

# About : Information Design

By Sue Walker and Mark Barratt

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A guide to information design, introducing current thinking applied to public and private sectors, highlighting future trends and challenges and including facts, examples and a glossary.

## In brief

*Also known as communication design or information architecture.*

Information design is concerned with making complex information easier to understand and to use. It is a rapidly growing discipline that draws on typography, graphic design, applied linguistics, applied psychology, applied ergonomics, computing, and other fields. It emerged as a response to people's need to understand and use such things as forms, legal documents, computer interfaces and technical information. Information designers responding to these needs have achieved major economic and social improvements in information use.

Today it is hard to imagine life without information design. It is used by almost all large organisations and governments where the costs of misunderstanding are large. Some examples of bad information design might include: forms that are incorrectly completed and costly to process; instructions that cause frustration and even danger and that may damage the reputation of the provider; education materials that fail to promote learning; scientific and technical data that are open to mis-reading and misinterpretation; command and control displays that fail to alert operators to potentially

dangerous situations; and websites that are difficult to navigate and unpleasant to look at.

Information design is user-centred. Usually, it is iterative - design solutions are tested and modified repeatedly. Sometimes the testing is local and informal; sometimes a project justifies formal and extensive usability testing and evaluation.

Information designers serve the needs of both information providers and information users. They consider the selection, structuring and presentation of the information provider's message in relation to the purposes, skills, experience, preferences and circumstances of the intended users. To do this they use specialist knowledge and skills in developing:

**Clear language** - Information designers can improve the clarity of documents by:

- redrafting existing documents into clear language
- writing documents from functional descriptions
- auditing existing documents to help staff improve them
- producing useful writing tools such as guidelines and examