Business Advantage*.

What are described as 'fairly sophisticated market research techniques', both qualitative and quantitative, are applied to the actual products (as distinct from the information products which support them). While the Bank does not benchmark any of its products, it is said that at least two other organisations have benchmarked their own products against the Bank's. Product launches have been researched, for example the low-cost credit card launched in 1996. Focus groups enabled trade-off analysis to be narrowed down to critical features: the low rate and the fact that there is no fee. The campaign for the card was very successful; it significantly undercut the market when launched and took a first swathe of people ready to switch. It is said to have changed the way in which users think of short-term lending; Visa is seen as an alternative to an overdraft or personal loans, capable of being used for wider range of transactions.

In advertising, the results of campaigns are analysed to measure their effects and learn lessons which shape decisions on future advertising. The technique of 'champion-challenger testing', which involves bringing in one new factor at a time to a successful strategy to observe the effect has been used, for example on the Bank's radio advertising. Information for decision making is said to have improved in quality and quantity, and to have become more standardised, permitting reliable comparisons.

Internal products. Here too, the Bank uses a variety of methods, and seeks to gain as much immediate feedback as possible. The video *Connecting you to the future*, for example, went out with a short questionnaire included in the box, and the responses made the starting point for new video.

A survey early in 1994 showed that staff did not read *Action Line* (a monthly marketing newsletter, written in-house, designed and produced outside) which ran for 66 issues, because they already received the information in it from other sources. It was replaced by a *Business Pages* insert in the staff newsletter, *Banknotes*.

Group discussions were held on *Banknotes* itself, which suggested it was a generally popular product, with a generally acceptable balance between bank- and people-related items. (As this case study was ending, it had just been decided to re-launch the newsletter in a redesigned form, to a new brief.)

An evaluation of the present situation

This evaluation is by way of an analysis of 'Strengths, weaknesses and opportunities' in respect of the way the Bank manages its information products. It identifies a number of positive features, one or two more problematic ones, and suggests some opportunities for development.

Positive features

- The recent structural change that has brought Corporate Affairs , which is responsible for information products, closer to centre of decision making
- The non-hierarchical and project-centred approach to managing information products
- The rich information content of everything the Bank produces over the whole range from advertising to purely informative products. The mission statement in particular is stronger in content than is general with such documents, and the policies and strategies which have been progressively developed from it are also rich in content and form the basis for unusual information products, such as the statements of ethical policy and the *Partnership Report*.
- The very good relations between Bank staff and the design groups, copy writers, and web site contractors they work with.
- The attention devoted to preparing briefs for outside writers and designers and maintaining interaction with them over the long-term. The quality of the best of the end products can certainly be attributed in part to this.
- Serious pre-publication testing of products by finding out how actual users manage in using them for the purposes they were designed for, and the range of steps that have been taken for post-publication monitoring and evaluation.
- The readiness to be self-critical and to present critical comments of staff and others in its own information products
- The high quality of information products intended to extend knowledge of the Bank's policies, and to reach particular groups of customers and potential customers; and of some of the information products which have been developed for staff, especially those for the Grass Roots initiative.
- The approach to corporate identity as a product of in-house thinking rather than something to be bought from an outside consultancy. The strength and power deriving from its unusually high information content are almost certainly due to this.

- The recognition of standard letters as a significant information product, and the attention paid to them.
- The development of an excellent web site, which is well structured, well designed and well managed (and the welcome information design approach shown in the design competition which the Bank has sponsored with the Royal College of Psychiatrists).

Problematic features

- The continuing lack of unified textual and visual presentation, presumably because of the freedom enjoyed by different divisions in the group in deciding who to commission for writing and design of products. This, however, seems likely to change in a positive direction, with the full implementation of the standards manual.
- The current difficulty in exploiting the customer database fully, to support the planning of information products to meet customer needs. While the long-term aim is to have it available for interrogation on desktops at present it still lacks flexibility and the solutions are still *ad hoc*.
- While the Bank invests in research findings, and commissions research on topics related to its policies, which forms part of the basis for decisions on information products, the in-house 'current awareness' processes (press scanning and circulation of cuttings is part of the responsibility of people in Corporate Affairs who have other jobs to do) seems rather old-fashioned today, and unlikely to guarantee picking up everything of significance.

Opportunities for development in information products

- While the Bank is essentially an information dependent organisation, and manages the presentation of information to its outside and inside worlds very effectively, it is still not clear to me how it decides what knowledge and information it needs, how it acquires and manages its information resources, or who has responsibility for any information strategy that exists, and for information management. It would certainly appear to be well placed to develop an information strategy explicitly linking its use of information, including its information products, to its business strategy.
- In this connection, the business process re-engineering initiative undertaken in the early 1990s could have been used as a framework to look at information

products as a process, as Davenport (1993: 82) suggests, in arguing that they are 'critical to process innovation success':

'In more and more businesses ... the end product is a unit of information – an insurance policy, consulting report, stock transfer, legal brief, advertising campaign, movie, or television program ... But ... these information processes ... are unlikely to have been viewed and managed as processes. No one knows where they start or end or how their performance should be measured.'

- There is potential for evaluating the contribution of the Bank's ethical policy, and the information products in which it is expressed and communicated, to the 'bottom line'. New approaches to assigning a value to intangible assets are now being developed and applied, and they bring the possibilities outlined by McPherson (1996):

Corporate ethical conduct is being addressed by the adoption of required standards for corporate governance, and by the inclusion of ethical and environmental audits in company annual reports, supported by research into measurement frameworks for ethical behaviour ... When policies for good governance and environmental protection are implemented, they incur compliance costs and produce benefits that improve the public image, induce customer loyalty, and reduce the expensive risk of penalties and boycotts. In other words ethical behaviour can have a real influence on the "bottom line". Such policies act as variable instruments that generate value (ie they are quasi-assets) and will need to become measurable and calculable if they are to be treated as corporate resources rather than benchmarks and slogans.

(It is encouraging to note that one of the Bank's Executive Directors was a member of the 'Hawley Committee', a group of representatives from leading businesses set up as part of the KPMG IMPACT programme to promote the concept of a 'Board agenda' for information in the UK.)

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Case study 5

Datastream International¹

Background

Datastream International is a business which makes its living from acquiring data, adding value to it by bringing it together and providing tools for analysing it, and selling the database which is the resulting information product, together with supporting documentation in both electronic and print-on-paper form. The data relate to financial and business performance, covering a range of securities, equities, bonds, commodities, etc. as well as economic statistics. A distinctive feature, setting Datastream apart from others businesses in the field, which sell real-time information, is the long historic runs available for much of the data offered, in some cases going back to as early as the 1950s. Depth of data as well as chronological span is available: not only price, but dividend yield, market value, etc.

The company buys high-quality data from the best suppliers world wide and sells on the end product to clients, on an annual subscription basis (the annual fee for unlimited access to the data to which they subscribe is not less than £30,000). The demands of local markets differ, but the core requirement is for access to a range of company accounts data, etc. The basic service gives access to text and tables; add-on services offer graphics and charts, and a datachannel, which allows customers to download data to make their own analyses – a range of about 25 mathematical functions is offered. The service is screen-based, with 90 per cent of the subscribers now using DS-Windows, offered as part of the service.

The company was set up in the 1960s as a research department within a firm of stockbrokers. Its history since then has been a varied one. It was floated on the stock

¹ Note: this case study was last updated in May 1999; unfortunately pressure of other work made it impossible for some of the respondents in Datastream to answer final questions. Where for this reason it has not been possible to ascertain the current situation, this is stated.

market, run by a consortium which included British Oxygen. By 1987 it was part of Dun and Bradstreet (whose influence is described as being something of a 'dead hand'); in the early 1990s it was sold to Primark Global Information Services – a US utilities company which decided to get into financial information and engaged in a programme of acquisitions. Datastream was its first major financial business acquisition; it has since added a company which deals in forecast data, and ICV – UK suppliers of real-time information – making a total of about twelve companies in all. In 1997 the decision was taken to merge ICV with Datastream; the ICV chairman and managing director now heads Datastream. The general perception of the change within the business is positive; it is seen as having a vitalising effect.

Customers

The company was originally developed as UK-focused, and initially the main customers were from the City of London. One of the first non-UK operations opened in Rotterdam. As the potential international demand came to be realised, the company began to add data from other countries. A New York office was set up in the mid-1980s, and the company now operates in 24 locations, in all major financial centres. Its development mirrors the growth in international interest, especially in the USA, where it was something new for a business community which was traditionally inward-looking.

There are now two and a half thousand client organisations in about 30 countries: made up of market makers, brokers, insurance companies, unit trusts, pension funds, and other businesses which need in-depth information and a long time perspective for taking major decisions, together with academic institutions (which receive a 90 per cent discount) and some media customers (eg *The Investor's Chronicle*, with which Datastream has a reciprocal arrangement).

Key objectives

Datastream is rather unusual in not having any specific formulation of its objectives, and does not even appear to have complied with the current fashion for Mission and Vision statements, which is something of a pleasant change.

Organisational structure

The company employs about 700 full-time equivalent staff. The areas of the organisation which are particularly concerned with information products addressed to the company's 'outside world' of actual and potential clients are Customer Documentation and Corporate Communications. The former, which is part of Corporate Marketing, is responsible for all reference and instructional documents, while promotional products, positioning brochures, etc. are managed by Corporate Communications. Originally one person was responsible for both, and while they are now separately managed there is no hard and fast dividing line. There is a perception of a continuum running from advertising and PR to information provision, and of shared territory where 'selling and telling' interact. All products are seen as containing both promotion and information in varying proportions.

Internally oriented information products are the remit of a Business Intelligence section, consisting of three people and forming part of Marketing Division, which was set up in 1996 as part of the outcome of a Business Process Re-engineering programme, to fill a perceived gap in the internal market. The main content is product-based information about Datastream and its competitors, and the main audiences are the Board of the company, and the sales staff, for advance briefing information about new products under development

Organisational culture

Interaction between sales staff and customer support services (via monthly meetings as well as informal email contacts) allows passing on of information about what the customers say, what they want, and what they are doing. Good interpersonal relations are said to prevail between authors and product managers – one of the advantages of being a fairly small organisation.

Decision making on information products

Datastream has what it describes as a comparatively well defined market, consisting of 50–60,000 people world wide, which to some extent facilitates decisions on its promotional information products. A small range of media is used for the products.

Response from the market comes via: sales staff and customer support staff, who contribute to retention rates of 90 per cent.

They seek to build a long-term relationship through:

- 1 Training end users
- 2 Consultancy on daily basis, the feedback from this contributes to development of communications products to meet customer need
- 3 Proactive work – going out with news of new data/facilities; the feedback from this shapes how Datastream tells people about its new offerings.

Decisions on what data are to be purchased for addition to the database are made by Marketing, and are passed on to the manager responsible for documentation as the basis for planning supporting products. The form of documentation products aims to be responsive to customer requirements, and hence is very dependent on a good feed of information from Marketing.

Costs and budgets for information products

So far as budgets are concerned, documentation has separate lines for external print, for design, and translations. The Customer Documentation Manager prepares estimates on the basis of his knowledge of forthcoming requirements, together with the previous year's spending. Documentation department's expenditure on user information products in 1996 was about £433,000, representing about 1.3 per cent of the company's research budget.

The information products

As explained above, there is a perceived shared territory where 'selling and telling' interact in the products offered to the outside world by Customer documentation and Corporate Communications

Customer documentation

The documentation consists of products to help people use the database – both print-on-paper and on-line. At the start, there was nothing specially for this purpose, products were developed *ad hoc*, and no professional authors or designers were involved; what was produced was created by marketing staff, analysts, etc. In the 1980s an attempt was made to do something more organised, and a good deal of customer

documentation was issued (nearly all of it print on paper). The quality, however, left much to be desired, as the products were not seen as important and little serious thought was devoted to them. It was only in 1987 that a professional with relevant experience was employed to develop documentation.

His initial decisions were that the following types of documentation were needed :

- 1 Core reference material for the system as a whole, including Datastream definitions and a re-designed reference guide to the numerous alpha and numeric economic codes used in the system has large number of items with numeric and alpha codes.
- 2 User guides for each major service, covering both top-level guides (Datatypes and Program Summary), and guides to the families of programs which have to be run to access required types of data.
- 3 A supporting infrastructure of products to help users, including an introductory guide for new users, and a guide to indices, interest and exchange rates.

Over the period since then, this structure has been retained, but the mode and medium of presentation have changed. Some of the products are now just electronic – for example the reference guide to codes (although it is admitted that it is easier to get an overview from a printed product than from the on-screen version). New ‘infrastructure’ products, such as *Getting started* have been introduced.

Another comparatively recent innovation has been a newsletter (*Infostream*) for customers. ‘Newsletters’ were originally issued to tell customers about new data available and about upgrades of the system. The title was something of a misnomer as they were always restricted to a single topic, and some consisted of no more than a single sheet. They relied on customers to feed them into the appropriate files and so often failed to reach the people who most needed to know about changes. In 1996, an information designer who had recently joined the documentation team had the idea of integrating data and technical material into a real newsletter which was more market oriented; it received a good customer response.

The major products are described, with comments, below:

Getting Started

Non-standard size booklet, mixed symmetrical and asymmetrical typography

Content:

- Introduction to Datastream (Q & A heads)
- Types of data available

- Instructions for getting started using DSWindows
- Looking up and using codes
- Using Datastream programs
- Worked examples (of a dozen or so programs)

Data available are shown as matrix tables of countries versus data types. The 'Instructions for getting started' are a combination of step by step instructions with explanations of the menus, buttons, etc on the DSWindows screen.

Looking up and using the codes is a rather forbidding process; the screen dump illustrations are not very readable in some cases; the worked examples, however, are useful.

There is a very large amount of coding to be mastered, and a lot of steps are required to get to data. Frequent users no doubt overcome these obstacles with practice, for those who do not use the system regularly, getting to grips with it cannot be easy. However, the company reports good feedback on *Getting Started* from most of the markets that use it.

Program Summary

Format designed to fit into Filofax binder – a revised (1997) version of an earlier product. Main content is brief outlines of the programs offered, search facilities available and codes for searching; appendices on online help channels, research manuals available, the Datastream software, and expressions and functions for manipulating data. Indexes by program number and subject.

A comprehensive product in a useful form for reference. The 1997 edition contained one or two confusing features, which may have been left over from earlier versions: the Contents page listed 'chapters', but there was nothing on what should have been the chapter opening pages to identify them as such, merely a change in the running head; and the instructions specific to particular program families were not given uniform treatment. Since then, a new edition has been issued, which takes care of these aspects.

Datatypes

Same non-standard size as *Getting Started*. Matrices of codes for 'datatypes' (values for price, dividend yield etc) for stocks and tradeable instruments, showing the programs

for which each is available. Centred text in the stub column gives some odd effects in otherwise very legible tables, as ...

Financial year end of the next period to be
reported

DSGate User Guide

2/3 A4. Introduction to communications software component of Datastream's local area network products; description of functions and features; instructions for installation and use. Running some of tables across full text area leads to lines which are too long for easy reading, and some would probably be more manageable if they were not in table format at all

Infostream

A4, with a flexible three-column grid which comfortably accommodates text, tables and graphs. Coloured band from section cover design runs across top and bottom of inside pages. A valuable step forward from the *Newsletters* which it replaced in 1997, it represents a more sophisticated design approach. The cover design presents a strong image and the content has a standard structure, with a brief editorial, news of developments in Datastream programs, brief news items and a table of new coverage; the back page gives contact numbers and codes for help channels.

Corporate Communications

A range of 'selling' material – for Datastream as a whole, and for specific products – with a good deal of informative content. Products issued over the past few years include large card gate folders, A4 depth, folding to 2/3 A4 width; A4 2-p and 4-p leaflets; A4 illustrated booklets on products; and a couple of really odd folders that look like agency products and feature respectively Napoleon and Cleopatra. The variety of shapes and typographic styles is transitional.

With the later materials Corporate Communications have developed a distinctive design approach in the matter of images. At one point it seemed possible that this would be used for all the information products, including those from Customer Documentation, but at the end of the case study period, a different solution had been arrived at: Customer Documentation continues to use its own front cover and spine designs for their products, while incorporating a Corporate Communications designed

back cover (text reversed out of black, with a thumbnail version of the front cover, and a map of international office locations. Positioning of text on the front cover has been standardised, and the product family name runs vertically down the right-hand side.

Electronic products

The Datastream public web site is currently being re-designed to broaden the scope and reflect the new structure of the parent company; it is not yet accessible to public view.

The intranet site, managed by the Business Intelligence unit, was established in 1996 on the basis of a brief from a cross-divisional team aided by a consultant. The site carries descriptions of all customer-available information products, and has recently begun to incorporate downloadable pdf versions of Datastream manuals and help files.

The material consists mainly of textual information with a structure of standard headings; there are also graphs and tabulations. The emphasis is on information content; the vehicle is seen as less significant than the content. The opening page offers a menu of topics (What's new, Products, Customer Processes, Competitors, General Information, Software Products, and Strategy & Market Sizing, together with facilities for downloading software. A feedback form invites users' comments.

A typical set of headings for information about a Datastream product:

- Product aims
- Target market
- Customer processes
- Cross selling opportunities
- Product benefits
- Features
- Weaknesses
- Project history
- Future plans

A working extranet site has also been established; it currently carries a range of support information for registered customers and will soon carry the customer documentation intranet material .

Information resources

The company's main resource of information is the database itself which constitutes both the core product offered to its customers, and an information resource for those who develop and market it and for those who create the other products designed to support users and Datastream staff in their work.

Other essential information resources for a company in this kind of business are generally considered to consist of:

- Information about the market for the company's products. Datastream's main resource is the company intranet.
- Information about the customers, their response to the products they purchase, and their requirements for new or revised products

When this study began, the existing customer database presented some difficulties; useful information was spread around in various databases which made it difficult to get an overall picture of their customers or to find people who met specific criteria. A strategy was available in terms of database design but resources for the interface were lacking; it had not been given high priority on cost grounds, but remained a long-term project. By early 1999, the database was reported to be in much better shape and was being maintained. An integrated customer list was being used for monthly mailings of *Infostream*; the long-term strategy for a more sophisticated database still existed, but was not as yet scheduled for implementation.

- Information about competitors – the intranet is the main resource.
- 'Environmental' information about the factors affecting the data which the database covers, the industries/services to which the data relate, the economic, political and social situation in the countries of origin and the countries to which the database is sold, developments which may lead to new, etc.

(The company's Business Intelligence Unit is probably the main source, but it has not been possible to ascertain whether this is so.)

- Information about the company's own product range

This kind of information may be spread among Marketing, database designers, Documentation, Corporate communication, and Business Intelligence, but it has not been possible to get a reply on the subject.

- Information about relevant developments in IT. Each manager has responsibility for keeping up with the relevant technology; the Research Customer Documentation manager keeps an eye on developments relevant to information product generation.
- 'Historical' information about the company's actions and their results. This is part of the remit of Business Intelligence; the unit's analysis of the history of projects includes problems encountered and things learned.

Human resources for information products

Customer documentation

As explained earlier, at the start such customer information products as existed were put together by staff without specialist experience or training in this area as a sideline to their normal work. The employment of specialists trained in technical authorship began as a consequence of the establishment in the mid-1980s of a customer documentation service. One of the facts that emerged was that customers liked the service but not the manuals. The marketing manager decided that a documentation department was needed and recruited the staff member who is now the Research Customer Documentation manager to set it up. Initially he worked with one marketing executive, and then over the next few years he recruited staff, whose background was mainly, like his own, in technical authorship, on the principle that it is easier for people with the essential professional skills to acquire the necessary content knowledge than vice versa.

The creation of customer documentation products is today seen as an information design job (the only instance of this perception found in the case study organisations), and the people engaged in the work are all regarded as information designers. The current strength of the department is now six; some members of the department have taken the University of the South Bank course in technical communication and the human/computer interface. They have a range of academic and work backgrounds (most have worked in computer industry) which they draw on in various ways, and a good deal of mutual learning and interchange of experience takes place on the job.

Corporate Communications

External advertising, design, and PR agencies are used for positioning and contacts. Corporate Communications provides the experience which goes into preparing briefs and interacting with the agencies.

Business Intelligence

The work of the unit involves a lot of writing, as well as gathering material, writing and designing. They describe their role as being pro-active, and they commission research to support their work

The technology used for information products

Business intelligence

The main medium of internal information flow before the setting up of the company intranet was email. Development of the intranet was a wholly internal job, taking advantage of the fact that one specialist in Datastream was knowledgeable in the field. A team of three developed the company's intranet, using a Microsoft product. The perceived advantages of in-house development were the ability to use their own knowledge of the information that colleagues would find useful, working informally on development, and not being constrained by internal bureaucracy.

Customer documentation

The software currently in use includes MSWord, Corel Ventura (which may be replaced by Framemaker), QuarkXPress, Windows Help File, RoboHelp, FrontPage for the web site, Authorware for multimedia, Corel-Draw, and Photoshop.

The presentation of information

The respective contributions of Customer Documentation and Corporate Communications as at the close of this study have been described above.

A house-style guide for print-on-paper products specifies page size, fonts, spacing, etc.

The on-screen house style is more informal. Windows was initially adopted as it became available, then an interdepartmental working group was set up, to look at how other companies in the group were dealing with it. With screen design, the aim is for progressive improvement, rather than control by detailed manuals. The recent move from 16-bit winhelp files to 32-bit gives more presentation options which are now beginning to be exploited.

Existing products are said to be moving towards greater uniformity, which may well involve less autonomy for local offices.

Testing, monitoring and evaluation of information products

Customer Documentation

While the world of the data that forms the basis of Datastream's main product is one of rapid change, the customers who use the product need to have continuity in the way in which the information they require is presented, both in the database and the supporting documentation. This means that changes in presentation have to be stepwise, and that their effects need to be continuously monitored.

Initially the company relied on informal feedback from customers while documentation was under development. There is still some pre-publication testing; draft documents are produced for beta testing with customers, but it is reported that feedback seldom results.

More recently, some focused evaluation has been introduced by Customer Documentation to supplement the rather sparse information that comes from an annual survey of customers conducted by Business Intelligence, which includes some very general questions on documentation. Apart from the generalised nature of the questions, a high proportion of the respondents are said to be decision-makers who have probably never used the system themselves.

Customer Documentation's surveys relate to specific documents. One on economic codes involved meeting a range of users in their own working environments. In another, on the previous version of the Program Summary, staff talked through the product with 25 end users. The process led to finding that something essential was missing: a guide to getting started; which was then produced by the staff member who has carried out the survey.

Every new manual produced is sent out with a letter asking for feedback; since the inclusion of Datastream's email address in the manuals, the amount of feedback has increased, and the names of the customers providing it have been noted for future reference.

Another approach, initiated by Customer Documentation, is an in-house 'Customer Information Forum' run by Customer Services to bring together staff from all parts of the company who are in contact with customers. A principal aim is to review all information products that go to customers in the light of the knowledge contributed by people in contact with them. The newsletter *Infostream* described earlier was one of the first outcomes from this forum, together with other products combining information and promotion.

Cost-effectiveness of information products

No measurement of the cost-effectiveness of information products in financial terms has as yet been attempted, and it has not been possible to ascertain whether there is any intention of trying to do this in future.

An evaluation of the present situation

Datastream is one of three organisations studied in this research which have information products as their *raison d'être*. The nature of its main products means that it is particularly essential to have:

- High-quality customer support information products
- Close interactions among 'stakeholders' in the company and outside
- Strong information resources to support the information products.

Without them, the investment that goes into the main products which it offers to a highly specialised market would not bring a full return.

The requirements are to a large extent met. Customer Documentation is, appropriately, part of Marketing, and its products benefit from the existence of forums for constructive interactions between the originators and product managers, sales staff and customer support services. These interactions have demonstrable results in terms of identifying new products, notably *Infostream*, which emerged from discussions in the customer information forum.

The focused Customer Documentation surveys on specific products, which involve talking through individual products on the spot with end users are a valuable solution to the problem of getting usable and specific feedback from users.

The creation of customer documentation products is – unusually – seen as an information design activity, rather than a matter of technical authorship with ‘design’ as an ornamental add-on, and interaction and learning are regarded as part of the job.

There are comprehensive and well managed internal information resources in the form of the company intranet to support the creation of the products. The Business Intelligence unit’s approach to information about the company’s own products is particularly valuable in its analysis of project history, which includes problems encountered and useful things learned

To set against these positive features, there are one or two more areas where it seems development has still further to go. They include the continuing lack of investment in full and flexible access to customer information. Some aspects of the design of the unusually complex material that has to be handled in the information products to support customers – as briefly analysed in the study would benefit further attention; it looks, however, as though the general trend is towards their resolution.

And, while the perception of there being no sharp frontier between promotional and information products, but instead a shared territory where selling and telling interact, is an admirable one, at the present stage, it is not possible to be sure how well it works in practice, in terms of an integrated approach to the design of the products.

Case study 6

The Department of Trade and Industry

Background

History

The Department's ancestry (Foreman, 1986) goes back to the Committee of the Privy Council for Trade and Plantation, established in 1621 for the protection of the country's overseas mercantile interests. The successor to this Committee was abolished in 1782, but reinstated four years later when an Order in Council – still in force today – constituted a Board of Trade, with a secretariat, charged to consider commercial treaties, colonial acts affecting trade, import and export duties, and prohibitions concerning trade. This counts as the foundation of the present-day department. Its responsibilities in the two centuries since have undergone many mutations. In the early years it had a leading role in the great 19th century debates on free trade and the abolition of slavery, under such distinguished presidents as Huskisson and Gladstone.

The underlying pattern has been for the Board to acquire new responsibilities emerging from economic and social developments. At various times it has been responsible for the merchant fleet; education for industrial design, crafts and science; standards for weights and measures; trade marks and patents; railways and canals; labour exchanges and unemployment insurance; mines; the coastguard service; clothes rationing; registration of companies under the Companies Act; and civil aviation. Over time many of the areas it was charged with administering – such as education, employment, transport, and fuel and power – became separate departments of government (particularly under the impact of both World Wars), while more recently others have become separate agencies. Its weighty and varied history, and its rather amoeboid pattern of growth, perhaps account for the complexity that characterises the Department today.

One major change during the course of this case study was the election of a Labour government in 1997; this has had some significant effects on the way in which the Department works, which are reflected in the developments recorded here.

Scope and staffing

The Department of Trade and Industry today is a large and complex organisation. In 1998, at the close of this study, it has a President, three Ministers with responsibility for Trade, Science Energy and Industry and Trade and Competitiveness in Europe, a Minister of State, and two Parliamentary Under Secretaries, while from the Civil Service side it is run by two Permanent Secretaries (one of them responsible for the Office of Science and Technology) and nine Directors General.

The Department is also responsible for a number of Executive Agencies (Companies House, the Insolvency Service, the Patent Office, and the Radio communications Agency); others have in recent years been sold off. In addition, it has a high-level policy responsibility in relation to certain statutorily independent bodies (the Offices of Fair Trading, Telecommunications, Gas Supply, Electricity Regulation) and the Export Credits Guarantee Department.

Excluding the executive agencies, the Department employs about 5000 staff (1998 figures – the number decreased in 1995/96 owing to resource constraints, which led to voluntary early severance); the agencies bring the number up to about 10,500

Key objectives

The Department's overall aim is defined as helping 'UK business compete successfully at home, in the rest of Europe, and throughout the world.' The current objectives (1998)¹ it sets itself to this end are to:

- Improve the openness, efficiency and effectiveness of markets at home, in Europe and across the world.
- Ensure the Science and Engineering Base achieves standards of international excellence.

¹ They are now (June 1999) expressed in concise terms, as part of a first 'Strategic Framework', on the DTI web site, as being to 'Promote enterprise, innovation and increased productivity; Make the most of the UK's science, engineering and technology; Create strong and competitive markets; and Develop a fair and effective legal and regulatory framework.'

- Ensure consumers are given a fair deal, by improving provision of information, advice, representation, protection and redress.
- Improve and enforce the regulatory framework for commercial activity, while removing unnecessary burdens on business.
- Ensure secure, diverse and sustainable supplies of energy to businesses and consumers at competitive prices.
- Improve the framework of law and regulation for employees and employers in a skilled and flexible labour market founded on the principle of partnership.
- Increase the capacity of businesses, especially SMEs (small and medium sized enterprises), to grow and to improve their productivity, through innovation, adoption of best practice, and investment.
- Increase competitiveness, economic growth, enterprise and opportunity in the regions.
- Ensure that science, engineering and technology are used across Government and in industry to maximise sustainable growth and quality of life.

Comparison with the objectives under the previous government shows some interesting similarities as well as contrasts :

- Identifying the needs of UK business, through dialogue with individual sectors
- Ensuring that they are taken into account by Government and within the European Community
- Working for trade liberalisation worldwide, and helping UK business to take advantage of market opportunities
- Promoting competition and privatisation
- Promoting the economic development of UK energy resources
- Maintaining confidence in markets, and protecting consumers by effective regulation, while seeking to reduce regulatory burdens on business
- Maintaining a framework which provides a fair balance between the interests of employees and employers
- Stimulating innovation and encouraging best practice in quality, design and management
- Fostering the creation and development of small and medium-sized businesses
- Responding to the needs of different regions and areas with special difficulties

- Taking proper account of environmental issues in relation to its own policies, and ensuring that overall environmental policy takes proper account of its impact on business..

Organisational structure

Up to 1995, at the level below Permanent Secretary, the typical structure in the various areas of the Department looked like this:

Commands (consisting of a group of Directorates)

 Directorates

 Branches

 Sections

Changes in the senior management structure of the Department, in response to White Papers on the Civil Service of 1994 and 1995², were designed to meet the requirement for 'leaner, flatter management structures' and improved career management and succession planning.

They sought to:

- Create a top management group which contributes to the efficient management of the department and its resources
- Establish levels of responsibility reflecting the needs of work
- Reflect the patterns of work-flows in the Department
- Enable the Department to respond flexibly to changing circumstances and to facilitate both team working and vertical accountability
- Ensure that the business of the Department is effectively discharged.

In pursuit of these objectives, and on the basis of consultation with staff, the new structure reduced the number of layers of management in most areas:

² *Continuity and Change Cm 2627* and *The Civil Service: Taking Forward Continuity and Change Cm 2748*

Heads of Commands

Heads of Directorate

Heads of Sections

The new top management group of the Department consisted of:

Permanent Secretary

Central functions:

Solicitor and Director General, Legal Services

Director General Resources & Services

Chief Economic Adviser Regional & SME

Director Central Policy Unit

Director Business Support Review

Directors General of:

Trade Policy

Export Promotion

Industry

Energy

Director Information

Corporate and Consumer Affairs

Further changes mean that the current (1998) top management group consists of:

Permanent Secretary

Directors General for:

Trade Policy

Export Promotion

Industry

Energy

Regional and SME

Corporate and Consumer Affairs

Legal Services

Research Councils

Resources & Services

Together with:

Chief Economic Adviser

Director Communications

Director Competitiveness Unit

The information products

Compared with the other case-study organisations, the DTI is responsible for a vast number of products, addressed to outside and internal readerships. Just before this study began, a consultancy report on the Department's publishing processes revealed over 1700 external publications and a very large and increasing number of internal ones. The current (1998) catalogue of DTI publications in print (which also includes a few

videos and disks) has over 1000 titles - from leaflets and booklets to reports of up to 100pp and the occasional book-length monograph, and a separate catalogue of export publications contains over 250 titles. More than 20 different directorates and units originate publications, whose subjects cover the whole range of the Department's activities and responsibilities, from arbitration via competition law, consumer protection, innovation, IT and small firms, to standards and telecommunications.

At the start of this case study, as with most of the others, information products were more or less exclusively print on paper. Since then, there has been rapid movement towards making existing products, and new types, available in electronic form, via a DTI web site, as well as development of an intranet which will play an increasing part in access to internal information products.

The first moves towards setting up a web site were entrusted in 1997 to the former Information Directorate, which was said to be dealing with its responsibility 'very reluctantly and at arms length'. Since then there have been fundamental changes in the management both of the medium and of the content it carries, and rapid progress, which is described below (see p167)

Organisational culture

Historically, the Department has undergone many changes of scope, as indicated above in the background to its development. These have no doubt affected the way it has seen itself at various points in its history, as they have brought in people from many different disciplines and professional backgrounds, each with their own culture which has interacted with that of the civil service. More particularly, since 1979 there have been some very fundamental changes in direction arising from changing views about what the Department should be doing in such matters as sponsorship. All of these factors help to explain the autonomy of the commands and individual divisions.

The organisational culture of the Department at the time when this case study began exhibited traditional civil service features, in particular a concentration of information flow within functional hierarchies and an accompanying reluctance to countenance horizontal flow between different hierarchies. The autonomy of individual divisions could be energetically guarded, there was a tendency to believe that no other part of the organisation could have anything useful to impart, a reluctance (possibly well-founded) to rely on others for any support or service, or to learn from them,

readiness to undertake everything from within, and a certain distrust of central functions.

The traditional features were compounded by what is described as 'very fast decentralisation' in the early 1990s, by failure to accompany the decentralisation with identification of common ground, and by 'lack of imagination' on the part of the central functions. Examples abounded of duplicate initiatives, for example in relation to the Internet; information managers had an uphill task in trying to promote co-operative working between those with related interests. The Department as a whole was said to lack awareness of the significance of information resources and information management; and information technology specialists were reported as seeing themselves as the repository of all that needed to be known about information and its use. Central advisory functions - including those relating to information products - were sometimes seen, where they were known of, as at best a hindrance to getting on with the job.

The process of creating information products depends on the co-operation of people from different areas; and the difficulties created by the conflict between traditional vertical hierarchies and co-ordination of work across different hierarchies were specifically mentioned as a hindrance in one area which is responsible for many of the Department's publications.

One other part of the organisational culture, mentioned, for example, in the course of discussions of information products to support specific Departmental programmes, was the imposition of timescales deriving from political imperatives, rather than from the requirements of the programmes.

Some of these features of organisational culture were addressed by the report and recommendations of a Senior Management Review Team. The consultation process with senior staff carried out as part of the study included such findings as the need for means of dealing with 'cross-cutting issues' at top management level ('Although in theory Directorial and Command boundaries should be no obstacle to better team working, cross cutting issues are not always pursued or resolved sensibly'; and called for better handling of issues which cut across Command and management unit boundaries; for more clarity about the most effective use of specialists; and for better team working.

By the time this case study reached its final stage, there were noticeable, if gradual, changes in many respects. Observations from within the Department indicate that

people are now prepared to give information if others ask for it, though there is still a problem in getting them to do so without knowing how it is to be used. Some of the information difficulties created by decentralisation are coming home to roost – especially that of regaining critical information, such as that on health and safety, which was dispersed in the process of decentralising. Attempts are now being made to establish best practice in this respect and to ensure that it is followed.

The 1996 merging of the Library with information technology to form Information Management and Technology is said to have given positive results; library and information services have a higher profile, and are well respected for their knowledge of external online sources. The overall approach to information systems and technology has also changed quite fundamentally, with the establishment of long-term partnership over a 15-year period with the vendor for a major new system, ELGAR (Electronic Government and Administration Re-engineering), which will have a significant influence on the Department's web site, its intranet, and its whole approach to the publishing process.

Communications Directorate has assumed a more central role with the change of government, receiving more staff and more support; and there is, as might be expected, much more emphasis on presentation of information, both outwardly and internally directed, with strong ministerial demand in respect of form and content. The Directorate carried out a study of the effectiveness of internal communications as a whole in the autumn of 1998; contributions were invited from Management Units and Agencies, from Ministers and the Permanent Secretary, and from Trade Union representatives on a range of issues. The main topics covered suggested for consideration were lateral communication within and between various functions and levels; vertical communication; communication with central DTI services such as IT and Personnel; cultural/technical/physical issues that affect communication (including staff attitudes, limitations of IT available or ignorance of the technology, and factors such as lack of meeting rooms or physical distance between buildings). Though the questions posed did not refer specifically to the role and effectiveness of information products as vehicles for internal communication, the survey results are likely to have clear implications in this area.

My own experience in the final round of discussions with DTI staff certainly suggests that there is greater willingness on the part of the Department to take long-term and more strategic view of projects involving the use of information, and that traditional

civil service attitudes have become less widespread as people with a variety of backgrounds have come in to work in the areas with which this research is concerned.

The baseline for the present case study

The Department originates a very large number of information products (in the 1995/96 financial year, for example, 682 external and 33 internal publications were issued , and responsibility for them is widely spread among a range of Directorates and management units.

In the early 1990s there was concern about the efficiency and cost effectiveness of this large and complex area of the Department's work, and consultants were commissioned to look at how the Department assessed what it should publish and how it managed production, storage, stock control and distribution. Their report and recommendations forms a kind of baseline for this case study, in respect both of the products and the organisational arrangements for managing their creation and distribution.

One of the first tasks was to establish how many titles there were and the size of print runs, because there was no complete central record; even the Information and Library Service, which was reported as trying valiantly, could not keep up¹.

The 1700 or so publications for external consumption, ranged in scale from print runs of over a million down to as few as 150; The vast range of internal material – notices, newsletters, leaflets, guidance notes and instruction manuals – was noted as having increased in diversity with the devolution of management responsibilities to individual Directorates.

It proved difficult to identify the full cost of producing, storing and distribution the Department's publications, because of variations in how costs were allocated and the ways in which publications were funded. The input of professional skills to products for external distribution varied from Directorate to Directorate, with the result that some products were considered to 'work against its aims.' Similar variations prevailed in

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relation to information content; some publications were actually found to contradict agreed Departmental policy.

Most concern was caused by 'inefficient and sometimes ill-considered' methods of storage and distribution; external publications were found to be distributed from 270 different points, with the inevitable results of wastage, duplication, and inefficiency. The originators of external publications often lacked information on which to base their decisions on print runs; in some cases they knew something about likely demand on which to base an order, but in others they had no information to go on. While print runs for internal products were supposed to be set by the number of staff in the target audience, the information on this provided by the existing system had proved very unreliable.

Recommendations for improvement included:

- Creating a Publications Unit within the Information and Library service, to provide 'advice and guidance on standards, value for money and cost-effective options for producing publications.'
- Asking managers responsible for publications to make an investment appraisal for every product, itemising costs and proposed benefits as the basis for assessing its value-for-money potential, and deciding on the best options for the various stages of producing it.
- Establishing a database of publications with information on all titles.
- Rationalising storage and distribution.
- Defining the roles of the in-house professional resources for information design and graphics.
- Identifying expenditure on publications, and considering how internal providers of design and production advice could compete with external agencies.

Action was taken on the recommendations; in particular the Publications Unit was set up within the Information and Library Service and a database of publications established within it, and an external contractor became responsible for storage and distribution. In the final stages of this study, the Unit formed part of the Public Services Unit within the Information Management and Technology Directorate; four out of five of the management-level staff of the Public Services Unit, it is interesting to note, are professional librarians..

The recommendations of the OMC report are used for most of the remainder of this case study as a framework for looking at the topics which are considered in all the case studies, and comparing how 'what is' matches 'what should be'. Given the vast of information products, examples have been taken from a number of areas, rather than attempting to cover the whole range. The recommendations refer solely to hard-copy products, which were the only ones in existence at the time of the report; but in the final years of the case study electronic products, based on the internet and a developing intranet, have come to play a significant part in the Department's output and to introduce new ways of thinking about information products and presentation. The story of these developments is told after the account of the traditional products which for so long constituted the sole means of external and internal communication.

Decision making on information products

The formal procedures

One of the first recommendations from OMC report related to decision-making about publications. For each proposed publication, managers should carry out an investment appraisal or option appraisal with a full execution plan, itemising all costs and all benefits over whole lifetime of the publication. They should then assess whether it was likely to produce value for money, and if so which options for various stages represented the best value for money.

The Publications Unit which was set up as a result of the report's recommendations duly produced *Guidance for production of DTI publications* in 1994 . This gives step by step advice on planning a DTI publication, including how to find out if a budget has been allocated and what to do if not. It provides originators of publications with a checklist of questions to answer; the answers should provide a rationale for the publication²,

² The first set of questions are:

- What are you trying to achieve?
- What is the message?
- How does it link up with the related policy, programme, campaign or strategy?
- What is the target audience?
- How large is this audience?
- What do you want the audience to do after they have received your message?

indications for scheduling and for the resources required, and proposals for monitoring, distribution and storage.

On the basis of their answers, originators are asked to set out the objectives for proposed publications, identify options for production in relation to the objectives, and to estimate the costs and benefits of the options. A Pro Forma is provided for these details; part of this goes to Publications Unit, but the cost/benefit appraisal stays in the originating division. The decision that authorises publication to go ahead rests with the budget holder for the publication question, who also decides which production option is to be chosen.

In 1998, the original Guidelines were still in force, and the Publications Unit manager was planning seminars about them in liaison with Communications Directorate, with emphasis on using the services of the Department's contractor for distribution, keeping the Unit informed of publications, and providing legal-deposit copies.

What happens in practice

The decision on whether to following the procedures set out in the *Guidelines* rests with divisional management, who are reported to take various views of their significance. It is not altogether easy to see from the accounts given in the various areas of the Department responsible for originating and managing information products how practice matches the prescribed procedures, as the following examples may indicate.

Annual Report. (Produced in Finance and Resource Management Directorate) On the personal decision of the then President, in 1994 and 1995, a colourful document, aligned with the typical company annual report, and addressed both to Parliament and the Department's public, was produced. The response of the Parliamentary Committee to which it was addressed (Trade and Industry Committee, 1995) was not entirely welcoming. Its report for the 1994/95 session commented that the publication was not wholly appropriate as a document for Parliament; observing that the attempt to appeal to an outside audience was a worthwhile but secondary project, it suggested that the purpose might be better served by two separate products.

The next year, therefore, the Committee's suggestion was followed, and two reports were produced: the traditional Expenditure Plans (DTI/HMSO, 1996), and a short, colourful, Annual Report for the 1995 calendar year. The attempt was made to present them as 'stylistically part of the same family'. Proposed changes in procedures for government accounts and budgeting (Resource Accounting and Budgeting), due to be introduced from 1998/99 on with the objective of putting them on a commercial footing, and improving the quality of management information, will, however, bring changes to the Estimates. These in turn have affected the presentation of the annual report, which has reverted to a single Expenditure Plans Report.

MINIS. (Ministerial Information System). The establishment of this product is another instance of decision making at the top level. Introduced by the then President, Michael Heseltine, when he came to the Department, as a means of organising resources, it requires each management unit to bid for manpower and resources and to show how they are needed in order to meet Departmental objectives. This system was replaced in 1998 by a similar management information system, RAM (Resource Allocation and Management); the basic components of the process are unchanged. While the previous system's main focus was running costs, RAM for the first time seeks to integrate the bidding and allocation process for all DTI expenditure.

Open government initiative. This initiative (part of the Citizen's Charter) goes back to the Open Government White Paper of 1993. A *Code of Practice* issued in 1994 and revised in 1997 requires government departments to provide information in response to specific requests (and to give reasons if it has to be refused), to be proactive in providing the facts behind major policy decisions or proposals and in making information available about how they deal with the public, to give reasons for administrative decisions to the people affected by them, and to publish information about how their public services are run, their targets, and their standards of service.

The DTI's original implementation of the initiative (the responsibility of Information Management Services) was set up to a tight timescale, so the person responsible for the programme made the initial decision on the information products; there was said to be no time to consult Information Directorate as recommended in the *Guidelines*.

Decisions since then have been taken by the Head of the Unit 'within the remit of the normal processes'.

Managing in the 90s. A programme which started in 1989 and ran until 1996, with the aim of helping companies to respond competitively in the areas of design, production, purchasing and quality (later extended to include marketing and product innovation), it produced an extensive range of printed products and videos.

What is described as the 'rationalising and positioning of material' was assigned to a 'Literature Task Force' drawn from various sections. There was some effort to achieve a uniform style for the products, but it is reported that it never got 'bedded in', and attempts in that direction were overtaken by the decision to move to the internet as the primary means of delivery. By the end of the case-study period, of the original 75 publications, some had become outdated, and of the remaining core of about 20, some remained available in print, but stocks were being rapidly reduced as the transfer to the Department's web site proceeded.

Export Publications Unit. The Department's export publications were the subject of case study in the OMC report, exemplifying 'the problems and successes of the transition from a decentralised to a centralised set up'. Departmental policy of extending charging to include export publications required standardisation of content, quality and presentation, a central catalogue, and a central contact for ordering. The Export Publications Unit was set up to meet the requirement.

Decisions on export publications are taken jointly with the Foreign and Commonwealth Office via the Joint Export Promotion Directorate. The export data and market branches of the Department and overseas posts collaborate in deciding types of products and content, taking into account what is commercially available. The Unit had no annual publishing plan at the start of this study, but by 1998 there was a rolling programme of commissioning, with an updating cycle of one to three years for the key *Hints for Exporters*. range of publications There are still problems in that the Unit is not notified of forthcoming sector reports or duplicate free information that is published and distributed by market desks.

Small and Medium Enterprises Directorate. The Directorate takes its own decisions on products in this area, on the basis of the Department's policy of supporting the target audience of existing small firms by providing publications which fill gaps in the market.

The main problems are reported to arise from conflict between these limitations and demand from the target users; for example, publications on setting up in business and employing staff were not considered to be in scope, but focus groups of potential users said they would be most useful. On that basis, the Department agreed to produce them.

Costs and budgets for information products

The OMC investigation found that it was difficult to identify the full cost of the Department's publications (some staff were unable to provide any details of the cost of their publications). There was no uniformity in the way external publications were funded; costs were met in a variety of ways – from running costs, from programme spend, or from the central publicity budget controlled by Information Directorate. This budget financed major campaigns and other divisions had to bid for their own publicity needs from it. Those who took this route were also obliged to use Information Directorate services, so that the Directorate was both controller of the budget and obligatory provider of services – in effect depriving users of the choice they were supposed to have under the 'customer-contractor' principle. Further problems of keeping within budget were revealed from the case study of the Export Publications Unit, which showed actual production costs greatly in excess of budget – presumably connected with Unit's lack of control over what gets published.

The main recommendations in this area were for investment appraisal of all publications, and clear identification of expenditure on publications, and today the Publications Unit incorporates into its database on publications information about total production costs supplied by the majority of originators of publications. Reports available from the database include actual production costs, costs for proposed publications, publication costs by directorate/publication.

In practice ...

The present situation for the information products considered in this case study varies. The *Annual Report* is an exception in that, as a Command paper, it is produced by HMSO, which estimates the print run and decides on the selling price.

Open Government Initiative. For the first products under this programme, the recommended procedures for cost estimates were not carried out, because of time

pressures for meeting a government commitment; in the second and successive years, budget provision was made.

Managing in the 90s. Major products in this programme were put out to tender; bids were invited from among a small number of agencies which had previously done work on the programme.

Export Publications Unit. The Unit operates the procedures developed by Publications Unit. It bids for publishing budgets on the basis of what it thinks it can publish in the budget period. Budget estimates are now (1998) broken down under the heads of print costs, design, consultants and sales figures, and are said to be more systematised than they were in the past; they no longer take staff costs into the costing equation. There are no authorship costs for products authored by FCO posts, though there are for those written by external consultants. Budgets are planned five years in advance; as mentioned earlier, the Unit is seeking to gain advance knowledge of projected publications, so that it can budget more effectively.

Small and Medium Enterprises Directorate. The Directorate puts up a publications strategy proposal to the Minister responsible, with a rationale and justification demonstrating the need. This is accepted as the basis for its budget. The report on a 1997 survey of the response to the Directorate's publications notes that its budget for producing and disseminating for 1997/98 was £293,000.

MINIS (Ministerial Information System). There was no separate budget for MINIS as such; costs relating to it were met from other existing running costs budgets, such as salaries, stationery, reprographics, etc. Staff responsible attempted to make a rough estimate of what it costs to obtain the required information in terms of staff time around the Department. For MINIS 95, the estimated cost was around £1m, a figure which fell by about 18 per cent in the 1996 round, and which was expected to show a further fall of 10-15 per cent in 1997. It has now been decided to discontinue this calculation which is described as being a feature of the 'cut red tape' ethos. MINIS is described as having been the primary driver for savings in DTI (running costs 19 per cent down over the period 1992-97), and RAM will continue to be used to identify efficiency savings.

Information resources

This section looks at the information resources within the Department, the extent to which they are used as sources for creating information products, and their potential for being used in this way.

Information and Library Services

The DTI Information and Library Service structure is quite complex; there are two main site libraries (reduced from three in 1995) together with a number of others in particular directorates and one (the Export Market Information Centre) which serves the public. Some of the agencies and most of the associated bodies also have their own specialised libraries. The two main site libraries between them cover the areas of the Department's title. As mentioned earlier, in 1996, Information and Library Services merged with information technology to form the Information Management and Technology Directorate, within the Resources and Services Command.

Four possible areas were considered for the location of the Publications Unit, which the OMC Report recommended as the source for the advice and control which the review had found to be lacking in the Department:

- The Information and Library Service (then in SMD3)
- Purchasing and Policy Section then (in SMD2 – now in Finance & Resource Management)
- The then Information Directorate (later Communications Directorate)
- The Information Design Team (in SMD2 – subsequently shut down)

The last two were excluded on the grounds that the Unit needed to be organisationally separate from service providers, so that its advice could be seen to be impartial. The final choice was the Information and Library Service, which then encompassed the Enquiry Unit and Directories Section, because of its key roles in providing and managing centralised information, and handling large volumes of internal and external inquiries, and its experience of creating and maintaining a database of publications and of managing budgets. The recommendation was accepted, and this was where the Unit was established. In 1995, the Publications Unit became part of the separate Public Services Unit; it remains, however, in the management area of the head of Information and Library Services.

The Service was also involved, up to 1996, through its Information Management Unit in a variety of other initiatives for using information resources as a source of information products, which are outlined below. The Information Management Unit became part of the Business Analysis Team in 1996, and the later history of some of these developments is described on p167.

Internal guidance material. One area in which the Information Management Unit has been involved is that of communicating guidance, news and reference information internally via various information products. The move to electronic systems for internal communication led to the commissioning of a review in 1994 of options for managing such material in an electronic environment (the DTI's existing office automation system, OSPREY). The report identified 3 kinds of material:

- 1 Alerting – urgent information which needs to be communicated to lot of people at once
- 2 Updating – new developments in areas in which people have chosen to be kept informed
- 3 Reference – directory-type material about existing practice.

It recommended exploiting the e-mail and bulletin board facilities of OSPREY for the first two types of product. For the third, additional investment was considered necessary – though there was an expectation in the Department that it could be made available over OSPREY, nobody had thought much about what it would need to achieve this. A full study was proposed, in order to specify the requirement, examine information management and technical issues, and select an option for meeting the requirement. The findings from this project were inconclusive, and a pilot study was then run to test out four possible approaches:

- 1 Full text retrieval alone
- 2 Browser alone
- 3 Options 1 & 2 combined
- 4 A customised document management system.

The third option came out as most successful, and an implementation project was established to deliver reference material in this way. The sequel to this story is told below in relation to the development of MANDRIN (see p166) where information

management and IT specialists are involved in developing information structures and re-structuring existing information products for electronic presentation and use.

Here it is important to note that the DTI intranet will become the key to how the information and library service delivers information, and to further changing the role of the library towards in-depth rather than quick-reference presentation. The service is already working to an increasing extent on information research, using electronic sources and delivering the results electronically, and it is also now involved in business analysis, bringing together information management and IT skills.

Contacts databases. There are several hundred of these in the Department, each set up as an individual initiative and with no common approach to the task. The information about companies which they contain is potentially valuable as a source of ideas for products which the Department could profitably offer to companies, but their idiosyncratic design makes it difficult if not impossible to realise the potential.

The need for a contacts database for the Business Link initiative gave the opportunity for the ILS to set priorities, identify common features, and develop a departmental standard using the database software associated with the OSPREY system. This should make it possible for the multiplicity of standards to begin to converge as individual databases start converting. A standard was agreed and is reported to be in use in some areas, but it is suggested that it has not been over-energetically promoted.

The work in this area attracted ministerial attention, and as a result a study of the duplication of information was set up, with the aim of identifying the kind of information about companies which people in the Department need, where it comes from, and who does what with it. The resulting review recommended procuring a common source for company information, but the attempt to do so is reported to have been unsuccessful in the face of lack of clear business benefits for the users.

The implementation of the ELGAR system (see p135) should lead to solutions to these difficulties.

Information auditing. Another initiative from Information and Library Services, working with the Information Management team, which has potential for promoting the use of information resources to develop useful information products was a series of information audits in a number of Management Units. Initial findings indicated more in

the way of obstacles than positive starting points, but the results of later stages have been used for other relevant studies on information strategy and intranet strategy.

Export Publications

Export Publications Unit uses the Export Marketing Information Centre and its own small in-house collection – the main purpose is to identify what others are issuing, as the Unit's remit it to produce only material which does not duplicate commercial products. It commissions market information. The Unit uses in-house, domestic and internet sources to resource information in products written abroad.

Human resources for information products

The OMC report provides an outline of who was doing what jobs on information products at the time of its review.

External publications

The originators of many products for major campaigns were using the services of Information Directorate, which took over the text and arranged design, typesetting and printing, using a variety of service providers. In these instances, there was said to be a close relationship between originators and Information Directorate. Where authors had used Information Directorate on major publications, they tended to use their services on non-campaign titles too.

On the other hand, 'There were staff who undertook the major part of the task themselves such as design and layout, selecting printers and putting work out to them. In some instances, staff had limited experience; in others, they seem to have undertaken the task without knowing that services were available to support them.' They seemed to have 'very little previous experience of producing literature', knowledge was not shared across the Directorate, and wrong assumptions were made about costs because the people making them lacked knowledge, and felt there was very little in the way of guidance from any central source. In other cases, poor service in past had deterred staff from using internal resources, and others again thought that DIY saved costs. As the report remarks 'Any cost-benefit analyses rarely take into account the full cost of staff time or the benefits they are likely to gain from using fully trained and experienced staff.'

Internal publications

It was reported in 1994 that 'authors who have felt the need for a well designed, eye-catching document' for internal audiences were using the services of the then Information Design team (descended from a previous Forms Unit and Phototypesetting Pool) and of the Graphics Studio (in Information Directorate). The former was described as specialising in the 'design of text and the presentation of Plain English as well as with Forms design', and the latter as being staffed by 'Graphic Artists whose principal expertise lies in design and graphics'. Both these units were hard-charging, and competing at the margins. It is not entirely surprising that there was said to be some confusion about the relative services offered. By 1996 the Information Design Team and the Graphics Studio had been closed down, and all information design was outsourced, with Information Directorate (now Communications Directorate) advising on appropriate design agencies.

Export Publications Unit. The case study in the OMC report of this unit makes it clear that there were no staff with specific qualifications in this area. The Unit is described as using typists to wordprocess text which was then passed to a local printer to print direct from disk, or to produce good quality laser masters for photocopying. This was considered cheaper than using the services of the Central Office of Information for typesetting and editing as previously. Staff are also described as doing 'an element of design and layout', and as being aware that this has training implications, but 'they are using experience gained through liaison with COI and other techniques picked up along the way.' The Graphics Studio was used for maps, graphs and diagrams.

After the OMC report

Guidance for the Production of DTI publications addresses the problems identified in the OMC report, by presenting some rather limited advice on the activities involved in creating information products.

Writing. For internal publications, 'in-house writing and editing skills are likely to be sufficient'; for external audiences, professional inputs - possibly from Information Directorate or an external writer, especially for technical subjects - may be desirable.

Proof reading and editing. The people responsible are advised to ask a colleague unconnected with the drafting to 'assist with checking the directness of the message and with proof reading and editing.'

Design. This aspect is dealt with by a short checklist of questions (see p155), none of them relating to the people who should do design work, or the skills and knowledge required.

In practice ...

Various approaches are adopted in the different parts of the Department considered in this case study.

Annual Report. This is managed by a small team in Finance and Resource Management Directorate, who have an excellent knowledge of the Department by virtue of their contacts with all areas over their bids for budgets, but no specialist training for publishing. They commission contributions from divisions to a brief prepared by themselves; editing seems to involve depth editing of 'organised information', rather than copy editing of a draft written elsewhere. The team describe themselves as 'owning the text'. On the design side, they work with Communications Directorate which prepares a brief for an outside design agency.

Open Government. As mentioned earlier, the member of staff in Information Services in charge of the start of the programme had to decide on the initial products because of the short time-scale. In planning them, *DTI External Forms. A best practice guide* was used; this advises originators to provide a brief provided to which a specialist can work. (The *Guide* places strong emphasis on the fact that the major cost for these products is borne by those who spend time understanding and completing forms; and it advises 'Allow plenty of time for consultation with designers and the FCU and for the form to be tested and printed.')

Today (1998), there is one leaflet for the public on the Department's administration of the *Code of Practice on Access to Government Information*, together with instructions and guidance for staff on the Department's electronic TeamForum (see p164).

Managing in the 90s. The staff responsible for this programme operated a policy of outsourcing both writing and design. The brief and specification for products were said to be based on preliminary research (who did it was not specified). The products were mostly written by academics, engineers or consultants, and then 'journalised' by outside specialists, on the grounds that competent in-house writers were lacking. Two or three companies provided professional services for most of the products; they had what was described as a 'partnership relationship' with the in-house staff responsible, who were described as acting as 'facilitators'. The later transfer of the core products to the DTI web site was handled by an outside contractor.

Export Publications Unit. The situation at the start of this study was that the writers of export publications were mainly employed in FCO overseas posts, writing to a brief conveyed in letter form. Staff in the Export Publications Unit edited both content and copy; they were responsible for checking consistency, sequence and level of detail and interacted with authors and the market branch in the course of editing.

They were not formally trained in either editing or proof reading. A professional librarian supervised planning and editing, because this was regarded as an information professional's job. The editing was done by untrained clerical staff. The Unit did not undertake much formal design consultation; design decisions were said to go back to those taken in the days when the COI's services were used. The Unit tended to use a small group of printers; it was reported that while there was a specification, instructions had come simply take the form of 'do it like the last one'.

By 1998, there had been a good deal of change. The Unit was responsible for commissioning and evolving certain kinds of material, including an Internet guide for export, 'Websites for Exporters'), for which they arranged production, design and photography and controlled distribution. For other publications they had a co-ordinating role, described as managing information, organising and encouraging best practice. They used consultants to assemble information for publications, which was then passed on to posts and desks for 'promotional working'. Copy came back to a six-member editing team in the Unit, who, while now graduates rather than clerical staff, lacked any professional editorial expertise or background. The editing was confined to copy editing; they seldom rewrote anything, and then only after consultation with the originators. The only training was in-house and on the job, with some use of manuals and documentation for reference. The Unit had tried some use of free-lance editors, but

had not found it very satisfactory. They were now planning to try again to build teams of outside editors on a long-term basis, and a publishing consultant was due to start a project to help the Unit towards becoming a professional publishing enterprise.

The manager of the Unit had also produced a template of standard information elements for the *Hints for Exporters* range of products, as a framework for the originators to 'write into'. Design work is outsourced; the selection of designers is made jointly with the market desk which will promote the publication.

Small and Medium Enterprise Directorate. At the start of this study some major publications, like the *Annual Report* on the programme, and the *Guide to Help for Small Firms*, are written and edited in house, with outside design and production, as were some smaller products; others are wholly created outside. The view of the manager responsible was that it was important to give staff opportunities for development through responsibility for writing and editing; 'although there's a lot of anxiety, if you do it yourself, the payback is tremendous.' In-house writing of most products continues today; the reasoning is that since the content deals mainly with regulations, the staff time in that would go on briefing outside writers and checking the results is better spent on doing the job themselves and using their expert knowledge of the subject matter direct.

Work with design groups involves the selected group from the start, and the originators work closely with them, to a brief prepared in house. On smaller items, in-house staff discuss their own ideas about layout with designers, and take their advice on their feasibility.

MINIS. Internal design decisions on type faces and colours were taken by the staff of the Unit, who also supplied internal products and training/briefing for the people elsewhere in the Department who contribute data to the end product. The main product for this purpose was the *MINIS Handbook*, which set out the process and timetable, and gave instructions on completing the forms (these are based on returns for the Christmas Policy Directorate - Director, Scrooge, supported by Marley, Cratchit and Fezziwig). At the time when the *Handbook* was circulated, a series of seminars was run for the staff most closely concerned. Similar arrangements operate now that MINIS has been replaced by RAM; the *MINIS Handbook* has now become *RAM Guidance*, and is a much thinner document.

Publicity Section and Publications Unit. When this case study began, the Publicity Section was managed by a member of staff with previous experience as the manager of a printing department in a manufacturing firm. With changes in organisational structure, there is now a Print Procurement Unit, with two staff, which is part of the Department's Publicity Directorate (35 staff); the Unit reports to a member of staff with previous experience as the manager of a commercial printing company.

In the Publications Unit, following the recommendations of the OMC report, the principal expertise was and is in information management and in giving 'signposting and value for money advice'. Signposting includes information about appropriate suppliers of professional services for different kinds/levels of publications, but, as some instances quoted here make clear, the originators do not necessarily go either to Publications Unit or the Publicity Section.

The technology used for information products

At the time of the OMC review, desktop publishing was an attractive innovation, which was being heavily promoted as the solution to all kinds of publishing needs, and being naively accepted as such in many organisations, with little appreciation of the economic implications or of the need for design skills to make successful use of the technology. The review found that in the Department desktop publishing was currently limited to specialised areas (ie the Information Design Team and Graphics Studio, which were using Macintosh systems), but that some staff were using less sophisticated software, for which less cost justification was needed, to produce publications in-house.

There are arguments against this – not only related to training and staff time, but that there is a risk of Directorates developing further ways of producing publications "in-house". Also, we believe that on the surface DTP systems appear very attractive but, although they are user-friendly, such systems require substantial training and have very lengthy learning curves. They are also essentially a tool for an experienced designer and without extensive use are unlikely to be cost-effective.

These cautions are repeated in the *Guidance*, which tells users that if they have DTP and can justify using it, they should consider doing so, but before deciding, they should be aware of the costs of proper training and other hidden costs.

In practice ...

The advice about desktop publishing appears to have been taken to heart. Origination of almost all products for external distribution is done in-house using word-processing software, and the remaining stages of production are contracted out. The level of sophistication varies according to the function of the product, ranging from four-colour work for prestige products associated with major programmes, to high-resolution laser print masters which are used by printers with DocuTec systems to originate good quality photocopies for export publications.

Products which are primarily for internal use, like MINIS and its successor RAM, use technology at a deliberately simple level, extending to no more than word-processing and a spreadsheet package, together with simple graphics for organisation charts.

The presentation of information

The findings of the OMC report

Many of the external publications are produced ... to highly professional standards. There are, however, a number of publications which author Directorates circulate without the benefit of expert advice; where value for money considerations and the public image of the Department are not adequately considered and where the standards of quality and presentation create a poor image of the Department and work against its aims.

While most staff were found to be aware of some aspects of consistency of presentation, such as the logo, there was very little understanding of the effect of presentation on how others perceive the DTI. It was difficult for Information Directorate to enforce standards, even though they had someone with responsibility for this. Examples were found of publications for high-profile audiences where the quality of presentation was poor, and of others produced to more expensive level than necessary. Staff 'need to attach a value to what they produce before they can actually decide on the quality of the product ... what they may consider to be an expensive product may, in fact, provide value for money...'

Problems of attaining/maintaining standards of presentation also arose from devolved budgeting - people were said to think they were saving money, whereas in

fact they were getting poor performance out of their products; the report commented in this connection on the 'conflict between freedom of choice and maintaining standards.'

It appears that some years ago, the Department, like many organisations, invested in the services of corporate identity consultants, and acquired a multi-volume house style manual which went the way of most such products - in the absence of an 'ID police force' with powers of enforcement, the identity underwent simplification, dilution, diversification, and ultimately oblivion. This is perhaps symptomatic of a general cultural problem in organisations where power is delegated without clear specification of who is responsible for what.

On internal products, the OMC review found that often people bringing them to design professionals had already made up their minds and were unwilling to change them in the light of professional advice.

In practice...

Discussions in the early stages of this study with the originators of the information products covered by it showed that they adopted a variety of approaches to the issues raised by the OMC report, and to the guidance offered by the Publications Unit. This is evident from the remarks of both the originators themselves, and the professionals whose job it is to provide advice on presentation.

The *Guidance for production of DTI Publications* issued in 1994 by the Publications Unit asks originators of publications whose design and print costs are likely to exceed £1500 to consult Information Directorate (now Communications directorate) for advice on design and production, and suggests that advice should also be sought on publications below those limits, although this is not mandatory.

Accounts of the situation in the early stages of this study varied according to their point of origin. On one hand it was reported that some divisions did not bring publications to Information Directorate early enough, and that not all divisions followed the approach set out for producing rationales, etc. On the other, the word was that, while Information Directorate was responsible for a 'Guide to Consistent Presentation', more help could be forthcoming in response to questions about its application.

The *Guidance for production of DTI Publications* offers some advice on aspects of presentation. So far as writing is concerned, in-house authors are recommended to adopt a 'Plain English' style, summarised in this advice:

- Aim to keep sentences down to less than 20 words
- Try to avoid technical, legal, jargon and foreign words, unless the publication's message relies heavily on such content ...
- Keep the use of passive verbs to a minimum
- Try to put yourself in the reader's place: will he or she understand the message as you have drafted it? do unavoidable terms need explaining? Could a new procedure be better explained with flow charts?

Design is covered by a checklist of questions, some relating to the start of the process, and the rest to the point when design decisions have been made:

- Does it need to fit an existing series?
- Will your publication have to compete?
- Is there a standard format to which it will have to conform?
- Does design complement the words used and is it capable of being printed by a cost effective process?
- Does the design meet the Department's rules on consistent presentation?

As this study ended, Publications Unit was about to put the guide to producing publications on to the intranet.

Annual Report. The team responsible for the *Annual Report* undertake careful planning of presentation within the constraints imposed by the dual readership of Parliament and business, and by the need to match the way in which estimates are presented to Parliament. Like all Annual Reports of government departments, the DTI's is jointly published with the Treasury, which sets detailed standards for core content. The briefing to contributing divisions at the start of this study used a pro-forma checklist, which asked them to start each chapter by linking the activities they reported to the Department's objectives, and then to show how their work addressed the objectives. Recently the content requirements have become more detailed; each chapter gives an overview of the relevant budget and the previous year's out-turn, together with information about performance in achieving objectives and about highlights of the year.

Managing in the 90s. A 'Literature Task Force', consisting of representatives with expertise from different sections and a variety of levels, was said to be responsible for planning products, and 'positioning' them. The approach to written presentation, with its reliance on specialists to 'journalise' texts produced by outside experts, has already been mentioned.

Export publications. At the start of this study, as mentioned earlier, Export Publications Unit was devoting comparatively little attention to the presentation of its products, being usually content to instruct printers to follow the style of the previous item in a series. With clarification of its remit to make it clear that information products should be chargeable and in consistent series, by 1998 the Unit was paying closer heed to presentation. A new format and style had been developed; as mentioned earlier a template of standard elements to guide originators in the structure of content had been produced for the *Hints for Exporters* series; and the use of campaign logos was encouraged, to identify products with the brand of the relevant market desks

The catalogue of export publications was singled out by staff as a product needing attention to presentation. It was said to need research on arrangement which would allow easy access; the professional librarians working in the Export Publications Unit were reported to be trying to set quality standards in this respect. By the end of 1998 the printed catalogue had been completely revised (its arrangement and the presentation of data on publications is very different from that of the main DTI catalogue), and the text was also available on the Department's web site.

Production. The OMC report drew attention to some ill-informed judgments about print-runs, and about value-for-money options for production. When this case study began a variety of practice prevailed in how originators set about making and carrying through production decisions.

When originators followed the recommendations set out in the *Guidance for production of DTI Publications* and came to the Publicity Section for procurement of information products, the specification and schedule were drawn up jointly by the originators and the Section. An invitation to tender for a re-design of the *Guide to Help for Small Firms*, for example, quoted from the results of research among users (see p161) in requiring 'clear bold layout with highly legible text', ease of access, and re-cycled

paper. The design groups contacted are required to submit visuals of cover style and a sample double-page spread, and an itemised cost estimate covering 'preliminary styling', formatting text from a word processed disk, preparation of illustrations, camera-ready artwork, print specification, and liaison with the printer (all within 6 days!).

Export Publications, in contrast to this example, maintained its own contacts with a small group of printers, and prepared its own specifications for the jobs it entrusted to them – though, as noted above, these appeared to be fairly minimal in the case of products which form part of a series where the printer had already handled earlier items. Disks prepared in-house using Word Perfect were used to generate a high-resolution laser print master, and this was supplied to printers who use the DocuTec system to provide high quality photocopies; they also did the binding. Export Publications Unit now (1998) uses desktop publishing software on pcs for in-house typesetting of the products for which it is responsible.

Typesetting was normally handled by the designers commissioned for the job, on the basis of text files provided by the originators. This continues to be the case, and printing is usually sourced through the Print Procurement (obligatory for jobs costing over £1500).

The print team maintain a database of printers setting out details of their equipment and capabilities, and the Department's practice is to go out to competitive tender for print production (except for Parliamentary publications which are produced through The Stationery Office).

Distribution. As noted earlier, the feature that gave most concern in the OMC review was storage and distribution of external publications, which were found to be distributed from many different points; rationalising distribution therefore became one of the main tasks of the Publications Unit set up following the review.

By the final stages of this study, while much had been done, the problem of multiple distribution points was an intractable one. A new contract for distribution, placed at the beginning of 1998, had replaced three previous contracts; while it was working well it was said to be still undermined by individual management units who failed to realise the effects on would-be purchasers of their publications of having to deal with a variety of phone numbers and sources. Less than half of the total number of Departmental publications were available through the DTI Publications Orderline run

by the contractor. The situation was compounded by the fact that the contractor's database covered only those publications which they themselves handled, and therefore did not coincide with the fully up to date database maintained by the Publications Unit, and published as *DTI Publications in Print* which was receiving many inquiries from potential purchasers asking about DTI publications not available from the Orderline. (The printed catalogue is an excellent product, arranged by subject, with full details of where items may be ordered from, and a very thorough index.)

Testing, monitoring and evaluation of information products

While the OMC Report recommended that at the initiating end of the process managers should carry out a detailed investment appraisal to assess whether proposed publications are likely to produce value for money, it said nothing about following it through after publication.

The *Guidance for production of DTI Publications* produced by the Publications Unit, however, does make some suggestions. Its only recommendation on pre-publication testing is that colleagues should be asked to help with proof reading and editing in order to check text that is difficult to understand (the Unit's manager said at the start of the case study that pre-publication testing was also an option, but one which had not so far been taken up by divisions).

On post-publication monitoring and evaluation, however, the *Guidance* provides detailed advice: 'Evaluation should take place as a matter of good management practice' though it is necessary only for products where design and print costs exceed £15,000. Evaluation is recommended six months after the first issue; the date should be fixed when the decision to go ahead with a publication is confirmed with the Publications Unit. In order to get maximum benefit from experience, the originators of publications need effective procedures for initiating an evaluation and for disseminating lessons learnt. The cost/benefit appraisal information assembled in the initial stages of planning products should form the starting point for post-publication evaluation. The *Guidance* acknowledges the problem of 'specifying the baseline against which to compare the outturn'; it could be the outcome expected when the original decision was made, or what would have happened if the product had not been issued. It provides a checklist of points to consider in assessing 'whether the publication has been successful in reaching its target audience, meeting your objectives and providing value for money':

- Overall cost, external and internal
- Did it meet the proposed objectives and targets?
- Did it reach the intended audience? Was the distribution list accurate?
- What response/feedback was received? Is a survey of recipients necessary?
- What lessons have been learned for next time? What action should be taken on them?

In practice, there seemed to be comparatively little action on this advice. By the end of the study, it was reported that a few originators of publications actually made a cost/benefit analysis.

Annual Report

Pre-publication comments are sought within the Department before the report is finalised. So far as outside response to the end product is concerned, a covering letter from the President, asking for comments, apparently brought little response. The team responsible for the report checked the views of the Select Committee in 1994, and reported a continuing dialogue with the Committee and the Treasury. They also expressed a wish to know more about how people used the product, but it appears that no specific action has been taken since then to find out.

Open government

The member of staff responsible for the initial products did some informal initial testing by asking people in the Inquiry Unit if they could understand the forms and what they themselves had to do with them. Sensitive divisions also pre-reviewed the application of the code for themselves. The person responsible saw each case that had been raised, and discussed it with liaison officers in the divisions concerned, so as to build up information for future use in revised products. A review was planned after 6 months, to gather feedback on how the initiative had been used. This included lobbying those organisations which are most aware in this area, and an ongoing review of the clarity of products.

The situation at the end of the study was that an annual poll of Open Government Liaison Officers in the Department's Directorates was carried out, to assess their views of the guidance put out by the Open Government Unit; at the last poll over 90 per cent

had reported that they were satisfied or very satisfied. The Unit anticipated that the recent move to putting Open Government pages on MANDRIN would increase user satisfaction.

Managing in the 90s

An advisory panel looked at the programme as a whole at an early stage. For marketing and business planning, test marketing through a user panel of 5 or 6 people was used. Some pre-publication testing of formats was done on occasion, and a contractor undertook two surveys on the response of companies to the literature associated with the programme.

Export Publications

It was reported at the start of this study that 'no proper studies of users' have been made. The Overseas Trade Service carries out a survey of purchasers, but not of publications.' There was no formal pre-publication testing or post-publication monitoring. By the end of the study, the Marketing Strategy included post-publication testing (telephone survey by an external research company), and a response form had been introduced for the *Hints to Exporters*.

Small and Medium Enterprise Directorate

The then Small Firms Directorate (now Small and Medium Enterprise) commissioned an extensive review of publications through consultants in 1994. The objectives were to:

- Determine who the divisions customers are/should be
- Obtain views on current publications
- Highlight any information gaps
- Establish where small firms look for help
- Guide the extent to which the Directorate's publications should inter-relate with other DTI literature

The categories of users approached were small businesses, DTI/TEC/Business Link executives, intermediaries and trade associations, and Scottish businesses, intermediaries and DTI executives. The research was based on a combination of focus

groups and depth interviews. The main findings from the focus groups of small businesses were summarised in these terms:

- The majority view was that the publications were useful, relevant and easy to read
- The most popular was the one on setting up in business
- Users were not aware of the full range of publications, while non-users know nothing about any of them
- There was some cynicism about the extent of the help available; publications were thought to raise expectations too high
- Users wanted economical production; they disliked 'expensive, glossy brochures and packs', and they disliked an 'element of propaganda' in some of the literature.
- They wanted the products to address their subject in 'as brief a way as possible'.

Findings from the interviews with executives of the DTI, TECs and Business Links, and with representatives of trade associations and intermediaries indicated that:

- There was confusion about publications emanating from the SFD and other bodies in the field
- Very little feedback was received from users on the usefulness of the literature
- More precisely targeted products, for example for start-ups, were seen as necessary.

Features which users applauded in SFD publications:

- 'Concise yet comprehensive'
- Cheap to produce
- Helpful flow charts
- Useful lists of organisations, publications, etc
- Two-column format
- Glossaries of terms

Things they did not like:

- Misleading titles
- 'Propaganda'
- Expensive to produce
- Products inappropriate for target audience
- Too many graphics that contribute nothing
- Products that gloss over difficulties

Action in the light of these findings was primarily in the form of more focus groups and more pre-testing of products.

A further evaluation of publications was commissioned in 1997, by which time the range of publications had been extended and the content had changed significantly, while demand for them had also increased. (The current 'suite' of 24 publications includes the 'small firms' family of A4 booklets; a series of Employment Rights Factsheets; a wallchart-cum-brochure on Setting up in Business; and a sponsored set of two booklets and a wallchart on Better Payment Practice.)

The main weakness that emerged was lack of awareness by potential users of the range of publications available (a repetition of what the earlier survey had found) - there appeared to be no formalised marketing strategy for the products as a group, and no facility in the current database of purchasers for notifying customers of new editions of products they had purchased.

Respondents continued to appreciate the comprehensive content and succinct presentation of the publications, and again suggested that two distinct markets should be targeted: start-ups, and established businesses. They wanted a distinctive family style for series, so as to give them a 'brand' (something that is already in progress), and recommended that the paper specified for publications should take into account ease of reading.

The current publications for small businesses look as though the Directorate has taken to heart some of the complaints from the 1994 survey; they are factual in content; 'propaganda' and misleading titles seem to have been dispensed with; and the graphics - with the exception of an outburst of magnifying glasses in two booklets on franchising - are relevant. The style continues to be clear and businesslike.

Business Link

With regard to the DTI's association with Business Link, the view was expressed at an early stage in the existence of the Business Link initiative that there would be no central products and no 'national voice' to counterbalance the deliberately chosen approach of local partnerships with the central DTI function. The situation changed in 1997, when the Business Link Network Company was set up with the function of acting as a national voice. Up to that point the Business Link products had all been print on paper; the establishment of the Company marked a change to electronic delivery of

products via the DTI web site. The DTI staff involved have recently reviewed how the system works, from an information-management perspective.

MINIS

The staff responsible for the system were aware that it was necessary to make sure that those for whom it is intended saw it as a tool which they themselves could use. While there was no formal external evaluation, at the end of each round those most closely involved were asked for feedback on their experience of using it, and for suggestions to improve it. A review was carried out in 1995, partly in response to comments received, and partly because the staff responsible for MINIS realised that the system was becoming 'too cumbersome and unnecessarily bureaucratic'. Substantial changes were made as a result; when MINIS 96 was launched, Management Units were asked to complete only 4 forms instead of the 17 in the previous year. A working party of staff most closely concerned with work on MINIS was set up after MINIS 96, and minor changes aimed at making the forms easier to complete were introduced for the following year.

With the change to RAM, the originators will continue to review the process each year, consulting management units and the DTI finance community, before advising the DTI's Management Board in July on proposals for the next round. The new RAM process (itself designed in consultation with the Management Board and management units) reintroduces some of the more detailed information requirements which featured in MINIS, although there are now only four forms, and a number of information requests have been dropped. Given that RAM now covers programme as well as running-costs expenditure, there may well need to be further changes to the system to get it right, and these will be considered in the annual review.

This concludes the survey of how a representative range of printed products are managed in relation to the criteria recommended in the OMC report on DTI publications which has formed a baseline for the present study. While at the start of the study origination and management of some aspects of the products was electronic, the output available to the users was primarily traditional print on paper. Over the four-year period covered, however, there has been a movement - slow and perhaps reluctant at first, but rapidly gaining pace and impetus - towards presenting final products for both external and internal users in electronic form, through the vehicle of

the DTI's already extensive web site, and the intranet which is in the process of development. These initiatives, and their effects of how information products as a whole are regarded and managed, form the subject of the next section.

Towards electronic information products

Here we have to look at a combination of a large-scale, long-term investment in systems and IT (ELGAR), development of a web site from scratch, initiatives growing out of an earlier office automation system (OSPNEY), and moves towards an intranet.

Taking the process chronologically :

OSPNEY

TeamForum

MINERVA

Web site

MANDRIN

Electronic forms

Internal guidance products – TeamForum and MINERVA

As mentioned earlier (see p145) OSPNEY was introduced between 1993 and 1995 as the basis for the DTI's internal electronic communications. The first development within it for making short-term guidance material available to staff was the TeamForum application. The main presentation of information within TeamForum is a list arranged by a numerical code, with the alternative of a subject arrangement. It was designed solely to be accessed on the initiative of users, and has no facilities for selective dissemination of particular kinds of information according to work requirements. Within TeamForum, one specific product – MINERVA – provides information about the activities and statements of the Department's ministers.

Internal forms are an aspect of information products which play a large part in the life of government organisations. Up until 1993, the DTI had a central forms unit, responsible for the review and design of all internal and external forms. An initiative in 1997 in connection with the MANDRIN project described below led to the development of an application for accessing and filling in internal forms on-screen. The staff member responsible started by analysing some 60 of the main forms in use, a process which took

18 months. The design of electronic versions used JetForms software, and each form was user tested before being added to the FORMS application. Unfortunately there was no previous detailed evaluation of the costs of printing and storage of paper forms or of stock wastage when forms were changed, so there was no possibility of identifying what must have been major cost savings from the electronic version. The FORMS application can be accessed on screen either direct from its own icon or via MANDRIN (see below) – the application which forms the nucleus of the developing intranet. The top screen gives access to a list of categories of forms, from which a category and then a specific form can be selected. Each form has its own user information, and where appropriate electronic calculations built in. Users have the option of holding commonly used personal details, eg their name, Directorate, bank account number on their own pc, which can then be loaded direct on to any form that requires them. Automatic validation of forms is provided for. Once secure electronic signature have been developed, and data are transmitted and processed electronically, the whole chain of transactions, for example from filling in a travel claim form to payment of the reimbursement into a bank account, will be electronic.

The design process got off to a shaky start, with the employment of a contractor to undertake design and coding, which was unsuccessful because the contractor lacked knowledge of DTI processes and mainly simply copied the format of the old paper forms without considering improvements to the processes to take account of how the features of the electronic forms could be used to simplify the completion and processing of the forms. (The contractor also took over the original landscape format of the hard-copy travel claim form to the screen version, which created chaos for users trying to manoeuvre their way around it). The job of specifying the exact requirement of the forms was then handled in-house by a staff member and a student, and they took the opportunity to improve the presentation of information on the forms, and to get rid of civil service ‘archaisms’ in wording (this apparently caused some difficulties with people wedded to the jargon of their trade, but encouragement came from a dyslexic manager of the project who wanted clarity in language and presentation).

The forms project was recognised early as a quick win, in particular because of the automatic calculations and validation, which could be implemented quickly and provided an accessible demonstration of savings in staff time in checking the calculations in claims forms. The advantages of electronic forms will be reviewed as part of the MANDRIN Post Implementation Review which is due to take place.

Meantime some interesting results have come from a study of the use of the Travel and Subsistence form: 35 per cent of such forms are now completed using the electronic version, and the error rates with that version (in which the system, rather than the claimant, does the calculations) show a reduction of 80 per cent compared with the manual version.

MANDRIN and the development of the DTI intranet

As mentioned earlier (see p145) a 1994 review of managing guidance, news and reference information internally via electronic systems for internal communication identified three kinds of material – alerting, updating and reference, and recommended using the existing OSPREY system for the first two, while suggesting that additional investment was necessary for reference material (essentially manuals which were not very complex in structure and contained few levels of hierarchy).

Some internal information politics were involved at this point from the side of supporters with something of a vested interest in OSPREY. A pilot study therefore set up to test four possible approaches:

- 1 Full text retrieval alone
- 2 Browser alone
- 3 Options 1 & 2 combined
- 4 A customised document management system.

It was carried through by a combined team of consultants, including the vendors responsible for OSPREY, working to a project board chaired by a very experienced senior information manager from the DTI; they tested a number of products and tried them on the various alternatives. Besides measurement and comparisons, they talked extensively with authors and users, and then built a systems prototype and got people to try it. They found that the users preferred a browser-based system with a simple interface, giving access to full text documents. At one point consideration was given to asking authors to rewrite guidance material for a screen-based format, but this was abandoned as impractical in the timescale of the project; authors needed experience of the new medium before they could take decisions about the best presentation of their material. By March 1999, however, this was beginning to happen.

The business case for moving to a system of this kind was primarily based on quick access to essential documents without moving from the desk, and the associated time

saving and risk avoidance (this was particularly in relation to employment law – employers can be liable in dismissal cases if they fail to provide all relevant information, and this was particularly critical at a time when the Department's line managers were taking more responsibility for personnel matters). It is pointed out that were the process starting at the present time, an intranet would have been the obvious solution and the arguments would have been avoided. The DTI's requirement for a very secure system, however, means in any case a higher cost in designing for security and impact assessment than would be the case with commercial clients.

The final stage of the MANDRIN project was completed at the end of 1997, and in parallel with it the team looked at the possibility of taking into the system other types of material such as a directory service, registry system and CD ROMS. MANDRIN as currently (early 1999) implemented provides a strong foundation of access to manuals and forms with potential for development to take in other kinds of material, and for links to the Department's web site. The intention in further development is to retain the familiar features and cues which people are accustomed to use in looking up hard-copy material, and to avoid multi-media.

MANDRIN was launched to a successful start with a high-profile campaign. Since then an Intranet Strategy Management Board has been taking the intranet forward on a more strategic basis, seeking to move conceptions away from the technology and towards how it can actually change ways of working. The Board's Intranet Management Group, which implements the strategic thinking, is chaired by the head of the Business Analysis Team, a group which seeks to integrate the elements of information and knowledge management, organisational culture, administrative process and the infrastructure of new enabling technology. A strategy study [*may I have a copy, please*] for the Board introduced a strong knowledge management focus, and the Board has taken the line that 'if we can do the thinking right at the beginning, IT will be the easy part.' Pilot projects for expanding MANDRIN have been identified, and the Board aims to develop a phased approach to building exemplars of good practice in new developments with various partners in the Department.

Information content in the proposed development of the intranet is the responsibility of both information and IT staff, including ex-librarians, and the Intranet Strategy Management Board sees its task in part as developing the future role for information managers, one which will be largely concerned with promoting information interactions among people. Potential for a new approach to information

products is seen in this process, through the development of communities of interest, with information products focused on what people want to do with information in their work. In this connection they are basing their study on information audits carried out earlier in a number of management units, and looking at what people seek to deliver, their objectives, how they use information and the information they themselves create.

The Department's web site

The DTI web site was set up in 1995; the initiative was from the Department's side, there being at the time no pressure from industry for it. Initially, as a pilot IT project, the responsibility of Information Management and Technology Directorate, it became part of the remit of Communications Directorate with organisational changes in 1998. By the end of 1998, the site was a very large one, incorporating over 3000 pages of information. There have been two reviews since it was established, and a third review by a contractor was in progress during the final stages of this case study; this one was looking at the strategy for long-term development, and the first step was to discover how business and other users perceived the site and what they expected from it.

The site is managed by a staff member who came to the DTI to set it up in 1996. He reports to the Internet Editorial Board, which has general responsibility for overseeing the site and brings together a group of interested middle managers with various backgrounds - policy, technical and operational. The manager's initial role was to promote the internet within the Department and to encourage people to use it; this role has changed over time to that of facilitator, helping different parts of the Department to take responsibility for their own areas of the site and to find resources to implement their ideas. The manager now acts as consultant to them in setting up and developing their pages; he helps them in observing security requirements, understanding the constraints of the technology, and maintaining their parts of the site. Presentations are made to potential clients in the DTI to help spread good practice; it is observed that on the whole people are slow to think about different ways of structuring and presenting information electronically, and to allocate the resources necessary to develop electronic versions of material. The task of the manager is to advise and support the production of web pages and the transfer to the internet of material previously published in print. He acts as an internal consultant, but must work by persuasion because the costs of internet publication are borne by the

originating unit within DTI and not by the Department centrally through a central budget administered by Communications Department. Templates exist to guide development of web pages, and several web design consultants are used where the material justifies the additional cost. The manager is aware of the need for contractors who understand the content and the way in which the DTI does business; he has developed links with a number of suppliers and acts as intermediary between them and DTI clients; he acts as contract manager for larger projects and seeks also to encourage small and medium contractors.

The size of the site, and the diversity of its content, demand a coherent structure in which the classified hierarchical approach is complemented by alphabetical subject-indexing (despite the giant strides of the technology, Melvil Dewey's discovery of the strength of the 'relativ index' is still valid), to help users find what they need. The demand is met in a way which indicates that the Department's information professionals have applied traditional skills to good effect.

While there are people in the Department who are aware of the special problems of writing for the web – such as the need for information to be self-contained within paragraphs, some 'institutional resistance' is reported among those with traditional roles and skills in print production, as well as more general inertial resistance to a development which raises cultural and social issues. A guide to creating an effective web site has been written and is currently (March 1999) out for consultation with internal web contacts.

There is an interesting parallel with the situation described for printed publications in one respect: devolved budgets allow people to go it alone and to find their own contractors – a freedom which can lead to similar outcomes to some ventures involving print.

The initial driving force in the site was the perceived needs of the DTI; no priority was originally given to being friendly to internet search engines, and no idea entertained that people outside might approach it by routes other than those anticipated by the Department. While the home page and indexes are managed by Communications Directorate, the structure of the site and the character of different parts of it reflect the structure and culture of the Department. While there is advice and support as described above, availability of DTI material on the web is determined by individual management units who pay for their own pages, and so the site reflects their resources and their view of the importance of the web to their own work. Some

initiatives, like Foresight (business innovation for technology-led sectors) have very high-class sites; Overseas Trade Services also has a sophisticated site, because of high level backing for its development and significant demand from export businesses for immediate access to very current information. The other end of the scale is represented by Corporate and Consumer affairs, where the view is that most of the people they seek to reach, for example individuals with such problems as the inability to obtain credit, or organisations like Citizens Advice Bureaux, are unlikely to be connected to the internet. This is, of course, changing rapidly, and significant development of the site in 'consumer' areas may be anticipated.

The lack of an overall government view of what departmental web sites should be doing, and how different forms of product using different media should complement one another within the government communication strategy are also matters of concern.

An evaluation of the present situation

This final section sets out some reflections, in the light of the information gathered, about features of the findings which appear to have potential for positive development, and about aspects which may detract from achieving Departmental objectives.

Positive developments

The OMC survey recommendations provided the elements for a sound foundation for managing information products and presentation. The chances of realising the full potential were, at the time of the survey, and when this case study began, limited by certain features of the organisational structure and culture, in particular by divisional autonomy and decentralised decision making. Over the period of the case study, however, there have been some positive changes in both structure and culture, which favour better use of information resources and better management of information products.

At the start of the study, it appeared that the importance of the Department's information resources in relation to decision-making on information products was not fully appreciated at the highest levels, but the bringing together of information management and information technology has raised the profile of information

management and information technology has raised the profile of information management, and brought recognition of the essential contribution which senior information managers make to such projects as the development of the DTI intranet.

The Publications Unit set up as recommended by the OMC report has taken a firm hold on its tasks; its location within Information and Library Services, and its staffing by information professionals, has brought expertise in managing information resources to bear on the management of information products.

The Information and Library Service has also taken important initiatives on using information resources for creating information products – for example the project on internal guidance material [page 15]. Though the internal products intended to communicate information essential to doing the job have great potential value – positive or negative – in terms of working efficiency, at the start of this study such products appeared not to be considered, on cost grounds, to merit any investigation of their effectiveness. This, however, is an area where positive change is in progress – stimulated by such developments as the MANDRIN project, where recognition of this potential value formed part of the business case.

There are some encouraging examples of staff responsible for various information products who take a professional approach to such matters as publication planning, briefing and working with specialist agencies, editorial control, support for in-house staff development in writing and editing, and seeking user evaluation of products. While at the start of the study, Export Publications (the subject of a separate case study in the OMC survey) had made comparatively little progress in this direction, by the end it was seeking to become more professional as a publishing enterprise.

The fundamental change in the Department's approach to information systems and technology as embodied in the ELGAR system will help to create a strong foundation for the further development of the DTI web site and intranet, which in themselves are beginning to bring about rethinking of the whole area of information products and information presentation. In the DTI, as in other case study organisations, coming to terms with the web and intranet may well turn out to be the most significant catalyst for change in the way information products are thought of and managed.

At the same time, the change of government has led to a much stronger emphasis on the presentation of information to the outside world, with keen interest taken in it at the highest level. The studies leading up to the development of the DTI intranet [pages 31–32] are reported to have led, among other things, to the realisation that

despite the structural complexity of DTI, its outside world consists of only a few communities – something which should also have an effect on the future development of externally addressed information products.

Aspects in need of consideration

While, as indicated above, positive changes have taken place over the period of the study, there are still features of the present situation – some department-wide, some local – which appear likely to detract from the Department's chances of achieving its objectives in respect of 'value-for-money' information products, that is, those which:

- Enable users to take effective action which helps both them and the Department
- Support the achievement of the Department's objectives and promote its reputation
- Save the Department costs and risks that it would incur without them
- Achieve results whose value to the Department's work exceeds the costs of production.

The negative effects of divisional autonomy in decision making have already been referred to, as has the opportunity for counterbalancing them by changes in organisational structure at the top level, with their emphasis on team working across functional boundaries.

At present there appears to be no regular consideration of the whole range of information products across the Department as a whole; the OMC review represented a one-off attempt. There is currently no one forum which would bring together all the stakeholders and allow them to look at the creation and management of information products as a business process, negotiate a common approach to it, and consider its development in relation to DTI strategy. It is, however, possible that the experience of developing the web site and the intranet, and the range of associated information products – and the cross-boundary collaborations it is bringing – may lead to the development of such a forum.

In spite of the frequent references to value for money in relation to publications, it still seems that the costs to organisations of products at any level which fail to do their job properly is not fully recognised, and there is still a good way to go in establishing the true costs and values to the Department of information products. While *Guidance for production of DTI publications* (issued in 1994 and as yet not revised) says a good deal about value for money and costs of options at the planning end of the process, it contains

nothing about how to use the projections when the end products are actually in use. Nor was this aspect mentioned in the recommendations of the OMC Report for the 'Management Information System' to be set up by the Publications Unit; although the Unit's database today does hold information about costs for the majority of DTI publications.

The decision on whether to follow the *Guidance* and the other procedures recommended by the Unit still rests with divisional management, and at the end of the case study period the Unit was still having to concentrate its main energies in persuading originators to use the departmental contractor for distribution, keep the Unit informed of their publications, and provide legal-deposit copies.

In some areas of the Department, while there have been improvements, there continues to be a lack of appreciation of professional skills and the contribution they make to adding value to information products. This may be both cause and effect of a lack of training and development for the people involved in all aspects and levels of information products; there are instances where people at all levels from decision making and commissioning to editing and proof reading appear to receive inadequate training support for doing the job at a professional level.

Testing, monitoring and evaluation of external information products appears not to be universal, and approaches to it continue to be very variable and mostly low-level.¹

The present advisory role of the Publications Unit, and its reliance on the originators of products taking the initiative in providing information about them, makes it difficult for the Unit to take effective action on many of the factors just mentioned.

Within these constraints, however, there is still scope for upgrading the advice given. The 1994 *Guidance for production of DTI publications* has many useful features, but it fails to tell readers what to do with the answers to the checklist questions about proposed publications. The advice on design is minimal and following it would present difficulties to those most in need of help: how would someone with no experience or background of thinking about these matters decide whether the design 'complements

¹ There is today a good deal of reliable research and practice-based information on appropriate ways of testing, monitoring and evaluation, from such bodies as the Communications Research Institute of Australia, which deserves to be more widely known in this country.

the words used and is capable of being printed by a cost effective production process? This is hardly adequate, especially considering the pointed strictures in the OMC report about how people deal with design. The design area is one where a solution is still to seek; while the in-house provision (another instance of a service whose use was optional) was ended in 1996 and all information design is now outsourced, there appears to be no specific guidance or training on offer for the complex and demanding task of commissioning design.

It is also disturbing to find 'Plain English' still being relied on as the answer to every problem in writing. It is certainly a necessary courtesy to readers to use language in ways which are as familiar to them as possible, but there is plenty of research to show that in itself is no guarantee that the content will be understood and appropriately acted on - and that is the only true test of success in presenting information. To quote from some of the recent research:

There is a very real danger that consumers will be lulled into a false sense of confidence because a document looks well designed and is written in Plain English. Consumers may think that they understand a document and know how to use it when they do not. As a consequence, they may be seriously misled or disadvantaged.... Only user testing provides the evidence that a document is understandable. Sless & Penman (1994).

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Case study 7

The London Chamber of Commerce and Industry

Background

The London Chamber of Commerce and Industry was founded in 1881; its aim was then defined as: 'to influence public opinion and to influence the Legislature; to effect reforms that individual efforts would scarcely be powerful enough to bring about.' Throughout its history it has been a membership-oriented body, and until comparatively recently it has operated in the tradition of the period in which it was established, exercising a representative function in response to outside factors rather than taking initiatives or setting agendas.

An independent private company limited by guarantee, the Chamber is run by a combination of honorary officers and paid staff (the number rose from 95 in 1994, at the start of this study, to 110 in all by 1998), headed by a Chief Executive. Its 14-member Board consists of the honorary officers and the Chief Executive and Secretary, and members drawn from firms which subscribe to the Chamber. The Board acts as a management board responsible for financial oversight and resource management. The Council is a larger body, with a number of Vice Presidents and ex officio members, together with elected and nominated members; it is responsible for external policy, and for representation. In 1994, the Westminster Chamber of Commerce merged with the London Chamber of Commerce and Industry, and three years later the Chambers of Commerce for Hammersmith & Fulham and for East London took the same step. The total membership at the beginning of 1997 consisted of over 3000 businesses.

The main services offered to members are defined as information and contacts - covering export advice, training, information services and events; trade missions; and representation based on research among membership in order to present their views accurately. Information products are therefore potentially of great importance, and they account for a sizeable proportion of the Chamber's expenditure: salary costs related to information products together with print costs account for 0.07 per cent of the Chamber's total revenue expenditure (1998 figure).

Key objectives and strategies

The Chamber's current mission statement is a brief one:

To help London businesses succeed by promoting their interests and expanding their opportunities as members of a world-wide business network.

The 1997 key objectives, derived from the Corporate Plan strategic aims, were:

- To reduce the current resignation rate – a major cause of concern to the Chamber since the merger of the London and Westminster Chambers
- To review, enhance and re-package Chamber services which offer business opportunities to members – in 1996 the Chamber set up a Business Opportunities Group to integrate current activities, and it aimed in 1997 to develop further integration and exploit the Internet for this purpose
- To identify key customers and introduce account management – a review of member services recommended further investment in the Chamber's information systems, 'so that we know more about the interests and activities of our customers and the use made of our services'. This objective is directed towards using that information to focus on major companies.
- To increase media exposure by 50 per cent and establish the base line for tracking recognition of LCCI as the principal voice for London business – steps towards this included an annual independent survey to investigate awareness and impressions of the Chamber.
- To achieve BCC Accreditation – in 1996 the national organisation of British Chambers of Commerce (BCC) was converted into a national network consisting exclusively of Approved or Accredited Chambers. Full Accreditation now requires achievement of Investors in People status, and this was being sought by the Chamber, whose 1996 business plan included a commitment to developing its human resources.
- To negotiate with other Chambers of Commerce towards achieving a new integrated movement in London.

- To conclude a pan-London agreement on Business Link's¹ commitment to growing membership of London Chamber.

The 1998 objectives were to:

- Grow membership by 9 per cent excluding mergers
- Complete the establishment of a database of customers and their use of Chamber services (achieved by the end of 1998)
- Have at least half the London boroughs covered by the new integrated Chamber structure
- Increase by 15 per cent the frequency of LCCI mentions in the London and national media (achieved by the end of 1998)
- Create co-ordinated customer access to international trade services (achieved by the end of 1998)
- Introduce cross-Chamber knowledge management (achieved by the end of 1998)

Retaining its traditional control over its own destiny, the Chamber aims to be independent of government funding. In offering services to members it aims at a core of basic products for which there is a stable demand, which are relevant to sectors strong in central London, and to both large and small firms, and which are easily accessible and delivered in a professional way.

Organisational culture and structure

During the period of this study, the organisation has been in the process of fairly radical change towards a high level of professionalism, and a pro-active rather than reactive ethos. It is seeking for a change in the role of the Board vis a vis management in the direction of mutual support and 'clear and agreed roles and responsibilities'.

¹ A DTI initiative for bringing together local sources of business help and advice at a single location. Especially aimed at small businesses, the partners in them are Training and Enterprise Councils (TECs), Chambers of Commerce, local authorities, enterprise agencies, CBI, etc). By 1998, the LCCI's Information Centre had established a service level agreement with Business Link London, which no longer had information staff.

A human resources policy for staff is directed towards professional management, a 'self-critical approach to work' planned training, and sound personnel procedures; steps in 1997 towards Investors in People accreditation have led to annual determination of personal objectives, linked to identification of training needs.

Emphasis is placed on inter-team exchanges, on moving away from sharp functional divisions, towards a 'process' orientation (for example in seeing membership retention as a responsibility running across the whole organisation), and an organisation-wide view of the use of information and information technology in meeting organisational objectives. The hierarchy is a fairly flat one, and the culture is described as being an open one, in which people on whole are good at sharing what they know with one another.

The management group instituted in 1993 was based on a 'team' structure; this originally consisted of teams for Membership, Finance, Resources, Chief Executive, Information, Events, World Trade, Europe, Export Documents, and Policy and Research. One of its main concerns was the development of a marketing strategy. Previously no one person had responsibility for marketing; in 1997 it became the responsibility of the head of a team covering Membership and Marketing. Towards the end of the case study period (1997/98) the Chamber's policy was increasingly driven by marketing and membership, in response to a strongly competitive situation. The membership team in particular was renewed and drew in staff with a wider range of experience. Other changes have led to Policy and Research placing a greater emphasis on issue-related investigations (eg on the effects of the proposed privatisation of the London Underground).

After the team structure was established, a Strategy Group was introduced as a link between the Board and the Chamber's management; a subset of the Management Team, it consisted of the Finance Director, and the Heads of Membership Services, International Trade, Policy and Research, and Membership and Marketing. In 1997/98, the Management Team became an Operations Team, with its own detailed strategy, and a role described as that of the 'engine of the Chamber', complementing the role of the Strategy Group, which concentrates on creative thinking about longer-term issues. Each has representation at the meetings of the other.

Involvement in DTI initiatives like Business Link and Regional Supply networks also brings a change in role and adds to the external stimulus towards changes in organisational culture, while the 1994 merger with Westminster Chamber of

Commerce, and more recent mergers with other London-based chambers, imported a new element of internal organisational culture.

Information resources

Despite the acknowledged importance of 'information' as a key service to members, there is as yet no agreed definition of information in terms of the Chamber's role, though it is seeking to move towards a clearer understanding, embracing the concept of 'knowledge resources' in the sense of the expertise embodied in export advisors, experience of customs and trade procedures, etc. Further progress in this direction came from an initiative by the information team in 1997; in putting together their own objectives, they included knowledge management among them, and presented a paper to the Board which led to this being accepted as an objective for the Chamber as a whole. The arguments for it were based on the large amount of specialist knowledge embodied in its teams; the expertise which new staff members bring in and which should be made accessible; and the knowledge in the minds of long-standing staff, which should be safeguarded from loss when they leave. In contrast to the technology-centred approach to knowledge management of many organisations, the Chamber sees people as the focus and technology as a support to help them use their knowledge effectively. A knowledge audit was being planned in the summer of 1998.

Resources of information are distributed throughout the organisation in ways which reflect the various functions it performs.

The Information Centre

In earlier years, the Chamber had a business library whose origins dates back to 1890. As membership declined, its staffing was cut in the interests of economy. Among the changes of recent years, however, there has been a significant investment in qualified staff and the development of an Information Centre, including a library, under an experienced professionally qualified manager. By mid-1998, the LCCI information team consisted of 12 staff, most of them qualified information professionals. Its 1998 objectives included:

- Organising a knowledge management day for LCCI staff
- Developing, launching and promoting a market research service

- Developing, in conjunction with IT, networked desktop internet and online modem access for the research team
- Carrying out an information audit of all teams, with guidance from Personnel, to identify the LCCI's information assets, and incorporating an internal knowledge database in the library management system.
- Increasing the proportion of member companies using the Information Centre from 25 per cent to 35 per cent.

One of its major tasks in 1996/97 was to get an idea of the information needs of the whole membership, as a basis for designing appropriate services. Users of the research services of the information service at present represent a quarter of the total membership, and the service in mid-1998 was handling 30,000 inquiries a year undertaking a total of 4000 research projects a year for members. When this case study started, it was not possible to find out from the membership database the use which members made of the Chamber's services. The lack of information about membership imposed a 'reactive rather than proactive' approach, and made it impossible for the Centre to exploit its existing large resources, such as information about trade opportunities, because it was not yet possible to identify target users. Fortunately the membership database has since been upgraded to make it capable of providing this kind of information. The Information Centre now runs open days for members, to show them the whole range of information resources available to them.

The Centre is also seeking to develop further its information interchanges with the other teams, in particular with the membership team, with which it works closely, providing background information on member firms for account representatives who visit them, and for staff who meet their representatives on visits to the Chamber. While at the start of this study, it had a fairly limited role in this respect, it now provides information to all the Chamber's teams. The traffic is two-way; the World Trade Team in particular contributes substantial information from trade missions to the Information Centre. Development of interchanges between the holders of distributed resources of information is seen as useful and beneficial in itself, and as helping to counter any danger of the Information Centre being seen as relieving everyone else from needing to think about information. In 1997 the Centre acquired a library management system, which will ultimately cover all information resources and will be

the 'protection' theme of Norwich Union, another case study organisation.) As this study ended, a project was in progress to evaluate the worth of the brand to the Bank.

Decision-making on information products

Decisions about externally directed information products for customers follow from marketing decisions. For personal customer products, decisions by product managers are taken in liaison with the Marketing Services Manager. Each campaign and its associated products is supported by a business case relating to business objectives, and giving a cost breakdown.

Example

A summary of a proposal for a customer newsletter, initially as a pilot for customers in the North West.



Objectives:

- To inform customers of developments at their bank
- To increase customer loyalty
- To cross-sell the Bank's products/services
- To obtain feedback from customers
- To become self-financing.

Target audience:

The Bank's personal customers

Style:

[Details of format, content, approach to readers, illustrations, paper, use of colour, frequency, distribution]

Content:

'The value of the newsletter to the customer has to be immediately apparent for it to be saved and read/skimmed rather than binned as junk mail ... This means information which is closely targeted and in a quickly assimilated form.'

Targeting:

[Analysis based on the assumption that the readership will be a cross-section of the customer profile; unique features of that profile suggest that the 'special partnership' between customers and Bank should be 'the pivot of the whole paper'; easy direct response should be made easy.]

Content – Regular:

'Each issue should provide customers with:

- Information on the Bank's repositioning, ie developments in the areas of corporate responsibility, ethics, Mission Statement, Customer Charter.
- Education on the Bank's products and services
- Advice on personal finances
- Regional information'

Average length of items:

200 words; 12 such items proposed for each issue (suggested content for first few issues given in appendix).

Editorial team:

[A small team of people whose areas of responsibility cover the relevant subject areas to support the editor (who will have editorial control of what goes in)].

Timing:

[Estimate of time required to produce an issue]

Monitoring:

'to assess the success of the newsletter and plan its future direction, an accurate means of customer research is necessary'. The recommendation (on the basis of the experience of research firms) is for follow up telephone interviews with a small sample, rather than a questionnaire included with the product.



The outcome was *In Touch The Co-operative Bank Customer Newsletter*, published from Autumn 1993 (subsequently developed further to become the present *Customers who care*).

Costs and budgets for information products

No figure is available for the Bank's total expenditure on information products and presentation; it forms part of the marketing budget, which is a large one, but is not published.

Provision for information products is made in the annual budget estimates by staff in the relevant product areas; occasionally an ad hoc budget is sought for a special product which could not be envisaged at the time of preparing the annual estimates.

Each campaign and the products associated with it has to be supported by a proposal related to key business objectives, and a cost breakdown. The cost information in the customer newsletter proposal quoted above was in the form of per-issue costs for:

- Design, typesetting and printing
- Mailing
- Postage

(excluding initial design and on-going photographic costs, and assuming in-house writing of copy).

The information products

A brief outline of representative products current during the period of the case study, with notes of development during the period.

Products for internal audiences

Banknotes

A quarterly staff newspaper (tabloid format, four-colour, 8-page), with a mixture of work-related and 'human-interest' content. It is designed and produced by an outside company. Visually it is fairly chaotic and the typography does not make for the easiest of reading. Recent issues contain features and news items on a biodegradable affinity credit card launched by the Bank with Greenpeace, the Bank's business banking services, its Investors in People award, a disability-awareness programme, EC ecological legislation, and Bank staff involved in conservation work and in charitable fund raising. Its future development will be towards being more of a magazine, to complement other forms of in-house communication such as email and the office system.

Personal sector marketing and sales campaigns

A bi-monthly, following up the progress of ongoing campaigns, carrying contributions from Customer Services and anyone else with promotional activity. The content consists of summaries of recent and current activities, priorities for action for the month, advance notice of forthcoming activities, contact points for queries, customer response phone numbers for different services, and product charts which give an annual overview for the activities of each product group. A4, spiral bound, word-processed origination. The typography is a mixture of symmetrical and asymmetrical. Text pages have 3-col grid, with one column devoted to marginal heads, and 2-3 forming single column for text. It scores well on legibility and accessibility (though the page of contact points and the product charts would benefit from some design input) and uses the same range of recycled materials as external products.

Corporate and Commercial marketing campaigns

A quarterly summary, with sections on Sectors, Product News, Projects and Activity charts. A4 spiral bound, word-processed origination, landscape format; it is well designed and structured.

Retail Banking (Sales) Division: Technical Training Guide (1995)

For staff in the Division, the Guide 'is designed to contain all the information you require for your personal development needs relating to technical training.' The content includes 'Training Tracks' - charts showing training and development progression for different jobs in the Division; and details of in-house and external courses available. A4 loose-leaf; carefully structured, and written in an accessible and non-condescending style.

Training Newsletter. Group Resources (1997)

First issue of planned quarterly newsletter on training in one of the Bank's Divisions - appropriately the one which includes Human Resources. A4 four-page folder, two-colour.

Business Briefings.

An innovation introduced in 1998 (in response to the 1997 Staff Survey) covering all business issues, and replacing an earlier (and not conspicuously carefully presented) photocopied product which was described as a kind of script with prompts to encourage managers to communicate with their teams, on key events

such as the Bank's annual results and profit share arrangements *Business Briefings*. is used in face to face team briefings, with provision for electronic feedback.

Grass roots initiative: Staff Guide

The Guide was produced in conjunction with a major communications campaign which started in May 1993, addressed to the Bank's own customers and those of other financial institutions, with the aim of making them aware of the Bank and what it stands for, by a variety of media, including, for the first time, a TV campaign. The Staff Guide was addressed to staff, introducing 'What we stand for', 'What we won't stand for', and what the campaign would mean for their own work. A large-format product, designed by the group responsible for the campaign materials for the public, and extremely successful in concept and execution. There could hardly be a better way of enlisting staff commitment to ethical and environmental policies than by designing their material as part of whole campaign package, to same standards.

Grass Roots Diary (1994-1995)

The *Diary* was distributed to all branches in connection with the Bank's Grass Roots Award for the branch which contributes most to local community activity. It gave the dates of national charitable events as a basis for planning local activity, provided suggestions for converting Grass Roots activities into sales, and allowed for recording activities, funds raised, presentations given, etc. This too was large format, designed by the same group; it was thought out to the last detail, including a pocket at the back for press cuttings, etc.

The *Grass Roots* products are no longer issued.

Staff video (1998)

Another product resulting from the findings of the 1997 Staff Survey, which identified a need for more effective and consistent internal communications

Products for external audiences

Financial Statements (Annual Report)

The Annual Report used to be a fairly conventional product. The 1993 version was typographically rather unappealing; spacing was poor, and the measure used in the report was too short for comfortable reading. There was little relation in design terms between the report section and the financial statements, where the text

measure was too wide. Coated paper and a bad choice of typeface for it made for low legibility.

Since 1996, the Bank has presented its financial report as a paired document with a report on its social policies, to create an unusual form of annual report. The first of these, *Strength in Numbers*, introduced its Partnership Approach. In 1997, the financial report was paired with the first report on the implementation of that approach, *The Partnership Report*. The reports have a distinctive typographic identity, and are designed by a company which has worked for the Bank for many years; the copy for the Partnership Report is also the product of a group with which the Bank has a long-term relationship.

Ethical policy

Initially (1992) a 24-page booklet – *What we are and what we stand for* – was produced. It argued the case for commercial concerns having an ethical policy from first principles, and outlined the historical background of the Bank's policy in the co-operative movement. Feedback suggested this was too wordy, so the next version (1993/94) was reduced in content, and presented as concertina folder with 8 pairs of YES/NO images and brief text. (It is characteristic of the Bank's approach to information presentation that changes with time are always in the direction of minimising text). This was the first of the square format leaflets which are now a familiar feature of the Bank's output. A set of 8 paired posters was issued at the same time. More recently (1998) the policy has appeared in an 8-page A5 brochure, with examples of how 'profits and principles can go hand in hand', and of the Bank's positive investment in ethical enterprises, and an updated version appears in the January 1999 issue of *Customers who Care*, embodying new commitments arising from consultation with customers (through a questionnaire in an earlier issue).

Word of mouth

An A4 2-colour folder to encourage customers to recommend a friend. It carries an outline of the ethical policy, together with details of services, service guarantees, and figures indicating the high level of satisfaction among the Bank's customers. The presentation of information through text is well structured and coherent; visually, however, there is little to tie the elements together, and use of figure and ground device on cover, while ingenious, doesn't really work.

In Touch. The Co-operative Bank Customer Newsletter (now Customers who Care)

This began as an A3 sheet, folding to A4 and then became an 8-page A4 magazine issued at irregular intervals. The proposal (see p65) was followed by a period of research, which looked at other products, distribution, etc. Although a pilot was proposed, in fact it went straight into nation-wide production. Big changes in typography were made between the first and second issues.

In 1998, it was re-launched and re-branded as *Customers who Care* issued quarterly. The content concentrates on brand stories and service messages, and the title links it with a campaign in which customers are invited to vote each month on charities to which the Bank will contribute. Recent issues have dealt with Internet banking, the arms trade, and the updated Ethical Policy. The format changed again with the re-launch, to a n eight-page folder. I noted at an earlier stage that *In Touch* went on getting better in content and design, the grid worked well for both two and three column layout, and accommodated all the elements comfortably. The re-launched product maintains the high standard of typography and written presentation.

Personal customer services material

Policy and customer leaflets

This includes a series of nearly square format leaflets, among them a set of three on current accounts for students (account details, bank tariff, and application form); the text makes a strong point of how the account is differentiated from other banks' student accounts in not offering facilities that could lead them into serious debt. Recent additions include leaflets on demutualisation of building societies, and the Bank's service for selling windfall shares, and its Customer Service Guarantees. The square format policy and customer service leaflets, designed by the group responsible for many of the Bank's products, make a coherent series in terms of approach to readers, typography, visual elements, and materials. (It is unfortunate that in the Visa leaflets conditions of use and other essential information falls prey to small print and poor spacing.)

Other products on customer services are in different formats; the telephone banking leaflet from the Business Registration centre for example is A4 gate folded, with a tear-off registration form, while leaflets on travel insurance are presented in a non-standard format. These are less successful; there is no family resemblance, they are typographically disorganised, though the text content is good, being both conceptually well organised and well written. The Customer Charter Chapter One is

a real typographic disaster; printed throughout in capitals, which notoriously makes for difficult reading, its measure is also too short for the type size used, interlinear and inter-word spacing is poor, and the placing of the charter seal is ill-judged.

It was intended in 1996 to aim at one or two standard formats for leaflet-type materials, as part of the implementation of the Bank's Corporate Identity programme; implementation of this change is now planned for 1999.

Standard letters

These are not often considered as an information product, though they deserve to be, as work by the Communications Research Institute of Australia has demonstrated (see, for example, Stasko, 1994, who reports on a case study which suggests that 'Standard letters are as normal a part of most large organisations as paper clips. Rarely are they given a thought unless you can't find one. Unlike paper clips however, the potential difficulties for organisations caused by standard letters can be equal to the actual number which are sent out each day.').

A multi-department project was carried out in 1994 to rationalise all standard letters, leading to a reduction in their number from 3000 to 600. The project, which looked closely at content and presentation was related to the development of the corporate design manual (see below). New standard letters were produced by professional copy writers to briefs prepared in-house; there is reported to have been 'intensive interaction in getting them right'; all were re-written to ensure that they all spoke 'in the same tone of voice', as well as following house style. In use, appropriate letters are generated by the computer system as events occur relating to customer accounts.

Products for business customers

Business advantage

This newsletter (2-colour, A4 stitched, 8 pages) was initiated in 1994 on the basis of research among business customers, and is mainly oriented to small and medium enterprises. Content of a recent issue includes: features on the Partnership Report, and on factors to consider when expanding a business; items on tax investigation of small businesses, the Information Society Initiative to promote the use of information and communication technologies in business, the Industrial Common Ownership Movement, new developments in the Bank's electronic business banking service, and its GreenLease package; and a questionnaire about the

magazine, and their own business, with particular reference to the internet to and to Year 2000 compliance.

The design of the first issues presented problems of legibility in reversed out panels over a tint at the edges of page, especially the ones which were set ragged left. Text was run round illustrations; the type size too small and the light sans face was not very legible. While the content was useful, the text was less accessibly written than that of some other products from the Bank. A re-design in 1998 changed from a three-column grid to one that allows two and three columns on the same page, while retaining the other features which make for difficulty in reading.

Business 2000 (2-colour, A4 4-page

A product designed to keep business customers informed of the Bank's activities in relation to the millennium - not only Year 2K compliance, but European Monetary Union, the introduction of the euro, and the steps the Bank is taking to renew its install euro-compliant software and upgrade the processing power of its foreign currency system (from the start of 1999, customers have been able to transact, save or borrow in euro).

Financial Services for Business

A folder with 2 A4 brochures on the Bank's services for voluntary organisations, and on its independent financial advice. The graphics are weak and the text more spread out than the content warrants.

GreenLease

GreenLease is a product recently launched by the Bank to help businesses finance environmental improvements, which often require expensive capital equipment, through Asset Finance rather than loans. The Bank's Ecology Unit has expertise in both helping producers of such equipment to market it, and in developing asset finance packages for purchasers. The supporting information products (an A4 6-page folder, and a large-format A3 8-page brochure) are very distinctive. Their use of large areas of colour over half-tones is reminiscent of the earlier *Grass Roots* initiative products, and was selected in order to differentiate GreenLease. The copy is economic of words, and of high quality.

Electronic products

The Bank's web site was set up in 1996. Before that date the Bank had asked help from academics on a pilot web site. Their approach was simply to transfer existing

products as they stood to the web pages they developed. The situation was changed by an approach from a small web site company, which took the initiative of designing some specimen pages for a Co-operative Bank site 'on spec'. The initiative paid off, and the company was commissioned to set the site up. In 1998 it received the FT Business Website of the year award.

The company provides technical input as web master. Management of content of the site is in-house, by a member of marketing staff, who acts as interface between the Bank and the company. Product managers go through her in updating and adding to their material on the site, and she works in daily communication with the company.

The site is rich in content, well structured, with a straightforward contents page, and easy to navigate. The main sections are:

- Internet banking
- Our ethical approach (Ethical Policy statement Ethical Policy slide show – 'see what we will and will not invest your money in'; Customers who Care campaign; Ethical Policy Questionnaire; Fair Trade Coffee Challenge; Strength in numbers; Profits and Principles; Ethics and you; The Landmine Debate; Mission statement and Ecology Mission statement)
- About the Bank (the Partnership Report; Financial Statements; Customer Service Guarantees; the Banking Code; Contacting the Bank)
- Accessing the Bank (Telephone Banking; Branches, cash machines; Banking at your Post Office; Interactive Television banking)
- Business Banking (Millennium issues; Year 2000 Compliance); Business Direct; Business Visa Card; Business Deposit Services; Financial Director for Windows; Business Banking Charges)
- Employment Opportunities
- Interest Rates
- Personal Banking (The Millennium Bug; Personal Loans; Current Account; the Debit card; Student Current Account; Save Direct Savings Account; Pathfinder Savings Account; Tessa Savings Account; Guaranteed Investment Bond; Home, motor and travel insurance; Travel service)
- Visa Credit Cards
- Online Application Forms

Full text of key documents such as the *Partnership Report* is available on the site; key sections of others, eg *Financial Statements*, are reproduced; other material is complementary to print on paper products – for example the Customers who Care

campaign has a page which highlights some of the key issues supported, with a graphic to show the total contributed to charities.

One interesting feature of the site at the start of 1999 is a brief from the Royal College of Psychiatrists, sponsored by the Bank, for a student information design competition. The objective is to influence opinion formers in the media to change their attitudes around mental health. Content is to be based on a lecture by a psychiatrist, and the brief requires students to 'translate this conviction into print, taking full advantage of the components inherent in the medium - typography, imagery, colour, etc.'. Competitors are asked to produce a front cover and four spreads. The winner (s) will work with the Bank's long-standing design consultants (The Chase) to carry their entry into production.

Experience of developing the site has brought changes in ways of thinking about the relative roles of printed products and the web as vehicles for information. Initially printed literature was transferred as it stood to the web site; now, there is what is described as a 'whole new approach to content', taking advantage of the facility the web provides for creating links to other existing material, instead of repeating it in a number of individual contexts. The next step is envisaged as looking at how printed and web versions of information products can complement one another, to meet the various needs of users.

The Bank does not as yet have an intranet, but is considering it as a logical next stage; meantime email and the electronic office system are used for circulars, which are no longer issued in print.

Information resources

The Bank's customer database, set up in 1982, is potentially its most significant resource in planning information products - though in the early stages of this study that was said not to be fully appreciated outside Marketing Services. It was suggested that the Bank was 'just starting to learn how to make use of it'. The age of the database possibly accounted for the reported fact that, while most of the fields now held data, it was not yet possible to ask and get answers to the kind of questions that would guide the development of campaigns and products.

By the end of the study (late 1998), the importance of the database was said to be probably better recognised outside Marketing, while Marketing staff themselves, the main users, were constantly learning; there was, however, still a long way to go. Its use is still system-driven; its origin as a system for matching products to customers, means that interrogation involves a special search which has to be done

by IT. The long-term aim is to have it available for interrogation on desktops; meantime it still lacks flexibility and the solutions are still *ad hoc*. Meantime, Marketing is developing its customer contact strategy, to make more history available of what customers have received, and their response. Work has also been done on customer life styles and values. Restructuring of the marketing function has led to closer relations with the IT team and with credit management, and to an agreed view on what data need to be extracted, and on objectives and how to measure results. Information crossover has benefited the recruitment of customers, and increased knowledge of customer behaviour is used in making decisions on what to offer them; for example knowledge of customers' credit-worthiness is used in compiling Visa mailings, and so fewer applications are now declined.

So far as other information resources are concerned, in the early 1980s the Bank had an economic intelligence unit in the Marketing function, which scanned the press, monitored economic developments, and maintained international liaison with other co-operative organisations. This no longer exists (for reasons which are described as 'lost in the mists of time'); nor does a library which once existed in the Bank.

At the start of this study staff in Public Affairs and Marketing scanned the press against lists of key topics of interest to the Bank. Photocopied cuttings were circulated weekly to key managers, together with the output from an outside cuttings service. This continues, now that the organisational structure has changed.

The Bank also buys reports from commercial monitoring services for audio and TV; an annual roundup of these is circulated. Economic intelligence is sought in relation to specific products, to which the Bank might be alerted by topics which show up in the cuttings. This sometimes leads to the commissioning of research; a study was commissioned, for example, on money advice agencies. Ethical research products are bought 'off the shelf' from the Ethical Research Agency and Manchester Business School. One member of Public Affairs staff has special responsibility for research.

It is still not clear to me how the Bank decides what knowledge and information needs, how it is acquired and managed, and who has responsibility for the decisions, for any information strategy that exists, and for information management. Information interactions are certainly well developed, however. At the top level, a small executive team meets monthly, and this meeting is described as the place for presenting new ideas upwards without layers of line management getting in the way. An example quoted was of a recent paper on relationships with credit unions put forward by a manager with particular knowledge of this field. It

seems at any rate to be part of managers' responsibility to know the Bank's business plan, to take information initiatives based on it, and to know who to bring in on projects.

Human resources for information products

The Bank is described as employing a mixture of 'home-grown' skills developed on the job, and external recruitment of trained staff.

Writing and editorial

Some writing is done in-house. One staff member in Public Affairs divides her time equally between work on publications and PR. The decision about whether to use this in-house writing and editorial capacity or to go outside is left to the people responsible for particular products.

While requests for advice are received from other banks about how to run customer newsletters, the tendency in the Bank is to go outside for writing jobs rather than using the in-house capability.

For products which are to be written outside, a brief is produced in-house by the product managers concerned, and the writing entrusted to a copy agency. Strong emphasis is placed on briefing and on in-house consultation with stakeholders in the Bank (up to 65 parts of Bank may be involved in planning for some products), and there is what is described as 'intensive interaction' with outside writers. The Bank has a long-term association with its main copy writers; their in-house contacts provide a learning process for them, so that over time they have acquired the benefits of inside knowledge.

The 1998 *Partnership Report*, a major product, was a co-operative effort between the Partnership Management Team, who collected data, copywriters with whom the Bank has a long-term relationship, the staff member who prepared the design brief and the design group commissioned. Independent auditors were also involved.

Design

All design is commissioned from various outside agencies. One in particular has been used for several years, and is responsible for the ethical policy and related materials which are the most distinctive of the bank's information products. All product managers are however free to go to whatever design groups they choose, so

a range of design approaches is used. (The corporate identity which has been in the under development since 1994 is partly planned to move the Bank towards unified presentation – a process still continuing at the end of this study.)

Training

No training appears to be given in such activities as writing, editing, or working with designers and copy writers; skills and experience are acquired on the job by people who have a variety of backgrounds in the Bank.

The technology used for information products

Apart from word-processed documents for internal use, all information products are typeset outside. A few years ago, there was a cautious first venture into in-house desktop publishing. At that time, the intention was to develop the use of desktop publishing within Public Affairs for information products; on reflection, however, it was decided that this could lead to Public Affairs becoming a print unit, and so the department pulled out of it.

The presentation of information

For both internal and external products the Bank seeks to achieve professionalism in presentation, by means of text and visual organisation which match the information content and the intended readers, and which help readers in using the products for the purposes for which they are intended.

One aspect of this professionalism is embodied in the Bank's corporate identity. The first step in this direction was introduced in the mid-80s to overcome what were seen as the negative associations of the phrase 'Co-op Bank' with old-fashioned co-operative stores in the minds of the public. A process of revision started in 1991 on the basis of in-house thinking; a decision was taken not to follow the usual course of going outside to commission a concept from a specialist consultancy. The Bank worked with the design group which has been responsible for its most distinctive products, with which it has a long-standing association. The corporate identity is unusual in its high information content, which supports the underlying aim of setting the Bank apart from the competition. Ethical policy is the key differentiator; the effect of its environmental aspects is reflected in the choice of earthy colours, and the use of black and white visuals.

The approach to corporate identity is made clear by the Corporate Design Manual:

'Design discipline must be used to organise and clarify but should not be seen as a dictatorial straitjacket that stifles initiative. We regard it as a framework that, above all, makes sense and into which creativity can be channelled.'

The manual's content covers:

- 1 Logotype, symbol, image (based on the old cornsheaf), typefaces (Gill Sans and Stempel Garamond, from Bitstream Library)
- 2 Stationery including forms
- 3 Publications:
 - In-branch literature
 - In-branch promotions
 - Statement inserts
 - Direct mail
 - Leaflets
 - Posters
 - Application forms
- 4 Signage
- 5 Vehicles
- 6 Uniforms

It includes grids, and examples of production errors, under the apposite heading of 'What we won't stand for!' The manual is now being applied to all Bank information products.

Production

The Bank uses a wide range of typesetters, printers and other professional services for its information products (not drawn from any 'approved list'). Liaison with them over any particular product may be handled direct by the in-house product manager concerned, or by the design group commissioned for the job.

Testing, monitoring and evaluation of information products

Pre-production research/testing on ideas for new products

Various methods are used. In some cases, design groups provide pilot versions of products for testing with a sample of the intended users. This involves asking them

linked to an LCCI intranet, with the intention that it could become the nucleus of a Chamber-wide network.

Membership database

When this study began, the Chamber held basic information on its members in an elderly database which was primarily dedicated to recording subscription payments and renewals. The main activity of member companies was recorded in the database (using classification codes which were said to be out of date). Improvements in 1996/97 made it possible to find out the use which member companies had made of the Chamber's services, the system still presented some of the difficulties outlined on p195 for some of the staff who required membership information to support their initiatives. In 1997/98 the membership database was re-launched with new Windows-based software – Charisma – on which all teams have had training. The Information team does most work with it, and by mid-1998 was seeking further changes on the basis of experience to increase its utility.

Information from Policy and Research team activities

This team has the role of developing policy on the basis of research among members, and then using the results in lobbying and representation. Over the period of this case study it has become much more public-relations oriented. Qualitative information is gathered regularly from a sample of the membership as the basis for the *Quarterly Survey of the London Economy* (see below). Information is also collected from research projects which members sponsor on specific topics of importance to them.

European Information Centre

The European Information Centre has a particular role in supporting small and medium-sized enterprises (companies with under 500 employees) in their relations with the Single Market. It aims to use its collections of EC legislation, documentation on EC programmes, etc, and the expertise of its staff, to help businesses 'to make a positive response to ... the advent and consequences of the single market.'

Information products

The Chamber's information products draw to an increasing extent on its information resources, though not as fully as would be desirable in meeting its key objectives. As one manager remarked in the original interviews, 'We're good at giving others information, but need to work on exploiting information resources and adding value to them.' There is, however, awareness of the potential, and ideas for products to exploit it, throughout the organisation.

In 1994 the Information Centre took an initiative of this kind with *Business Matters* (now run by Policy and Research, see below). In 1997 a companion product *International Business Matters* was introduced to supplement it. Other products were developed elsewhere in the Chamber, for example:

- Packages for each major sector or for companies of a particular size, to tell them about services available, contact people, and key sources of useful information
- Information products derived from the surveys and/or statistical tables compiled by the Policy and PR team
- Print-outs for member companies showing them the use they have made of the Chamber each year.

External products

Table 1 shows the range of regularly appearing products which the Chamber publishes for external audiences.

Business Matters (Policy & Research)

This fortnightly current-awareness product for members was initiated by the Information Centre, and launched early in 1994, with the aim of presenting in accessible form short items of information relevant to Chamber members. Its management was later handed over to Policy and Research when the member of Information staff who had edited it moved on, though the information team still contributes. It is now more oriented to members' interests, and more interaction between readers and editorial has developed. The standard format for each issue groups items under the main headings of 'London news', 'Business news', 'International news', and 'Members' news'. Each item is presented under an informative title, in bold face, and each has a contact name and phone number. A regular supplement on *Employment Matters* has been added. When *Business Matters* appeared, it was characterised

by the Chief Executive as an example of change from reactive to proactive, and as one of the most important developments of the year. By mid-1998 the Chamber was considering re-evaluating content and presentation in the light of the developing diversity of the membership and its changing information requirements. Many younger members, from a much wider variety of backgrounds, including consultancy groups, multi-media companies, and the fashion industry, have recently come in, and have leavened the mix of large financial services companies and export/import businesses which traditionally predominated.

Table 1
Regular publications

Title	Department	Frequency	Distribution
Business Matters	Policy and Research	fortnightly	Membership (previously Information)
International Business Matters	International Trade team	bi-monthly	Membership
Openings for Trade	Information Centre	weekly	Subscription
Making Business Contacts	Events team	quarterly	Membership
Developing your business through people	Human Resources	3/year	Membership
Your keys to world markets	Europe and World Trade teams	yearly	Membership
Annual review	Chief Exec's team	yearly	Membership
Directory of Members	Membership team	yearly	Membership
Quarterly survey of the London Economy	Policy and Research team	quarterly	Membership subscription Sponsors
Annual review of the London Economy	Policy and Research team	yearly	Membership Sponsors

A new companion publication, lighter and less regular, *Member Matters*, was also being planned, to take advantage of these changes. Design and presentation will be by the design group responsible for the new set of membership products introduced in 1997/98 (see below)

International Business Matters (International Trade team)

A bulletin (6 issues/year) for members, on the same lines as *Business Matters*.

Openings for Trade (Information Centre)

This product, which has existed in one form or another for over 90 years, has been in the process of change for some time. In 1994 the London Chamber reached an agreement with British Chambers of Commerce to market it nation-wide, as it needed a bigger subscription base. It now carries the BCC logo, and incorporates some new features, including an inquiry form and an overseas events calendar, and design changes. The arrangement is a classified one; the main heads are Export Opportunities, Import Opportunities, and Specialised Opportunities, and under them brief details are given by country and by product. From May 1997 it has been produced as a weekly fax, and further changes are under discussion. By mid-1998, although some subscribers still supported it strongly, subscriptions were dropping, possibly because of competition from the Internet, as more younger import/export staff come to use the World Wide Web for the kind of information the traditional publication offers. The Chamber's Web site opened in September 1998; *Openings for Trade* will be available there; there was also some thought of merging with a competitor product, and of a possible joint venture with international chambers of commerce, using the Gateway IBCC (International Bureau of Chambers of Commerce) Net.

London Commerce (Policy and Research; ceased publication in 1994)

One product was discontinued as result of a review of publications following on the London/Westminster merger. This was the journal *London Commerce* (10/y), edited in house and managed by the Policy & Research team, and distributed to membership and others. It had undergone a number of changes during its history. Originally, it was a promotional publication, backed up by other specialist bulletins. With new management, some rapid changes were introduced; its final form was a magazine which aimed to concentrate on information unique to the London Chamber. One third of the content was related to the UK, and two thirds to international issues – a

reflection of members' interests. It relied on getting as much advertising as possible, and editorial policy aimed at a mix of standard features based on geographical areas and events, together with special articles to attract advertisers. It carried commissioned work from specialist writers in such fields as law and accountancy; other articles and items were written in-house.

Quarterly Survey and Report of the London Economy (Policy and Research)

Part of the London Economic Research Programme (sponsored by a number of companies and public bodies), covering results from a survey of businesses in London. Each issue consists of an economic review of key indicators from the world economy, the UK economy and the London economy, followed a commentary on the findings of the survey.

The questions asked in each survey cover such features as domestic and export markets, employment, recruitment, investment, and business confidence. Analyses are made by company size, by economic sector and geographical region. The methodology used in analysing the data involves calculating the difference between the proportion of respondents reporting increases and the proportion reporting decreases in different areas of activity. The results are presented as percentage 'balances'.

Annual Review of the London Economy (Policy and Research)

A companion product to the *Quarterly Survey*, this product provides a detailed analysis of the performance of the London economy and its future prospects. It covers the same factors as the *Quarterly Survey*, over the period of the past year, as well as longer-term issues, such as London's position as an international financial centre. It is sponsored by a number of large businesses and public bodies, including the Corporation of London, BT, London Regional Transport, etc.

Coming events (Events team)

A monthly six-page folder, giving details of events, with date, time, organising department, and contact name and number. This has been replaced by *Making business contacts* (quarterly) which summarises coming events, trade missions and exhibitions, and training courses.

Developing your business through people (Human Resources)

A six-page folder, appearing annually.

Your keys to world markets (Europe and World Trade teams)

An annual six-page folder.

The last three were designed as a group, replacing a rather ad hoc set of products. The re-design formed part of the commission mentioned above.

Annual Review (Chief Executive's team)

A small product (averaging 16 pages). The emphasis in recent issues is strongly on what the Chamber has achieved for its members and what it offers them; the 1997 *Annual Review* has sections on 'Helping our members' (providing information, international activities, networking activities) and 'Representing our members' (the liaison work of the Policy & Research division, its research publications on the London economy, employment and education and other key issues, and campaigns by the Chamber on such issues as funding for London Underground and energy and the environment).

Directory of Members (Membership team)

This product, like the membership directories of many chambers of commerce, is contracted out to Kemps Publishing, who contact members directly to verify details for publication.

Non-regular external products. Apart from the products which appear at regular intervals, there are others which are either non-series or occasional (mainly the responsibility of the Policy and Research team), or designed to be valid for a longer period (membership literature). Products of this kind are written in house and are usually designed and produced by external companies who have membership of the Chamber.

Over the period of this case study the approach to designing products addressed to members and potential members has changed a good deal. The first version encountered was an ominous-looking A4 booklet, with a shiny black cover and cut-out index tabs and a stimulating title: *Five reasons why over 4000 companies join the London Chamber of Commerce and Industry*. The text inside was pedestrian, and the typography and layout unimpressive, with particularly unhelpful use of spacing.

After a review of membership in 1997 which looked at all literature addressed to members a new set of membership products was commissioned. The job was put out to tender, to a brief prepared with input from all the teams in the LCCI; key requirements were that the materials should be designed as an integrated series,

appeal to the whole range of members and potential members, and be usable over a fairly long period. The design consultancy commissioned (a member company as it happened) interpreted the brief with understanding. Their solution is an attractive set of A5, gate-folded leaflets, presented in an A4, with imaginative use of colour and an interesting range of images, each dealing with a specific Chamber service or facility. Typography and layout are standard across the series, and information elements like a stylised map and a list of information sources in the Chamber appear in all the leaflets on the centre back page. The response of members has been positive.

Research publications. As the 1997 *Annual Review* puts it, the Chamber aims to 'publish material which demonstrates clearly and authoritatively to policy makers the importance of London to the national economy', through a research programme established in 1987. Some of the resulting products are from commissioned research, such as the 1996 report *London's contribution to the UK economy*; others from joint projects, such as that with the University of Westminster on employment in the capital, which resulted in reports on changing working patterns (*Older workers – an opportunity for London's businesses* and *Atypical employment in the capital.*). Another report, on *The prospects for the independent retailer*, resulted from research carried out by one of the main networks of Chamber members, the Asian Business Association, which was set up in 1995.

Internal products

The Chamber has comparatively few information products designed for internal use; this reflects in part the emphasis now placed on personal exchange of information via team meetings. A one-page monthly staff bulletin, *Chamber Matters*, began production in 1995. A typical issue contains items about Chamber documents (for example the Business Plan) and events, participation in the Lord Mayor's Show, staff training and development survey, and news from teams. The Information Centre issues an occasional *Information Update* – a current awareness sheet with details of new acquisitions added to the Library.

Apart from these, the main printed products originate from Human Resources, and are in the general category of staff information about benefits, salaries, health and safety. A loose-leaf 'induction book' for new staff was reviewed as a priority in 1997 and produced in revised form in 1998.

By mid-1998 house style guidelines for all internal products and for correspondence had been established, and incorporated in the 'operations manual' produced by Human Resources. The guidelines cover fonts, layout, justification, use of different versions of the logo, and the use of standard covers for various internal documents.

Electronic products

The Chamber's Web site, established in late 1998, is a good example of straightforward presentation, with a business-like approach which makes this an easy and undistracting site to use from the point of view of both navigation and access to content.

The opening frame offers six main sections:

- Introduction to the Chamber
- Answering your business questions
- Making business contacts
- Voice for London business
- Taking your business to the world
- Member money savers

with a descriptive sentence including buttons.

The content within the sections is well structured and presented with understanding of the medium. The visual presentation is attractive and refreshingly restrained in its use of colour and animation. The graphics take through a theme from the range of membership literature described above, using the cog-wheel background images which appear in some of the leaflets. Typography, in terms of typefaces and page layout also maintains the visual links with the printed products. The information content is also handled consistently; for example, in the 'Answering your business questions' section, the pages start with typical information needs, and what the Chamber's information service can provide to meet them, and then give tabulation of services and prices.

Decisions on strategy for information products

Until the concluding stages of this case study, no one person had overall responsibility for what the Chamber published; by 1998, however, this responsibility had become part of the remit of the Marketing Director.

When the study began, decisions about information products were not based on a strategy derived from key corporate objectives, and there was no overall publishing plan. Things tended to be produced 'because they've always been there', rather than because they would contribute to achieving a priority objective. In spite of the recently introduced management team approach, decisions on information products were still mainly taken by the teams responsible for them. There was, however, an intention to move towards self-financed publications, except for those provided as services to members. The budget for any given publication would be related to the significance for the Chamber's key objectives of the project involved. Self-financing could include both pricing policy and partnerships with outside companies.

Business Matters was an exception which helped establish a pattern for the future. A draft proposal was put to the management team, with a justification in terms of benefits to the Chamber, in October 1993. It was accepted, and a pilot issue was produced in February 1994, followed by the start of regular publication in March. It is also unusual in having a formalised editorial policy, and a special budget within the budget of the Information Centre.

Another factor which influenced the development of strategic thinking about information products was the rationalisation of the publications of the merged chambers. By 1997, this had been carried through; a single membership directory had been produced, and there were no separate publications for Westminster members.

The introduction of the Strategy Group in 1997 (see page 179) created a natural forum for the consideration of such issues; there was more questioning of how decisions on information products were taken, and the elements of a strategy for the Chamber's information products, oriented towards reaching potential members and exerting influence through targeted external relations, were beginning to emerge. By the following year, these had developed further and had started to find expression in, for example, the series of membership products described on p187

Discussions also started on the re-introduction of a business magazine, as a successor to *London Commerce*, to be published as a joint venture with an outside company, but had not progressed further by 1998.

Human resources for information products

Up to 1998, departments were responsible for their own products; they established the budget to be allocated to individual products, and arranged for writing, editing, design and typesetting. These aspects are now handled by Marketing, with some outsourcing to external media consultants.

Production of those items which are printed in house is the responsibility of the Reprographics section (headed by a manager with a background in the printing industry), which forms part of the Chamber's 'Resources' division. The Reprographics section also does the print buying for products printed externally. In-house typesetting was previously done mainly by an operator in Reprographics (see below, under Production); by 1998 there was a combination of in-house and outsourcing.

How specialist skills are provided for

At present, information products result from a combination of some specialist skills in-house (writing, editorial, and print production), buying in via consultancy (design of individual products) or direct purchase (print). While in-house desktop publishing, on a basis of 'do it yourself' learning, was used to originate a number of external publications when the case study began, four years on, while a small amount of DTP was done by the reprographics section, the majority was bought in from outside as needed.

In-house. When *Business Matters* was produced in the Information Centre, the editor was a member of the Centre's staff, who spent 6 days of the 10-day production cycle for the issue on editorial tasks, and was responsible for research, contacting other departments, reading, writing copy, layout and DTP typesetting. With its move to Policy and Research, it was initially run by an editor on a temporary contract, as the team had no-one with specific editorial skills, and then the job became permanent one.

The now discontinued *London Commerce* was produced by the Policy and Research Team, with staff who had several years of experience in the job. The 1995 review of the publication aimed to minimise the costs of production while maximising its impact. A possible option was the contracting out of certain aspects, for example design, but the Chamber was keen to maintain editorial control. In the event, it was considered not to be sufficiently cost-effective, and not to have a clear enough role, though it was

accepted that there could be a market niche for a London business magazine, analogous to those produced in some US cities.

When this study began, small ephemeral products like material on the facilities in its building which the London Chamber offers for hire, and flyers about training courses, were designed and mostly printed in-house, with the occasional 'glossy' [sic] item being printed outside. In-house production of these items was handled in the reprographics section. Many of the products did not look exactly inviting, and indeed some leaflets advertising meetings had something of the look of funeral invitations. By 1998, all such items were covered by the house style.

Buying-in via consultancy. The members' guide (*Five reasons ...*) described in rather disparaging terms on p187 was developed by a consultancy selected by the Membership and Policy and Research teams through competitive tender, to a brief produced in-house. The package of membership leaflets which superseded it in 1997/98 was commissioned in the same way, but with inputs from all the teams.

The initial design specification for *Business Matters* was done by a Chamber member with a design practice (again found by competitive tender). A grid and style sheets were provided for use by the in-house editor (the former is used, the latter not).

The Chamber's web site (see p189) developed by a design company, is a good example of appropriate design for the medium, which is also consistent with the presentation of the print on paper products.

Training

Where in-house editors are responsible for following a design specification, as with *Business Matters*, training in this side of the job is described as being mainly a matter of 'picking up hints' and learning from experience, though the first editor did some interactive audio training on Quark Xpress.

The editor of the now defunct *London Commerce* was responsible for design and layout decisions without the support of a professionally prepared design specification.

At the start of the case study, DTP was both comparatively new to the Chamber and fairly extensively used for its information products. While those staff who used it had received basic training on the software, there was a perceived need for a 'basic design awareness course' – which proved hard to find (the Chamber was not alone in this search; many organisations were looking for the same thing at that time).

The then Personnel department (now Human Resources) identified a need for training in a common approach to verbal and written communication for staff who are in contact with members and the public. Training courses have now been provided in telephone technique, general communications, and word-processing and spreadsheets; the suppliers are primarily member companies specialising in training. Annual surveys of Chamber staff to find out their views on training and development were instituted in 1997. Responses are anonymous and returned direct to independent consultants who prepare a report for the Chamber.

The presentation of information

The Chamber originally had little in the way of standards in this respect. *Business Matters* had a standard format designed by an outside designer, and used the *Economist* style guide for house style. But there was no Chamber-wide guide on how to deal with information elements in products for external distribution. Standards are now (1998) set by the guidance provided by the design consultancy responsible for the new range of Chamber products mentioned above (see p187), and have also been established for the Web site.

The Chamber's house style was described in the first stage of this study as 'nominal only', and indeed it was hard to establish what it might be from looking at a range of the publications (not an unusual situation in organisations). No decision has yet been reached about the appropriateness of having a 'corporate identity', or on how any such standard would apply to information products. An earlier standard format produced by a designer was discarded as 'too monotonous' and replaced by one prepared by the consultancy responsible for the design solution for external products.

This represents a significant advance on the situation in the earlier stages of this case study. Then, the Head of Reprographics was aware, because of a background in traditional letterpress print, of the decline in standards which DTP has brought to typeset products - for example, loss of sharpness and clarity - and regretted the general lack of visual awareness among most users of the software. So far as typographic design was concerned, however, while there was awareness of design weaknesses like overlong measures and poor spacing in existing products, it was not felt necessary to pay professional designers for 'run of the mill' products, and this was considered to be an area where it was legitimate to save money.

At the start of this study, the Information Centre pointed out that there were no in-team standards for the questions handled by the team, many of which required the extraction of information for presentation. A standard for *Presentation of Enquiries* was produced; it was based on Word for Windows, and recommended the use of templates for letterheads, faxes and address lists. It provided examples of layout and house style for such text elements as addresses, lists of items, etc.

Production

When the case study started, typesetting was almost all in-house. The only outside typesetting was for 'things with a more complex style'. One operator in Reprographics input copy provided by departments for *Openings for Trade*, Policy and PR products, and flyers for events. Copy went to the Head of Reprographics who advised on design, eg typefaces, amount of text, and where necessary took up editorial-type queries with originators. ASCII files went to the people responsible for products; and they did on-screen editing and layout. Proof reading was the responsibility of the originators of products. There was a list of authorised proof-readers, and it was a rule that everything should be checked separately by two proof-readers. The Head of Reprographics was responsible for print buying, using a range of printers considered appropriate for different types of product (eg specialist printer for Carnet forms)

By 1998, the process was essentially the same, perhaps a little more formalised. There is still one specialist DTP operator in the DTP Section headed by the Design and Print Manager (The editor of *Business Matters* is responsible for the typesetting of that product). Originators now input their own team copy on common drives shared by all teams.

Anything that comes under the Chamber documents guidelines has to be submitted to the DTP section to be designed and typeset in the house style. Anything that is going to be designed, published or produced by any third party has to be approved in advance by Marketing team or Design and Print Manager. The latter continues to be responsible for print buying.

Information technology and information products

The relationship between the originators of information products and IT staff was described at the start of this study as 'good but ad hoc' (Head of Resources); it remains

close, but less ad hoc. By the end, the situation had improved, and was characterised as one of close links and good communications.

At that time there was a range of technology in use. ICL Office Power was standard for word processing for internal documents, and there was no built-in support for document creation. Not all teams were connected to the Chamber's LAN, some teams used Word Perfect, while the Information Centre had Microsoft Office and Word. This situation hampered communication between teams, and meant that a good deal of re-keying of information products had to be done. By mid-1998, considerable improvements had been made; everyone was equipped with a PC, and all staff were trained in using Windows 95, so that everyone could communicate with everyone else.

The modest technology used in-house for information products was quite separate from the main computer system. The IT department, within Resources, consisted of four staff who maintained two databases:

- 1 The 3000 companies in membership
- 2 40, 000 non-member companies

Updated information from the staff in membership who dealt with individual companies was passed to the people responsible for maintaining the database for input. The membership database was essentially for managing a mailing list, and, as such, in its original form it was not equipped to offer much help towards generating information products. Judgments on its effectiveness were according to the place in the organisation from which it was viewed.

From inside Resources (where it was acknowledged to be 'fairly basic'), it was reported in 1995 that they were currently upgrading basic records and improving the range of information available about members; 'enough knowledge about the membership is available'. Some of the results of this work were available by 1997, and a new upgrade using a Windows-type interface though leaving the database itself unchanged, was being tested.

From elsewhere in the Chamber, there were complaints about the problems of finding information and getting reports from the system. Membership reported that while the facility for adding extra details about members existed, it was not used; that it was difficult to specify requirements for reports and to get them in time and in the form needed; and that the system demanded abbreviations, and used old classification codes. Information Centre reported that the membership database contained some

useful data, but not much about how members use the Chamber's services: 'To most people the membership database is a black hole'. It did not allow of the kind of normal information retrieval searches to which information professionals are accustomed today, and the IT department had to do a report if anything special is wanted. The software (SQL) was said to be difficult to use. The updated version now offers some capacity for users to generate their own reports, though it is said still not to be very easy to use.

The Chief Executive's view in 1995 was that the existing software was a disaster so far as its contribution to developing and maintaining the knowledge base about membership was concerned. The aim for the future should be an IT strategy developed within the framework of corporate objectives.

By mid-1998 things had moved on considerably: the membership database had been re-launched with Windows-based software; and most of the hardware and software in use in the Chamber had been upgraded. All teams now had a specialist IT member, and the IT department was described as 'really delivering'. The Information Centre in particular had benefited, and was using a good range of online and CD ROM databases, and the Internet.

Testing, monitoring and evaluation of information products

In the initial stages of this study, such evaluation as had been done had mostly been on an internal basis, and carried out informally - eg by telephoning people. 'We don't evaluate in terms of benefits to membership services and retention. It's an in-house point of view only at present.' The ultimate aim, however, is to make monitoring and evaluation of information products part of the Chamber's marketing strategy, and the new management structure should make this possible.

The surveys which NOP now carries out for the Chamber on products and services cover information products. The most recent membership survey (September 1998) asked respondents about the information products mailed to them from the Chamber: the questions related to the amount of information, the relevance of the content, professionalism of production, and how closely the products were targeted to members' needs. 77 per cent expressed themselves as satisfied overall; over 70 per cent of those who were satisfied said the products contained just the right level of information; 27 per cent considered they were professionally produced; but 17 per cent thought they should be more closely targeted to members' needs.

In the early stages of this case study, the merger with Westminster was an important current issue, and evaluation of the publications of the merged chambers was a business objective. The questions asked in pursuing this objective were:

- What service do the existing products give the membership and the outside world?
- What is the rationale of the existing products?
- Could any existing products be combined to give new ones?
- What would be the objectives of possible new products? How would they meet them?
- What would the costs and benefits be?

The evaluation of existing products covered:

- Format
- Content
- Design/presentation
- Marketing of product
- Editorial planning
- Skills and staffing at present available, and what would be needed for any new publication
- Costs and benefits (mainly assessed in financial terms)
- Advertising as the main source of revenue

Business Matters exemplifies a possible approach to evaluation and use of feedback. The pilot issue was distributed to active members, the Board and Council – 160 in all, of whom 35 replied to a request for feedback. Readers of the pilot were asked for a response on a 10-point scale – most respondents gave it 6–7. Their comments were taken into account in the first regular issue. Another evaluation survey, after a year, was made by sending a questionnaire with one issue to every member receiving it, with a request for feedback on the content of that issue. The response provided useful ideas for content, which were acted on in introducing the supplements mentioned earlier (see p183), and some comments on presentation and illustrations.

As yet no specific quality standards are set for information products, and the Chamber has not attempted to assess the significance and success of the contribution which information products make to achieving strategic business objectives, though

this could be taken into account in the development of strategy under the new management structure.

An evaluation of the present situation

Some salient points emerged from the early stages of the case study:

- There was no overall planning of key information products.
- Existing information resources were not yet fully exploited to meet the interests of members.
- There was a need and an opportunity for a forum for establishing a Chamber policy for information products and presentation, drawing in all the 'stake-holders', including the users of the products, and the people responsible for managing the Chamber's various resources of information. There was also a need for assigning specific responsibility for this aspect of the Chamber's work at senior management level.
- The development of appropriate information products to contribute to the key corporate objective of assisting the development of member businesses with information had been hindered in the past by the lack of easily accessible knowledge about members and other London businesses, primarily because of the nature of the existing membership database. Some improvements had been possible, but it seemed likely that the technology and systems would be able to give optimal support to information products only when the Chamber had developed an information systems/technology strategy related to its key business objectives.
- There was no formal means of monitoring information products, and no established criteria for evaluating them in relation to key Corporate objectives.
- No was there any established procedure for pre-publication testing of products to see whether they enabled the intended users to get what they were supposed to gain from them.
- Costs were evidently a major deciding factor in the matter of the presentation of products; but it was not clear how the value which they contributed to the Chamber's work, or their cost-effectiveness, was assessed.
- The need for professionalism in the presentation of information was not universally recognised throughout the organisation, and there was a need for thorough consideration of how best to apply the necessary professional skills to the

presentation of information products – in particular where they should be in-house, and where it would be more appropriate to buy in.

- In this connection, there was also a need for the Chamber to look at its use of DTP and at how efficient and effective it was in meeting organisational objectives.

Change and development

By late 1998, when the study was completed, positive development had taken place on a number of these issues:

- Information products had started to become more integrated with overall business strategy, and the Chamber's information resources were being drawn on to an increasing extent in their development.
- The introduction of the Strategy Group into the management structure in 1997 opened the way to considering the creation and use of information products as a business process, related to the Chamber's marketing strategy and business plans.
- The Chamber was moving, through its commitment to knowledge management across the organisation, towards development of an information strategy. With the support of an 'information-minded' Chief Executive, the Information Centre was taking an initiating role, in particular in carrying out an information audit.
- There was increasing co-operation among teams, facilitated by upgraded IT and systems.
- Moves were in progress towards proper pre-publication testing, monitoring and evaluation of information products.
- Advances had been made in the development of the IT and systems infrastructure to support information use, in particular in relation to member businesses, and key business strategy.
- Design of both externally and internally directed information products had become more unified, and typographically much stronger, thanks to a design consultancy with a good understanding of the work and orientation of the Chamber, working to a clear brief from the client.
- A deeper understanding of economics of in-house DTP had led to appropriate limits on its use.

The Chamber had also taken its first steps towards electronic information products, with the establishment of an effective Web site, and was on its way to setting up an intranet, which should be able to benefit from the experience of developing the Web site.

Outstanding issues

- A policy/strategy for information products - this could grow out of overall business strategy development, but it is not at present clear if it will be taken into account.
- Assessment of cost-effectiveness of information products - the information audit and knowledge management programme should help lay the foundation for this development.

Case study 8

The NHS Centre for Reviews and Dissemination, University of York

Background

The Centre was established at the beginning of 1994, within the NHS Research & Development programme, to contribute to the same aim as the UK Cochrane Centre – that of making high-quality research information on the effectiveness of treatments and the delivery and organisation of health care accessible throughout the National Health Service – but with a different emphasis. It describes itself as 'focused on the distribution and awareness raising end of the dissemination spectrum' (Draft Dissemination Action Plan, April 1995). Together with the UK Cochrane Centre and a register of research projects at Leeds, it forms part of a set of initiatives within the ongoing Information Systems Strategy of the R&D Division of the National Health Service.

The Centre commissions or carries out reviews on behalf of the NHS, focusing mainly on effectiveness, cost effectiveness, management and organisation of health services, and disseminates the results in the NHS to enhance effective decision making. It concentrates specially on the development of evidence-based clinical practice and service development. Both functions are supported by research on methods of conducting systematic reviews and effective dissemination. The Centre develops and maintains databases of published reviews and studies of economic evaluation of health care and offers an inquiry service about reviews and economic evaluations.

It was funded by the NHS for three years in the first instance. A review in 1995, after one year of operation, reported that it had made significant progress and was gaining a first-rate national and international reputation in its area of work, and recommended that its funding should be extended to the end of 1999. At a second review in the summer of 1998 the review panel organised by the Department of Health recommended an extension of funding to 2005.

Objectives

The Centre's overall aims are:

- To provide reliable evidence to the NHS of the effectiveness of health care interventions, based on reviewing research
- To disseminate its own reviews and those of other bodies (including the Cochrane Collaboration) to the NHS. This includes reviews undertaken or commissioned by the Centre, systematic overviews under the aegis of the Cochrane Collaboration and high-quality reviews and primary research undertaken elsewhere.

The activities it proposed to undertake at the start of its work (January 94) were:

- Undertaking and commissioning rigorous reviews of research findings on the effectiveness of health care relevant to the NHS effectiveness of health promotion interventions (on behalf of the Health Education Authority).
- Liaison with NHS decision makers to prioritise reviews and the questions addressed in them.
- Helping to raise the general standard of reviews carried out for the NHS.
- Carrying out research on methods of reviewing the literature.
- Disseminating the results of research to NHS decision makers.
- Networking with health-care professionals in order to encourage research-based practice in the NHS.
- Evaluating how effective its initiatives are in making research findings known to health care decision makers, and in influencing practice.
- Maintaining and making accessible databases of systematic reviews of effectiveness of treatments and economic evaluations.
- Keeping an up to date register of reviews completed and in progress.
- Providing an information and inquiry service on reviews and economic evaluations for people within the NHS and for health service researchers and consumer organisations.

Its objectives for the period 1996-1999, formulated in the light of the 1995 review and agreed in 1996 with the NHS, are to:

- 1 Collaborate with the UK Cochrane Centre, the National Research Register and other elements of the NHS Executive to contribute to increased co-ordination in

commissioning and conducting systematic reviews of effectiveness and cost effectiveness of health care and its organisation; and to promote better links with the Cochrane Collaborative Review Groups.

- 2 Promote, in collaboration with the UK Cochrane Centre and the various national and regional training initiatives, improvement in the quality and conduct of systematic reviews carried out in the UK.
- 3 Establish an explicit process for identifying potential review topics and setting priorities for carrying out or commissioning them.
- 4 Maintain and further develop the quality, quantity and efficiency of the reviews which it carries out and commissions.
- 5 Maintain and further develop its publicly accessible databases (DARE and the NHS Economic Evaluation Database) and promote their use and that of the Cochrane Library.
- 6 Develop further its dissemination function within the context of an overall NHS research intelligence dissemination strategy.
- 7 Support the work of the Practice and Service Development Initiative (a project on disseminating relevant research to nurses, midwives, health visitors and professions allied to medicine) and help integrate it into the Centre's core functions.
- 8 Further develop an efficient management, administrative and support function.
- 9 Ensure that its staff are able to develop their professional skills and experience, and to encourage them in doing so.
- 10 Maintain and develop a balanced research programme in areas relevant to the Centre's work, including primary research.

At the start of this case study the Centre's first Director described it as being 'more policy-driven' than the primarily 'science-driven' Cochrane Collaboration, while anticipating ultimate convergence of their work. By mid-1998, while there was prospect of their converging institutionally, integration of their work was developing. The *Effective Health Care* bulletin series had drawn on Cochrane reviews for a number of the topics it covered, and there was discussion about CRD covering topics that the Cochrane Collaboration did not have the resources to cover, such as diagnosis and screening, and providing a UK perspective on international Cochrane reviews. The Centre also provides training for a variety of audiences in using *The Cochrane Library*, and works closely with the publisher of the *Library* in making use of feedback.

Its policy-driven status means that its choices of directions of work have to be close to NHS strategic objectives; at the same time, the Centre is a university department, and so works according to scientific principles, including editorial independence and freedom to publish its work. At the time when this case study started, shortly after the setting up of the Centre, it seemed to be envisaged that there could be disagreement with the NHS on objectives, with the possibility of influencing the NHS to change its views – eg over research on dissemination itself as an activity. In the event, there were, especially in the early stages, what were described as ‘a lot of confrontations with the NHS’. These seem to have arisen from cultural differences over what it was appropriate to make publicly known; the NHS, following a long-standing civil service tradition of suppression of ‘sensitive’ information, sought to restrain the Centre from issuing material. The Centre, with a different approach to the matter, pursued a consistent line of standing firm on its interpretation of principles, while being ready to modify tactics. By the time of the 1998 review, it had largely gained its point and was encountering this kind of pressure less often. An important turning point was achieved over contracts for work from the NHS; the Centre refused to sign them unless they gave it total intellectual property and copyright, and actually worked without contracts until this point was gained.

While its main goals will remain unchanged, the direction of the CRD's work will be affected by the developments envisaged in the White Papers of 1997 and 1998 (*The NHS, Modern and Dependable*, and *A First Class Service*), which have highlighted the Government's determination to ensure the spread of evidence-based practice throughout the whole of the NHS. This will require not only high quality research, but also knowledge and skills to ensure effective dissemination and implementation. In particular, the CRD is likely to be a key source of information for the guidelines which the National Institute of Clinical Excellence will be expected to issue, and it will also contribute to the work of the Audit Centre for Clinical Governance.

Strategies

Meeting the Centre's aims requires work in three areas: reviews, dissemination, and information. For each area, the Centre has aimed to develop a strategy.

Reviews strategy

Priorities for review, according to an initial statement of May 1994 were to be decided in 'consultation with the NHS and consumer organisations alongside national and local priorities'. Some would be in priority areas defined by the Department of Health (the Centre bids for these); some from among topics suggested by people from outside.

Three years on, in 1997, the strategy for choice of subject was described as being still 'more *ad hoc*' than could be wished, and this was still the case by the time of the 1998 review. The NHS had not been very forthcoming with ideas on this, and so the Centre had been left to take the initiative. Some choices were related to NHS policy and to implementation prospects.

Selecting an order of priority is described as being guided by an 'opportunistic' approach, allowing room for manoeuvre, and taking into account such factors as approaches from patient groups (eg enuresis); significance and public interest (eg sleep apnoea); the need to have a 'balanced portfolio'; and the range of sponsors available. There is no central topic selection, but in 1998 the NHS Executive established its own topic selection group for the *Effective Health Care* bulletins.

Decisions about reviews to be undertaken are made after interaction with potential users to elicit what they want to do with the results of reviews; the aim is to provide them with a product which they can use for what they want to do.

The majority of reviews have been undertaken by the Centre, rather than commissioned. The commissioning process is based on Guidelines published by the Centre (Undertaking Systematic Reviews of Research on Effectiveness; CRD Guidelines for those carrying out or commissioning reviews. CRD Report 4, 1996) which set out very detailed procedures. The Centre places great emphasis on following the protocol and on managing the according to the guidelines, and considers that the process has worked well.

Both topics and content have developed. There is now more emphasis on reviews methodology than on questions of treatment; there are more policy-oriented reviews, which are of interest to NHS managers; and more reviews which link directly into implementation, as for example in the field of cancer. The Centre aims to develop its work in review areas demanding complex methodologies, in particular those related to screening, diagnostic tests, and those where evidence is predominantly from observational data; it also looks to incorporate more detailed cost-effectiveness analyses.

The Centre uses similar methods for constructing reviews to those employed by its sister organisation (see p86), which represent a 'gold standard'. Each review requires three kinds of knowledge: content expertise, methodology, and information science. Of these, it has the last two available on site; the required content knowledge is brought in as necessary from elsewhere. The process can be initiated from within the Centre or from outside; in either case it is a highly interactive one.

Within the Cochrane Collaboration, the Centre up to 1996 provided the editorial base for reviewing studies which assess the effectiveness of various approaches to dissemination. It experiments with approaches and engages in co-operation with other bodies – for example through a project with the Midwives Information and Resource Service, based on the Cochrane Pregnancy and Childbirth Database, using focus groups, and through projects on clinical effectiveness with the Institute for Health Service Management.

The Centre has also made an innovative reviewing input to the National Cancer Guidance Group, which in 1995 was given the remit of developing guidance on site-specific cancers for those commissioning cancer services. The CRD's role is to provide R&D input and interface with the wider research community. The process starts in each case with a day and a half spent by a multi-professional group of experts, health service managers and users in identifying the key characteristics of services associated with significantly improved outcomes. Outline proposals are then circulated to health professionals, patient groups, managers and the Department of Health, and the resulting comments fed into the critical appraisal process in which research evidence is collated. A draft manual is then produced, and discussed by focus groups of health care commissioners and the responsible subgroup. The draft undergoes further iterative refinement as the research evidence review is finalised with an editorial group which includes CRD representatives. It is only at this stage that the final draft manual goes for comment to the DoH and the relevant Royal Colleges; the key elements are strongly anchored to the research evidence base in the light of expert opinion. A separate research evidence document is then finalised and sent to the DoH for final comment.

In this process, the Centre is responsible for the research review (including commissioning relevant reviews), for writing the manual and evidence document and helping to produce a four-page summary for GPs, and for disseminating results through articles in professional and lay media.

Its experience has confirmed the advantages of this rather unusual approach: it ensures that recommendations are firmly linked to the research evidence base; facilitates professional and expert clinical input which helps apply or interpret research evidence and ensure practicality; ensures that recommendations are prioritised so that only the limited set likely to have significant impact on patient outcomes/quality of care are included; promotes an explicit approach in which justification of recommendations and expected impact is stated; and promotes a more accountable and evaluative culture by including examples of how implementation of recommendations can be measured. And the fact that most of refereeing is done during rather than after documents are written prevents professional or political groups changing recommendations in a way that would not be indicated by the evidence. As a progress report remarks, 'the process has not always been smooth and CRD's role in challenging the assumptions of experts has at times been vigorous.' The fact that reviewers were 'not just acting as support staff in the background but were centrally involved in all stages, especially writing' is perceived to have made a difference, allowing CRD to 'play devil's advocate, bring a more sceptical perspective, remove some of the excuses and at times act as proxy advocates for the commissioning or patient role'

Dissemination strategy

The CRD's dissemination strategy could be expected to be set within the context of an NHS policy for dissemination of research. In fact, the Centre's Report to the Review Committee (1995) referred to its dissemination strategy being hampered by the lack of a clear NHS and NHS R&D strategy for communication and dissemination - a point taken up in the Review Committee's recommendation that it should limit the scope of its dissemination activities to prevent over-extension, and that the development of an overall dissemination strategy should 'become a priority for the NHS Executive.' By 1998, while there was more pressure from the government on the NHS to assign responsibility for using research results, as the Report for the 1998 External Review puts it, 'there remains a lack of a national research intelligence dissemination strategy'; this means that 'the distribution of research-based messages is often poorly co-ordinated and their implementation sub-optimal', and 'continues to make the dissemination role of CRD unclear and at times hampers the Centre's effectiveness both at national and local level'. Within the NHS, the main responsibility for dissemination

policy, while originally resting with the R&D division, is now in the hands of Health Care. This separation of policy from research is in line with the civil service tradition, and, while research findings are discussed by policy makers within the Department of Health, there is no forum where 'stakeholders' from the research and policy sides can argue out a policy, and no agreement in principle on who is responsible for the interpretation of the work of CRD and for decisions on its use. Because of these tensions no overall NHS dissemination policy and strategy has been developed to form a supporting context for the CRD's strategy (the National Electronic Library for Health, proposed in the Government's 1998 White Paper *Information for Health*, however, implies a commitment to such a strategy and could hardly be developed without it).

The Centre's own opinion, put forward to the 1998 External Review, is that it should continue to be responsible for disseminating systematic reviews, and for research on dissemination strategies, because, while not enough is known about how to get research findings taken into decision making, the UK is probably a world leader in this field.

The Centre itself adopts a three-level approach to dissemination:

- Level 1 - Core (printed) materials for general dissemination. The products at this level consist of CRD reports; the *Effective Healthcare* bulletin (established by the Centre's first Director in 1992, before the Centre was set up, and carried on by the Centre); and *Effectiveness matters*, which is based on systematic reviews carried out by others. All are extensively peer-reviewed. They are sent directly to a broad readership and summarised for specific audiences. Guidance on distribution within organisations is sent with them, to help ensure that they reach the people who can make good use of them. In view of indications that this does not in fact work effectively in most cases (while over 90 per cent of Directors of Public Health read these products, the figure in primary care is only 20-25 per cent), the Centre has recently (1998) started asking recipient organisations to nominate a liaison person with whom it can build contacts. The problem seems to be that there is a dearth of people who know how to get incoming information to the right people in their organisations.
- Level 2 - More targeted approaches to specific groups and organisations who have a potential dissemination role, for example, those active in clinical audit, medical advisors in primary care and continuing professional education. The Centre is now

working (June 1998) towards a further stage of dissemination: drawing such organisations into passing on and interpreting the results of its work.

- Level 3 – The most highly targeted, at a local level. Pilot projects have been carried out to explore potential implementation methods, including the Practice and Service Development Initiative – a project to promote evidence-based practice in nursing and other therapies; and collaboration with the Midwives Information and women and practitioners.

The Centre has developed (1997/98) internal guidelines for each stage of dissemination, which set out in detail the activity required at each key phase. Another recent development in its dissemination strategy takes advantage of the Internet; full text of selected CRD reports and issues of *Effectiveness Matters*, and of recent issues of *Effective Health Care* bulletins is now available in its Web pages.

Appropriate training is seen as part of the Centre's remit of dissemination, and it proposed to the 1998 External Review the development of training in how to carry out systematic reviews, how to appraise them, and how to implement the findings.

Information strategy

In looking at the Cochrane Collaboration[cross-reference to Cochrane case study] it became evident that the role of information and information professionals was both extensive and more intensive than is usual in organisations. This is also the case with the CRD; its information service occupies a central position, and the Information Service Manager is a member of the management team. While the information service performs some of the traditional functions, the role of the information professionals has been greatly extended, and they themselves comment on the sense of being valued for the contribution they make. They form an integral part of the teams preparing systematic reviews, for which they carry out literature searches, are involved in primary research, including the development of highly sensitive search strategies, make an increasing contribution to dissemination, market the Centre's databases, give training on the use of the Cochrane Library databases, and give presentations about CRD databases.

While the information service has had a strategic plan since 1996 and has a clear work plan established to meet the Centre's targets, a formal organisational information

strategy to parallel those for reviews and dissemination has not been called for by the CRD's funders.

Organisational structure

By October 1995, the Centre had 20 staff; this had grown to 35 by 1997. They work in three groups: reviews, dissemination, and information. The hierarchy is a flat one, with few levels. With the development of expertise in carrying out systematic reviews, two of the most experienced of the Centre's reviewers took on the role of 'reviews manager', responsible for day to day supervision of reviews, and another was recruited. A review team is established for each review, consisting of at least two reviewers, an information professional and a disseminator. With experience, the Centre has found a 'blurring' between functions in some teams.

Organisational culture

The culture of the Centre is similar to that of its sister organisation, the Cochrane Collaboration, in that it is described as open and resolute for the principles on which its approach to its work is founded, which could be formulated as honest endeavour to bring together and interpret evidence, and to make it fully accessible to all stakeholders who have an interest.

Decision making on information products

Decision making covers in the first instance the reviews themselves, and then the products based on them.

The dissemination strategy describes the processes identified as part of dissemination; they include:

- Dissemination perspective in preparation of CRD reviews
- Identifying which core product(s) will be prepared as part of level one activity, and what level two and level three activities will be undertaken
- Evaluation and feedback

The decisions are taken by the dissemination group, and take into account:

- The requirements of the people commissioning the review

- The views of CRD staff
- The resources available and the changes in practice implied
- The nature of the research evidence
- The target audience
- End user views

Costs and budgets for information products

Table 1, based on budget estimates for the period 01 04 1998–31 03 1999, shows the costs associated with the Centre's information products, in relation to total costs and salary costs of its core activities.

The costs associated with information products (exclusive of the salaries of staff who spend some of their time in writing, editing, etc) amount to over £416,000, a large sum in relation to the total core costs of the Centre (£926,000). A very small proportion of the costs is recovered in sales and subscriptions

The information products

Externally directed products

The Centre's main external products are:

- 1 Database of Abstracts of reviews of Effectiveness (DARE)
- 2 NHS Economic Evaluation Database (NHS EED)

Users of the databases consist of NHS decision makers, clinicians, managers. DARE became publicly available in pilot form in February 1995, and went on-line in November 1995. Besides being accessible on the Internet through the Centre's web site (<http://nhscrd.york.ac.uk>), it is also available on CD-ROM as section 2 of the Cochrane Library. NHS EED was launched in autumn 1995. The Centre's Ongoing Reviews database is available as part of the National Research Register

The CRD's reviews strategy is supported by its *Guidelines on the conduct of systematic reviews*, designed to help reviewers, and due to be completely revised, with additional chapters on new areas such as reviewing evidence from observational data, diagnostic

Table 1 Costs associated with CRD information products

Costs associated with information products in *italics* – totals unnderlined

CRD Core

Total Costs	£926,000
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Of which:

Salaries	592,000
----------	---------

Non-salary costs:	97,000
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Including

Publication and document acquisition/ online searches	28,000
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Preparation and dissemination of materials	<u>5,000</u>
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Level 2 dissemination

CRD reports:

Production and printing, per report	<u>1,000</u>
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Postage	<u>1,000</u>
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Packing and labels	250
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6 reports/year	<u>13,500</u>
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Promotional/marketing material	<u>5,000</u>
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Copy editing for all printed material	<u>2,500</u>
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Workshops

(to disseminate results of reviews)	20,000
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Clinical Effectiveness Networks	10,000
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<u>Total Level 1 dissemination costs</u>	<u>51,000</u>
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continued

Table 1 Costs associated with CRD information products
 Costs associated with information products in *italics* – totals underlined

CRD Core	
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Non-salary costs:	97,000
Including	
Publication and document acquisition/ online searches	28,000
Preparation and dissemination of materials	<u>5,000</u>
Level 2 dissemination	
CRD reports:	
Production and printing, per report	<u>1,000</u>
Postage	<u>1,000</u>
Packing and labels	250
6 reports/year	<u>13,500</u>
Promotional/marketing material	<u>5000</u>
Copy editing for all printed material	<u>2,500</u>
Workshops (to disseminate results of reviews)	20,000
Clinical Effectiveness Networks	10,000
<u>Total Level 1 dissemination costs</u>	<u>51,000</u>

continued

Table 1 continued

Cochrane Library and other database training

Including:	
Development of training materials	1,000

Effective Health Care Bulletins (7/year)

Per bulletin:	
Additional research input	4,000
Pre-production costs	3,150
Printing, distribution, etc.	22,300
Postage of individual copies	500
Peer review	1,500
Total per bulletin	<u>31,450</u>
Total for 7 bulletins	<u>220,150</u>
Total cost of new review work for Bulletins	<u>80,000</u>

Effectiveness Matters (2/year)

Per issue:	
Research input	<u>8,000</u>
Production and printing	6,300
Postage	12,600
Packaging and labels	7,350
Peer review	1,500
Total per issue	<u>37,750</u>
Total for two issues	<u>71,500</u>
Total cost of review work	<u>18,000</u>

test evaluations, and evaluations on screening (available as hard copy CRD report and on web site).

Three main series of print-on-paper products have specific roles in the CRD's dissemination strategy:

- *Effective Health Care* bulletins (seven per year), designed to bring the results of reviews on the effectiveness of health service interventions to decision makers. *Effective Health Care* started in 1992 on the initiative of the Director of the Centre,

before the Centre was established. The intended readership was public health physicians, managers and health journalists and the aim was to provide them with high quality data and statistical treatment. Today, over 50,000 are distributed free of charge within the NHS to Trust Chief Executives, Medical Directors, Clinical Audit Committees and Libraries, etc and to Health Authorities for distribution to GPs. Topics of 1998/99 issues include: Cholesterol; Child Health Surveillance; Cardiac Rehabilitation; Deliberate Self-Harm; Smoking Prevention; Professional Behaviour; Dental Health; and Diabetes.

- *Effectiveness Matters* (two per year) – a series to complement *Effectiveness Matters*, covering topics more briefly in what is described as a ‘more journalistic style’ and summarising the results of reviews for a wider audience. Over 60,000 are distributed free within the NHS. The planned issues for 1998/99 cover Wisdom Teeth and Primary Care Infestations.
- *CRD Reports* (six per year) – detailed discussion of the results of important systematic reviews. Sold through the Publications Department of the Centre. Sales figures vary; a recent report sold over 1000 copies of the Summary, and over 200 copies of each of the three parts, which is about average.)

Another important aspect of dissemination is features and articles contributed by Centre staff to the relevant professional press. Examples include a regular contribution to *Nursing Times*, a monthly column in *Health Director*, and articles on the Centre and its work in such journals as *Journal of Clinical Effectiveness*, *International Journal of Technology Assessment in Health Care*, *BMJ*, and *International Journal for Quality in Health Care*.

Some of the Centre’s products are joint ventures with other organisations, like the series of 10 paired leaflets on pregnancy and childbirth (one for mothers and one for professionals) produced jointly with MIDIRS (the Midwives Information and Resource Service); and leaflets commissioned by Health Authorities (one on glue ear for the Bedfordshire Health Authority, and one on cataract for the Bucks Health Authority)

NHS policy emphasises the importance of informing patients about treatment options and their effectiveness, but there are still few research-based materials of this kind. A recent study by the CRD (March 1998) explores its options for developing information packages to disseminate the findings of systematic reviews of health care

effectiveness to patients, consumer groups and the general public. It suggests principles to guide its approach to the task as:

- Continuing to focus on information derived from rigorous systematic reviews of research evidence
- Honesty about the relative effectiveness of different options, with explicit encouragement of appropriate attention to individual patients' needs and preferences, and realism about the resource implications of decisions.
- Continuing to draw on research evidence about the effects of different approaches to providing research-based information to lay audiences
- Formal evaluation of information materials
- Collating and responding to feedback from users
- Concentrating on materials which will be useful, and not duplicating effort
- Co-ordinating this kind of dissemination with the CRD's wider strategy and with NHS strategies for information patients and other lay publics.

The Centre favours a solution of seeking funding to allow it to produce information materials for lay audiences on a more routine basis than at present; it put a proposal to develop parallel consumer versions for relevant bulletins to the NHS Executive in 1998.

Other information products are the responsibility of the information service, which produces standard information sheets on the subjects of frequent inquiries (for example on Systematic Reviews, Search Strategies, the Centre's databases, Sources of training and advice on conducting systematic reviews); and an introductory guide for users of the databases.

Internal information products

Manual of writing abstracts for reviews database, and Guidance on the NHS Economic Evaluation Database (CRD Report 6)

The CRD web site

The Centre's web site, established in 1996 is a kind of 'meta-information product' in that it is both a product in itself and a 'container' for all the CRD's other products, both electronic and hard copy, to which it not only gives desktop access but also provides connecting links and means of navigating. It is a conspicuously well-

structured site from the conceptual point of view. The main areas, and the sections to which they lead are:

- Introduction to NHS CRD
- Systematic reviews
About systematic reviews; Completed CRD reviews; Reviews in progress; CRD initiative to establish register of ongoing reviews; CRD guidelines (full text of h-c CRD Report No.4, 1996); Search strategies for identifying systematic reviews and meta-analyses; Training and advice on systematic reviews; Bibliography
- Dissemination
Introduction to CRD's approach and strategy
- Cost-effectiveness information
- Publications
CRD publications; Effective Health Care Bulletins (full text via Adobe Acrobat Reader and direct access to contents and main findings); Effectiveness Matters (full text of most issues).
- Contact NHS CRD
- Information Service
Contact addresses; sample questions; CRD databases helpdesk
- Search our databases
Search options; predefined searches (records with information on commonly searched topics).
The interface is a straightforward one, with a simple template to complete and clear supporting search hints (unfortunately the narrow measure of the column in which they appear, and the consequent very short lines, makes for difficult reading), the interaction with the system to select items from the search results is simple, and the DARE abstracts have a useful standard set of headings.
- Cochrane Library training
Contact name; details of support materials available: guides, manuals and materials to use as the basis for training sessions (a large downloadable self-training guide and a brief introduction to using CLib, supplemented by sets of Power Point slides). The guidance material is authoritative, but continuous prose, on paper as well as on screen, is a rather dense medium for presenting highly complex instructional information on carrying out activities (there is a good deal of research in the information design field which indicates alternatives to prose which perform better

and give users more help). Anecdotal feedback from users about the training materials is favourable.

- Links to related web sites
A comprehensive annotated list

The Centre has considered setting up its own intranet, but so far continues to use the University intranet.

Information resources

As described earlier, the information professionals on the staff of the Centre, like those in the Cochrane Collaboration, have a central role in the creation of the information products which are its main offering, which goes beyond providing a convention information service. They are responsible for developing the Centre's databases, with a particular input on structure and terminology control:

- Database of Abstracts of reviews of Effectiveness (DARE)
- NHS Economic Evaluation Database (NHS EED)

Other responsibilities include helping to develop search strategies, keeping researchers up to date, and offering an inquiry service. They provide support for internal researchers in defining questions, in making searches, and in identifying where relevant literature is actually located. Guidance is given to reviewers on what they can expect in various sources when they access them.

In developing DARE, the service used Medline, Current Contents Clinical Medicine CD-ROM, and hand searching; more recently it has added other sources, including PsycLit, Biosis, and the alternative medicine database AMed. The service has developed its own strategy for identifying systematic reviews, which it then sifts and passes to reviewers for assessment. The assessment classifies them as Reject, Source article, or Accept for quality-added abstract. They are then recirculated for independent assessment, after which structured abstracts with an assessment of methodology are prepared and input to the public database.

The information service was also responsible for decisions on and purchase of software for databases. The Idealist package was selected as standard for internal use; in mid-1998 it was still in use, but the service was looking to replace it and has now selected CAIRS. The public databases use BRS/Search software. Decisions on IT purchases

and on bibliographic software are taken on a shared basis, with the involvement of end-users.

While the DARE database is available as a module of the Cochrane Library, its structure has no similarity to that of the Cochrane reviews.

Human resources for information products; provision for specialist skills

Transforming reviews into core products 'involves summarising reviews, editing, peer review, design and publication.' (draft dissemination strategy, 1995) – all specialist skills.

Writing

The Centre has developed a thorough process for the steps leading up to writing its products, with the aim of ensuring that the presentation is appropriate for the intended readership, for the ways in which they will need to use them, and the content. Focus groups are used in order to gain a context of the views of the target audience for leaflets and a lengthy period is devoted to writing them. All printed products are peer reviewed. While some outside writers have been used on occasion, by 1998 writing was mainly in-house, and regarded as part of the job of the staff concerned with the work on which the products are based, some of whom were described as being very skilled. Where outside writers are commissioned, there is very close contact with them.

Design

At the start of the Centre's operations, the approach to design was fairly *ad hoc*. The design of the *Effective Health Care* bulletin when first issued (the bulletin originated from the University of Leeds, then moved to York when the CRD was established) was the responsibility of the publisher; reports were designed by the Publications Manager, following the example established by the Centre for Health Economics for its papers, which were apparently based on two principles, one negative ('they can't be seen to be looking too glossy'), and one positive ('neat but not gaudy').

As the Centre's work developed, it began to develop its own approach to design. When *Effectiveness Matters* was launched, it was designed by an outside designer, to a

brief from the Centre. The redesign of *Effective Health Care* in 1995 took the form of a template which an outside typesetter could follow (design commissioned by the publishers); the same approach is followed for the production of *Effectiveness Matters*. The Centre's reports initially followed a similar house style to that of CHE papers, but in 1997 they too went out of house to a dtp typesetter (QuarkXpress) who applies an established CRD house style.

The Centre today takes visual design seriously and works closely with the designers it uses; while a number of designers have been commissioned in the past, it now works mainly with one designer whose approach is found appropriate.

Editorial

When the Centre was established, a decision was taken to have a joint publications unit with the Centre for Health Economics, and this arrangement continues. In 1994, at the start of this study, one staff member was responsible for editorial and production work on both CHE and CRD publications. The job consisted of taking drafts, copy editing with some content editing, seeing items through production, and marketing, together with editorial work on *Health Economics*. The job-holder had 'grown into the job', and by mid-1997, as Publications Manager, was working with a team of two on the printed publications of the CRD and those of the CHE.

The presentation of information

The Centre aims to build a positive product identity and 'brand loyalty' for all core publications with all its potential target audiences. The draft strategy speaks of striking a balance between having enough vehicles for disseminating different forms of research evidence and 'confusing audiences about the distinctions between them.' A similar point was elaborated for the 1998 External Review, with emphasis on the differences in presentation required for different kinds of review products, as between those addressed to the people who commission them, and those directed to the audience whom they seek to influence.

There was awareness from the start of the problems of presenting complex information in reviews, helping readers to extract the meaning, and writing for a range of audiences, and of the difficulty of deciding when to write in-house, when to commission, and who to commission.

The role of visual presentation in solving these problems appears not to have been much to the fore in early days. It was reported in 1994 that decisions about design were not taken on the basis of content, complexity of information, etc, although they were related to audiences to some extent, eg *Effectiveness Matters* had to be 'attractive to pick up', and hence the decision to have it professionally designed. Later, however, more attention came to be paid to content in relation to readers, a process which began with the 1995 re-design of the *Effective Health Care* bulletin, with the use of graphics as well as statistical tables, when the CRD was established. (see also the account on p221 of studies by CRD staff on the presentation of information to consumers, which is relevant in this context.)

Production

When CRD began its work, products were originated from in-house word-processed disks, with no internal use of dtp, and output in-house via a laser printer. This was the situation as described in 1994, for CHE products, and the intention seemed then to be that most CRD products – except those designed and printed externally on a separate budget, like *Effectiveness Matters*, would be treated in the same way. By 1998, as described above, everything was being handled by an outside typesetter, taking disks provided by the CRD, and printed externally.

Testing, monitoring and evaluation of information products

The original draft strategy for dissemination included evaluation and feedback. For each evidence-based topic, a dissemination protocol was prepared by the team concerned, identifying dissemination activities to be undertaken, key tasks and timescales, and providing a basis for the team to evaluate their work in terms of 'process'. All Level 3 activities were to be evaluated, to assess the outcome of specific dissemination activities. 'Given the relative uncertainty over the acceptability and appropriateness of its core publications, CRD will need to review them at regular intervals' (Draft strategy, April 1995).

There was awareness of the practical difficulties of evaluating the outcome of CRD's activity, and acceptance that the Centre needed to adopt 'an iterative process' for developing the dissemination of research evidence on effectiveness, because there was

only limited experience to draw on from elsewhere in NHS, and no clear NHS R&D dissemination strategy.

It was indicated that the team concerned with dissemination would be responsible for testing usability, and it was suggested that ultimately users might be involved in pre- and post-publication testing

Evaluative work in fulfilment of the strategy began in 1996. A randomised trial was carried out on the impact on general practice of *Evidence Matters*, and a readership survey of *Effective Health Care* bulletins was conducted among District Health Authority staff. Results to date show high levels of self reported awareness and readership in some audience groups (>90 per cent for Directors of Public Health), but lower levels in others (eg 25 per cent in general practice).

More recently the Office of Public Management has investigated the dissemination of *Effective Health Care* bulletins. The study covers how they are distributed within NHS organisations, their impact on the individual and the organisation, and the most and least effective features; it asks about general awareness of EHCb and about views on quality, design and layout, and asks questions about specific bulletins.

Until 1998 there had been little evaluation of material of Level 3 type (eg leaflets for patients and professionals). More recently, the Universities of Sheffield and Glamorgan have been commissioned to evaluate the use of Informed Choice Leaflets in maternity care; these studies look at users' knowledge of the topics, their attitudes, and psychological, emotional and physical outcomes, together with organisational and economic factors.

It is interesting to find that, as part of the pre-publication reviews procedure, material designed for patients is always sent to the Plain English Campaign. As discussed in Chapter 4 [this is a chapter of the thesis on existing relevant research] Plain English as a means of ensuring that readers can make use of information products in the ways they need – eg finding and extracting required information, understanding it and acting appropriately on it – has been strongly criticised by many researchers. The purpose of the scrutiny in the present case is primarily to ensure readability; the critical aspects of how effectively readers are able to make use of the content are covered by evaluation and peer review.

Members of CRD's staff and other researchers (Entwistle et al. , 1998) present an interesting discussion of issues that have arisen during development and introduction into practice of information materials designed to present research findings to

consumers, which aim to promote clinical effectiveness and informed patient participation in clinical decision making. They emphasise that quality criteria should be determined by 'consideration of the intended purpose of the information materials and of the consequences of their use'. So in the case of these information products, the information presented should reflect best available research evidence, presented so as to be 'accessible, comprehensible, and usable to its intended audience.'

They refer to the particular need to make careful decisions about how probabilities are framed and the types of statistic used to communicate them. They also stress the importance of processes to ensure the quality of the products, and the need for a range of expertise and skills, from ability to access, critically appraise and interpret research evidence, to understanding of patients' information needs (see Figure 1).

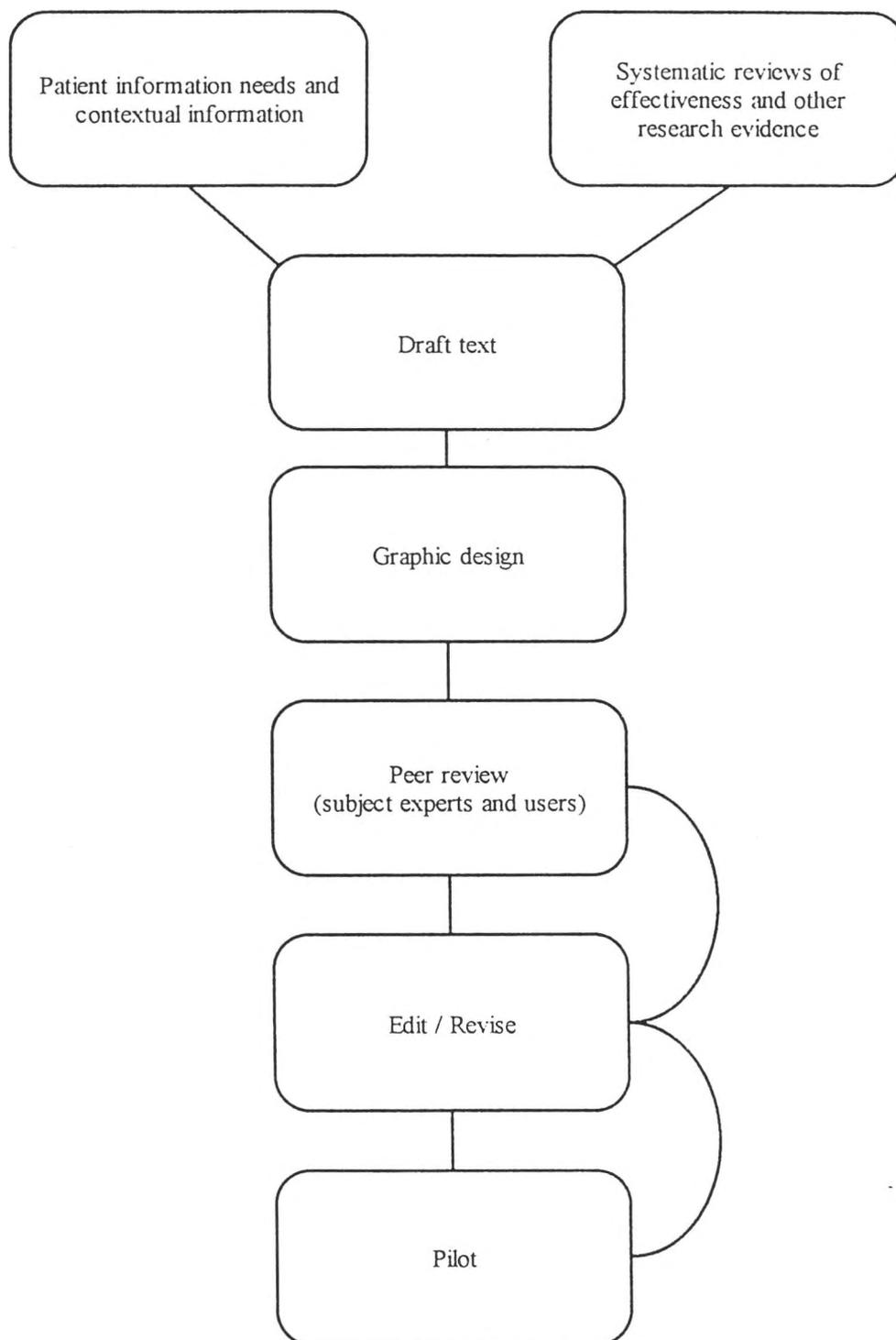
Principles for development of leaflets for all four projects considered were that:

- 1 Content should be based on, and consistent with, the best available research evidence of effectiveness; uncertainty should be acknowledged where it exists
- 2 Versions for health professionals should encourage appropriate attention to issues of importance to patients
- 3 Versions for patients should address their information needs, especially related to decision making.

For three of the four, the first text drafts were written by journalists of various kinds, from medical to popular women's magazine; the other was written by a CRD dissemination team. Professional graphic design was commissioned for all. Editing was done either by the project team, a CRD dissemination team or (in the case of the pregnancy leaflets, by MIDIRS (Midwives Information and Resource Service)). The authors refer to the problem of finding the right tone, eg not being too paternalistic. Advice was taken from the RNIB about type size and paper for the cataract leaflet.

The authors acknowledge the problems of interpretation and the impossibility of value-free judgments; in dealing with them, it is essential to understand what the intended audience knows, believes, feels, needs to know; and to have knowledge of the context of use. They conclude that the production of such materials should be as far as possible independent of vested interests, and that there should be rigorous research to evaluate the effects of different techniques and types of materials. (See also Coulter, Entwistle & Gilbert, 1998, for a thorough assessment of the quality of a number of patient information materials)

Figure 1
Basic production processes for development of patient information material
From Entwistle et al. (1998)



No attempt has as yet been made to establish the cost-effectiveness of the CRD's information products (June 98)

So far as the database products are concerned, while initially (as reported in *Evidence-based Purchasing*, October 1995), there was a lot of feedback from users on the search interface for DARE, by 1998 they appeared to have got used to it. A 1996 survey by SECTA of the requirements of existing and potential users confirmed the problems, and recommended a good Web interface as the most helpful format for novice users. The job of redesigning the Web interface for DARE to make it easier to use was put out to tender. As not all users have Web access, the old interface has also been retained.

An evaluation of the situation

There are many positive features to note here.

- The main one is perhaps the organisational strength which the CRD deploys in its relations with the NHS, the Cochrane Collaboration, and other institutions in its field, and in the management of its own activities in conducting and commissioning reviews. This has provided a strong foundation for developing the information products which are its *raison d'être*, and for the extended future role it envisages in the dissemination and implementation of evidence-based practice – a role which will demand thinking about new kinds of information products.
- The integration of information professionals and information resource management into the core activities of the Centre is an aspect of this organisational strength which gives critical support to the development of information products.
- Information products themselves are integrated into the whole review and dissemination process, which has from the start been the subject of careful thought and monitoring.
- There is strong emphasis on training for all stages of the process from planning and carrying out reviews, through creating information products based on them, to dissemination. In particular, there is good support for writing, which is – rightly – seen primarily as an in-house task.
- Peer reviewing of information products is a standard part of the process.
- There is a commitment to pre- and post-publication evaluation of the effectiveness of information products, and useful studies have been made of user response to them (though nothing as yet on cost-effectiveness – good cost data on the products are available, so there is a basis for extending into this vital area).

- Recent studies (Entwistle et al., 1998) on products for patients show an exemplary 'information design' approach, in terms of taking into account content, who will use the products, and how they will want to use them.
- The Centre's web site – an information product in itself, and a 'container' for the whole range of CRD products – is a very well-structured one from the point of view of conceptual links and support for moving around the content. It is encouraging to know that there is an interest in using the experience of developing the site to think about the whole range of information products and their presentation – for example, how the visual presentation of existing hard-copy products may need to be modified for on-screen use.

There seem to be two factors which still cause problems, one minor and one major. The minor one is that, while there is a sound process for developing information products, typographic design appears to get rather less attention than other aspects, in terms of drawing on professional knowledge about the influence of type face, size, spacing, measure, etc (except, interestingly, in the case of the cataract leaflet; in fact, while these features are clearly of special importance for users with visual impairment, they actually have a large, though often unrecognised, influence on all readers). With more attention now being paid to content and its presentation in relation to readers, this aspect may come to receive the attention it merits.

The major problem, which may make for difficulty in future, as it has in the past, is the lack, at the time this study was completed (autumn 1998) of an overall NHS and NHS R&D strategy for communication and dissemination, which threatens to undermine the pioneering research by the Centre on ways of getting research findings taken up and acted on.

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Case study 9

Norwich Union, stage 1

The insurance industry has a long history of being terrible at presenting information'

An insurance company manager

Background

Norwich Union has been associated with the city of Norwich for over 200 years; and is the largest employer in the city. A mutual company for most of its existence, owned by its with-profits policy holders, it became a plc in 1997. The shareholders who now own it include besides the policy holders, institutional and private investors and staff members.

The Group consists of two major UK insurance businesses, together with a number of subsidiary companies and an International insurance business. They work within a federal structure, with a high degree of autonomy for each individual business. Worldwide staff numbers at the beginning of 1999 were nearly 17, 000; 14,000 of the Group's employees work in the UK - just under half of them in Norwich.

The UK General Insurance arm, which is responsible for all non-life personal products - including motor, household and travel - employs almost 6,000 staff (including subsidiaries), 3000 in Norwich and the rest in 28 regional offices. Dealings with its six million customers are mainly handled through intermediaries: 11,000 Insurance Brokers/Agents, of whom 6,000 are supported from regional centres and the remainder from Norwich. General Insurance also covers commercial insurance products for businesses, mainly 'packages', distributed mainly through insurance brokers. The direct arm now has over one million retained policies.

The UK Life and Pensions arm, besides life insurance, also deals with pensions and investment products. It accounts for 6,000 staff (2,500 in Norwich, 1500 in Sheffield, and the remainder distributed around 36 regional branch offices), and serves 2.4 million customers, 95 per cent of them through Independent Financial Advisers (IFAs).

The Group's Investment Management operation manages the life and general insurance funds, pensions, OEIC funds and ISAs (previously PEPs and unit trusts); it provides a full investment management service for other parts of the Group and manages investments on behalf of the Group's UK customers.

Its international operations employ 4,500 staff and enjoy a high degree of autonomy, but operate under the umbrella of the Group's worldwide corporate identity.

The Group's 1998 operating earnings before tax were £716 million, and the value of its worldwide funds under management was £57.6 billion at 31 December 1998.

Key objectives and strategies

The Group's mission was formulated in these terms in 1991:

To develop Norwich Union as a leading provider of insurance and related financial services principally within the European Community.

Our priority is to satisfy present and future customers through:

value for money

fair dealing

high quality service

Subject to this, we aim to grow as vigorously as possible.

The UK base was seen as of paramount importance to this mission, and these objectives were established for it in 1991:

- To get closer to our customers by understanding and responding to their needs and broadening our distribution channels.
- To create a better, more efficient service as well as maintaining the quality and security of our products.
- To provide a competitive range of products and make the most of our investment expertise.

By 1995, the Group goals were defined as:

- To deliver consistently to all group customers excellent value for money and a high quality service.
- To be the preferred partner for intermediaries who also value high quality products and service.

- To operate profitably and progressively grow the value of the Group for our owners.
- To maintain a level of financial strength to support business risk and reassure customers and intermediaries.
- To be a team which takes pride and pleasure in being part of Norwich Union
- To be active in supporting the communities in which we operate.

After flotation, the Group's primary objective had become simply 'to create real growth in shareholder value'; the means to achieve it were defined early in 1999 (in *Unplugged*, the vehicle for communication of management thinking to staff) as:

- Achieve significant growth - from increasing existing business and by acquisition
- Increase the percentage of business outside the UK
- Increase the direct customer base
- Provide high-quality service at low cost - through skilled, well-motivated staff supported by new technology
- Create strength by pooling resources across the Group - in particular by sharing knowledge, processes and resources.

Its overall brand strategy is currently defined (on the Norwich Union web site) in these terms:

We offer our customers financial security by helping them save for the future, provide against the unexpected and insure the things that are important to them. We give better protection through our wide range of good value, high performing products.

This is summed up in our statement: "No one protects more."

How we go about it.

We aim to earn the trust of our customers by:

listening to what they want...

developing innovative solutions based on experience...

and consistently delivering top quality service and products that are among the best in their field.

Organisational culture

Large cultural changes have taken place in the last decade or so in what was a very traditional, hierarchical and somewhat inward-looking business, and they are still in

progress. For the first time in its history, the company began making senior appointments from outside its own ranks, often on fixed-term contracts; its institution of an equal-opportunities policy has led to a more balanced distribution of women staff throughout most levels of the occupational pyramid (though as yet they are rare in the top layers of management). The age profile has also changed in the past few years; with a large intake of school-leavers between 1988 and 1991, and a subsequent 'downsizing' of the Group's operations in 1992/93, many over-50s took early retirement, and there are now few staff over the age of 55. The lower and middle management group is now predominantly young. These changes are seen as having both advantages and drawbacks; while a more questioning and less accepting approach is characteristic of today's workforce, there has been a loss of managerial knowledge and experience, especially in dealing with people and communicating, and this is identified as something to be rectified through training and development programmes.

Other developments are designed to bring about further changes in corporate culture, with the aim of enabling the company to compete successfully in a rapidly changing business environment. Norwich Union is historically a group of different, largely autonomous, companies, each with its own culture. It has been described as a 'consensus organisation' which avoids imposing company-wide standards, and there is little tradition of lateral communication between the different businesses. In recent years, the company has been seeking to move towards being more of a group and less of a federation of slightly feudal domains. One of its steps towards this aim was the commissioning in 1991 of a unified corporate identity (see p242), centred around the theme of 'one-ness', defined as 'A Group with many successful parts rather than a series of businesses.' The importance of working as a 'single entity', in terms of working together across different business units while maintaining the accountability of individual units, continues to be emphasised; since flotation it is seen as critical for the value of the Group as a plc, 'Working together and sharing experiences across the Group will be key to maximising the value we can create as Norwich Union plc', as the new Chief Executive put it in his first communication to staff (*Unplugged*, Issue One, 1998). It is now also a brand issue. This kind of cultural change is easier to put into words than into deeds, and some problems encountered are described later.

Open communication

For the past few years there has been a strong commitment on the part of top management to 'open communication'. The strategy for internal communications was, at the start of the study, the responsibility of the Group Corporate Affairs division. It began with a major staff opinion survey carried out by Personnel in 1992, to which there was an 80 per cent response rate. The replies showed that employees' preferred way of receiving information about the company was through team meetings which included their own boss. On the basis of this, an 'Open Forum' internal communications programme was introduced, which included regular presentation of corporate information through team meetings and supporting publications (one in-house 'Open Forum' publication presented a section on performance figures which were largely negative - as a response to earlier staff comments which complained the company was 'glossing things over').

Open Forum had by the end of the study been replaced by the 'Unplugged' process, but the emphasis is still on information sharing, information flows upwards and around, as well as the traditional top down, and formal feedback up to the highest level of management. It may be that the change in the composition of the staff, and the more questioning and less docile approach it has brought, is setting the pace for management. Emphasis continues to be placed on open communication, however embarrassing or difficult it may be on occasions, although the change to plc status has brought the necessity of protecting market-sensitive information, and taking account of Stock Exchange regulations which may affect the timing of disseminating certain kinds of information.

Quality

At the start of the study, a programme under the title 'Renowned for quality', sought to establish performance criteria for quality, to gain commitment from all members of staff to innovation at all levels and productive team working, and to encourage managers to lead by example. The driving force behind the programme was the realisation of an 'enormous gulf' between the perceptions of senior managers and those of their staff about how far the company lives and works by its 'core values' of customer focus, responsiveness, dependability, openness, teamwork, concern for others, and integrity.

By the end, the programme had evolved into Norwich Union's brand strategy which aims at 'consistently delivering top quality service and products that are among the best in their field'. Each business area seeks to meet this aim in appropriate ways and over a timescale that fits in with their business operational plan.

Decision-making for information products

All these moves towards change in the corporate culture have a significant bearing on the way the company manages its information products, both internally and externally directed. There is an organisational link, in that the Internal Communications (previously Publishing Services) section, within the Group Corporate Affairs division, has responsibility for key internal and corporate publications, and an advisory role for others; it has specialist professional staff, including writers and editors.

The autonomy of individual businesses means that they are responsible for decisions on the information products associated with their own products. Decisions on what external information products should be developed are taken by marketing and sales staff of the individual businesses as part of their marketing plans. Typically, when an insurance or investment product is to be launched, the team member responsible for the literature plans and writes the products for customers and intermediaries, and develops the design brief on the basis of the product specification; launch material is often outsourced.

While there is a declared policy of relating proposals for information products to specific business objectives, there is as yet no top-level managerial responsibility for enforcement or for developing an overall strategy that could still take into account the differing strategic roles and communications needs of individual businesses. A step in this direction was taken in 1998, however, with the setting up of the Marketing Steering Group, which potentially provides a forum for an overview of the information products of the individual businesses. Chaired by a Director, its membership consists of marketing managers from the different businesses and the Group Brand Manager; its terms of reference (currently – May 1999 – under revision) are:

- To provide a reference point for the UK Executive Board on the marketing activities of the Group, specifically ensuring that these activities are aligned with the Group's long-term business strategy.
- To make Norwich Union's overall marketing effort more effective by co-ordinating the activities of the individual businesses

- To provide a forum to develop and implement best practice across all marketing activities.
- To be responsible for group-wide marketing activities, including:
 - Management of brand policy
 - Developing group-wide customer strategy
 - Establishing a product development policy for the Group
 - Managing a calendar of Norwich Union marketing campaigns
 - Managing a relationship with creative, media and research agencies.

In the Insurance Broker channel of General Insurance, product proposals are put forward, setting out the key 'message' of the product, the production methods, and the 'tone' that is sought. The Corporate Clients channel of General Insurance negotiates information products direct with its customers, in accordance with the nature of the business relationships; the initiative is sometimes from the client's side and sometimes from that of Norwich Union. The practice of the Life and Pensions business is different again; the management relates its business strategy to the main group goals, and uses it as the basis for deciding on its communications strategy. The Marketing Communications Manager has responsibility for deciding on information products; advice is taken from colleagues in the sales force, who receive valuable feedback from the Independent Financial Advisers with whom they are in daily contact. So far as the international operations are concerned, the business in each country is responsible for decisions on its own information products, in the light of knowledge of the local market.

The Identity Management Team (see p241 for more about its work), which is responsible to the Group Brand Manager, provides expertise on design and production. It is responsible for managing the corporate identity and the establishment and management of a network of external design suppliers who can be accessed as required by the design units in the businesses. The purpose is to ensure effective management of the brand, maximum benefit with minimum cost, and better management of standards.

Business-related information products are now categorised into three levels:

- Level 1: These are mainly reprints of existing products, in which the Identity Management Team is no longer involved. They go straight from the originators to the group purchasing department, and then to outside printers.

- Level 2: Material requiring some professional design input, for example, form design and new versions of existing products which require changes in typography. Responsibility for producing these rests with the individual businesses, which have some design capacity (not fully qualified) among their staff, with guidance from the Identity Management Team as required.
- Level 3: Major new products or re-launches, requiring a creative input. Businesses are free to seek proposals from outside groups, drawn from the supplier network mentioned above.

Costs and budgets

The individual businesses set a budget for the information products associated with their major products, broken down into such elements as copy writing, design and production; the amount is related to the importance of the product in relation to achieving business objectives and to the amount of information it has to contain. The costs are borne by the sales and marketing budgets of the business, thus enabling management to measure the impact of the cost on their bottom line performance.

So far as electronic products are concerned, applications on the intranet have to be justified at a project or departmental level, using the Group's existing cost-benefit analysis methods. Internet applications are sponsored out of a specific budget.

The information products

Internal products

At the start of this study, almost all such products were hard-copy; by the end, the policy was to make the intranet the main vehicle for as many of them as possible. Whatever the medium, management is strongly committed to internal communications throughout the business and to products to support them. A great deal of effort is invested in products for communication to staff from management, and for interchange of information among staff. Products include:

- A monthly tabloid-style newsletter (*Norwich Union NEWS*), issued to all active staff, which consists mainly of top-down information, together with a letters page. This product is now a key element of the staff communications programme, and is seen as assisting the management of change. It is primarily business-led, although the

Internal Communications team responsible for it was, at the end of the case-study period, seeking to introduce more human-interest material.

- The *Norwich Union Magazine*, originally distributed with the *Norwich Union NEWS* and now sent only to Group pensioners – a quarterly which is oriented to human-interest stories. It is was at one point used to build awareness of community activities of staff, but currently seeks to focus more on material of interest to pensioners, such as gardening and travel. The magazine was re-designed and re-launched in 1994, and was the subject of a further minor re-design in 1999. It is written almost entirely in-house (with some reader contributions).
- A bimonthly printed product for staff to complement other forms of internal communication in the Life and Pensions area, and to act as a reference source. Originally called *Update*, now *Monitor*, it is likely to move to electronic presentation.
- *Personal Lines* newsletter, a quarterly for all staff in Personal Insurance, to provide 'context information' and *Commercial Break*, the equivalent publication for the Commercial Insurance division, merged in 1997, to become *In Touch*, which goes to all General Insurance staff. An electronic bulletin board fulfils the comparable function for Norwich Union Direct.
- Business circulars with details of changes in corporate and management structure; originally printed, these can now also be put on internal bulletin boards.
- A *Staff Handbook* (revised in 1996 and 1998): a 78-page A4 booklet, rather in the old tradition of such documents, it consists of 20 pages of main text, 30 of appendices; a separate section on staff pensions and health insurance schemes with its own appendices; and a sort of coda of 'Guidelines for use of display screen equipment', which balances the introductory passage on 'Norwich Union tips for an efficient office'. At the end of the study, the news was that the handbook was now making good progress towards being put on line, after hanging fire for some time
- A personnel newsletter (*Staff News*), produced as required, communicating updates to employees' terms and conditions of service. The issue in March 1999 may be the last in printed form before it goes over to the intranet
- *Unplugged* – the main vehicle for conveying top management thinking on key developments. instituted by the new Chief Executive, who took over not long after the flotation of Norwich Union (the name is intended to reflect the CE's own 'way of doing things – relaxed and informal but direct and to the point'). Quarterly, A4 format, six-page gate folded, its design has changed a good deal since the first

issue; the rather adventurous and flowing typography of the first issues has been replaced with more staid bullet points, and colour has been added.

One other category of Internal information product should be mentioned: when the businesses are developing new products, the teams responsible create materials to support the process, and to give advance information to the staff who will be responsible for promoting the product once launched. The Bicentenary Bond which formed the subject of the second-stage case study in Norwich Union provides useful examples, which are described in that case study.

Apart from these conventional products, e-mail is used for *Newslines*, a weekly 'current awareness' summary of business-related information, the Life and Pensions Monday Morning *Memo*, and, when required, for the quick distribution of urgent information (for example news about staff re-training after the LAUTRO condemnation of certain pension sales activities). Satellite-based interactive TV is used within Life and Pensions for in-house staff communication of key messages, for example from the Spring and Autumn senior management conferences. They also put out interactive strategic and commercial programmes every six weeks to an audience of sales staff and independent financial advisers in their regional offices. In the early stages of the study, 'Drive time' tape cassettes were produced so that sales staff can catch up on new developments while travelling between appointments.

CD-ROMs are produced for sales consultants, who are now also able to access a database of corporate data, and to input information, from laptops while in the field.

Products for external audiences

The external products are closely related to well defined groups of 'stakeholders'. The principal group consists of intermediaries, who constitute a very important target audience, and receive a great deal of attention under the 'IFA first' programme. Currently the main means of communicating is the quarterly magazine *Putting you first*, which started in 1997. The content (articles commissioned from specialist writers, and news items) is aimed at supporting IFAs in their work, keeping them up to date with relevant developments, and above all building their loyalty to Norwich Union. Other support material includes seminars and videos, software to help in putting together 'reason why' letters for potential customers, satellite TV programmes, training CD-ROMs, and marketing guides. The web site for IFAs is described below.

While Life and Pensions treats IFAs as a unified audience from the point of view of information products, General Insurance tends to segment brokers into a number of different audiences, and to differentiate products accordingly.

Another important group comprises 'with-profits' policy holders (before de-mutualisation the Life Society's members). Communications with them at the start of the study were primarily paper-based - in the form of the annual bonus statement and a newsletter; these are now supplemented by the Group's web site.

These policy-holders were, until the 1997 flotation, the 'owners' of the mutual society. When Norwich Union became a plc, their place was taken by shareholders. The lead-up to flotation required a series of information products addressed to members, to explain the significance of the proposal in preparation for the vote on the proposal for flotation. The main one was an A5 booklet *What the flotation means for you*. Once the proposal had received assent, there was a follow-up 'Mini-prospectus' with details of the free shares for members and the special offer of further shares at a discount, and a booklet 'selling' the discount offer more vigorously.

Shareholders now receive *Highlights*, a tabloid format summary of the *Annual Report and Accounts* (and the full report on request). The *Annual Report and Accounts* is a large non-standard size, and almost book-length, at over 100 pages for the 1998 version. It uses colour for charts (bar and 'ring' charts - a neat version of the pie without the slices, with the proportions indicated on the circumference), and coloured stock.

The Marketing teams throughout the businesses produce pre-sales brochures for intermediaries and direct customers as part of the 'selling end of the continuum', and are responsible for the policy documents issued to customers (see the second-stage case study for examples).

Electronic products

Web site. Norwich Union established its first web site in 1995. At this point it was the responsibility of Group Corporate Affairs, but in 1997 it was transferred to Group Services. The systems team which set it up continued to oversee its development; the change in management responsibility reflected a move towards using the site primarily as a vehicle for transacting business. The public site now (1999) offers an increasing number of interactive services for users, including on-line information for shareholders and facilities for credit card sales. The expansion on this side has been accompanied by a reduction in the number of information pages - 450 were recently cut.

The structure is fairly simple. The home page presents access along two 'axes': one leads to the Group's products and services; the other, repeated on first pages at second level, consists of the headings 'home' 'about' 'contact' 'sitemap' and 'important information'. While the meaning of some of them is unambiguous, it is not clear what may be expected from 'about' and whether the content accessed from it, and from 'contact' and 'important information', will vary according to where the user happens to be on the site at the time. (In fact 'about' always produces the same page about Norwich Union, and the other two lead respectively to the same list of contact phone and email numbers, and the same obligatory statements about accuracy and validity of information, the Data Protection Act, etc.) The sitemap turns out to be no more than the very simple classified list of main topics which can be produced semi-automatically. (At the end of the study, in May 1999, a search facility had been re-introduced).

Visually, it is not the most readable of sites. The typeface used for text is not an easy one to read on screen, the flashing animation which currently appears on the home page and elsewhere acts as a distraction, rather than as the attractive alert which is presumably intended. Some methods of presentation, including a large scrolling set of matrix tables which are meant to allow comparison between the cover provided by various NU health plans, are far from easy to use on screen, and look very much as though they have been lifted from the printed version without consideration of the differences between the two media. Some of these features can be ascribed to the fact that the site designers are under the constraint of building and delivering pages that will work on all kinds of browser, at different screen resolutions and on monitors with limited space.

In setting up the first site, the ID management team provided design inputs. In a subsequent stage, an external agency was used; this arrangement has now been discontinued, and the current site is internally managed: marketing departments are responsible for the content and structure of their own pages; the Group Internet Services Department oversees infrastructure and administration; and visual design is agreed by them with the Brand/Identity teams

While there appears to be no specific responsibility for co-ordinated management of the information content of the web site as a whole, and no formal statement of overall policy covering the role of the site in supporting Group strategies, every page has its specifically assigned guardian who is responsible for accuracy and currency of the

content. The guardians, or 'owners' as the Group designates them, are mainly from Marketing.

The relation between electronic and printed products has changed over time; while originally most web site content was taken direct from printed products, now most of it is specially written. Many changes have been made as the result of feedback from users, for example the recent introduction of graphs.

Intranet. Development of the Norwich Union intranet, 'UnionSquare' began on an experimental basis, initiated from the IT side in 1996. A year later, funding was given for a development team to explore further, within the context of a major project for introducing the same desktop throughout the Group, standardised on MS Office and Internet Explorer. There was therefore a deliberate focus on the infrastructure, and a lot of time went on developing standards which would allow business users within the Group to develop their own products without any technical skills beyond word processing.

The content was initially news, and the number of users small. As the existence of the intranet became known, one of the businesses (Investment Management) decided it could be a very useful tool for them, and went ahead with developing its own, as a container for its own information. The further development of the intranet has gone on in a similar way, with other businesses, and sections, within them setting up their own areas, and putting up material which varies a good deal in breadth and depth of content. By mid-1998 there were about 1000 users, out of a potential 15,000. Rapid growth in content continues; the number of pages increased from 3500 in January 1999 to 25,000 in April.

Limitations on access conform to the Group's general policy of classifying certain kinds of information - primarily that involving commercial confidentiality - and restricting access to authorised users, while allowing open access to the remainder.

This rapid development continued without an intranet strategy for the Group as a whole (arguments for its necessity were advanced by the Internal Communications team) until March 1999, when a high-level strategy was agreed by Marketing Directors. A project manager joined in May 1999, and details of priorities will be agreed by June 1999. Meantime, a great extension of access is in prospect from a project which by mid-1999 will replace all the pcs in use within the Group and standardise on MS Office and Internet Explorer.

At the same time, coexisting with these developments, a large amount of important procedural information languishes on the old mainframe system, in a 'Quick Reference Library' whose features belie its name. Documents from a previous hard-copy Administration Handbook were put on to the system as they stood, arranged by a rough subject grouping and within that by the numerical code of the documents, so that the content is totally unsearchable. Since then, there has been little attempt to keep the material up to date, and none to make it easier to find items by subject, or to improve the impressively awful on-screen presentation. The intranet strategy should now ensure that this large body of content without ownership will be made the responsibility of named guardians and brought on to the intranet.

Extranets. There has also been some development of extranets: the site for IFAs has won an award; a pilot extranet covering some of Norwich Union's overseas subsidiaries has recently been set up, and a new site for General Insurance intermediaries was inaugurated in March 1999.

Information resources

Norwich Union has a number of information resources with potential to contribute to planning its information products in line with business strategy.

The Group makes a large investment in research amongst intermediaries and customers to assist product development and marketing (see the second-stage case study for an example) and communications strategy. Reports on research findings (for example on comparisons of the published reports and accounts of major UK insurance groups) are also produced and circulated to senior management; they are said to provide a valuable source of market intelligence.

At the operational level, each marketing division has its own research team which gathers information about competitor activities and maintains business-specific databases. The customer database in General Insurance, for instance, covers records for more than 3 million customers.

While information from research is used by product development teams to design new insurance products and the accompanying information products, it was accepted at the start of the study that information is not yet fully exploited for this purpose. There was said to be a problem of matching internal information about customers with external information like demographic data. There was certainly an appreciation of the

benefits of being able to integrate the two as a support for understanding situations, decision making, and taking new initiatives. The obstacles lay in old internal systems which did not permit appropriate access to information that would allow full use of its potential to support information product development – as one manager put it 'We have written off so much history.'

A substantial investment in new IT systems to improve customer databases was beginning to pay off by the end of the study. The MIDAS system now operating brings together a lot of information on all customers. Problems of ownership of information about those who come via intermediaries had to be resolved, and the system is now being extended to hold information on all, regardless of source, but with safeguards to ensure that it is used for marketing with due respect for its origin. The ultimate aim is a clean effective database with wide range of information, easy to interrogate and section, and good progress is being made towards it.

So far as can be ascertained, there is no overall strategy, at Group or business level, for the use of information to support key business objectives, no overview of the resources of information available to the Group, and no specific responsibilities for managing information resources. It is interesting that the Group appears not to have had any formal library or information service in the recent past, particularly in the light of the fact that as this study ended, in May 1999, a knowledge management project – whose project manager is also responsible for the intranet – was under way.¹

One of the first manifestations planned was a 'yellow pages' of experts and resources for particular subjects.

A new information resource came to light during preparations for the Bicentennial celebrations of 1997: a collection of company archives which is now being professionally studied and recorded with a view to making it accessible for use. This represents the first serious attempt at documenting and managing archive material; previously the curator of the Group's museum dealt with inquiries on demand, but there was no formal process.

¹ A recently appointed Group Human Resources Director is sponsoring both the intranet and knowledge management projects, with a view to their potential for beneficial change in organisational culture and constructive use of human resources.

Human resources for information products

There is a division between information products for wider corporate communication and those for specific markets. The former, directed principally to staff and to shareholders and policy holders, are mainly the responsibility of Group Corporate Affairs, and are produced by its professional specialists. The latter, which support insurance, investment or pension products, are handled by the marketing teams of the individual businesses.

Writing and editing

Most writing and editing of publications is done in-house. The Internal Communications team in Group Corporate Affairs consists of specialists recruited from outside the business; the present strength is seven individuals, with six full-time posts. Attempts at internal recruitment were found not to work; it proved to be easier for professional writers and editors to get to grips with insurance information content than vice versa. The team is responsible for the *Newsline* email bulletin, *Norwich Union NEWS*, and *Norwich Union Magazine*, for editing the *Annual Report and Accounts*, and for other internal work as commissioned. They spend an increasing amount of time (about 25 per cent at present) on external publications, such the *Annual Report and Accounts*, , and 'ghosted' features for the trade press for experts in the business lines; much of the writing for other information products (eg product sales brochures) is handled by members of the marketing teams, supported by external copy writers.

Design

Graphic and typographic design has had a chequered history within Norwich Union. A small in-house design unit grew in size with the parallel growth in influence of the Marketing division in the 1980s and early 1990s. Some of its work was in form design, but mainly it designed information products for the businesses and some corporate information products (eg the *Annual Report and Accounts*). A major change came in 1993, when the company started cutting the size of its work force for the first time in the 200 years of its existence; the in-house design group developed over the next two years into a small Creative Management unit whose role evolved into managing the corporate identity (this aspect of its work is discussed below), designing and producing

corporate information products, managing a 'roster' of external providers of design, and providing guidance as required to the design units in the businesses. Now named the ID Management team and reporting to the Group Brand Manager, it consists of three professional designers. The head of the team, a designer with long experience in Norwich Union, is Brand Identity Manager, with responsibility for establishing Group Policy for brand identity, guidelines and standards, overseeing the implementation of the Group ID and resolving any issues in that area. One member of the team supports the staff responsible for design matters in marketing teams on preparing briefs for external design agencies. The team meets regularly with representatives from marketing teams, and makes random quality checks on products commissioned from external suppliers, who, by the end of the study, handled almost all major information products.

The use of desktop publishing software by secretarial and administrative staff throughout the group is restricted to internal reports; no products for external audiences are produced in this way.

Training

While already trained professionals have been recruited, both in-house and external training are offered for members of staff as part of their professional development. Marketing staff development is currently under consideration by the Marketing Steering Group; this may well cover such activities as writing, editing and briefing designers.

The presentation of information

The main focus of attention in this respect is the Group corporate identity and brand identity. The current Norwich Union corporate identity was commissioned in 1989 from Wolff Olins, launched in 1991, and introduced over a period of three years. The major aim of management in seeking a new corporate image was to promote the vision of Norwich Union as a single organisation, and, while retaining the visual reference to the Cathedral associated with the business for over 100 years, to present it in a more up-to-date context. The theme of 'one-ness' emerged from the design consultancy as a personal interpretation of the business, rather than as the result of research, although what little research was available showed that consumers considered Norwich Union

to be 'one company'. The positioning concept of 'protection' which is now associated with the brand was developed by Saatchi and Saatchi Advertising in 1994.

The management of communication with clients is seen by those responsible for corporate communications as part of the general process of 'image management'.² Emphasis is also placed on maintaining the image, or 'brand', in internal communications.

The large traditional-style manuals which followed the 1991 corporate ID project were superseded by more manageable guidelines prepared by the Creative Management unit for specific kinds of product. The current version consists of a 'quick guide' to the Norwich Union Identity, in the form of a poster-size visual summary, folding down into an A4 cover, of key elements: corporate mark, colour, typefaces, spacing, headings, graphics, etc. The quick guide is complemented by three companion products on creating marketing literature, advertising and mailers, again with visual examples of the recommended treatment, together with a very brief 'briefing for writers' on using words and images to present and interpret the brand, and a small card folder with a checklist of questions for testing the quality of products. Agency feedback was sought in 1998 on this guidance material, as a means of getting a fresh external view.

In the light of the findings, the Brand Identity Manager is currently (early 1999) working on a promising new approach to guidance on presentation, which in effect focuses on the questions of Who is the audience? What is it about? How will the product be used? as the means of ensuring that brand interpretation for individual products is appropriate for audience, use, and content. The aim is to produce a 'kit of parts' that can be combined in various ways. The new guidelines may be issued on CD-

² The approach is similar to that defined by Hefting (1988) in introducing a new corporate image for the Netherlands Post Office: 'First of all, what is at stake is the "image of the concern", ie the (proven) quality of the produce. This is followed by a series of general demands and possibilities which combine to form a corporate image. These ... could be arranged in a hierarchy [in which] the corporate culture or style of presentation comes immediately after the quality of the product: its organisation, its attitude to the customer, its tempo and efficiency, its search for solutions or its willingness to engage in dialogue. Lower down the hierarchy comes its public image, the design of all the visual expressions which ... combine to create a visual corporate atmosphere.'

ROM, and will certainly be on the intranet. As well as basic elements of the kind used in the existing guidance, there will be procedures (including a standard briefing format which sets out the information which needs to go into a brief for outside agencies, but which often does not). One innovative and helpful piece of design support is a 'slider scale' on colour, typography, images, and layout, which shows criteria for good and bad, with visual examples.

Feedback from customers and intermediaries, obtained as part of the formal activities of the research units of the business, is also intended to be used to help design information products (for an example, see the second-stage case study). The emphasis on customer focus in such products continues, some of it externally driven by requirements of regulatory bodies; for example, products relating to health have to meet external standards which will allow customers to compare what different providers are offering.

At the start of the study, a Plain English policy had been adopted and embodied in *Group Writing Standards* (1995). This publication incorporated guidance on written communications, covering the visual and verbal presentation of letters, memos, reports, marketing material and legal documents. It covered house style elements (reference numbers, dates, etc), typeface choices and provided standard layouts, together with 'Plain English standards'. The guidance on 'Plain English standards' is along the usual lines of such documents, with generalised advice on such points as sentence length and use of active rather than passive forms of the verb, but no explanation of when exceptions are desirable. And while some of the principles – like 'don't waffle', or be professional as well as approachable – are sensible, there is not much advice on how to carry them out in practice (the *Group writing standards* are intended to be supported with training given by managers to their staff; this is reasonable, but it requires that the managers themselves should have some support). The list of 'Words and phrases to leave out' is a useful one; on the other hand it is difficult to envisage how the 'Finding the plainer word' glossary would be used in practice by those most in need of help.

All policy documents were re-drafted by the Legal Department to meet the disclosure regulations which came into force early in 1995 for the Life and Pensions business. There is some knowledge of and interest in developments in the Australian insurance industry in this respect, though the reservations about exclusive reliance on

'Plain English' of such research bodies as the Communications Research Institute of Australia appear not to be known.

The intention of the Plain English policy continues to be relevant at the end of the case study, and it may well form part of the brand intranet site.

The Internal Communications team today takes a commonsense approach to Plain English; rather than adhering mechanistically to dubious rules, writers aim to present content as clearly as possible in relation to the audience and its existing state of knowledge.

Production

All in-house design work is Macintosh-based, using Quark XPress and Aldus Pagemaker DTP software, along with Photoshop and Illustrator. There were difficulties in moving towards this solution; Norwich Union's business is PC-based, and the Group Information Technology team was unable to offer advice from its own experience. They did, however, buy in consultancy to advise on systems and provide training, which resulted in the present set up, and offer continuing support. The Internal Communications team installed Front Page web software on PCs in April 1999.

Various simple DTP packages on PCs are used throughout the organisation by secretarial and other administrative staff for general correspondence, internal reports and similar products, which are reproduced on low-resolution laser printers.

Testing, monitoring and evaluation of information products

Norwich Union has done a good deal in the way of serious evaluation based on feedback of various kinds in response to its information products. Research on information products for customers is the responsibility of the research teams in the marketing divisions throughout the businesses. For example, Marketing Services in General Insurance (Personal) business set up a programme some years ago, using a research agency; part of the agreement with the agency was that the client should agree on monitoring and evaluation criteria when products were under development and that the agency should use them in making the evaluation. The method used is 'sensitised shopping', which involves testing information brochures about policies by observing how actual customers make use of them to find information. The results led to moving informative content, including tables, to the front of brochures and making

it more prominent, reducing sales 'blurb', and concentrating on key selling points and exclusions.

Focus groups with buyers of policies have also been used, in order to learn about their experience of making claims, raising queries, and communication with the company.

A survey is conducted among intermediaries every quarter to find out what they and their customers think of products and how understandable they find them. Rating is on a 5-point scale, with performance criteria for each point on the scale.

Research has also been done on ways of making renewal notices to policy-holders, and updates of policy booklets, specific to the individual policy-holder's own policy; one point at which databases of customer information should be able to support information products.

Similar research activity is conducted in the General Insurance (Commercial) business, and Life and Pensions business units; the research here, however, is principally based on intermediaries rather than policy-holders. [*still correct?*]

No research comparable to that undertaken on customer information products is done for internal products, although a regular two-yearly survey is made of staff opinions about the way information is presented, and what information they want. The staff magazine (founded 100 years ago) was re-launched in 1994 on the basis of such feedback. Two internal communications surveys have been made on *Norwich Union NEWS* since 1997, and the editor also seeks feedback from people who supply stories about how satisfied they are with the treatment of them. In anticipation of moving the product to the intranet, there has been some redesign with the aim of breaking the content into manageable elements.

An evaluation of the present situation

This final section of the case study looks first at features in the situation which have a positive effect – actual or potential – on the Group's information products, and then at some aspects which seem likely to create problems and obstacles.

The judgments expressed are based on the fact that information products are the key means by which organisations tell their outside and inside worlds the things which they want them to know, and on the premise that they will make their maximum contribution to business value if:

- Their role is clearly related to overall corporate strategy
- They draw on well managed resources of appropriate and accurate information
- They present the information in ways which are appropriate for the audience, the use they need to make of the product, and the information content; and if their effectiveness is monitored and lessons learned
- They are produced by collaboration among people with appropriate skills and experience
- There is a forum where key stakeholders in the organisation's information products can interact on strategic aspects of information products, and learn from experience.

Positive features

On those criteria, Norwich Union scores well in a number of ways.

The recently established Marketing Steering Group makes a potential forum for an overview of information products and the development of a strategy for them linked to corporate strategy, and it is to be hoped that it will take this as part of its remit.

Norwich Union draws on a high level of professional skills and knowledge in corporate communications, with well qualified and experienced writers, editors and design managers, who seek to take account of the audience, use and information content of the information products to which they contribute.

In an earlier draft of this report, it was observed that 'The company clearly assigns great importance to the corporate identity in informing the outside world about itself, and ...shaping audience perceptions of Norwich Union.... The question does, however, present itself of whether concentration on the identity might stand in the way of a thought-out strategy for information products. If there is a danger of this kind, it lies in the actual information content of the image and its accompanying words, and the depth of understanding and interpretation which those who work in the company attach to them. Were they to be understood only at the level of a 'slogan' or even a mantra, they could hinder the development of thinking about the meaning of what the company seeks to do, and interpreting it in information products of real value.' It was therefore encouraging to see by the end of the study the work in progress on the new 'Fit for purpose' guidance on visual presentation and managing relations with the outside agencies on which the Group relies.

Another contrast between early and late stages of the study relates to the attitude towards Plain English. My observation in a draft written in 1996 was to the effect that 'There are dangers of relying on putting everything through what someone described as the 'Plain English carwash' as the guarantee of usability. It is certainly a necessary courtesy to readers to use language in ways that are as familiar to them as possible, but there is plenty of research to show that that in itself is no guarantee that the content will be understood and appropriately acted on – and that is the only true test of success in presenting information.' In this connection, reference was made to a review of a publication from the Life Insurance Federation of Australia entitled *Simply Better: The case for clearer life-office documents* (Kelly & Balmford, 1993), which pointed out that:

Documents written in Plain English and presented using good graphics seem superficially to be more comprehensible, and the research [research quoted in the LIFA document on the response to some insurance documents] shows that they are preferred by people. But ... people's preferences are unrelated to their comprehension, and their confidence in the documents they prefer is misplaced ... There is a very real danger that consumers will be lulled into a false sense of confidence because a document looks well designed and is written in Plain English. Consumers may think that they understand a document and know how to use it when they do not. As a consequence, they may be seriously misled or disadvantaged.... Only user testing provides the evidence that a document is understandable.' (Sless & Penman, 1993/1994).

This is really another aspect of the challenge of thinking hard about the essentials, and making sure that the people who are responsible for all kinds of information products appreciate that understanding the users of the products, and what they need to do with them, is the key to promoting a valuable 'conversation' between originator and reader. When that becomes the focus, then features like a strong corporate image and sensitive use of language take their proper place as valuable tools to support the main task. It is encouraging, at the end of the study, to see this kind of approach being taken by the people in Group Corporate Affairs responsible for brand identity and for writing internal information products.

An interesting comment on the Group's previous approach to information products was made in the course of one discussion; it was to the effect that they were often not

addressed to real customers, but were actually 'Norwich Union themselves, telling themselves what they knew'. During the study some serious and conscientious research to test information products in use was described; these attempts to find out about the real customers, and evaluate information products in relation to how the intended users are able to use them in practice, are encouraging.

While in the early stages of this study the lack of a modern comprehensive customer database was acknowledged as an obstacle to developing information products to meet customer needs, by the end, the considerable technical difficulties had been overcome and the necessary management decisions taken to allow the first steps towards creative use of this resource.

The professional management of the archives discovered in the run-up to the bicentenary should make valuable information about the past activities of Norwich Union accessible for the first time, and could lead to more pro-active use of company history.

There are other less tangible factors which have potential for positive influence, but which will, however, require a good deal of work to put into effect; they include the Group's commitment to open communication through the information products addressed to its staff, the desire for knowledge sharing across boundaries recently expressed at the highest level, and the continuing influx of young and able professional staff who are prepared to question traditional ways and to seek the cultural changes implied by these aspirations.

Problematic aspects

To set against those positive features, there are some factors which may act to prevent the Group from realising full benefit from its investment in information products and information presentation. Many of them probably arise from the fact that it is a collection of near-autonomous businesses; and they offer opportunities for change, as well as posing potential threats.

Information products by definition depend on information. The information products of Norwich Union are dependent on its having accurate, up to date, comprehensive and accessible information about customers, intermediaries, competitors, potential business partners, its own products and the results from them, etc. The effectiveness of the job they do depends critically on the extent to which they are supported by information resources. As demonstrated in the second-stage case

study (see p253), the major contribution to value in the development of the product investigated and of the associated information products came from information and knowledge about such topics as:

- The potential market for the product
- Competitors and their products
- Compliance requirements
- Legal requirements
- Ethical standards of Norwich Union in its relations with potential and actual customers
- Norwich Union's past experience (including past and existing products and supporting information products)
- 'Who knows what' - people in Norwich Union who have knowledge of particular topics
- Suppliers of products and services (eg design groups, writers, printers)

So far, however, it appears that the Group, unlike many other large businesses today, does not have an explicit strategy for information which links the use of information firmly to its business strategy. Nor does it seem to assign responsibility for the management of the resources of information distributed throughout the Group or for an overview of its information resources and their use. This issue is particularly relevant at the present time, when the expressed intention is to create strength by pooling resources across the Group by sharing knowledge, processes and resources. While the institution of a knowledge management project is a sign of good intent, it is a difficult undertaking to manage knowledge (which resides in the minds of human beings) productively without also managing the information resources which are the essential food of knowledge; it is to be hoped that the project will lead towards other information resources being professionally managed in the same way as the Group's archives.

This lack of a strategy for information is particularly evident in relation to the development of the web site and the intranet. Differences in perspective were apparent as between the systems staff responsible for the infrastructure and the internal communications team; both had a reasoned point of view, what seems lacking to mediate between them and to gain the fullest advantage from their specific contributions to electronic information products is an information management

perspective. It was discouraging as the study approached its close to find, given the opportunities for new and creative approaches to information products which the technology now offers, the apparent lack of a formulated overall Group policy for the management and content of the web site and the intranet. This was especially so in the light of findings from other organisations studied in the course of this research, where the development of web sites and intranets has acted as the stimulus to real progress in thinking and in strategic management of information products, and in some instances as a motive force towards cultural change. However, the 'stop press' news of an intranet strategy, with a project manager to oversee it, gives reason to hope that Norwich Union may gain similar benefits - particular as both the intranet and knowledge management projects are being sponsored by the Group Human Resources Director, with a view to positive cultural change.³

³ An 'eleventh hour' development, as the finishing touches are being put to this thesis suggests, that this may come about. The experience of starting to develop an intranet strategy, in a cultural change framework, has made those concerned realise that an essential foundation is thinking about the information the Group needs and how it should be managed. It has also - on the basis of the observations in the paragraph above - led to a request for a copy of relevant chapters of the thesis to help in this task.

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Case study 10

Norwich Union, stage 2

Setting up the case study

As described in Chapter 3 it was the intention from the start of the research to follow up the first round of case studies, which would be based on observation and discussion, with a further stage which would use a different methodology, preferably one which would provide a complementary perspective.

The general aim would be to find out something about the value which information products – as assets which are partly tangible and partly intangible – can add (or subtract) for the organisations which create them, but at that point I had made no decisions about method. By chance, as the research was starting, I was commissioned to write a chapter on valuing information (Orna, 1996); in the course of reading I came across an account of the Integrated Value Manager (IVMTM) methodology (McPherson, 1994), and met the originator. This led to discussion of a possible application of the IVM in the research, and ultimately to the second-stage case study in Norwich Union whose results are presented here. Background to the IVM is given in Chapter 3 (for the most recent statement of the methodology, see McPherson, 1999). Here it is sufficient to remind readers that it is a comprehensive methodology designed to deal with evaluation and combination of value in the non-financial dimensions of an organisation's operations (for example, intellectual assets and information, ethical conduct and reputation), and then to combine monetary and intangible value so that overall value-added on the financial and non-financial dimensions can be used as a decision variable, and for subsequent financial analysis.

As explained below, the application of the IVM had to be on a modest scale – though it was as rigorous as possible in the circumstances – because it was not a high-priority project from the point of view of Norwich Union (though it received exemplary and thoughtful support from the manager responsible for the product being studied). None the less, it provided useful insights, and some relevant findings, and acted as a prototype application of a methodology which appears to have considerable potential for establishing the value of the contribution made by information products (with the identity of the participants withheld, it forms the basis for a case study, intended to be

used for IVM training purposes by Professor M'Pherson, who acted as IVM consultant for the project).

Rather protracted negotiations with Norwich Union finally led to agreement, early in 1998, to a small-scale application of the IVM in relation to an investment product which had been developed for launch in connection with the 1997 bicentenary, and named in honour of it the Bicentenary Bond). A Project Initiation Document defining the objectives, the participants, the proposed benefits to Norwich Union, the activities to be carried out and the deliverables from them, and the timetable was drawn up and agreed to.

Objectives

The aim of applying the IVM was defined as being to assess:

- The value the Bicentenary Bond (henceforth referred to as the BB) has contributed to Norwich Union in terms of money, achievement of Group goals, reputation, etc.
- The proportion of that value which came from applying knowledge and information
- The proportion of the value of the BB which was contributed by its associated information products, which are the means by which knowledge and information are conveyed a) internally and b) between Norwich Union and intermediaries and potential buyers of the BB.

The process and the participants

The activities as proposed were:

- Presentation of the methodology to the client (IVM consultant and researcher)
- Development of a Business Value Model (IVM consultant and client, based on draft by researcher)
- Information audit, covering use of information and information interactions in the process of developing and launching (researcher)
- Quantification and evaluation of the Business Value Model (IVM consultant, researcher and client)
- Presentation of report and discussion of results (IVM consultant, researcher and client).

In the event some of the activities had to be modified because pressure of work made it impossible for some of the Norwich Union participants to allocate the necessary time, and because the main contact (the manager who had headed the team developing the BB) unexpectedly left Norwich Union at the time when final report would have been presented to the client.

The Norwich Union participants consisted of: the member of Group Corporate Affairs who had acted as main contact since the start of the stage 1 case study; the colleague to whom he handed over responsibility for contact when he went on secondment in 1998; the Product Manager/project manager for the BB who acted as client for the stage 2 study; members of the project team and sales consultants who participated in the information audit.

The product studied – the Bicentenary Bond

The Bond was offered as a lump-sum, low- to medium-risk investment product, giving a guaranteed annual bonus rate for the first year, and designed for medium- to long-term investment (ie at least five years), with an option for regular withdrawals.

The development of the Bond

The process of developing the BB began with a Project Definition Workshop of 30 people who would have some involvement with the project, including designers. The workshop dealt with the background, aims, market and key factors of the Bond. Then a core project team of about eight members took over the project, meeting weekly. The members represented: marketing product development; marketing communications (responsible for the information products); actuarial product support; compliance; legal; client services; and systems. The Product Manager for the Bond also fulfilled the role of project manager in this instance (the Group now uses professional project managers).

Basic research had already been carried out for two earlier products, which in effect acted as pilots for the BB; feedback in preparation for developing the BB was received from sales consultants (all of whom have their own group of intermediaries), and from major IFAs by means of structured interviews (face-to-face or telephone).

Product development was guided by a standard process document, consisting of a graphic overview of key steps, and a description of high-level objectives and

deliverables, and the roles and responsibilities of the team, together with a full graphic process model, defining input inputs and outputs for the project manager and for team members representing marketing/communications, actuarial, legal, client services, business systems, group compliance, etc.

The associated information products

The process requires the development of one key internal product – *Marketing Activity Advice*, which was prepared by the marketing communications team member who was also responsible for the external products. Prior to the BB, there had been no standard structure for this product; the one developed for the Bond has since become the standard format. Designed as a self-training manual for staff concerned with the launch of the Bond, it was supplemented by training sessions.

The information products for outside use, by IFAs and customers, consist of:

- A *Key features* leaflet (A5) and a brochure (also A5) addressed to potential customers. The text of both is well expressed, and outstandingly clear, comparing favourably in that respect with comparable products from some other companies; visually it is well presented, with good use of colour in the small tables.
- A support package for intermediaries which consists of an A4 folder (an innovation introduced for the BB), which repeats the text of the *Key features* leaflet, and contains:
 - A standard letter for intermediaries to use with clients
 - Application forms for purchasing the BB, cash request and regular withdrawal
 - Facts and figures and technical details
 - A4 single-page leaflets
- The policy booklet for investors (A4, 12pp, with a cover pocket for the actual schedule). This too is clearly written, with a useful section of definitions, and visually well presented.

The identifying image used for all the products (a half and half coin 1797/1997 pound coin) is a strong and appropriate one.

The marketing communications team member wrote the products on the basis of the product specification and the key selling points that it identified; he also used the product specification as the basis for the design brief for the agency which did the job. He subsequently sought feedback from 40 managers or representatives from local offices

around country, on 'overall impressions', visual appearance, technical details, materials for independent financial advisers, etc. The response rate was 40 - 45 per cent.

The information audit

Preliminary analysis of NU knowledge and information requirements

In preparation for this stage of the research, I made a type of analysis which I have used in other contexts¹; starting from corporate goals, it derived from them:

- 1 The knowledge the Group requires in order to meet its goals
- 2 The information it needs in order to support that knowledge
- 3 The interactions among people (internal and between the Group and its outside world) necessary for applying information and knowledge

The analysis is reproduced in Appendix 1. It formed a useful basis for discussion with the BB Product Manager about the knowledge, information content, and information interactions which development and launch of the Bond required. It also helped towards a preliminary identification of the business values of the Group, which contributed to the IVM consultant's derivation of the 'referent objectives' necessary for the IVM application (see p290)

Questionnaire development

When critical kinds of information and information interactions had been identified, it was possible to use them in developing the questionnaire which was the instrument used in the information audit. The IVM consultant advised on the scales which were required so that questionnaire responses could be input to the IVM, and on the form which the response matrix needed to take (see p292). The full questionnaire is reproduced in Appendix 1; here it is sufficient to indicate the categories of information and the types of information interactions, and the questions which respondents were asked about them.

¹ See, for example, Orna (1999), pp 45 - 54

Information categories

- The potential market for the product
- Competitors and their products
- Developments in the insurance industry
- UK economic and social developments
- Compliance requirements
- Legal requirements
- Ethical standards of Norwich Union in its relations with potential and actual customers
- Norwich Union's past experience (including past and existing products and supporting information products)
- 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- Suppliers of products and services (eg design groups, writers, printers)

For each category of information, respondents were asked the same set of questions:

- ? How important was it in your work on the Bicentenary Bond
- ? How much did you use it?
- ? Did you use it for developing the Bicentenary Bond?
- ? Did you use it for developing the associated information products?
- ? How appropriate was the coverage for your needs?
- ? How accurate/reliable was it?
- ? How appropriate was the level of detail for your needs?
- ? How appropriate was the form in which it was available to you?
- ? Was the information available to you at the time you needed it?
- ? How well did it contribute to meeting the key business objectives of the Bicentenary Bond?
- ? How important was it for creating a product that would sell well in the intended market?
- ? How important was it for creating a product that would meet the needs of intermediaries?
- ? How important was it for creating a product that would meet the needs of potential customers?
- ? How important was it for maintaining the reputation of Norwich Union?

Information interactions

- Within the project team responsible for the Bicentenary Bond, about development of the Bond
- Within the project team about the associated information products
- Within the project team, about Systems/IT support
- Between project team and sales consultants
- Between project team and intermediaries
- Between people responsible for associated information products and suppliers
- Between project team and managers of information and knowledge resources elsewhere in NU
- ? Between project team and NU policy makers
- ? Between sales consultants and intermediaries

The same three questions were asked about each interaction:

- ? How important was it for achieving the objectives of the product?
- ? How well did it work?
- ? How did the quality of what you got from it match up to what you needed?

The sample

Given the limitation of the investigation to a single product, the sample was, perforce, a small one; it consisted of:

- Three members of project team (the Product Manager/project manager; the Account Manager Product Communications – responsible for the associated information products; and the Senior Product Consultant, Actuarial Product Support – responsible for approval of the product and of all associated literature).
An intended fourth member was ill during the period of the study, and had to be excluded.
- Four sales consultants in two Norwich Union offices and one Senior Point of Contact (responsible for sales support for consultants).

On the advice of the Product Manager, the sales consultants completed only that part of the questionnaire which reported on the information interactions in which they were personally involved.

The Product Manager also completed questionnaires as a proxy for:

- a) Senior policy makers of Norwich Union (on the basis of their input to the concept of the Bond)
- b) The intermediaries who are mainly responsible for selling the product to customers (on the basis of her exchanges with them during development of the Bond).

Administration of the questionnaire

The questionnaire was completed in the course of individual interviews with the participants; they had been sent background to the research beforehand, and the interview was used as an opportunity for them to ask questions about it, and for the researcher to learn about the respondents' work and their role in the development of the BB. It turned out that all had previous experience of responding to questionnaires which asked them to place their responses against a scale. In this particular instance, they were required to mark a precise placing in the relevant cells to indicate their judgement.

The IVM application

The stages of the IVM application are outlined here in narrative form; more technical detail, based on the IVM consultant's report, is given in Appendix 2.

Development of referent objectives

For the application of the IVM, a statement of objectives from the principal stakeholders in the subject under examination is the essential starting point for establishing the value context for which the IVM instrument is to be developed. In this instance, the IVM consultant drew on corporate documents, and on the draft set of corporate business values mentioned above, to list a set of objectives. These were agreed by the client, and then used to define a set of five referent objectives (some problems, and how they were dealt with are outlined in Appendices 2 and 3):

- 1 Develop BB in alignment with company objectives
 Provide high-quality information to support BB development
- 2 Provide high-quality information products to support launch of BB
- 3 Ensure high-quality compliance with legal and ethical standards
- 4 Ensure very good access to company expertise and knowledge

- 5 Ensure high-quality intercommunications between all parties concerted with BB development (includes provision of high-quality IS and IT systems aligned to needs.

The questionnaire and scales

The IVM uses a linguistic measurement procedure which allows assessment on the basis of descriptive words or phrases to be mapped on to a ratio scale under controlled conditions. The nine-point scale used is structured to act as an interval scale that can be converted into a ratio scale. The interval scale runs from 0 at one end to Complete at the other with equal intervals: 0 (nothing), VL (very low), L (low), BP (below par), P (par), AP (above par), H (high), VH (very high), C (complete). Appropriate linguistic equivalents were provided in the questionnaire; an example is shown below:

- ? How appropriate was the form in which it was available to you?

-
- 0 Absolutely awful
 - VL Very inappropriate for the way you needed to use it
 - L Inappropriate
 - BP Below acceptable
 - P Acceptable
 - AP Fairly appropriate
 - H Highly appropriate
 - VH Almost exactly right
 - C Exactly right
-

The results from the questionnaires were entered into the IVM's spreadsheets.

Process model

On the basis of the process model described earlier for development and launch of the BB, the IVM consultant created a conceptual model of the process which shows the people involved, and the categories and information interactions of the questionnaire (see Figure 1 in Appendix 2)

A simple financial model of the process can be stated in these terms:

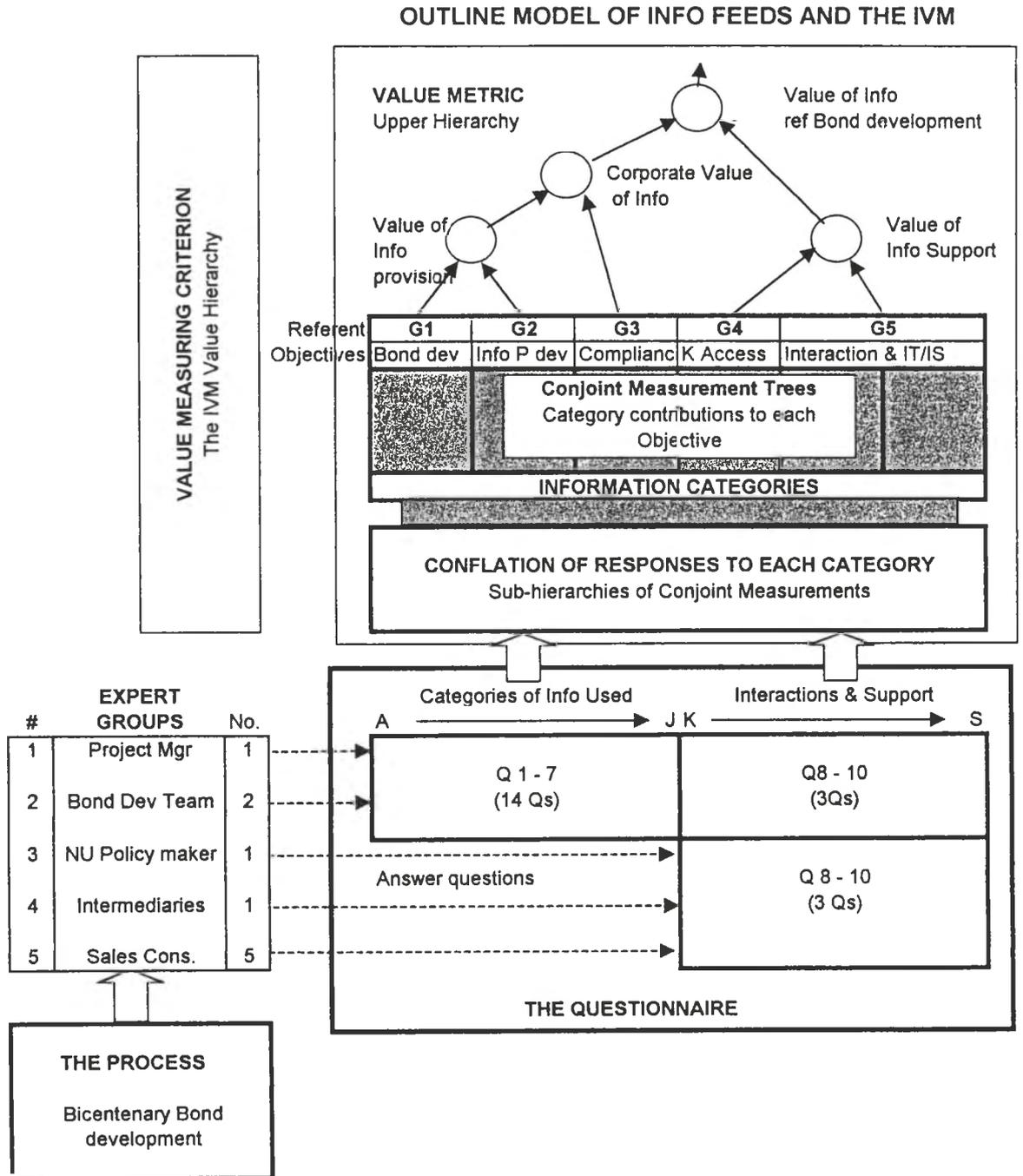
- The *financial value* of the BB to the Group and its shareholders is the capitalisation of the final cash flow
- Its *non-financial value* to the Group is a compound of its cost-effectiveness as a financial instrument, and the enhancement it brings to market and ethical reputation
- The *value of information* to Bond development is a compound of the quality/usefulness of the information available, acquired and processed (by systems and human minds) in achieving Bond objectives. This is what the IVM criterion measured in the present case.
- The *financial value to the Group of the information* used in developing and supporting the BB is a function of the cash flow generated, the use-value of the information, and the costs of all the assets involved in generating and supporting the Bond. This required fuller financial and asset-value data than could be acquired (see Appendix 3 for comments on the effects of this shortfall).

Developing the IVM hierarchy

The IVM application involved four stages, as illustrated in the outline model shown in Figure 1

- 1 Inputting assessments from responses to the questionnaire
- 2 Conflation of responses, ie combining the 14 assessments for each category and the three for each interaction into a single one for each
- 3 Conjoint measurement: the categories/interactions of the questionnaire serve as the bottom-level attributes for the IVM hierarchy proper. The IVM consultant divided them into subsets, each of which formed the lowest level of a conjoint measurement tree with one of the five referent objectives at the top. The results of the conflation process form the input to the attributes, and the output from each conjoint measurement tree is the value which information contributes to the relevant referent objective.
- 4 Value measurement: A final value measurement takes the five values at each objective from stage 3, and measures their joint achievement with respect to the BB objectives as a whole. Further detail on the process is given in Appendix 2.

Figure 1
 An outline model of the IVM structure for the case
 Reproduced with permission of Professor P K McPherson



Technical limitations

Certain technical limitations on the application of the IVM were imposed by the fact that the project was of fairly low priority from Norwich Union's point of view. The areas where the application was less rigorous than it would have been if it were being done on a contract basis were:

- The small sample size
- Difficulty in getting complete financial data, which made it impossible to relate the financial contribution from intangible value to cash flow
- The limited staff time available for participation in developing the IVM hierarchy and refining the criterion by which value was assessed.

(A full account of the limitations, and their effect, is given in Appendix 3, which is based on an audit report of the IVM exercise by the IVM consultant.)

Taking these limitations into account, in the judgement of the IVM consultant the questionnaire was sufficient for a study of this kind, and the IVM criterion was a 'necessary and adequate instrument from which meaningful results could be obtained', which 'in accounting terms ... provided a reasonable but qualified value audit'. It is therefore possible to have confidence in the findings reported, even though they are more limited in range than would be the case in a full contractual application of the IVM.

Findings

The findings are presented here in the form of the non-technical report given to Norwich Union on completion of the project; Appendix 2 presents supplementary technical detail.

Conflated results from assessors

As the sales-consultant respondents completed only part of the questionnaire, results are given separately for the project-team members and the sales consultants

Project-team assessors' judgements about the importance/quality of key categories of information used in developing the Bond. The assessors were asked to judge:

- a) the importance of information on the topics listed above (p259) for their work in developing the Bond
- b) the quality of the information they received

Application of the IVM combined each assessor's judgements to give a single importance/quality reading for each category. In some categories there was a wide range in judgements; this was probably due to the nature of the different assessors' roles in the Bond's development: one was the project manager, and therefore had a broader overview, while the other two were concerned with specialist aspects.

Table 1
Categories ranked according to the highest value assigned

- 1 Ethical standards
- 2 Suppliers of products and services
- 3 Competitors and their products
- 4 Compliance requirements
- 4 Legal requirements
- 4 'Who knows what' in Norwich Union
- 5 Market for the product
- 6 Developments in the insurance industry
- 6 Norwich Union's past experience
- 7 UK economic and social developments

Those at the top of the list are also those where the range between judgements is largest; there was most agreement among assessors over what was of lower importance/quality.

Project-team assessors' judgements about interactions with other people over information. The second part of the questionnaire asked about exchanges of information among the people involved in the Bond's development and the systems/IT support they received. They were asked how important these were for achieving the

objectives of the Bond, how well they worked, and how well what they received matched what they needed.

The interactions were as listed on p260

Application of the IVM combined each assessor's judgements to give a single importance/quality reading for each kind of interaction; the results of the process are shown in Table 2. The widest range of judgements was about interactions between the project team and sales consultants and intermediaries.

Table 2
Interactions ranked according to the highest value assigned

-
- 1 Within the project team, about development of the Bond
 - 1 Between the project team and NU policy makers
 - 2 Within the project team about the associated information products
 - 2 Within the project team, about Systems/IT support
 - 2 Between project team and managers of information and knowledge resources elsewhere in NU
 - 3 Between the project team and sales consultants
 - 4 Between the project team and intermediaries
 - 5 Between people responsible for associated information products and suppliers
 - 5 Between sales consultants and intermediaries

There was close agreement among the assessors about the importance/value of:

- Systems/IT support
- Interactions within the project team about the development of the bond and about the associated information products
- Interactions between the project team and managers of Norwich Union information resources

Sales consultants' responses. On the advice of the client, sales consultants were asked to reply only on three kinds of information interaction:

Between project team and sales consultants

Between project team and intermediaries

Between sales consultants and intermediaries

as it was considered that these were the only parts of the questionnaire to which they could give a usable response.

The highest score and narrowest range among respondents was for interactions between sales consultants and intermediaries. This may mean that the sales consultants see their outward-facing, rather than inward-facing information interactions as most important and valuable, and focus on building their relationships with their intermediaries (one interview emphasised the role of 'point of contact' staff in analysing relevant information from these interactions). Views varied on the interactions between the project team and sales consultants and between the project team and intermediaries. (One very low score for the latter relates to an incident reported by one sales consultant in which a communication from the project team to intermediaries drew their attention to a competing product of which they might otherwise have been unaware.)

Criterion results

The IVM aims to evaluate non-financial values with an authority comparable to that of financial accounting; it does so by strict observance of measurement theory, rejecting anything that does not comply, and by deploying conjoint measurement theory to combine many values within a well defined mathematical space. (See Appendix 2 for an exposition of the IVM criterion, based on the IVM consultant's technical report).

The contribution of information to achieving Bond objectives. The criterion against which the IVM assessed the value achieved by the use of information and knowledge in developing the Bond was the set of referent objectives. As described earlier, the objectives were derived, with the agreement of the client, by the IVM consultant from the Norwich Union objectives for the Bond, which in turn derived from the Process Document for the Bond.

The conflated results from all the project-team assessors, described above, formed the IVM input to this stage. The output was the extent to which the use of information supported each objective.

The objectives, and the value achieved in supporting each by the use of information (a combined reading, balancing the perspectives of the three assessors), are shown in Table 3.

Table 3
Referent objectives and the value contributed by information

Objective	Value from use of information (per cent)
1 Develop Bond in alignment with NU Objectives Provide HQ information to support Bond development	73 per cent
2 Provide HQ information products to support launch of Bond	74 per cent
3 Ensure HQ compliance with legal and ethical standards	77 per cent
4 Ensure very good access to NU expertise and knowledge	71 per cent
5 Ensure HQ intercommunications between all parties concerned with Bond development; includes provision of HQ IS/ IT systems aligned to needs	63 per cent

The 'sensitivity' of individual categories of information and information interactions. The meaning of sensitivity in this context is that the more sensitive a category of information, the more critical it is to achieving value, and therefore the more value you can add by improving its quality, and the more damage you do by reducing quality. As the IVM consultant's report expresses it: 'Sensitivities have considerable managerial significance as they indicate what is critical to the achievement of value, and what is not' – and they result from complicated mathematical process and cannot be predetermined to meet the wishes or prejudices of a client. The most sensitive categories/interactions emerge as:

- Interactions within the project team, about the associated information products
- Information about competitors and their products
- The potential market for the product
- Compliance requirements
- Legal requirements
- Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- 'Who knows what' – people in Norwich Union who have knowledge of particular topics.

In the context of this research, it is particularly interesting that interactions within the project team about associated information products are so sensitive, especially the damage that can be done by poor quality. The same applies to a rather lesser extent for competitor and market information. With compliance and legal requirements, ethical standards, and knowing 'who knows what' in NU, there are smaller gains and losses at stake.

The least sensitive are interactions:

- Between project team and managers of information and knowledge resources elsewhere in NU
- Between project team and intermediaries
- Between sales consultants and intermediaries

These all relate to interactions between the project team and what might be called 'out-groups'. A question arises as to whether this is related to the views held by the project team about the significance of such interactions, the quality of Norwich Union's information resources and their managers, the importance of sales consultants' contribution?

Financial model and cost effectiveness

In the event, because of limitations on the time which Norwich Union staff were able to devote to the study, insufficient information was available for a detailed evaluation of the Bond once launched, as a contributor to cash flow. It was possible, on the basis of

the available financial data, to create only a minimal financial model, sufficient for no more than a demonstration of how the IVM can be used for cost-effectiveness analysis.

Conclusions

What do the findings allow us to say about the matters which the project aimed to assess?

The value the Bond has contributed to NU in terms of money, achievement of Group goals, reputation, etc.

As explained above, limitations on the contribution which Norwich Union was able to make to the study made it possible to go only as far as a cost-effectiveness analysis of the use of information in the development and launch of the Bond.

In IVM terms, cost-effectiveness analysis involves obtaining the combined value of the financial and intangible components of value. In the present instance, the combined cost-effectiveness value arrived at by this process was 0.65 (where a value of 1 represents optimal cost-effectiveness). The overall proportion of the cost-effectiveness value contributed by intangible inputs was high: 0.89, as against a monetary one of 0.53.

The proportion of that value which came from applying knowledge and information

The IVM criterion results tell us both the proportion contributed to achieving the objectives by knowledge and information, and the sensitivity of individual categories and information interactions, ie their potential for adding and subtracting value.

Information contributes a high percentage to the value achieved in meeting the Bond objectives, ranging from 63 per cent on intercommunications within the team (including IS/IT support) to 77 per cent on compliance with legal and ethical standards. The figure for providing information products to support the launch is 74 per cent.

Interactions within the project team about the information products associated with the Bond proved to be the most sensitive of the information categories and information interactions considered. In other words, they are the most critical for achieving value; improvement could add most to value, reduction in quality do most damage. Competitor and market information come next, though much less sensitive, followed by compliance and legal requirements, ethical standards, and knowing 'who knows what' in Norwich Union.

There are some interesting points from the project-team assessors' judgements about information categories and interactions:

- They agreed in assigning lower importance/quality to: developments in the insurance industry; Norwich Union's past experience, and UK social and economic developments.
- A high value was given to interactions within the project team, and between team and managers of information resources elsewhere in Norwich Union
- The importance/quality of interactions between project team and sales consultants and intermediaries was given a low ranking (though in this case there was a wider range of judgements)

Sales consultants' judgements on the three kinds of interaction about which they were asked (their own interactions with the project team and with intermediaries, and those between the project team and intermediaries) suggest that they saw outward-facing information interactions as more important than those with project team.

It seems possible that the responses about these interactions from project team members and from sales consultants may represent the typical 'head office/branch office' tensions which often exist in organisations.

Proportion of the Bond's value contributed by its associated information products

Without information products, not much information would get around, either among those developing the Bond, or between them and the outside world of customers to whom the aim to sell it. Information products are the essential vehicles for the process.

While in this case, for reasons explained earlier it is not possible to show the proportion they contributed to the value of the BB, what does emerge is:

- 1 They are ranked high in the conflated results on importance/quality
- 2 The objective of providing information products is judged to be well supported by information (it comes second, with 74 per cent)
- 3 Interactions within the project team about information products are the most sensitive of all categories/interactions.

We can certainly say that the results indicate a high contribution of knowledge and information to development of this investment product, and that they point to certain

kinds of knowledge and information, and certain information interactions which appear to be particularly significant for enhancing value.

How these findings relate to those from the first-stage case study

The importance which the people responsible for developing the Bond attached to various categories of information and to interactions over information, and the contribution which information was found to make to the value of the product, suggest that the Group's information resources are an important enough asset to require strategic management. The first-stage case study, however, revealed no indication that it has as yet considered information and knowledge as intangible assets meriting a Group-wide strategy, although support for knowledge sharing across boundaries has recently been promoted as a desirable aim. (Other businesses in the insurance field are currently developing 'knowledge capital' strategies; see for example the account of The Mutual Group values mapping project, which forms part of such a strategy - Saint-Onge, 1999.)

Again, the findings from the IVM application point to the importance of ready access to a range of information, unhindered by boundaries between functions and businesses within the Group (information about 'Who knows what in Norwich Union', and interactions between the project team and managers of information resources elsewhere in Norwich Union, for instance, were both ranked highly by respondents to the questionnaire). But the findings from the first-stage case study suggest that '... fragmentation and a degree of restriction of access is the order of the day with regard to the resources of content and contextual information on which information products - in particular those associated with insurance and investment products - depend.'

This trend seems even to be intensified in the Group's current progress towards transferring information to its intranet. It was observed that there appears to be a strongly felt need to keep the circulation of competitor information to a limited audience within each individual business. Given that competitor information was the category that emerged as the second most sensitive (ie with the greatest potential for adding or subtracting value) from the IVM analysis, this kind of restriction would appear to merit some critical investigation.

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Norwich Union case study, Stage 2

Appendix 1

The Group's information and knowledge requirements

Information audit questionnaire

Table 1
The goals of NU, and what it needs to know to achieve them

Goals (1995 set)	Knowledge and know-how requirements
Deliver consistently to all Company customers excellent value for money and high quality service	About customers
	About economic and social context in which NU works
	About competition and innovation in the insurance industry
	About NU's past decisions and their results
	About NU's products (including information products)
To be the preferred partner for intermediaries	About intermediaries – those who work with NU; others About products they handle
To operate profitably and progressively grow the value of NU	About financial situation of NU
	About financial situation of competitors
To maintain a level of financial strength to support business risk and reassure customers and intermediaries	About risk levels to be provided against
	About risk management
	About customers and intermediaries
To be a team which takes pride and pleasure in being part of NU	Management: about staff and their capabilities About industrial relations and negotiation
	Know-how in communicating and team working
	Staff: about the business and its situation; about their responsibilities and those of colleagues
	Know-how in co-operating and team working
To be active in supporting the communities in which we operate	About the local community
	About NU's history in relation to the community

continued

Table 1 continued

Goals
(1995 set)

Knowledge and know-how
requirements

Additional objectives implicit in goals

To deliver business objectives cost-effectively

About the quality of information systems

To maintain a cost-effectively managed organisation

About management of information resources and information systems

About management of IT

About quality of IT services to end-users

About effectiveness of delivery of IT services

Assumed goals in relation to situation since flotation:

To deliver value to shareholders and to retain their long-term commitment

About shareholders

To comply with all legal and regulatory requirements as a plc

About legal and regulatory requirements and relevant bodies

Table 2

The information (content and 'containers') which NU needs to draw on to maintain its knowledge

Knowledge and know-how requirements	Information required to maintain knowledge	
	Content	'Containers'
About customers	Who and where they are allowing access Products bought features Transactions Retention rates/losses	Database, via multiple
	Views of value and quality people in Level of satisfaction with with them	Reports from regular contact
	NU's products/ services New requirements research	Reports of special
About economic and social context in which NU works	Demographic trends	Appropriate statistical series
	Age structure of population	Periodicals & press
	Economic situation databases	Research reports On-line external
	Employment patterns Lifestyle/social trends	Internet
About competition and innovation in the industry	Situation of competing companies Their products & services	Periodicals and insurance press; 'Intelligence' reports compiled from various sources
About NU's past policy decisions	Decisions taken and results – successes and failures	Minutes, issues papers. policy documents, digests Hard-copy or electronic files
		continued

Table 2 continued

Knowledge and know-how requirements	Information required to maintain knowledge	
	Content	'Containers'
About NU's products information products	Past & existing products, people responsible, results, lessons learned	Hard copy or including electronic files
About intermediaries – those who work with NU; others	Who and where they are Relations with NU Their customer base	Database Correspondence
About products they handle	Views about NU's products and services	Reports from those in regular contact Reports of special research
About financial situation of NU	Up to date figures Accurate forecasts	Database with appropriate software permitting forecasts
About financial situation of competitors	Competitor intelligence	Periodicals, press Intelligence reports compiled in-house/ outside
About risk levels to be provided against	Requirements of customers and intermediaries	Reports from those in regular contact Special reports on research
About risk management	Research on risk management Compliance requirements Past practices and their results	Periodicals, research reports (published and specially commissioned) Articles and reports on risks associated with compliance failures Records of decisions and of effects; costs of bad decisions

continued

Table 2 continued

Knowledge and know-how requirements	Information required to maintain knowledge	
	Content	'Containers'
Management: About staff and their capabilities	Skill and knowledge available; potential database)	Appropriate personnel records (files or
About industrial relations and negotiation	Current good practice	Periodicals, press, research reports, conferences
Know-how in communicating and team working	Current good practice	Periodicals, press, research reports, conferences
Staff: About the business and its situation	Regular, full and accurate provision of information	Briefings by managers, newsletters, email
About their responsibilities and those of colleagues	Appropriate information	Appropriate contracts of employment; employee handbook; training courses
Know-how in co-operating, communicating and team working	Relevant training and development	In-house and external training courses
About the local community	Organisations Local government Contacts	Database of organisations and contacts, and records of transactions with them with flexible access
	Social situation	Local press, reports from own research
	Previous actions and their results	Reports – in-house and press
About NU's history in relation to the community	Archives and records	Hard-copy archives + appropriate electronic records of them Current records files and databases

continued

Table 2 continued

Knowledge and know-how requirements	Information required to maintain knowledge	
	Content	'Containers'
About the quality of information systems vendors	Standards; specifications user feedback	Files (hard-copy or electronic)
About management of information resources and information systems	What they are; where; who is responsible	Files; internal directory; visual maps; information systems architecture map
About management of IT	IT infrastructure; location of resources; who is responsible	Files; internal directory; maps
About quality of IT services to end-users	Standards; specifications; vendor information; user feedback and action on it	Files (hard-copy or electronic)
About effectiveness of delivery of IT services	Standards ; results of monitoring ; action on results	Files (hard-copy or electronic)
About shareholders	Who they are Holdings Relations with NU Views of NU	Database Reports of people in regular contact and of special research
About legal and regulatory requirements	Legislation Regulatory bodies Contacts The Company's relations with them	Copies of relevant legislation and material about its application and interpretation On-line external databases Database of organisations and contacts Correspondence files

Table 3

The information flows and interactions that are necessary among people to make effective use of the knowledge and information NU requires

NB All information flows are in both directions

Customer information

People involved

- | | |
|---|--|
| <ul style="list-style-type: none"> • Customers • Intermediaries • Direct sales staff | <ul style="list-style-type: none"> • Marketing • Product development • Those who commission/carry out research • Systems/IT staff* |
|---|--|

Interactions/ information flow

- | | |
|---|---|
| <p>Between</p> <ul style="list-style-type: none"> • Customers and | <ul style="list-style-type: none"> • Intermediaries • Direct sales staff • Researchers |
| <ul style="list-style-type: none"> • Staff in touch with customers and | <ul style="list-style-type: none"> • Marketing • Product developers • People responsible for information products • Policy makers |
| <ul style="list-style-type: none"> • Users of customer information and | <ul style="list-style-type: none"> • Systems/IT staff responsible for design of customer database |

Information about economic and social context

People involved

- | | |
|--|---|
| <ul style="list-style-type: none"> • Staff responsible for acquiring and analysing relevant information | <ul style="list-style-type: none"> • Decision-makers on policy, products and marketing • Systems/IT staff |
|--|---|

Interactions/information flow

- | | |
|---|--|
| <p>Between</p> <ul style="list-style-type: none"> • Staff responsible for acquiring and analysing relevant information and | <ul style="list-style-type: none"> • Suppliers • Decision-makers on policy, products and marketing • Systems/IT staff |
|---|--|

* Note: Systems/IT staff are concerned in nearly all information interactions, because they are responsible for ensuring that systems and IT support people in using information in the ways that they need

continued

Table 3 continued

Information about competition and innovation in the industry

People involved

- Those who monitor competition and innovation
- Decision-makers on policy, products, marketing
- Those in contact with intermediaries, sales staff, etc
- Systems/IT staff

Interactions/information flow

- Between
- Those responsible for monitoring and
 - Suppliers of information
 - Decision-makers on policy, products and marketing
 - Systems/IT staff

About NU's past policy decisions

People involved

- Those who manage records of Company decisions
- Decision-makers
- Systems/IT staff

Interactions/information flow

- Between
- Those who manage records and
 - Those who need access to them for decision making, etc
 - Systems/IT staff

About intermediaries and the products they handle

People involved

- Intermediaries
- Their contacts in NU
- Those responsible for products they handle
- Those who monitor competitors in the industry
- Those who commission/carry out research on intermediaries

Interactions/information flow

- Between
- Intermediaries and
 - Their contacts in NU
 - Those responsible for products they handle

continued

Table 3 continued

Interactions/information flow

- Between
- Those who monitor competitors and
 - Those who deal with intermediaries
 - Those responsible for the products they handle
 - Those who commission/carry out research and
 - Those who deal with intermediaries
 - Those responsible for the products they handle
-

About NU's financial situation

People involved

- Finance managers
- Senior management
- Employees
- Press/PR/internal communications staff
- Intermediaries and those responsible for contact with them
- Customers and those responsible for contact with them
- Systems/IT staff

Interactions/information flow

- Between
- Finance managers and
 - Senior management
 - Senior management and
 - Employees
 - Those responsible for contact with intermediaries and customers and
 - Intermediaries
 - Customers
 - Press/PR/internal communications staff and
 - Press
 - Employees

continued

Table 3 continued

About the financial situation of competitors

People involved

- Those responsible for competitor information

Interactions/information flow

Between

- Those responsible for competitor information and
 - Decision-makers on policy, products and marketing
 - Systems/IT staff

About risk levels to be provided against

People involved

- Customers
- Intermediaries
- Direct sales staff
- Marketing
- Product development
- Those who commission/carry out research

Interactions/information flow

Between

- Those in contact with customers and intermediaries and
 - Marketing
 - Product development
 - Systems/IT staff

About risk management

People involved

- Staff involved in managing risk
- Managers of records/company history
- Those who commission and carry out research
- Staff concerned with meeting compliance requirements
- Managers of relevant externally originating information

Interactions/information flow

Between

- Staff involved in managing risk and
 - Those concerned with meeting compliance requirements
 - Managers of records/company history
 - Managers of externally originating information
 - Those who commission and carry out research
 - Systems/IT staff

continued

Table 3 continued

About human resources

People involved

- | | |
|--|--|
| <ul style="list-style-type: none"> • Line managers • Staff for whom they are responsible • Systems/IT staff | <ul style="list-style-type: none"> • Human resources managers/training and development staff • Staff responsible for keeping up to date with relevant external information |
|--|--|

Interactions/information flow

Between

- | | |
|--|--|
| <ul style="list-style-type: none"> • Line managers and

 • Human resources managers and | <ul style="list-style-type: none"> • Staff for whom they are responsible • Human resources managers/training and development staff

 • Staff responsible for keeping up to date with relevant best practice information Systems/IT staff |
|--|--|

About industrial relations, negotiation, communicating, etc

People involved

- | | |
|---|---|
| <ul style="list-style-type: none"> • Line managers • Staff for whom they are responsible • Human resources managers/training and development staff | <ul style="list-style-type: none"> • Staff responsible for keeping up to date with relevant external information • Employee representatives • Systems/IT staff |
|---|---|

Interactions/information flow

Between

- | | |
|--|--|
| <ul style="list-style-type: none"> • Line managers and

 • Human resources managers and | <ul style="list-style-type: none"> • Staff for whom they are responsible • Human resources managers/training and development staff • Employee representatives

 • Staff responsible for keeping up to date with relevant best practice information Systems/IT staff |
|--|--|

continued

Table 3 continued

Employee knowledge about the business and its situation

People involved

- Employees
- Internal communications staff
- Middle and senior management

Interactions/information flow

Between

- Employees and
- Internal communications staff and
- Middle and senior management
- Employees

About their responsibilities and those of their colleagues

People involved

- Employees and their
- Staff responsible for internal communication
- Human resources managers/training and managers development staff

Interactions/information flow

Between

- Employees and
- Their managers
- Colleagues in other areas of the business who contribute to the processes they are involved in
- Human resources managers/training and development staff

Know how in co-operating, communicating and team working

People involved

- Employees and their managers
- Human resources managers/training and development staff

Interactions/information flow

Between

- Employees and
- Their managers
- Human resources managers/training and development staff

continued

. Table 3 continued

About the local community and NU's history in relation to it

People involved

- Staff responsible for external relations
- Press/PR
- Local media
- Systems/IT staff
- Local organisations/businesses
- Local government
- Educational institutions
- Managers of records and archives

Interactions/information flow

Between

- Staff responsible for external relations and
 - Local organisations/businesses
 - Local government
 - Educational institutions
 - Managers of Company records and archives
 - Press/PR staff
 - Systems/IT staff
- Press/PR staff and
 - Local media

Information audit: Norwich Union, Bicentenary Bond
 Draft questions for interviews

Part 1

Date

Name

Job title

Role in relation to Bicentenary Bond

Instructions for filling in:

Put a 'blob' in the place that matches your judgment on each question for each kind of information, locating it in the relevant space to show precisely where it comes on the scale.

Example

	A	B	C	D
0 Absolutely no importance *				
VL Very low importance				
L Low importance	•			
BP Below middling importance				•
P Middling importance			•	
AP Above middling importance				
H High importance				
VH Very high importance		•		
C Absolutely critical				

B has been judged as at the top end of the 'Very high importance' level for this kind of information

Part 2 The categories of information used

This part asks about the kinds of information you used in your work on the Bicentenary Bond.

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q1a

In your work on the Bicentenary Bond, how important was information about [Category ...]?

	A	B	C	D	E	F	G	H	I	J
0 Absolutely no importance *										
VL Very low importance										
L Low importance										
BP Below middling importance										
P Middling importance										
AP Above middling importance										
H High importance										
VH Very high importance										
C Absolutely critical										

* 'Absolutely no importance': go on to next category ; otherwise, go to Q1b

Q1b

How much did you use it?

	A	B	C	D	E	F	G	H	I	J
0 Not at all										
VL Very infrequently										
L Infrequently										
BP Sometimes										
P Fairly often										
AP Quite often										
H Frequently										
VH Very frequently										
C Constantly										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q2a

Did you use it for developing the Bicentenary Bond? (tick)

Yes No **Q2b**

Did you use it for developing the information products associated with it? (tick)

Yes No

Q 3 The next questions are about how the quality of the information you used matched the ways in which you needed to use it.

Q3a

How appropriate was the coverage for your needs?

	A	B	C	D	E	F	G	H	I	J
0 Not at all										
VL A little of what you needed										
L Some										
BP A fair amount										
P About half										
AP Quite a lot										
H A great deal										
VH Almost everything										
C Everything you needed										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q3b How accurate/reliable was it?

	A	B	C	D	E	F	G	H	I	J
0 Wholly untrustworthy										
VL Very inaccurate/unreliable										
L Rather inaccurate/unreliable										
BP Below par										
P Moderately										
AP Fairly accurate/reliable										
H Highly accurate/reliable										
VH Very high accuracy/reliability										
C Absolutely accurate/reliable										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q3c:

How appropriate was the level of detail for your needs?
(inappropriate can be too little or too much)

	A	B	C	D	E	F	G	H	I	J
0 Absolutely inappropriate										
VL Very inappropriate										
L Inappropriate										
BP Below acceptable										
P Acceptable										
AP Fairly appropriate										
H Highly appropriate										
VH Almost exactly right										
C Exactly the right level										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q3d

How appropriate was the form in which it was available to you?
 (eg did it make it easy or difficult for you to extract what you needed?)

	A	B	C	D	E	F	G	H	I	J
0 Absolutely awful										
VL Very inappropriate for the way you needed to use it										
L Inappropriate										
BP Below acceptable										
P Acceptable										
AP Fairly appropriate										
H Highly appropriate										
VH Almost exactly right										
C Exactly right										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q3e:

Was the information available to you at the time you needed it?

	A	B	C	D	E	F	G	H	I	J
0 So out of time as to be useless										
VL Very badly timed										
L Badly timed										
BP Below acceptable timing										
P Acceptable timing										
AP Fairly good timing										
H Good timing										
VH Very good timing										
C Exactly at the right time										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q 4

How well did it contribute to meeting the key business objectives of the Bicentenary Bond?

	A	B	C	D	E	F	G	H	I	J
0 No contribution										
VL Very poor contribution										
L Poor contribution										
BP Less than acceptably										
P Acceptably well										
AP Fairly well										
H Good contribution										
VH Very good contribution										
C All that could be wished for										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q 5

How important was it for creating a product that would sell well in the intended market?

		A	B	C	D	E	F	G	H	I	J
0	Absolutely no importance										
VL	Very low importance										
L	Low importance										
BP	Below middling importance										
P	Middling importance										
AP	Above middling importance										
H	High importance										
VH	Very high importance										
C	Absolutely critical										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q6 a

How important was it for creating a product that would meet the needs of intermediaries?

	A	B	C	D	E	F	G	H	I	J
0 Absolutely no importance										
VL Very low importance										
L Low importance										
BP Below middling importance										
P Middling importance										
AP Above middling importance										
H High importance										
VH Very high importance										
C Absolutely critical										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q6 b

How important was it for creating a product that would meet the needs of potential customers?

	A	B	C	D	E	F	G	H	I	J
0 Absolutely no importance										
VL Very low importance										
L Low importance										
BP Below middling importance										
P Middling importance										
AP Above middling importance										
H High importance										
VH Very high importance										
C Absolutely critical										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Q 7

How important was it for maintaining the reputation of Norwich Union?

	A	B	C	D	E	F	G	H	I	J
0 Absolutely no importance										
VL Very low importance										
L Low importance										
BP Below middling importance										
P Middling importance										
AP Above middling importance										
H High importance										
VH Very high importance										
C Absolutely critical										

Information about

- A The potential market for the product
- B Competitors and their products
- C Developments in the insurance industry
- D UK economic and social developments
- E Compliance requirements
- F Legal requirements
- G Ethical standards of Norwich Union in its relations with potential and actual customers, and your responsibilities in maintaining them
- H Norwich Union's past experience (including past and existing products and supporting information products)
- I 'Who knows what' – people in Norwich Union who have knowledge of particular topics
- J Suppliers of products and services (eg design groups, writers, printers)

Part 3

Interactions with other people over information

This part looks at exchanges of information among the people involved in the Bicentenary Bond, and at the systems/IT support they received.

Exchanges, interactions, support:

- K Within the project team responsible for the Bicentenary Bond, about development of the Bond
- L Within the project team. about the associated information products
- M Within the project team, about Systems/IT support
- N Between project team and sales consultants
- O Between project team and intermediaries
- P Between people responsible for associated information products and suppliers
- Q Between project team and managers of information and knowledge resources elsewhere in NU
- R Between project team and NU policy makers
- S Between sales consultants and intermediaries

Q8

How important was this kind of interaction/information interchange/support for achieving the objectives of the product?

	K	L	M	N	O	P	Q	R	S
0 Absolutely no importance*									
VL Very low importance									
L Low importance									
BP Below middling importance									
P Middling importance									
AP Above middling importance									
H High importance									
VH Very high importance									
C Absolutely critical									

* 'Absolutely no importance': go on to next type of exchange
Any other response, go to Q9

Q 9

How well did it work?

		K	L	M	N	O	P	Q	R	S
0	Didn't work at all									
VL	Very poorly									
L	Poorly									
BP	Below middling									
P	Middling well									
AP	Quite well									
H	Well									
VH	Very well									
C	Perfectly									

Exchanges, interactions, support:

- K Within the project team responsible for the Bicentenary Bond, about development of the Bond
- L Within the project team. about the associated information products
- M Within the project team, about Systems/IT support
- N Between project team and sales consultants
- O Between project team and intermediaries
- P Between people responsible for associated information products and suppliers
- Q Between project team and managers of information and knowledge resources elsewhere in NU
- R Between project team and NU policy makers
- S Between sales consultants and intermediaries

Q10

How did the quality of what you got from it match up to what you needed?

		K	L	M	N	O	P	Q	R	S
0	Not at all									
VL	Very poor match									
L	Poor match									
BP	Below middling									
P	Middling match									
AP	Quite a good match									
H	Good match									
VH	Very good match									
C	Exactly what was needed									

Exchanges, interactions, support:

- K Within the project team responsible for the Bicentenary Bond, about development of the Bond
- L Within the project team. about the associated information products
- M Within the project team, about Systems/IT support
- N Between project team and sales consultants
- O Between project team and intermediaries
- P Between people responsible for associated information products and suppliers
- Q Between project team and managers of information and knowledge resources elsewhere in NU
- R Between project team and NU policy makers
- S Between sales consultants and intermediaries

Norwich Union case study, Stage 2

Appendix 2

Points from the technical report of the IVM consultant

Introduction

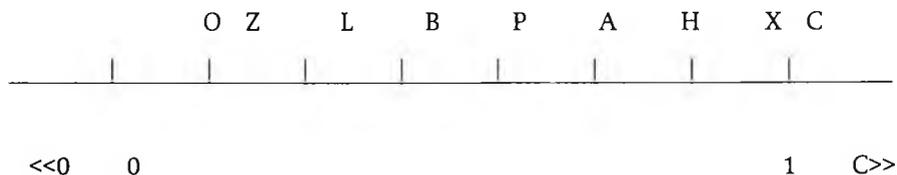
The IVM consultant prepared a report on the project, designed in part to conclude the assignment and in part to provide a case study for training of IVM practitioners. This appendix summarises relevant parts of the report, and reproduces tables and figures from it, with permission of Professor McPherson. The sequence follows that of the narrative account given in the case study.

Referent objectives

The process of determining referent objectives for the IVM criterion is summarised in Table 1. It should be noted that some of the objectives deduced by the IVM consultant from corporate documents (Column 2) were not supported by any information that would be provided by the questionnaire; this created the problem of stating a small set of objectives that would both capture the essence of the blocks in Column 2 and have a proper match to the value contributions coming up from the responses to the questionnaire. The audit in Appendix 3 comments on the effect of this.

Questionnaire and scales

As described in the case study, the linguistic measurement procedure used in the IVM permits mapping from assessment in linguistic terms on to a ratio scale.



DETERMINATION OF REFERENT OBJECTIVES FOR IVM CRITERION
Top-down from Corporate Objectives

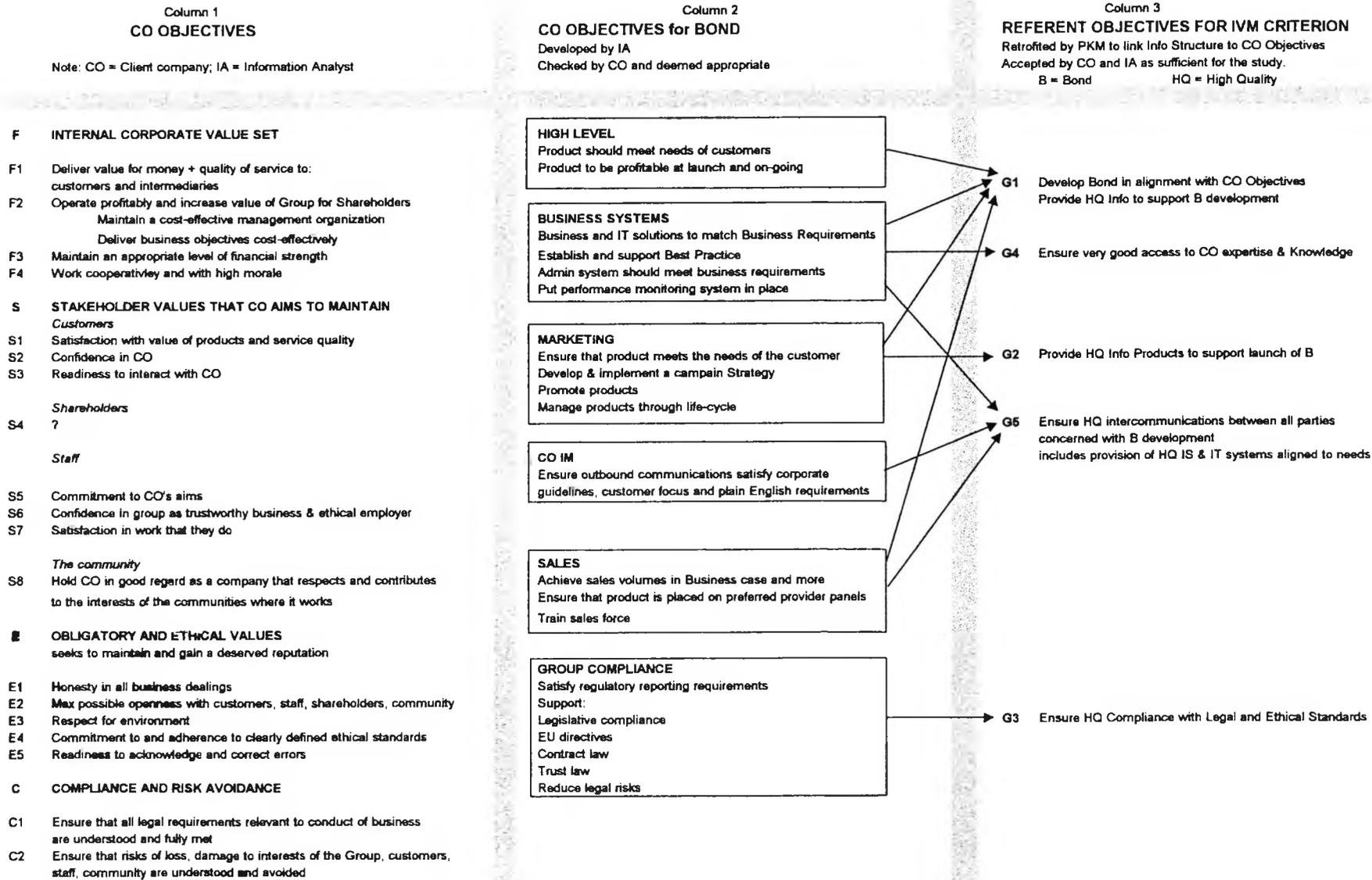


Table 1
 Determination of referent objectives for IVM criterion
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 Report on an IVM application

The interval scale shown above extends from Z to X with equal intervals; any assessment below Z is read as 'nothing' and any above X as 'complete', and closures are forced at 0 (nothing) and C (complete) at one half interval below Z and above X. The resulting scale can be treated as a ratio scale with a numerical shorthand for the grade points, though assessors are required only to think in terms of the linguistic intervals. The IVM handles the subsequent processing to provide a value assessment at each input as a numerical proxy for the verbal grade given. In full applications of the IVM, the preferred method of assessment is by a facilitated group, whose assessments can then be treated statistically as the readings from an error-prone instrument. In the present instance this was not done, as the number of assessors completing the full questionnaire was too small a sample.

Table 2 shows the summary of the nomenclature used in the IVM spreadsheets to represent the questionnaire categories/interactions and questions.

Process model

Figure 1 is a conceptual model of the Bond process from development through to its market; it shows the points at which the people involved contribute, along with points at which the information categories and interactions of the questionnaire are called into play. The IVM structure adopted treats the categories A-K and interactions L-S as the bottom-level attributes of the value hierarchy.

Developing the IVM hierarchy

Figure 2 provides a 'wiring diagram' of the IVM hierarchy as adapted to the questionnaire used in the information audit. It shows in more detail how the conflation hierarchy feeds up to the conjoint measurement trees and on up to the value metric; each circle represents a node that is calibrated appropriately, as described below under 'The IVM criterion'.

The colour coding represents:

- Pink: all information categories except for legal and compliance ones
- Green: legal and compliance categories
- Blue: all information interactions.

Table 2
Information audit: response sheet master

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Assessors will have entered blobs against the code letters for the interval scale on their sheets
Analyst will enter into the XL entry sheet the following

INTERVAL SCALE	O	VL	L	BP	P	AP	H	VH	C
Equivalent Letter	O	Z	L	B	P	A	H	X	C

Categories of info used. This part asks about the kinds of info you used in your work on the Bond

Part 2: INFO CATEGORIES

QUESTIONS	Short Question	Potential Mkt for Bond	Competitors & their products	Devs in Insurance industry	UK economic & social dev's	Compliance requirements	Legal requirements	CO Ethical standards	CO past experience	Who knows what	Suppliers of lps & services
		A	B	C	D	E	F	G	H	I	J
How important was info about...?	1a	Importance									
How much did you use it?	1b	Use									
Did you use it for dev of Bond?	2a	Used for dev Bond?	← Enter 1 for Yes, 0 for No								
Did you use it for dev of IPs?	2b	Used for dev IP?	← ditto								
Q3 is about how the quality of info you used matched the ways in which you wanted to use it											
How appropriate was the coverage for your needs?	3a	Coverage									
How accurate/reliable was it?	3b	Accuracy									
How appropriate was the level of detail for your needs?(Inappropriate can be too little or too much)	3c	Detail									
How appropriate was the form in which it was available to you?	3d	Presentation									
Was the info available to you at the time you needed it?	3e	Timeliness									
How well did it contribute to meeting the key Bus Obj of the Bicentenary?	4	Business Obj									
How important was it for creating a product that would sell well in the intended market?	5	Market share									
How important was it for creating a product that would meet the needs of intermediaries?	6a	Intermediary needs									
How important was it for creating a product that would meet the needs of potential customers?	6b	Customer needs									
How important was it for maintaining the reputation of CO?	7	Maintain Rep of CO									

Part 3: INTERACTIONS & SUPPORT

This part looks at exchanges of info among the people involved in the Bond, and the system/IT support they received

	Within Project team resp. for the Bond			Between					
	PT &	People respon	PT &	sales &					
	about dev of Bond	about Info Prods	about IS/IT support	Sales consultants	Intermediaries	lps & suppliers	Migs of info & knowledge	CO policy makers	Intermediaries
	K	L	M	N	O	P	Q	R	S
How important was this kind of interaction/info interchange/ support for achieving the objectives of the product?									
How well did it work?									
How did the quality of what you got from it match up to what you needed?									

How important was this kind of interaction/info interchange/ support for achieving the objectives of the product?	8	Imp. To Obj. achievement
How well did it work?	9	Effectiveness
How did the quality of what you got from it match up to what you needed?	10	Matched to user needs

PROCESS MODEL FOR BOND DEVELOPMENT & LIFE CYCLE

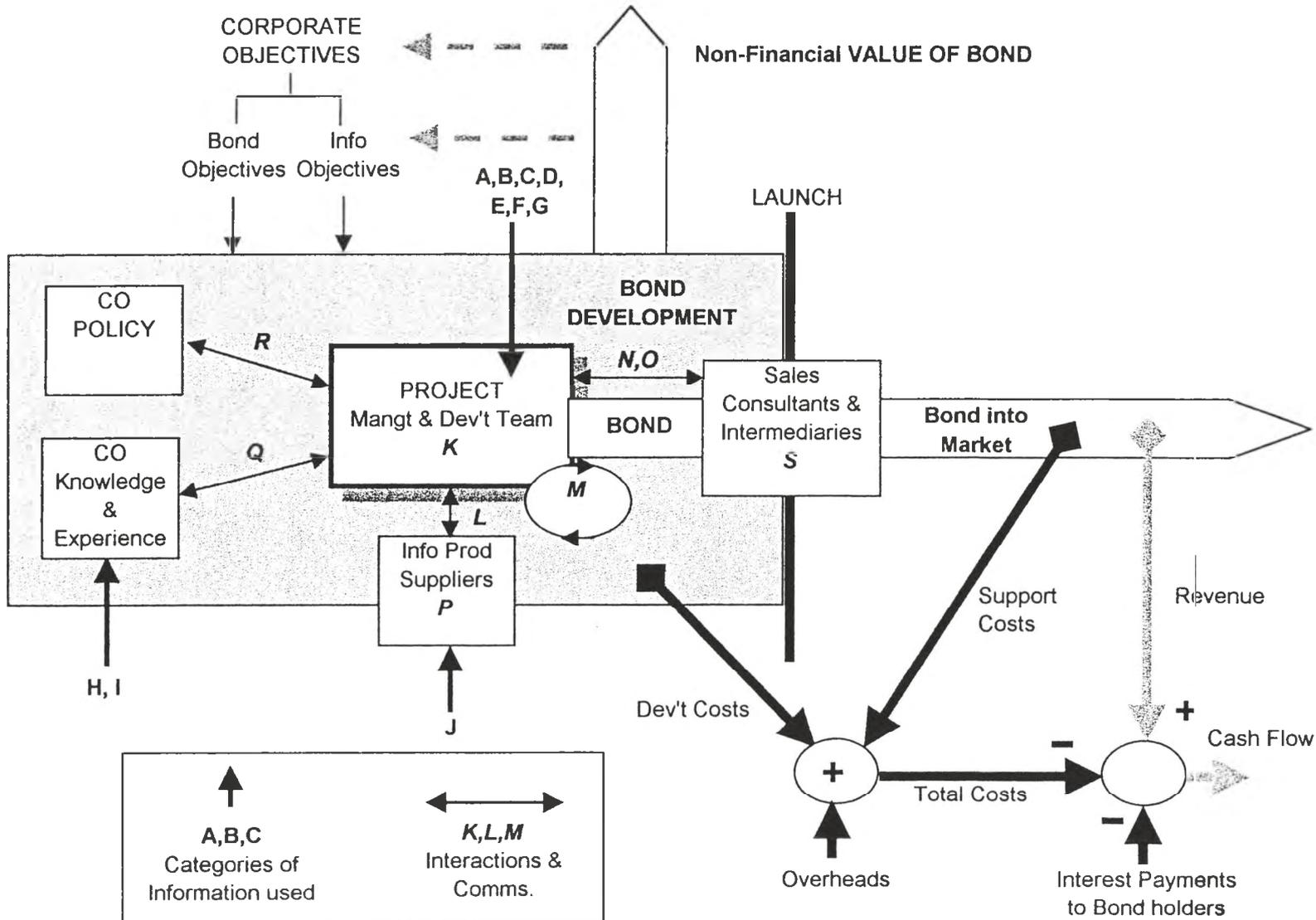


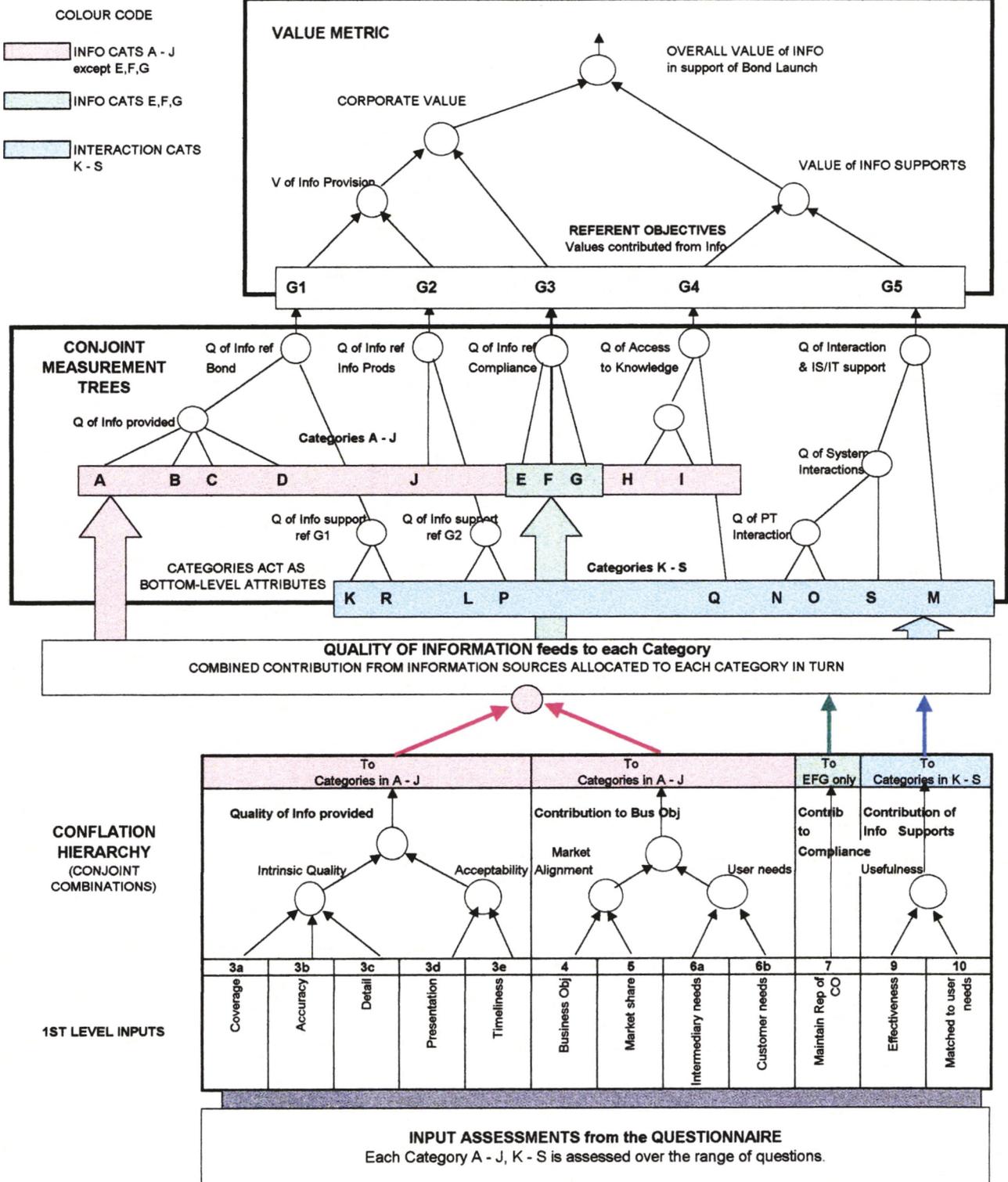
Figure 1
 Conceptual model of the bond process
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 Report on an IVM application

Figure 2
Overview of the IVM hierarchy

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OVERVIEW OF THE IVM HIERARCHY

' WIRING DIAGRAM ' for the IVM HIERARCHY as adapted to the INFO QUESTIONNAIRE



Input assessments

Responses to questions 3 – 6b and 9–10 from the questionnaire were used as assessment inputs. Questions 1, 7 and 8 provided inputs to the weighting process described below under 'The IVM criterion'.

Conflation hierarchies

Each information category (A–J) received nine assessments, and each information interaction (K–S) two. An allocation process is required to

- 1 Feed the input level of conflation with the set of 11 assessments
- 2 Read the conflated output value
- 3 Place it as the input value to the appropriate category-attribute at the bottom of the conjoint measuring hierarchy

Value metric

The IVM measures and combines the values logically from bottom to the top. The structure, although apparently complex, is a simple and logical build-up of operational levels:

Let $V(..)$ signify the value of $(..)$

and $V<.....>$ the combined value of $<.....>$

and let the top value be $V(I|G)$ which reads as the value of information given the set of referent objectives G .

The bracket $<.....>$ implies a logical combinatorial operation from the associated hierarchy.

Top combined value:

$V(I|G) = V<V(G_x), x = 1, 2, 3, 4, 5>$ where x is the index of an objective

Achieved value at the objectives:

$V(G_x) = V<V^x(A_j), j = A, B, C, \dots R, S>$, where $^x A_j$ is the j th category depending from the x th objective, and j is the category letter index

Conflated value inputs to the category-attributes:

$V(X_{Aj}) = V\langle V(JP_k), k = 3a, 3b, \dots, 6b, 7, 9, 10 \rangle$, where JP_k is the assessment from the k th question for parent category J_A

Findings

Conflation results from the three project-team respondents

The conflation process takes the 9 + 2 questionnaire assessments for each category and combines them to give a single reading that reports the integrated value-meaning of the 11 assessments to the category. As shown in Table 3, the conflated results for each category are presented as bar charts for each respondent, with the numerical value underneath.

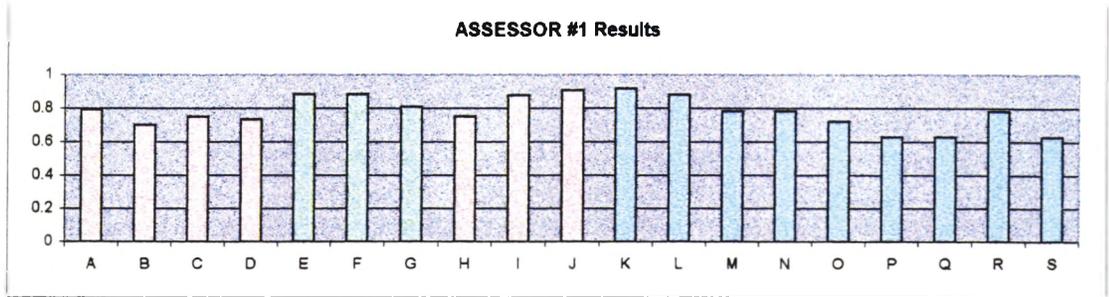
An IVM combinatorial structure applies a logical combination that complies with the requirements of multi-dimensional conjoint measurement theory. In general, only those values that satisfy an additive or concatenation rule (eg 3cm + 5cm = 8cm) combine additively.

Different combinatorial rules apply to other forms of combination; for example take the combination of the information attributes assessed under questions 3A-3c of the questionnaire (coverage, accuracy, detail, presentation, timeliness). The typical scoring approach is to assign scores to each on a not too carefully defined scale and average. This would mean, for example, that the combination of complete coverage (score 1) and complete unreliability (score 0) reads as 'half good' (score 0.5), but clearly it is no such thing, as completely unreliable information is useless, regardless of its coverage.

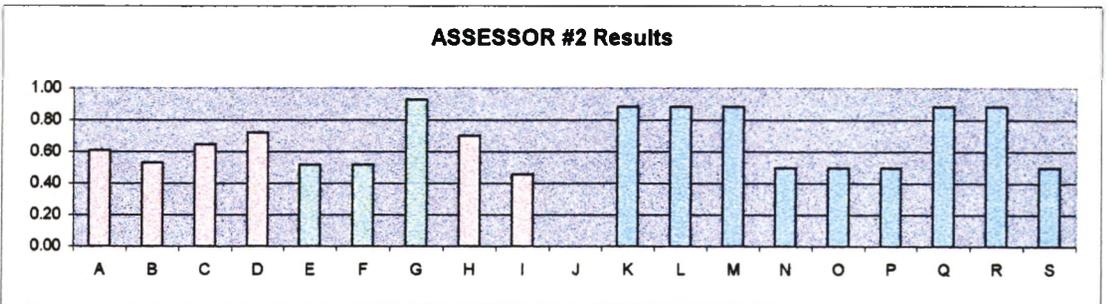
An example from the assessments of respondent 1 of category H shows that the conflated value from the 11 assessments is 0.75, meaning that the information available in this category was 75 per cent good with respect to the complete acquisition of all relevant information. In comparison, an additive average rule yields 0.69 for the same assessments; this the conflation process has found more value' than the average in a string of rather good assessments (equally, it would have come up with less than the average for rather poor ones). The actual figure for the conflated readings depends on how the rules and calibrations of the nodes in the combinatory hierarchy evaluate the inputs (for an outline, see below, under 'Conflation hierarchy')

Table 3
Charts for conflated results from assessors

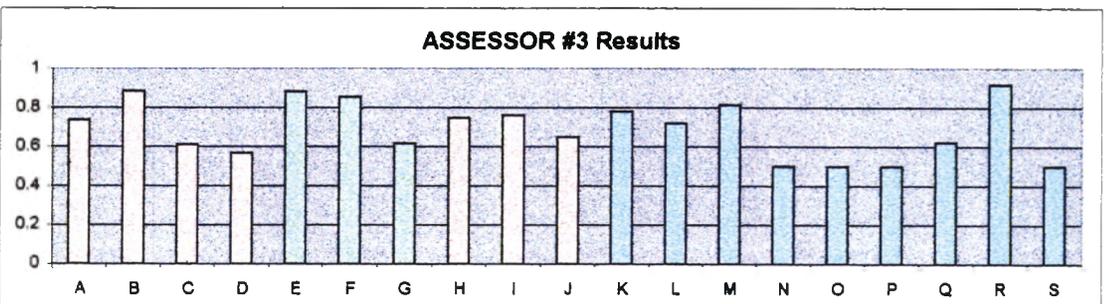
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#1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	0.79	0.70	0.75	0.74	0.88	0.88	0.81	0.75	0.88	0.91	0.92	0.88	0.78	0.78	0.72	0.63	0.63	0.78	0.63



#2	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	0.61	0.53	0.65	0.72	0.52	0.52	0.93	0.70	0.46	0.00	0.88	0.88	0.88	0.50	0.50	0.50	0.88	0.88	0.50



#3	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	0.74	0.89	0.61	0.57	0.88	0.88	0.62	0.75	0.78	0.65	0.78	0.72	0.81	0.50	0.50	0.50	0.62	0.92	0.50
	Potential Mkt for Bond	Competitors & their products	Devs in Insurance industry	UK economic & social devs	Compliance requirements	Legal requirements	CO Ethical standards	CO past experience	Who knows what	Suppliers of Ips & services	Within			Between					
											Project team resp. for the Bond				Peopl respo nsible		P1' &	sales &	
											about dev of Bond	about Info Prods	about IS/IT support	Sales consultants	intermediaries	Ips & suppliers	Migs of info & knowledge	CO policy makers	intermediaries
	Part 2: INFO CATEGORIES										Part 3: INTERACTIONS & SUPPORT								
	A	B	C	D	E	F	G	H	I	L	K	L	M	N	O	P	Q	R	S

Criterion results

Table 4 summarises the formal values for the three project-team respondents (the criterion was not applied to the results from the sales consultants, who assessed only three interactions. A fourth 'assessor' Z is included to represent an assessor who balances the perspectives of the three actual assessors; Z's assessments are the arithmetical mean of the conflated category readings of the other three. It should be noted that the criterion used was calibrated only for one respondent – the Product Manager for the BB, and so the results shown indicate the quality of information as assessed by three team members, but evaluated with the team leader's perspective.

Comparison of the assessments shows differing judgements about the quality of information among the respondents, which may be attributable to their differing professional roles in the team.

The middle bar in Table 4 shows the sensitivity of the criterion to the information categories and interactions in the questionnaire. The sensitivity is obtained by holding all inputs at 0.5, and reading the changes in the combined value at the top as each input category value is changed from 1 to 0. The length of the bars indicates the degree of sensitivity, the colour what happens when the category is set to 1 (yellow) or 0 (red). It should be noted that the sensitivities are the result of the complicated mathematical process described above, and cannot be influenced by the wishes or beliefs of respondents. As discussed in the case study, interactions within the project team about the associated information products emerged as the factor to which value was most sensitive, while the lowest-ranking were interactions between the project team and managers of information and knowledge elsewhere in Norwich Union, between the project team and intermediaries and between sales consultants and intermediaries.

The IVM criterion

The structure and calibration of the IVM criterion determine the values reported from the input assessments. The structures of the conflation hierarchy and the criterion hierarchy are briefly described here.

Table 4
Results summary and criterion sensitivities

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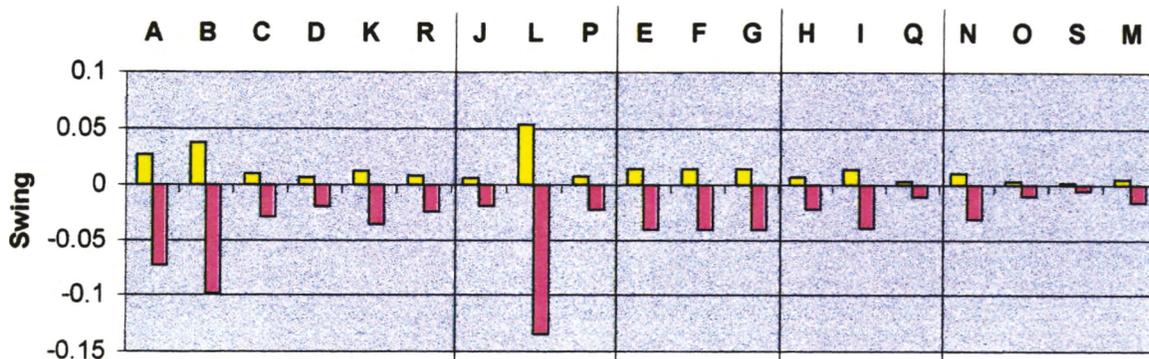
RESULTS V(INFO)

ASSESSOR	
#1	79 %
#2	61
#3	71
Z	72
REF	50

RESULTS AT THE REFERENT OBJECTIVES

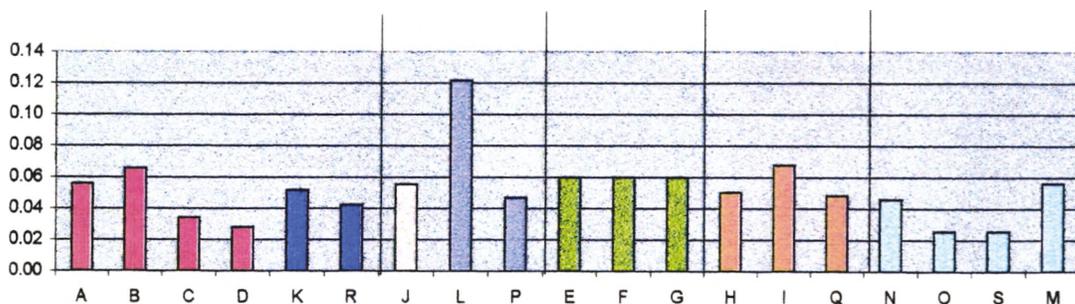
	G1 Support of Bond Launch	G2 Support of IPs	G3 Legal and Ethical requirements	G4 Access to CO Knowledge &	G5 HQ Interaction & IS/IT
#1	0.76	0.83	0.88	0.78	0.76
#2	0.63	0.63	0.60	0.56	0.56
#3	0.76	0.68	0.75	0.73	0.56
Z	0.73	0.74	0.77	0.71	0.63

CRITERION SENSITIVITIES



A	B	C	D	K	R	J	L	P	E	F	G	H	I	Q	N	O	S	M
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A	B	C	D	K	R	J	L	P	E	F	G	H	I	Q	N	O	S	M
Info on Pat. Mkt. For Bond	Info on Competitors & their products	Info on Devs in Insurance industry	Info on UK economic & social dev's	Internal PT interaction about dev of Bond	Interact PT & CO Policy makers	Info on suppliers of IPs & services	Internal PT interaction about Info Prods	Interact. betw. People resp. for IPs & suppliers	Info on Compliance requs.	Info on Legal requs.	Info on CO Ethical standards	Info in CO past experience	Info on Who Knows What	Interact. betw. PT & Mgrs of Info & Knowledge	Interact betw. PT & sales consultants	Interact betw. PT & Intermediaries	Inter betw Intermediaries & sales consultants	Internal PT interaction about IS/IT support

CATEGORY WEIGHTS



Conflation hierarchy

Figure 3 shows a screen dump of the conflation hierarchy for one category. As noted, the Product Manager who acted as client was closely involved in calibrating the structure.

Two combinatorial rules are used in the hierarchy: the Multiplication (M) rule and the Goal (G) rule. For the M rule the combined value $V(X,Y)$ is proportional to the product of the two branch inputs (X,Y). The larger $V(X,Y)$ is, the nearer it is to the desired vertex (1,1), taking into account the branch weights. Branch weights $w(X)$ and $w(Y)$ represent the relative importance of X and Y to the achievement of the combined value: $w(X) = W/(1+W)$, $x(Y) = 1 - x(X)$. The hierarchical weights HW in the figure indicate the relative importance of the node due to its position in the hierarchy (see below for discussion of setting the weights).

Under the other combinatorial rule, the Goal rule, the combined value is directly proportional to the nearness of the coordinate X,Y to the vertex (1,1), after modification for branch weights.

It should be noted that value is always expressed on a uniform (ratio) scale in the range 0 and 1, where '0' means that the input values to the node are less than agreed minimum threshold, and '1' that the value concerned has been achieved, and that proportionality on the scale holds in between, ie the top value of 0.79 in the figure means that the combined value of the nine input assessments is 79 per cent of complete achievement.

The IVM permits shape functions to be included (shown in the figure under the bottom row of the criterion). The functions are selected from a given range and allow the client to modify the inputs to the bottom row of nodes, and there only; this modification does not affect the structure and calibration of the criterion above. The client selects from a menu of given functions to match the way that value is perceived to alter as the underlying input alters.

The value criterion

Figure 4 is a screen dump for the value criterion. The inputs at the bottom are the conflated values for all the categories from the conflation hierarchies, and the colour coding, as in Figure 2, is:

- Pink: all information categories except for the legal and compliance



CO: Info Audit: INPUT CONFLATION HIERARCHY

RESPONDER
GROUP No #1

For Record	0.79											0
INPUT ROW	for CRITERION											
Input No.	1	2	3	4	5	6	7	8	9	10	11	12
Input	0.793											
Category	A	B	C	D	E	F	G	H	I	J	K	L

CONFLATION STRUCTURE

SET TO NU (HC) TUNING

CLIENT AGREEMENT

STRUCTURE & CALIBRATION

Original by PKM
Node rules and weights agreed by CO and PKM after some modifications.

Peak functions XS and XB and their peak factors m selected by CO

All Input shaping Functions selected by CO

CO agrees structure as shown
x/yy/19zz

Row of Input Shaping Functions

Contrib to Category A 0.79

Contrib to Category A 0.00

V of Info to category			
V	0.79	HW	
Rule	M	1.00	
	0.44	0.8	0.56
	0.68	IN	0.90

Intrinsic Value of Info provided (IVI) 0.68

To A - J

Contribs to Bus Obj (VCB) 0.90

Contrib of Info Supports 0.00

IV of Info			
V	0.68	HW	
Rule	G	0.44	
	0.67	2	0.33
	0.66	IN	0.76

IV of Info			
V	0.90	HW	
Rule	G	0.56	
	0.50	1	0.50
	0.88	IN	0.92

Q of Info			
V	0.66	HW	
Rule	M	0.30	
	2	3	1
	0.33	0.50	0.17
	0.79	0.64	0.50

Acceptability			
V	0.78	HW	
Rule	M	0.15	
	0.33	0.5	0.67
	0.50	IN	0.94

Market			
V	0.88	HW	
Rule	G	0.28	
	0.50	1	0.50
	0.88	IN	0.88

User needs			
V	0.92	HW	
Rule	G	0.28	
	0.50	1	0.50
	0.88	IN	1.00

Usefulness			
V	0.00	HW	
Rule	M	1.00	
	0.40	0.67	0.60
	0.00	IN	0.00

0.88	0.46	0.50
mS	mH	XS
0.786	0.643	0.25
0.099	0.148	0.35
		0.175
		0.049

0.50	0.94
mS	XB
0.50	0.39
0.05	0.85
	0.67
	0.10

0.88	0.88
mS	mS
0.79	0.79
0.14	0.14
	HW
	0.14

0.88	1.00
mS	mS
0.79	1.00
0.14	0.14
	HW
	0.14

0.00	0.00
mS	mS
0.00	0.00
0.40	0.60
	HW
	0.60

Category being Loaded A

U Inputs
From Questions

Coverage
0.786
3a
7.86

Accuracy
0.643
3b
6.43

Detail
0.5
3c
5

Presentation
0.5
3d
5

Timeliness
0.786
3e
7.86

Bus Objectives
0.786
4
7.86

Market share
0.786
5
7.86

Intern. Needs
0.786
6a
7.86

Customer needs
1
6b
10

Effectiveness
0
9

Matched to user needs
0
10

Figure 3
Conflation hierarchy

Report on an IVM application
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- Green: legal and compliance categories
- Blue: all information interactions

The criterion shown records the values using the assessments of the Product Manager. The referent nodes lie in the green bar, which is an important dividing line in an IVM criterion. Above the bar the valuation hierarchy is a true metric, and a Goal rule is applied to all the nodes, whereas below it the nodes are fitted with rules that correspond with the local conjoining combination (in this case in fact all the conjoining nodes were found to be goal-oriented and fitted with a G-rule), but this is not necessarily always so.

Setting hierarchical weights for the nodes

It is important to obtain these by a method that is as near to an objective weighing balance as possible, because of the evident interaction between weights and sensitivities (see Table 4 above). Three constraints have to be observed in setting hierarchical weights:

- 1 The weights in each level should add to 1
- 2 The hierarchical weight of a higher node is the sum of those of the lower nodes which feed it
- 3 The top node should have a hierarchical weight of 1. The weight ratios are then a function of the hierarchical weights immediately below, and adjust automatically.

This means that the hierarchy weights in all intermediate levels of the hierarchy are constrained by the 'calibration weights' inserted for the referent objectives, and at the bottom level. Although these are the result of human judgement, they can be obtained by a methodology that constrains it to something which is almost objective, as described below.

Obtaining calibration weights for referent objectives and bottom-level attributes

The method depends on pairwise comparisons of the importance of a set of elements, with the results entered, following strict procedures, into the cells of a Binary Comparison Matrix. Solving the matrix for its eigenvalues yields a vector whose elements are the relative weights of the original elements. In the absence of the

'perfect knowledge' to which human assessors cannot aspire, which would result in objectively correct weights, the methodology provides approximations to the 'true' weights, and a statistically proved Consistency Factor (CF) indicates how close the solved weights are to those that would have resulted if the matrix entries had been consistent with scientific measurement. In the present case, the Product Manager and the researcher made the judgements of the relative weights of the referent objectives, with what proved to be a high degree of consistency. The results are shown in Figure 5.

The questions about the importance of information to achieving information goals in each category were used as inputs to a calculation that derived the relative weights of the bottom attributes in each of the trees depending from an objective; these weights were then adjusted in the correct proportions to sum to the weight of the parent objective. The attribute weights ought to have been checked using the more precise BCM method, but this step was waived to save time and effort.

Cost-effectiveness

As explained earlier, it was possible to make only a rough and ready cost-effectiveness analysis, based on data on the development costs of the Bond; more information than could be provided would have been required for a detailed evaluation of its contribution after launching to cash flow.

The final IVM combination of the financial and intangible components of value can be portrayed as taking place in a combinatory node with input axes for cost c and intangible value v . The nearer the coordinate (c,v) is to the vertex $(1,1)$ the more cost-effective is the activity under study.

The combination of the financial and intangible value requires financial value to be projected first into the measuring value space, in order to make operational financial value (measured on a scale of £ units) commensurate with intangible value measured in the normed value space on a scale in the range $[0,1]$. The IVM procedure for projection of any measurand on to value space is to standardise it with respect to agreed minimum and maximum limits in the range of the measurand. Thus non-dimensional cost c is given by:

$c = (C^0 - C)/(C^0 - C^*)$ where C^0 is the high limit, and C^* the low (desired) limit, so that $c = 1$ when $C = C^*$, ie the low-cost target has been achieved.



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BINARY COMPARISON MATRIX

The BCM is the nearest approach to a scientific method for judging relative weights
[REF: T.L.Saaty. Analytical Hierarchy Process. McGraw-Hill 1980.]

- 1 List items to be weighed as A,B,C etc.
- 2 Enter Relative Weight of A:B, A:C etc into the uncoloured cells of matrix
- 3 Read resulting weights in Column N
- 4 Check that Sum of weights = 1. If not there is an error: try again.
- 5 Check that Coherence is GOOD. If not, think about the relative proportions again.
- 6 Copy - Paste - Value the calculated weights over to the appropriate location of the Value Metric worksheet

ENTER JUDGMENTS INTO MATRIX CELLS

No. of Items

	A	B	C	D	E	F	G	H	J	K
A-G1	1	1.7	1.5	1.5	1.5					
B-G2	0.59	1	1.5	1.5	1.5					
C-G3	0.67	0.67	1	1	1.5					
D-G4	0.67	0.67	1	1	1					
E-G5	0.67	0.67	0.667	1	1					
F						1				
G							1			
H								1		
J									1	
K										1

	WEIGHT
A-G1	0.277
B-G2	0.224
C-G3	0.180
D-G4	0.166
E-G5	0.153
F	
G	
H	
J	
K	
SUM	1

Coherence

Consistency

Factor CF

GOOD if CF < 0.10

SCORES FOR BCM ENTRIES

How much greater is A relative to B?

SCORE MEANING

- 1 the same
- 1.5 somewhat greater
- 2 noticeable greater (X2)
- 2.5 significantly greater
- 3 decidedly greater (X3)
- 5 A's contribution is strongly favoured
- 7 A's contribution is favoured very strongly
- 9 A's contribution is just about dominant

Select the midpoint score if ambiguous.

Enter the reciprocal score if B > A

Figure 5
Binary comparison matrix

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Report on an VM application

Calibration of the value for money V(CE) node

The combinatory node V(CE) requires calibration for cost-effectiveness (see Figure 6).

The default calibration consists of:

- Goal rule: the node is a metric
- Equal weights: trade-offs between effectiveness and the costs of achieving it are examined first with monetary and effectiveness values equally important
- Shape functions: mid-Achiever on the cost input, midESS on the effectiveness input¹
- Cost limits for normalisation: $C = \min C - 10 \text{ pc} = \max C + 10 \text{ pc}$.

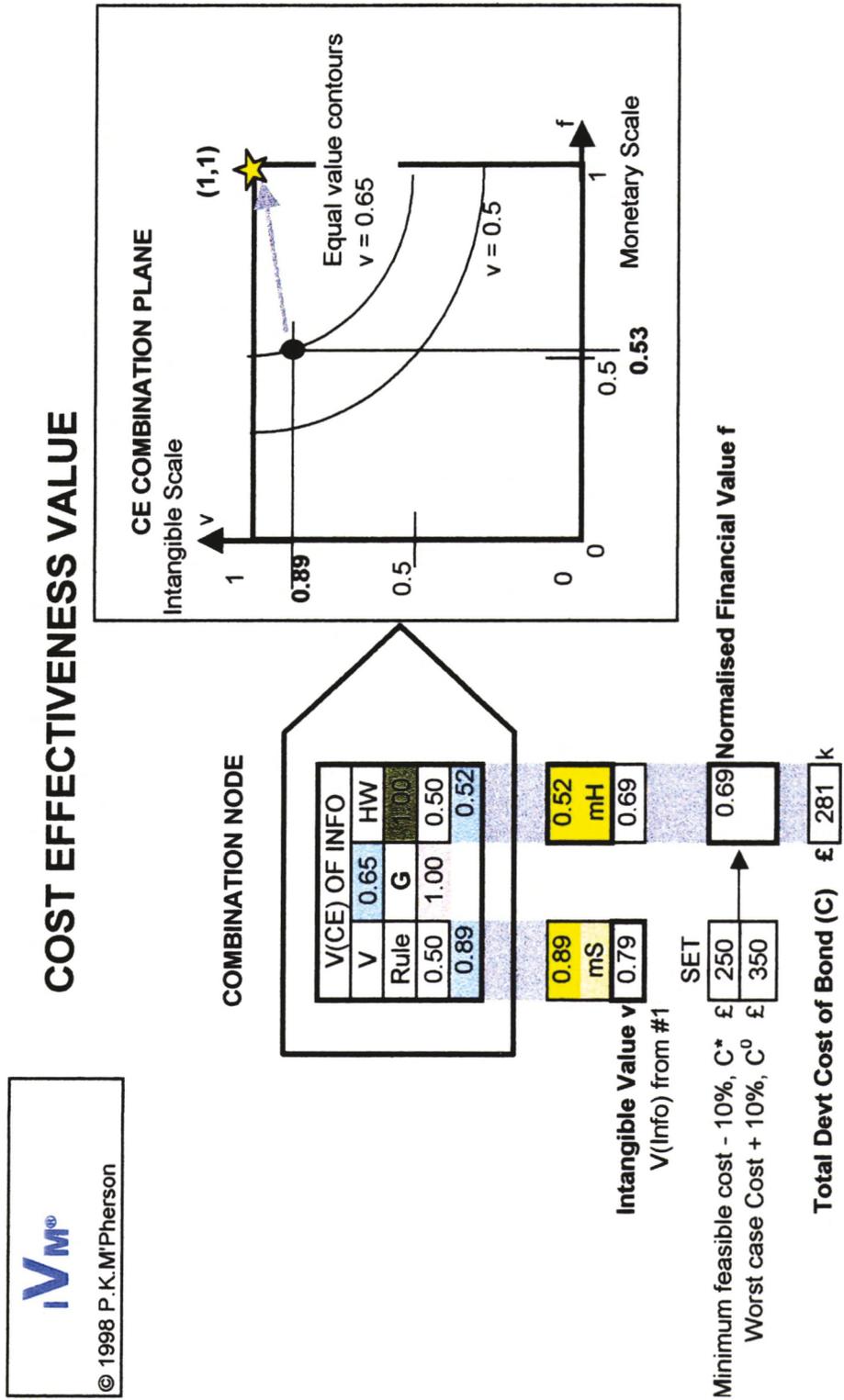
The C(VE) node used for the cost-effectiveness demonstration was left in the default setting to save troubling the client for more detailed financial data. Arbitrary cost limits were inserted by the IVM consultant to normalise the development cost. The figure given in Figure 6 for development costs (a disguised one) projects into a non-dimensional monetary value of 0.69 in value space. After modification by the shaping functions, the two inputs to the node are 0.89 (effectiveness) and 0.53 (monetary).

The combinatory node shown in Figure 6 is the default recommendation for a cost-effectiveness trade-off. The method allows the best option or product to be selected on a cost-effectiveness basis if other cases exist for comparison. The plot of the Combination Plan is shown in the figure, with the coordinate (0.89, 0.53) plotted, and the arrow pointing to the desired vertex of (1,1). The shorter the length of the vector the more cost-effective the case. Contours of equal value are shown for $V = 0.65$ and $V = 0.5$; they are circular when the weight ratio is unity. Any combination inside the 0.65 contour will indicate a more cost-effective launch than was obtained for this case.

¹ The argument for this selection is that managers and decision-makers tend not to perceive a financial-intangible trade-off as a linear process. Experience suggests that the shaping functions selected matches their preferences. The Achiever function accentuates the value added as input costs approach their minimum feasible target; the ESS function accentuates value added most over the middle of the range.

Figure 6
Cost effectiveness value

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Norwich Union case study, Stage 2
Appendix 3
An audit of the IVM application

Introduction

On completion of the study, the IVM consultant made an analysis of the application, following standard procedures established for auditing which are applied for each IVM project.

The standard audit has the following sections:

- 1 Set up of the value context
- 2 The necessary and sufficient measuring attributes
- 3 Measurement and information management
- 4 Set up and calibration of the IVM criterion
- 5 Calibration of stakeholder criterions
- 6 Set up of the financial model
- 7 Certification of value observability and measurability
- 8 Certificate of calibration and accuracy

The main points from the audit are summarised below under these heads, with particular reference to instances where the full standard was not achieved.

Set up of the value context

The development of the referent objectives as described in the case study, was carried out by the IVM consultant, whereas this would normally be a task in which all the stakeholders participated. This requirement was waived by agreement to limit the demand on the client. The Product Manager agreed the objectives as appropriate ones for the study.

The coverage of the stakeholders involved in the product launch was considered to be a good one, given the scale of the exercise.

The value space implied by the referent objectives covers both financial and non-financial, and the non-financial categories (operational, quality of product, quality of knowledge base, intellectual capital) offer a broad spread of information categories to be managed and intangibles to be evaluated.

The system of interest was by definition the whole process of developing, launching and introducing the BB to customers; while the information interest of the study terminates at the launch, the financial interest runs into future projections of revenues and costs. In practice, as described in the case study, data for a full analysis of financial value could not be acquired within the limitations of the study. In other respect the model of the system of interest was sufficient.

C Audit evaluation

The value context for the case is considered to be sufficient for the development of a proper IVM Criterion (for the intangibles) and a subsequent limited cost-effectiveness evaluation.

The necessary and sufficient measuring attributes

The IVM procedure requires that a top-down process be undertaken first, to produce a hierarchy that elaborates the distinct attributes of the value-meaning contained in the high-level objectives. These attributes must be necessary, sufficient, observable, and measurable if they are to capture the complete value meaning of the value context.

As recounted in the case study, the questionnaire was designed before the start of the IVM process (it has to be that way round, because of the necessity of making progress and using the limited time available to good effect). It was discussed with the IVM consultant, and some changes and additions made, but this sequence of events meant that in effect the categories and questions of the information audit became the measuring attributes – which is the wrong way round for the IVM, which requires that the measuring attributes are conditioned first to the referent objectives.

Thus the prima facie set of necessary and sufficient measuring attributes for the given context was not established. However, the questionnaire design was agreed by all parties to provide excellent coverage of the information requirement, if not exactly of the measuring requirement, and it was accepted, after detailed examination by the IVM consultant, as sufficient and adequate.

The categories and interactions about which the questionnaire asked were judged by the IVM consultant as providing a fair and reasonable set of attributes for the purpose of a low priority study. The questionnaire could not, however be certified as value observable, because:

- It was not developed from a given value context and explicitly declared objectives, and the attributes were not subjected to a rigorous test for compliance with the necessary and sufficient condition.
- The stakeholders should, in the view of the IVM consultant, have included the sales consultants and intermediaries.
- Some information categories may have been missed from the questionnaire, and others might profitably have been subdivided.
- Some questions could lead to overlaps in meaning and double counting.

While the objectives and the retro-fitted top-down value hierarchy were agreed as 'reasonable' by the Product Manager, the degree of client involvement in developing the hierarchy was less than would be expected in a formal contractual development.

Given that the IVM part of the investigation was at best a part-time matter for the Norwich Union staff concerned, the lack of rigour is understandable; nonetheless, the IVM application maintained the required standards as far as was possible in the circumstances.

Audit evaluation

- The top-down defining hierarchy satisfies the well-formed requirement
- The circumstances of the case meant that the hierarchy was retro-fitted bottom-up from a given set of attributes. The attributes were examined carefully for their coverage of the context, but they were not tested rigorously for the necessary and sufficient condition. Some possible instances of non-distinctness were noted.
- Consequently a full certification of the measuring attributes as used cannot be allowed: at best they are necessary and adequate for the purposes of the case.

Measurement and information management

While the linguistic measurement procedure described in the case study was used for all assessments, the small number of assessors who completed the questionnaire in full did not permit the use of the normal statistical treatment of the procedure.

The client decision to ask sales consultants to complete only a small part of the questionnaire, relating to certain interactions, and not to seek their responses on information categories, detracts from the quality of information coverage.

It is doubtful if the assessors in the study understood that all assessments have to be given an admissible grade; there were one or two 'n/a' or 'don't know' answers to some questions. To avoid error signals being posted from the IVM criterion, the IVM consultant had to arbitrarily enter '0' for 'n/a' (equating it with the lowest point on the linguistic scale, as meaning that the category receiving this response was of no interest or relevance to the respondent), and P (Par) for 'don't know' (by analogy with a probability of 0.5). In a full-scale application, this situation would not arise, because adequate time would be available for initial explanations about the scale.

Audit evaluation

- The input assessments were all treated properly using the LMP to ensure canonicity. Thus the primary measurements are canonical – save for the few inadmissible entries from two assessors.

Set up and calibration of the IVM criterion

Examination of a criterion considers three factors:

- 1 Compliance of structure
- 2 Confirmation of the reference datum
- 3 Compliance of calibration (combinatorial rules, node weights, shape functions, sensitivity analysis)

Compliance of structure

The conjoint measuring structure provided by the IVM criterion consists of three layers as described in the case study, and as shown in Figures 3 and 4: the top metric levels;

conjoint levels, and lower conflation level. The structure was examined and agreed by the client.

Confirmation of the reference datum

The reference criterion was calibrated to the perspective of the principal stakeholder, the Product Manager; while this served the purpose of the study, it meant there was no independent yardstick available against which stakeholder bias could be examined.

Compliance of calibration

All the nodal calibrations were explained and discussed with the client; a few changes were admitted and the final fit of combinatorial rules was agreed by the client.

The IVM consultant explained the meaning and use of shape functions, after which the client and the researcher discussed each input together and selected an appropriate shape function for the perspective.

The relative node weights for the five referent objectives were obtained, using the full Binary Comparison Matrix procedure. The matrix entries were carefully judged by the client and the research acting as a team, with the consultant facilitating.

Sensitivity analysis

The sensitivity analysis was explained and discussed with the client, who agreed with the implications of the sensitivities as described in the case study.

Audit evaluation

- The criterion structure matches exactly the prerequisite top-down hierarchy, which is well-formed and compliant with the relaxed requirement of necessary and adequate for the purposes of the case.
- Each input assessment from the questionnaire acts as a canonical measure after processing by the required mapping procedure.
- Thus the attributes become measurable and observable.
- The absence of a proper reference calibration is regrettable, but its absence does not invalidate the Product Manager criterion, and it was hardly required as no stakeholder criteria were produced.

- The calibration of the criterion is compliant with IVM requirements and protocols
- The client was involved in the selection and weighting process under expert facilitation, save for the bottom-level attribute weights were derived from the assessor entries to the importance questions in the questionnaire. The final fit was agreed by the client.
- The sensitivity analysis is an accurate reflection of the criterion's character as calibrated, and agreed by the client. A second round of calibration with the client should have been made, but the present criterion is meaningful with respect to the context.

Calibration of stakeholder criteria

For the reasons explained above, the criterion was not calibrated to any other stakeholder perspectives. Their absence does not disqualify the results obtained.

A compliance report is therefore not required here.

Set up of the financial model

As explained in the case study, the data available did not warrant an extension to evaluate the contribution of the information supporting the Bond as a proportion of the cash flow stream of the Group.

Audit evaluation

- The financial data supplied were enough for a simple cost-effectiveness demonstration, no more.
- The calibration of the V(CE) node needed for cost-effectiveness analysis fitted the default requirement and was compliant.

Certification of value observability and measurability

While some of the protocols necessary for maintaining the desired level of measurement integrity had to be relaxed because of the nature of this project, nevertheless the IVM criterion used was compliant in its construction and application, and service as a 'necessary and adequate' instrument from which meaningful results

could be obtained. But 'necessary and adequate' is less strict and secure than 'necessary and sufficient'.

Audit evaluation

- The measuring attributes of the criterion used in this study can be passed only as necessary and adequate, although the information provided by the questionnaire provided a broad coverage. The qualification stems from the fact that the top-down defining hierarchy was retro-fitted to the questionnaire.
- The primary measurements were all assessed properly, save for a few inadmissible responses. Even so the value context can be judged to have been rendered observable and measurable.
- Thus the criterion qualifies as necessary and adequate, observable and measurable.

Certificate of calibration and accuracy

- There was enough interaction with the client during the calibration stages to ensure client agreement to the final calibration fit, and to state that the criterion met the primary stakeholder's perspective.
- The criterion serves the purposes for an exploratory study of the evaluation of information for a financial instrument. More development (particularly in the financial domain) and depth of calibration would be required to make the criterion an assured measuring instrument for real cases.
- The criterion was tested for arithmetical and combinatorial accuracy at each node and as a whole by the responsible IVM analyst.
- The results of the evaluation are 'correct' relative to the given context and the resulting criterion, (subject to the necessary and adequate qualification).
- Two assessors entered some inadmissible responses to the questionnaire. These were rectified using conventional IVM procedure, but the subsequent criterion results are only an approximation to what the two assessors may have intended.
- The previous qualification underlines the need for all contributing participants to an IVM exercise to have had a preliminary briefing on the IVM and its protocols.

Case Study 11

The Tate Gallery

Background

The Tate Gallery, founded in 1897, houses the national collections of British art from the 16th century to the present day, and international 20th century art. Besides its London home on Millbank, it maintains galleries in Liverpool and St Ives, and is currently (1998), developing the Tate Gallery of Modern Art at Bankside in a former power station (due to open in May 2000). It is among the most frequently visited museums and galleries in the UK, with nearly two million visitors in the year 1997/98.

The period over which this case study has been carried out has been one of great change in the way in which the Gallery works; as its *Forward Plan* for 1998 puts it, the Gallery is 'poised to undertake the most significant transformation in its history', embracing not only a great building programme, but a 'commitment to offering greater and wider access through education and outreach, interpretation, high quality displays, touring and other collaborations, all backed up by outstanding information services and research' while continuing to add to and conserve the Collection and to deepen and widen knowledge of it through scholarship and publication. These ambitious aims have been accompanied by significant changes in institutional culture. Not only has the Gallery adopted a more 'commercial' approach in the face of reduced public subvention and an increasingly competitive environment for cultural institutions, it has also begun to assign a high value to information as a means of supporting change, both in the management of its affairs and in reaching the widest possible audience for its work. In this, information products, both print on paper and electronic, have a significant role. Its web site, established in 1997, is the first by a major international gallery to allow direct access to its Collection image base and associated research.

Key strategies and objectives

There have been important changes in emphasis over the period of this case study. The Gallery submits its forward plans to the Department of National Heritage and to its Trustees. Up to 1994/9 they consisted of projections of expenditure and a bid, together with appendices containing overall Gallery objectives and departmental objectives. The objectives of departments were internal ones, drawn up without reference to the overall objectives of the Gallery. No criteria for fulfilment of objectives were included. Since 1995 the approach has changed, partly in response to the requirement of the Department of National Heritage for performance indicators, and partly to meet the Gallery's own perception of the need to distinguish between ongoing objectives and those which involve change, to have an agreed basis for priorities, and to ensure that specific departmental objectives fit within the framework of the overall top-level ones of the Gallery as a whole. In the corporate plan, individual objectives are related to the main objectives of the Gallery.

The Gallery today defines its main aim (in its 1998 Forward Plan) as:

'to increase public awareness, understanding and appreciation of British art from the sixteenth century to the present day and of modern and contemporary art from around the world.' The Plan also introduces a statement of its values (a new feature), in these terms:

'The Tate Gallery wishes:

- to combine quality and accessibility
- to represent the contemporary and the historical
- to build on a world class collection with works of outstanding aesthetic and historical value
- to create exceptional displays, exhibitions and activities in London, Liverpool and St Ives
- to link the worlds of leisure, education, culture and the arts, encouraging life-long learning about the visual arts
- to promote research and scholarship and contribute to thinking about British, modern and contemporary art
- to build an organisation that invests in its staff, promotes equality of opportunity and sustains a working environment of mutual support and intellectual enquiry
- to invest in high quality architecture and promote good design

- to be accountable to the public which provides the majority of its funding and to the many individuals, companies and trusts which make a vital contribution to its work.'

The Gallery seeks to achieve its values by setting objectives for the period ahead; as presented in the 1998 Forward Plan, the current objectives are:

1 Making the Collection available to the nation by:

- display
- loans to other museums
- interpretation
- promotion to a range of audiences from first-time visitors to scholars.

2 Adding to the Collection through: gift, bequest, transfer, purchase.

3 Extending knowledge of British, modern and contemporary art through:

- exhibitions, events and educational work
- collaboration with artists
- promotion abroad
- collaboration with other specialists, institutions and media.

4 Caring for the Collection by:

- suitable housing and storage
- conservation
- upgrading gallery spaces.

5 Researching the Collection:

- using the Gallery's web site for distributing research information
- creating renewed research facilities on the Millbank site
- documenting, researching and publishing the Collection
- programmes of research into conservation.

6 Securing financial, human and physical resources:

- ensuring capital and revenue funding
- new organisation structure
- maintaining the estate
- implementing an Information Strategy covering Collection documentation, the Gallery's public records, and all other areas of information

- developing skills, knowledge and experience of all staff, and promoting interchange of information with other institutions
- effective financial controls
- advocating improvements to relevant standards, laws and regulations.

These objectives embody some significant developments in comparison with those at the start of the period of the study. In particular, they introduce an objective of implementing a comprehensive information strategy contributing to securing and managing essential resources, and to using the Gallery's web site for distributing research information.

Departments are responsible for developing their own objectives within the framework of the overall objectives and for articulating how they contribute to the overall objectives. They are also responsible for establishing appropriate performance indicators for relevant top-level objectives and for their own areas – the indicators so far are primarily quantitative.

Information policy/strategy

Since 1994 the Gallery has been moving towards developing a policy for its use of information. The first step was creation in 1992 of a large 'Information Resources' group, chaired first by the Gallery's Director, and then by the Head of Communications. The resources of the title referred, in the intentions of those who set it up, primarily to materials and media for information delivery to the public. Initially the role of Gallery-wide information resources in the more usual sense of the term was not recognised. Members of the group, however, perceived that without knowledge of the existing resources of information and information processes within the Gallery it was not possible to make appropriate decisions about the content and method of information delivery to the public.

A survey, starting in 1991, was carried out jointly by Gallery Records and Documentation/IT staff with the aim of identifying information systems (electronic and manual, file series, indexes, etc), knowledge bases and key contacts data, and major information processes. Working parties looked at collections documentation standards, information about people and institutions, delivery of information to the public, gallery records, and document collections. Its first report, issued in 1992, showed that over 430 different systems had been identified; one immediately useful outcome was the

development of a Gallery records management policy to replace a system that had fallen into disrepair. The next step was intended to be an analysis of information flows with the aim of identifying areas with common purposes in relation to information, where co-ordination would be useful. A questionnaire was prepared but demands of other work meant that the initial findings from the survey were not followed up by the group. In the meantime some relevant issues were being independently developed, for example in relation to cataloguing, publications management and management information. (An interesting sidelight on the problems encountered by the group is thrown by comments of participants from different areas of the Gallery – each pointing to the failure of people from other disciplines to 'understand what information really is'; it was at any rate useful in showing that, as one member put it, 'the lessons of information awareness are very slow to learn'.)

Early in 1995, a new, smaller Information Policy Steering Group was set up to look specifically at the development of an information policy; this consisted of managers from Public and Regional Services, the Library, Information Systems department, and Documentation/IT. It drew on the findings from the earlier survey. While the Group did not have formal terms of reference, its general aim was to develop an information policy for the Gallery, and to keep up to date with similar developments elsewhere. It was not at that point clear what the scope of any ultimate information policy would be, though it was envisaged that if successfully developed, it would cover information products.

In 1996 it was decided to re-form the Group with a broader membership and the remit of pressing ahead with developing an information strategy, using consultants to work with the Group and help in the process; this remained the intention at the end of the case study.

Discussions at that time suggested that key issues to be resolved included:

- The scope and definition of 'information management' in relation to the collections, and its relationship to the management of information technology.
- The approach to policy development and implementation – top-down, or by consensus among 'stakeholders'.
- The role of outside consultants in the process of policy development – should the whole process be entrusted to them, or should the main work be done in-house, with specialist expertise bought in where required?
- The 'ownership' of information – if it is accepted that the Gallery is the 'owner' of all the information resources, then is it useful to distinguish between 'guardians' and '

stakeholders' of information as well? Departments or individuals responsible for managing particular resources of information would be guardians, while people without management responsibility but with a legitimate interest in the information resource concerned, as users or contributors, for example, would be recognised as stakeholders with rights to participation in decisions.

By mid-1998, further changes had taken place. It was perceived that the Group was not really focused, and it moved to concentrate on developing an Information systems strategy. The resulting document set out an agenda for the next few years, and made recommendations on the as yet unexplored implications for how the Gallery should continue to manage information systems and the role of curatorial staff in relation to information. It embodied guidelines on how to manage information projects, with emphasis on deliverables in terms of benefits, and on their quantification. The especial need for total overall information management and a coordinating manager was recognised. The document was debated, and valuable discussions took place, leading up to its acceptance by the end of the case study period. The time which this process has taken is seen as worth while, because of the high level of acceptance of the ideas it embodies. It is now realised at top management level that there are measurable benefits to be had from managing information and having systems that support it. It seems likely that one outcome of this extended process will be a move to set a value on the Gallery's information assets.

An outline of the strategy circulated to staff in February 1999 defines its purpose as to provide systems which will support their work across the whole Gallery, on all sites; provide easy access to relevant and useful information; and facilitate smarter working and cross-functional co-operation. The first of the new applications to be introduced is a Gallery intranet, followed by a data warehouse holding mainly information extracted from existing and new application systems and designed to make it widely available – the first scheduled application will be an authoritative and unified mailing and contacts list. Selection of a new Collections Management system began in September 1998, with implementation due to begin in the summer of 1999; described as being 'at the heart of Gallery operations', it will feed information to a range of new systems delivering information to the public (including visitor information services and a project to create digitised images of the British collection); and the existing web site will also be enhanced. Other new systems will cover human resources and finance. The integrated use of information of all kinds, which the strategy will for the first time

make possible, obviously has potential for the development of new information products for a range of users.

Decision making on the development of the strategy is in the hands of an Information Systems Steering Group, headed by the Director of the Gallery, and two new staff roles have been defined: an Information Systems Development Manager, and a Corporate Information Manager, whose remit is to 'promote information sharing across the Gallery'. The Gallery's Head of Library and Archive is now undertaking this role, dividing her time equally between it and her existing post.

Organisational structure

The governing body of the Gallery is its board of Trustees. When this case study began, the organisational structure consisted of six divisions:

- Finance and Administration (Development Office, Finance, Personnel, Publications, Restaurant)
- Gallery Services (Building Projects, Gallery Management, Estate Management Unit, Support Unit, and Information Systems)
- Collection Services (Art Handling, Conservation, Photography, and Registrar's Department)
- British Collection (Research and Cataloguing)
- Modern Collection (Acquisition and Display)
- Public and Regional Services (Library, Archive Administration, Gallery Records, Exhibitions, Education, Communications; Tate Gallery Liverpool, and Tate Gallery St Ives)

Responsibility for externally directed information products was distributed between two divisions. Finance and Administration was responsible for commercial publishing through the Tate Gallery Publishing Ltd, which is a wholly owned subsidiary (financially separate from the Gallery since 1932); while the Communications Department within Public and Regional Services managed design and print production, the corporate identity, advertising, public information, educational publications, and interpretation products. The joint-venture journal, *tate: the magazine* was produced by an independent company, in association with Communications Department.

The information resources on which information products draw very largely were also distributed among different divisions: the Library and Archive was located in Public

and Regional Services, and management of the Gallery's collections database was in Gallery Services. The documentation unit in Gallery Services managed core information about the collection, which involved establishing standards, collecting and editing information, devising systems to structure and use the information; it also monitored and edited information input by other departments.

Since that time, large changes in organisational structure have been made, and others are in progress. There are now nine directorates:

- Finance and Administration
- Building and Gallery Services
- Collection and Research Services (formerly Collection Services) Library and Archive have moved here from former Public and Regional Services
- Collections – British and Modern Collections have merged
- National Programmes (formerly Public and Regional Services) Responsibilities will include: national programme co-ordination; Tate Gallery St Ives¹ loans and regional partnerships; broadcasting, digital and national, education programmes; corporate communications

Tate Gallery of British Art. Responsibilities will include: displays and exhibitions; interpretation/education; visitor services; operations

- Tate Gallery Liverpool
- Tate Gallery of Modern Art (the new Bankside gallery) Responsibilities will include: displays and exhibitions, interpretation/ education; visitor services; operations
- Tate Gallery of Modern Art Project directorate

With the development of further sites, it will be necessary to ensure that information and systems support is integrated across them, so that they go forward in parallel. There are implications for information products; including sending staff moving between different sites to contribute to their information products.

¹ The Tate Gallery St Ives will reorganise along the same lines as Liverpool, the Tate Gallery of British Art and the Tate Gallery of Modern Art.

Organisational culture

The structure and culture of organisations often echo one another, and this seemed to be the case at the start of this study. As just mentioned, responsibilities for information resources and information products were distributed among various divisions. There was, however, no regular organisational forum where the people concerned could meet to interchange information and negotiate – possibly because the existence of common interests was not fully recognised. While there had been temporary forums, like the Information Resources Group described above, they were described by some of those who took part in them as not working very well (possibly because of lack of formally agreed terms of reference for their activities).

Other features of the organisation's culture as it appeared at that time may have derived from the differences between museums and galleries as institutions. Art galleries, unlike museums, are often characterised by a 'temporary exhibition' ethos, which can lead to focusing on the current project at the expense of neglecting the collections which form the complement and the core of the special projects – a typical hazard in all kinds of project-oriented organisations. This approach may have constituted an obstacle to developing integrated policies; individual subjects became the subject of projects, policy papers on them were produced and submitted to the Trustees, and when approved their implementation became the responsibility of the originating department.

Questions that then presented themselves included: How do other departments know about the production of policy papers? Do they have the opportunity to contribute before they go to the Trustees? Is there a stage of presentation to colleagues and stakeholders once policies are approved, and before implementation starts? Is there any monitoring of policy implementation? It is understood that, as part of the developing culture which the Gallery is seeking to achieve, efforts are being made to involve more people both formally and informally, though it is said that the degree to which policy is circulated is still uneven.

There was also some indication of cultural differences deriving from differences in background, for example as between design management, information technology, publishing, and art history. The introduction of the corporate identity (designed for the Gallery by Pentagram), for instance, was reported to have been met initially with 'misunderstanding and hostility', which may have arisen from the lack of shared 'language' between designers and other professionals.

By mid-1998, the perception within the Gallery was that cultural changes were in progress. The balance within the organisation was said to have changed, particularly in regard to perceptions of the relative position of collections staff and others. The image is no longer that of a 'pinnacle' of knowledge located within one group; instead there is more awareness of the relationship between different kinds of knowledge and skill, and greater recognition of the contribution that all specialisms make to the knowledge base of the gallery. As a consequence, the concept of teamwork is becoming more of a reality and less of a worthy aspiration, and development in this direction is said to be gathering momentum.

Decision-making on information products

The commercial arm of the Gallery's publishing programme is managed by Tate Gallery Publishing Ltd. (a company set up in 1996) At the start of this study, a Publications Committee, acting on recommendations from senior management was responsible for editorial policy and investment, while Tate Gallery Publishing Ltd, employing a staff of nearly 40 in its retailing and publishing sections, managed the day-to-day work. The Committee has now been replaced by the Publications Group and editorial policy is in the hands of the company, which is described as being more proactive than before; Managing Director puts forward proposals for the publishing programme.

Over the period of this case study commercial considerations have become more important in deciding what books are published. Some products have moved from the commercial to the non-commercial area, in particular collection catalogues. Previously these were regarded as commercial and loss-making; they have now moved to being non-commercial products in electronic form. The argument for this development rests first on the ease of updating that it offers, and second on the potential for greater public awareness of the content of the collection, on the assumption that this will lead to more actual visits to the Gallery - an argument would probably not have been accepted until recently. The decision to publish the whole catalogue on-line is described as a brave one for its readiness to allow public access to 'work in progress'. The driving force behind this development was finance to start a digitisation programme provided by Tate Publishing - long term and far-sighted investment.

Co-production with commercial undertakings came to the fore some years ago in relation to multi-media products; after one venture described as less than wholly successful, the Gallery decided that in any future project it must retain control over

how information, including images, which it provides is used. The 1996 business plan described multi-media and electronic publishing as a very high risk area which should not be undertaken without a sponsor and a partner already in the field. In fact no potential partners have come forward.

The relationship between the parts of the organisation responsible respectively for commercial publications and for other externally directed information products at one time presented some problems in relation to the application of the Gallery's corporate identity. (For an account of design and production aspects, see p329). By the end of the study, however, these had become less significant, and any problems which were to arise today could be resolved. The publishing company is currently working with Communications to discuss the application of a new corporate identity.

Costs and budgets for information products

Up to the 1995/6 financial year, the Gallery accounted on a cash basis, and so the system had no predictive value for decision making on information products, or any other aspect of the Gallery's work. While each division received a set of accounts for its own area at the end of each month, this was not decision-oriented, but simply a record of expenditure. This led to the development of various informal systems; by the end of the case study, as part of the Information systems strategy then being implemented (see p120), a new information system for the Finance Department was about to be implemented. Today, as noted earlier, more emphasis is placed on budget planning in relation to objectives, and proposals for information products, like other proposals, require a quantified indication of benefits.

It is not as yet possible to indicate the proportion of the total revenue budget which is allocated to information products and presentation.

Tate Gallery Publishing Ltd products

An annual publication plan is prepared by the Managing Director of the publishing company. When the company was a trust, the plan consisted of a list of titles and costs, which was discussed by the Publishing Committee. Today each title proposed has to have a rationale and cost justification, and each is reviewed against the provisions of the Publications Business Plan prepared by the Managing Director and discussed and approved by the Board of TGPL. The nature of the books to be published is discussed

with an editorial group comprising senior members of the Tate and the Managing Director, which meets three times a year; the results of its discussions feed into the business plan. Between 1995 and 1998 the publishing programme expanded from 12 to over 20 books a year, with titles ranging from large scholarly exhibition catalogues to short introductory books for students and art lovers.

Non-commercial products

Budgets for non-commercial products, such as those created by Education publishing, which has an annual budget of about £8000, are established by the usual bidding process and controlled by the budget holders; where outside designers and printing are involved, the actual costs are negotiated by the Marketing section of Communications Department.

Three major exhibition leaflets a year are provided for in the budget (the catalogues are produced by Tate Gallery Publishing Ltd; the Marketing Manager is currently discussing with the publishing company the branding/identity of these) Normally three tenders are sought from a small group of printers with whom Communications consistently works; other factors besides price are taken into account and the cheapest quotation is usually, though not necessarily always, the one chosen.

Products on which Tate Gallery Publishing Ltd and Communications collaborate are the Biennial Report, the Forward Plan, and occasional broadsheets. Some not-for-sale publications are also contracted by the originating departments to Tate Gallery Publishing Ltd – the educational publishing programme for example is discussed with the manager of Publications for professional advice on the market for different items.

The information products

When this study began, print-on-paper was the main medium for all types of information product issued by the Gallery, both externally and internally directed. Over time, there has been a marked shift towards electronic products, particularly those for internal use, but also, as mentioned above, those which allow access to information about the collections. The development of the Gallery's web site, while still in a comparatively early stage, has made it possible to offer two versions of the catalogue: a publicly available one which has some restrictions in level and detail, and an internal version which is more utilitarian in appearance, but provides fuller information.

A linked initiative, still under development, is the Gallery's intranet, which will be used for informal as well as formal communication, and which will offer advantages in the planning of information products.

While these developments are a great help to desk-based staff, they are of little benefit as yet to other staff, who remain disadvantaged in terms of both access and training. While the Gallery is seeking to increase opportunities for access for all gallery staff, there is still a need for paper-based products. And as new Gallery spaces are developed, where staff will work in public spaces rather than small offices communication there will be other communication problems to be solved. One possibility is the integration of digital and voice-based systems, which could feed into the email system, and paper-based communications. Changes in the IT infrastructure have already ensured that all sites are now networked. High bandwidth enables transfer of traffic from all sites, and is able to cope with voice traffic. Working on projects across multiple sites thus becomes easier, and opportunities are created for increased organisational efficiency and improved response to the public.

The summary below indicates the range of information products, and how they have changed and developed over the period of the study.

Internal products for use within the organisation by its staff

Staff handbook

This was originally a word-processed document consisting separate sheets in a ring binder, issued to all staff in compliance industrial relations legislation. Production of the handbook was managed by the Head of Personnel; it was written in-house and discussed with the staff side, and updated periodically. The main sections dealt with: Contract; Policies and procedures; Amenities and benefits. The ultimate aim was to widen the scope of the Handbook, so that it contributed towards education. By the end of the case study, the Head of Human Resources was proposing a radical revision of content, with emphasis on staff rights rather than their obligations. The new product will be shorter, and it will be available on the intranet as well as in print. A manager's handbook, proposed in the 1998 Forward Plan, and to be developed by a representative group of managers working with the Training Manager, will form part of the new Staff Handbook.

Automate, Tate Gallery Library and Archive Newsletter

A current-awareness product, word-processed in the department. The content included a complete library accessions list, and archive news about collections accessioned and catalogued and work in progress. By the end of the case study period, this was no longer issued as a printed newsletter; instead lists of recent acquisitions and new serials are available through the Library and Archive collection management system.

Author's Guide

Designed to ensure standards of consistency in description, names, etc. for Gallery staff and others who write copy for the Gallery's information products.

External non-commercial

The Marketing Manager decides and manages the production of a range of materials to publicise Tate activities etc. after consultation with and input from staff in many departments. Most of these are produced by the Print Production Manager (Marketing Section, Communications Department) who advises on or selects a suitable method of production. Origination is either by In-house DTP (usually by the Print Production Officer herself) or by outside designers. Printing is by outside firms. Examples include such regular leaflets as:

Tate Events

Tate Education

Tate Courses

Tate Exhibitions

Future Plans

Tate Access (describes disabled access)

TatePlan (bi-monthly Gallery Plan with details of events, opening times etc.)

Bookmarks for major exhibitions, distributed free in bookshops as publicity

Free leaflets for major exhibitions eg Sargent, used for advance publicity before, and public information during, the exhibition.

The standard format is one-third A4, folded in various ways; most are printed in black with one colour; Tate Exhibitions has colour reproductions of works featured. Collaboration with departments is particularly close on some leaflets, such as: *Appreciate the Tate* (Friends of the Tate Gallery; leaflet about membership), *Performing*

Buildings (Tate Gallery Of Modern Art project team); *Art Trolley* (Public Events and Education)

The remaining products are designed and reproduced in-house via DTP software and photocopying, by staff from such departments as the Press Office, TGMA, Friends, Public Events and Education. The Print Production Manager advises on design, production and training in using DTP software, which is available in the Communications department and the Public Events and Education Department. Examples of this type of material include:

Press releases and press packs for individual exhibitions (Press Office)

Flyers advertising activities and events (Friends, Public Events and Education etc.) – A4, black and white

Resource packs for teachers (Public Events and Education) – illustrated notes for teachers, written by Gallery staff, A4

Family trails, and activity sheets for children (Education section, Public Events and Education) – Trails include *People and places* (John Singer Sargent); *Picturing places* (Patrick Heron); *People and faces*; (all produced in house, A4 or A5); and *Henry Moore* (produced outside). The activities include *Constructing Sculpture* (relating to an Anthony Caro sculpture); making a picture postcard (after Constable's *Chain Pier, Brighton*); and a surrealist dreaming wheel, which encourages its users to construct unlikely sentences and to use them as inspiration for their own creative activities.

Products for in-gallery use

In-gallery display labels, captions and texts; these are derived directly from the collections database, and described as 'push-button products', in ready tagged ASCII text. Wall texts giving interpretation and context have since 1990 been produced for every work displayed; these are set outside

TateInform

An audio guide (rather like a mobile phone) which can be hired by visitors. In the galleries, there are numbers beside works on which there is information in the system. Operation is simple – key in the number of a work on the keypad (a window shows the number and lights up), press a rocking button to play/pause, hold to the ear like a phone to listen to the commentary, an audible beep and 'End' in the window indicated when the commentary is complete.

Commercial

Tate Gallery Publishing Ltd products consist of exhibition catalogues and trade books, together with posters, postcards and a range of three-dimensional products.

tate: the magazine, for Friends of the Gallery, is edited and produced by an independent company, under a licensing agreement; revenue is shared with the Gallery.

Information resources

The resources which are in principle available to be drawn on for information products consist of the Gallery's Library and Archive, collections information in the documentation system, curatorial knowledge, and the Gallery's own existing information products - including its web site. Views about the location of responsibility for resources of knowledge and information have changed over time - at one time it was seen as a curatorial task, then as that of registration, and then as belonging primarily to documentation and IT.

Library and Archive

The Library and the Archive were separate for much of their history, but a restructuring in 1990 brought together the Library and part of the Archive within Public and Regional Services, while those parts of the Archive concerned with acquisition went to the Modern Collection (the Forward Plan for the period 1998-2001 includes the integration of the whole of the Archive with the Library). The Archive consists of externally originating material on British 20th century art, and the Gallery's own public records, for which the Gallery has statutory responsibility, delegated by the Public Record Office. It also holds certain key files from current records, and is responsible for an overview of all current files held and managed by individual departments. The Library's collections are a key resource for research on 20th century art, and are used both by researchers (Gallery staff and outside researchers) and by the public. The Archive is probably used more by outside researchers than by the Gallery's curators.

There is close co-operation between the Library and curatorial and education departments, whose staff use it for research when writing information products. The

Library's role is seen as an initiating one in respect of anticipating research needs in its acquisition and management of information. This entails both maintaining current awareness about developments in the art world, and keeping up to date with the development of the Gallery's policies and objectives; the Library manager participates in relevant meetings and receives committee minutes.

In other respects, the Library's role has traditionally been reactive rather than proactive, limited mainly to answering inquiries. Steps during 1992/93 towards installing a computerised UNIX-based system of library management (Unicorn) were undertaken partly with the intention of developing a more initiating role, which might lead to its contributing in new ways towards the development of information products. Another main aim was been to make the Library and Archive catalogues available via JANET, so that researchers can interrogate them from their own location. (The fact that the acquisition of the system was undertaken on the Library's own initiative was characteristic of the way the Gallery's introduction of IT had developed over a period; see p344)

By the time this study was nearing its close, the Library and Archive were reported to be going through something of a battle for resources to continue with catching up on the cataloguing back-log. At the same time, however, the exercise in developing an Information systems strategy was seen as having made management more focused on how to deal with essential gallery information, and the archival implications. The question was being asked 'Can we use the intranet to provide access to repositories of information? and to enhance their value by making them accessible?'

The documentation system

Over the period of this study, there have been small incremental changes in how information is managed in the documentation system. But while there have been quite small changes in structure, there has been a vast development in how information is extracted and used, brought about, as explained below (see p335) by the development of the Gallery's web site. It was possible to achieve this because of the thought invested in the original development of the system.

Responsibility for the collection database passed to Information Systems department when the Documentation and IT section was created there in 1990. Information held in word processing files which had been used to assemble copy for the 8th edition of the printed Concise Catalogue was imported into a database in the late 1980s, then

migrated through further databases before arriving in the current system in around 1989. Since 1989 the database has held a record for every work in the collection; and the concise catalogue type information about each work has been maintained to publishable standard. Other collection management type information (location recording) has been added incrementally. The current system is the Tate Gallery Database Program which was developed in-house to:

- Provide a framework for the collection of publishable quality information about the Tate's entire collection, to a defined standard
- Provide a framework for many extensions; e.g. the locations recording system
- Provide the fastest possible access to information for the most needed retrievals
- Provide access to record keeping facilities to staff largely unused to databases
- Generate practical products: eg concise catalogue, display labels, management reports
- Hold information so as to be re-useable in future systems

The system is accessible via a PC local area network. The core programs, standard and special functions are hard coded and compiled in Clipper. The data files are dBASE III type.

The rest of the documentation system consisted, when this study began, mainly of manual records holding information not held (or not yet developed) in the databases. These were located in various Gallery departments; major records series were: the Cataloguing Files in the British and Modern Collections; the Acquisition Files and Exhibition Files in the Tate Gallery Archive (current files held in Modern Collection and Exhibition Departments); the Inventory Ledgers, Renumbering Files, Strong Room books, and the historical Locations Records in the Registrar's Department; the Conservation Records in Paintings, Paper and Sculpture Conservation Departments; Installation Files in Art Handling Department.

Stores of images were also distributed (although many were indexed in the Collection Database), eg the Transparency Files in Publications Department; photographs filed in the Archive the Slide Collection in the Education Department and the Negatives Store in the Photography Department.

Communications Department had also compiled various resources which added value to these major records series, eg a card index to certain areas of subject matter, and a list of dealers representing artists shown in the Gallery.

Details of financial transactions concerning works of art were held in the current database and older manual records of the Finance Department, while the Development Office also accumulated less systematic information in its fund-raising database, concerning relationships between various benefactors and works in the collection.

Since 1996 the databases have not been substantially developed although work has been done to enhance and expand them in modest ways. Most development has been in exploiting the information already maintained to high standard in the databases and presenting it in new ways to new audiences: for example the illustrated concise catalogue launched on the Gallery's public web site in February 1998 is derived from the collection databases and over 8000 image files (most of which were created in 1997 during a project to scan the library of transparencies held by Tate Gallery Publishing Ltd.)

In the summer of 1998 the Information systems strategy paper recommended that a new collections management system should be procured as soon as possible to improve information sharing and use. In the autumn a project team representing user departments began work to specify and select a new system, intending to implement during summer 1999. The project is led by a registrar, with technical input from Information Systems department and help in steering through the procurement process and assembling the requirements from two external consultants.

The only regular direct contribution that the collections information system made to the Gallery's information products was the production of labels and captions from the collections database. Other products, such as broadsheets associated with exhibitions, and the 1991 ninth edition of the Concise Catalogue, incorporate information about the collections exported from the Tate Gallery Database program, as did various internal information products (for example: Trustee Acquisitions Lists, produced by Documentation section at the end of each financial year for presentation to the Board of Trustees; Acquisitions Memo, produced by the Registrar's Department to inform staff of works accessioned into the collection; 'Modern collection artists born in ...', produced annually by Documentation section to help decisions on which of the artists represented in the collections should be feted on their birthdays).

In 1996 the Gallery began to develop a range of World Wide Web pages which would be automatically refreshed from the Tate Gallery Database Program, to create information products for staff and public which drew directly on the Gallery's core databases. This work is now (late 1998) coming to fruition, and yielding payback and added value from earlier inputs. Work is now in progress on trying to put into machine

readable form the peripheral material which has links to the material in the collection database, such as supplementary text and conservation examination records, so that it too becomes accessible via the network.

Collections cataloguing is now described as an ongoing dialogue between documentation staff collections curators over the production of full catalogue entries; this development went hand in hand with proposals for developing the Gallery's web site, so those concerned were alert to the need to identify a core of information for public use, together with appropriate associated information. A project was commissioned at the end of 1997 to test out this approach for a general rather than an academic audience. The project delivers a number of texts; they were related to specific works and gave a biography of the artist, together with details of the context including techniques and condition. Answers were sought to such questions as – what are the essentials to cover? how much description should there be? how much history outside the item itself? what level of research is feasible? who should do it – a single originator, or a widespread group? with a high rate of acquisition, can we produce this level of documentation within three months of acquisition, together with photography and production of a digital image? The products from project are accessible on the web site, and market research is in progress on the feedback from the public.

Digitisation of the collection has also begun with 8000 works being digitised. A further initiative funded by the Heritage Lottery Fund, the British Art Information Project, aims to digitise the remainder of works in the collection by the year 2001.

The Tate web site

As will be seen from the preceding paragraphs, the Gallery's web site now plays a key enabling role in creating information products. The motivation for its development came from the top level thanks to long-term advocacy by staff who could appreciate the potential. In 1997 agreement and a budget were forthcoming. The underlying reason is described in these terms: 'getting to the visitor target was beginning to strike home'. The site was seen as an opportunity to contact the potential audience cost effectively, and it is said to have been taken very seriously by the organisation for developing identity; developing relationships with actual and potential visitors; and creating a community of educational groups. Four posts, including a Web Editor, have been created; and it is now a going concern. Web site management is shared between

Information Systems department and Communications and the existence of a good dialogue is reported. The very process of setting up the site demonstrated that there were multiple stakeholders, whose contribution was needed, and spread understanding of the importance of a high-quality well-managed database as the foundation for a site that added value.

The site is an attractive and welcoming one; the home page presents a straightforward site guide, with main headings of Collections, Online shop, Supporters, Contact us, Galleries (London, Liverpool, St Ives, elsewhere), and Future plans. Text instructions are clear and readable, and navigation presents no problems. Visually the site is unusually clean and elegant; it is typographically unified, typefaces are appropriate for screen viewing, page structure is based on a consistent grid and colour and images are of a high standard.

Web-based technology is also seen as the basis for visitor information at the Tate; envisaged as being intranet-based and providing follow-up information, leading to the development of focused 'conversational' interaction with individuals. It is seen as an example of a feature that is the Gallery's strength: developing new ideas about service provision.

It is illuminating to look back on an earlier version of this case study, which observed: 'The potential for using the valuable reference material in the existing records has, however, not as yet been fully exploited. While Documentation section can, and often does, produce one-off reports from the collection database in response to curators' requests for lists of works in certain categories to support or explore the feasibility of specific display proposals, retrieval facilities for end users are still limited. They can search in simple ways, for example by artist's name or by accession number; more complex queries have to be dealt with as special reports (for instance putting together captions for works to be included in forthcoming display programmes, for use by the Public Information desk). All that is currently available for subject searching is a list of subject headings, and the only system for subject searching consists of a card index at the information desk, which has been developed *ad hoc* but has the merit of being based on real questions asked by inquirers. It is recognised that this approach will need updating and extending to allow for other ways of searching by subject (eg scholarly iconography) if the Gallery is to move towards public access to its information resources, and the intention is to develop towards electronic searching.'

The remarkable progress that has been made in a short time would not have been possible without awareness on the part of those responsible for the development of

documentation standards are, that careful thought about the range of ways in which people want to look for and use information is more important in achieving a 'rich and detailed standard' for recording than just having a 'data model with lots of fields'.

Human resources for information products

Traditionally, the Gallery created its information products in-house; in recruiting staff, including those who would work on publications, however, it looked only for a visual arts background. Now it seeks candidates with previous experience elsewhere of relevant work.

Writing and editing

Writing makes something of a link between Tate Gallery Publishing Ltd and Communications, as some of the Gallery's commercial publications are written in-house by Interpretation staff (other publications are commissioned from outside writers). The Curator of interpretation is a professional writer; he and other curatorial staff are responsible for the text of TateInform and for extended captions and wall texts. Like other art historians on the Tate Staff, senior members of the Department may be commissioned by Tate Gallery Publishing Ltd. to write or edit series. Otherwise they produce non-commercial material. After the launch of the Tate Gallery of Modern Art and the Tate Gallery of British Art, interpretation will become increasingly site-based, and will raise many issues of site management.

Public Events section produces flyers advertising events or activities and is consulted by the Marketing Manager for leaflets such as Tate Courses. Education section does the same, but also produces a larger range of material for use by teachers, parents and children via DTP and photocopying. The latter are planned and managed by the Resources Officer in consultation with the Head of Department, the Schools Officer, Community Officer (both also part of Education section) and commissions freelance writers where necessary. The Department's current ambition is to produce these materials to a higher standard, via outside designers and printers commissioned by the Print Production Manager, Marketing section, Communication Department).

Both Communications and Information Systems department claim an interest in editorial control: the one in order to achieve consistency in presentation in words, the other to ensure that published material uses standard wording for specific information

elements. The Documentation Officer in Information Systems department edits collection database information, the Head of Interpretation in Communications edits a range of material, and two editorial staff in Tate Gallery Publishing Ltd edit commercial publications. The staff Marketing Manager and Print Production Manager also copy edit non-commercial information products, and the recently appointed Web Editor (who also works in the Marketing section of Communications Department) is responsible for editing texts other than the collection catalogue on the public web site.

Design

Preparing briefs for outside designers of non-commercial products is the responsibility of the Print Production Manager. Tate Gallery Publishing Ltd. makes its own design decisions, which are taken with an emphasis on book typography appropriate for the content of the individual titles.

Training

In the early stages of this case study, training in relation to information products and presentation appeared to centre mainly on the use of desktop publishing.

Responsibility was shared between Communications and Information Systems department. Communications provided a 3-day course on using the software, and instructions on using the corporate identity; these were run by its print production manager, who set up templates for a range of applications.

The DTP (Ventura) training provided by Information Systems department was limited to 'tightly controlled applications' in connection with structuring the output from collections databases. Resources and responsibility rested with the Head of Information Systems, and the Documentation Officer provided database training. Standard forms were provided for anything done in-house. An introductory word-processing training programme, provided by external trainers in collaboration with in-house staff was been introduced for Word for Windows.

By mid-1998, the Gallery was making what was described as its first consistent approach to training. It had appointed a training manager, who is working with IS and other staff on defining levels of training for information and IS products. The aim is an enhanced form of training to make people better at using the technology and systems,

and to develop their understanding of how to manage information and flexibility in communicating.

The technology used for information products

As mentioned earlier, introduction of IT into the Gallery was piecemeal; it was only in the early 1990s that it has started trying to develop a co-ordinated strategy, and the applications used in creating information products could be described as being separate from other uses of IT and internally somewhat fragmented. In 1995 a unifying step was taken with the introduction of Windows throughout the Gallery; there were by then more than 300 pcs linked in a Wide Area Network which included, besides the main Gallery, those at Liverpool and St Ives. People were said then to be becoming more aware through experience of the possibilities of building links with colleagues. The platform was described as a basic one, and as needing adequate support, which would be developed over time. There was a particular interest in providing transparent tools like World Wide Web browsers, and linking information from the collections database to images, within a framework of standards and interaction – an interest, which, as described above, is well on the way to fruition.

The first steps towards computer-based management of collections information were taken in the mid-80s in the Registrar's department, moving later to Information Systems department, as described on p331. One of the first uses of the technology was the production of the printed concise catalogue from the collections database in the early 1990s, using desktop publishing software.

The desktop publishing system in Communications was used for small-scale external materials, while the separate system maintained by Information Systems department was restricted to uses connected with the collections database. The Registrar's Department used desktop publishing to produce labels, a process under the control of Information Systems department. Internal information products were mainly word-processed.

By the end of the case-study period, the use of in-house desk-top publishing has expanded, in what is described as a more focused way. Digitisation has created many high-resolution images which can be transferred electronically to external publishers, and Tate Gallery Publishing Ltd. is well aware of the potential this offers. There is increasing interest in in-gallery print-on-demand for the public. The experience of the web site has led to a great increase in copyright awareness, because of the necessity of

getting permission from owners of copyright – a process which actually went well; very few individual artists refused, and agreements were negotiated without too much difficulty.

The presentation of information

The Tate Gallery Publications Business Plan for 1995–98 set out the situation so far as Tate Gallery Publishing Ltd products were concerned:

Tate Gallery Publications has long enjoyed an international reputation for the quality of its design and production. The classical approach to typography has enabled backlist books to reprint again and again without looking dated. Each year at least four Tate books are among the "100 Best Designed British Books of the Year" chosen by the book trade and exhibited in London.

In the course of 1995 Tate Gallery Publishing Ltd carried out a review of its use of print, and identified different typographic requirements for various elements of its list; the outcome was a decision to continue to use traditional print where justified.

The strand of presentation represented by the Gallery's corporate identity dates back to 1991-2, when the design group Pentagram were commissioned to design a new corporate identity for the Gallery. The corporate identity has been described as being 'a tough thing to bring in', because of the lack in the Gallery's culture up to then of a design approach. It also raised the issue of how far the activities of TGP should be brought within the identity.¹ The view of the incoming Head of Publications in April 1994 was that a clear distinction should be made between the Retail and the Publishing; while it was agreed that the ID should be used in the Shop, according to the Business Plan:

The books are a completely different matter. Here TGP is already established in the market place, which is an international and not parochial one. To present an exciting and varied list ranging from 16-page leaflets to 600-page catalogues

¹ By mid-1998, innovations introduced by a new Director of National Programmes included branding for individual parts of Tate, which had evident impact on the corporate identity; a degree of tension in this area was reported as continuing, though it was regarded by some observers with some amusement.

requires a varied choice of designers, who are there to serve the book rather than force it into an existing straitjacket. It is not suggested that formats and typefaces should each have their own identity, but customer appeal and the needs of the book are paramount.

And the Plan suggested that TGP itself needed an ID as a publishing house, allied to the Gallery's but clearly distinct, showing that 'this is a professional, financially independent organisation, able to compete in the world of Thames and Hudson or Prestel [*Prestel Verlag*] '.

At the end of the case-study period the Managing Director of TGP Ltd and the head of Communications were working together to discuss the application of a new corporate identity (being designed this time by Wolfe Olins).

Production

When this study began, production of non-commercial items for public distribution was managed by Communications; a development resulting from the introduction of the corporate ID. They used a small number of printers regularly, from whom tenders are sought for appropriate jobs. Apart from the labels and captions automatically originated from databases (see p329), other products were mainly originated by word-processing; in some cases the ultimate product was directly from that, in others typesetters or printers might still re-key from hard copy; more usually a text-file from the word processed file was used to originate typesetting. The main catalogue was typeset externally (as mentioned earlier, it has now moved to the web site). At least one product (the Illustrated Companion to the Tate) was produced (in 1990) using Monophoto.

The objectives for 1994/95 included the production of an increasing amount of print via DTP, and as indicated above, this has in fact come about, with more focused use of this technology.

With the structural changes described earlier, non-commercial information products are now the responsibility of the Division of National Programmes; in this connection education and associated information products will play an increased part, with the institution of an important programme of high-level in-house courses for specialists.

Testing, monitoring and evaluation of information products

At the start of this case study, activity in this respect was described as being 'not very sophisticated'. The main findings about the effectiveness of information products had emerged from a Visitor Audit commissioned in 1994, which used observation, interviews in the galleries, a survey, and focus group discussions.

Findings with a bearing on information products and presentation which emerged from the Audit include:

- A high level of use and appreciation of extended captions and wall texts.
- A demand for more information about what is on display, about what is in the collections and not on display, and about the background to works.
- Low level of use of Information signage and broadsheets.

The consultancy which carried out the Audit recommended among other things:

- Establishing an Information Centre where visitors could access information on the collections and consult current exhibition catalogues.
- A 'Micro-Gallery approach' (similar to the interactive hypertext-based guide at the National Gallery) which would allow visitors to locate particular works or themes for themselves and plan their own route round the Gallery.

A survey of the readership of *tate: the magazine* showed that this product was the second most important factor in encouraging Friends to renew their membership, and the third most important in terms of recruitment of new Friends.

By the end of the study evaluation of individual products or groups of products was focused on whether they achieved their stated objectives within the terms of their production. Cost-effectiveness plays a large part in the appraisal, especially in the case of Tate Gallery Publishing Ltd, where, as mentioned earlier, each proposal for a product has to have a rationale and cost justification, which serves as a post-publication evaluation criterion.

Development of the Gallery's web site has been instrumental in progress in eliciting responses from users and building interactions with them. Responses to the site have been positive, and it has brought unsolicited endorsement. Contrary to expectation in some parts of Gallery that only a few hundred people in the world would be interested in the on-line catalogue, there have been tens of thousands of users world-wide, and the site received 21 million hits in 1998, from over 120 countries.. There is now a need to develop methods, in addition to the Visitor's Book, of using the Web site to get

information from people. The information desk's subject indexes based have been transcribed to the internal web pages for preliminary evaluation by staff.

An evaluation of the present situation

The fundamental changes over the period of the case study which have been described above mean that my evaluation at the close is different in many ways from the way in which I saw the situation in the early stages. It seems fair, therefore, to present both and to show how and why they have changed. It is pleasant to report that I close this study more encouraged than I was at its start.

Throughout the case study there have been several factors which have implications for future developments in the areas which form the focus of the present research. They relate primarily to how people define such terms as information, information policy, and information management, and *how* they think they should contribute to achieving the Gallery's aims.

Information policy development

In the early stages, while information policy was much discussed, there seemed to be differing visions of what the policy is seeking to achieve; on the one hand it was seen as a matter of 'opening it out to users of information' and drawing in stakeholders, and on the other as a means of getting influential people to understand the significance of information, and as being strongly identified with a strategy for the use of information technology.

There also appeared to be different views on the role that outside consultancy should play in the development of information policy. One opinion was that, to convince senior managers of the significance of information, it was necessary to entrust external consultants with the task; an opposing view was that to do so would both disregard the essential contribution to policy formulation from the inside knowledge of staff and pass an implied judgement on their quality. On this view, the Gallery's own staff should take the lead, calling on outside expertise for support where necessary.

Alongside these variations in strategic approach there were differing understandings of what information consists of – some people thought it was simply what the Gallery presented to the outside world; no connection was seen with where that information came from, or how resources of information about the collections

were organised and maintained, or the economics of the process. The past history of what had by then become Communications may have some bearing on the confusion of views; it was previously called the Information Department, and the change of name was made in order to develop what was described as a 'pro-active department to sell the Gallery'. It may be that the concept of information became attached to pro-active selling in the process.

It was also reported that up to recently it had been difficult to 'identify that IT and information management are separate and different'. Understanding of the distinction by the time the case study began had led to the creation of an Information systems department with IT and information management as separate sections. This suggested that information management was perhaps seen as lying within information systems, rather than systems and IT being regarded as an essential infrastructure designed support an information management strategy that would serve the full range of what the Gallery needs to do with information in order to meet its objectives. (The two views of information management are associated essentially with, on the one hand, a systems and IT approach, and on the other one deriving from information science – they are easily distinguishable in the literature, but today show some signs of beginning to converge.)

Changes in the period 1997/98 have led to a focus on information systems strategy, which is seen as leading to an overall information management strategy, with a role for a co-ordinating manager. It seems that initiatives from information systems staff who have a good understanding of what information and information management mean have, over the long term, begun to win the day and convince top management. This process has been accompanied by cultural changes manifested in a 'different balance within the organisation' as between groups with various kinds of specialist knowledge. (The experience of restating their positions at various stages in the present case study is, incidentally, said to have helped the staff concerned with this process in focusing their ideas.)

The development of the Gallery's web site has been of particular significance in this context – it has been possible to take advantage of the long-term and hitherto not much regarded thinking invested in the collection database in moving quickly to important information products and foundations for interaction with users, as well as to establish in the process a sound basis for the Gallery's intranet. This process has helped to bring together diverging views about the nature of information and the

relative importance for the Gallery of information directed to the outside world and information deriving from documenting the collection.

The use of IT

When the study began, there was a history of piecemeal introduction of information technology, without any coordinated strategy; individual departments had taken their own initiatives, and incompatible (and sometimes unsuitable) systems had been bought at different times by various departments. There had been particular problems with corporate information, which had been distributed among multiple databases, some with poor retrieval facilities, and in general very task oriented, and the Gallery still lacked a proper contacts database which would form a single resource for information about people and institutions. The idea of a single integrated system for management information was described as still being 'deeply revolutionary.'

This situation may have been associated partly with past management attitudes, which encouraged independent initiatives, and partly with the fact that the Gallery had few professional IT staff at its disposal to support developments for which different departments had a legitimate need; it also reflected the functional diversity of the institution and its culture.

Here too, time has brought beneficial changes; in this instance, the Gallery's impressive expansion programme, with its new sites and the possibilities they offer, has brought about new thinking on the use of technology and has provided incentive for a drive towards unification. All sites are now networked. At the same time, the Information systems strategy should include a clear definition of the strategy for IT.

One positive feature identified in the early stages by various people was that the Gallery had not leapt headlong into investing in the latest fashionable technologies, such as multi-media and image databases. It is now reaping the rewards for this caution; although in these matters one is always to some degree in pursuit of a moving target, the Gallery is in a strong position to develop its digitisation programme and its web site, and to embark on innovative developments to meet the needs of its new gallery spaces.

Information products and presentation

In the early stages of this study, the fragmented way in which information products were managed was noted: information products tended to be seen as discrete items, existing each in its own right, rather than as the end product of a process drawing on a range of sources. Each one was consequently composed in isolation and did not become automatically integrated into overall information resources. While there were some high-quality products, each was self-standing, and not specifically related to what the Gallery as a whole sought to achieve through information. While responsibilities for information products were distributed among various divisions, there was no regular organisational forum where the people concerned could meet.

Over time, there has been more thinking about how information products should support what the Gallery is seeking to do, particularly in relation to the appropriate division between commercial and non-commercial, and to electronic as against printed, as with the collection catalogues (see p324). They have become more integrated into overall strategy and objectives; proposals for information products, like other proposals, now require a quantified indication of benefits. The lack of a meeting ground for those with responsibilities for information products may be rectified with the structural changes of 1997/98, and the development of Information systems strategy described above (see p320). Training in relation to information products has also come to be taken more seriously and a consistent approach is being developed.

Differing views on presentation appear still to exist. The role of the corporate identity introduced in the early 1990s was, as noted earlier (see p323) was something of a bone of contention so far as the commercial publishing arm of the Gallery was concerned, though this has largely been resolved since then, and those responsible for its introduction elsewhere found the process a difficult one. In the closing stage of this study, a further element had been introduced, with the concept of branding for individual parts of the Gallery, and the development of a new corporate identity. The presentation of information products is another area where development of the Gallery's web site may lead to more fundamental thinking in relation to total rather than surface aspects of presentation.

Information resources

As observed earlier (see p318) there have been changes over time at the Gallery in views of what constitutes information resources, their place in the organisational structure, their management, and their role in relation to information products. In the early 1990s, the term was seen as meaning materials and media for information delivery to the public; now the more usual sense of the term, as covering such entities as libraries, archives, collections documentation and the systems to support their use, is accepted. At one time the main responsibility for information resources as so defined was seen as a curatorial one, then as belonging to registration, and later again as that of documentation and IT. A more integrated understanding is now emerging from the development of an Information systems strategy, and the need for co-ordinated information management has been recognised, with the appointment of the Gallery's Head of Library and Archive as Corporate Information Manager.

Large-scale changes are in progress as this case study closes, and there is still a long way to go, but the more integrated approach to using information which has developed makes it likely that a) the Gallery's information products will be seen as part of its total information resources, and b) there will be more comprehensive and strategic use of its resources of knowledge and information as a source of information products.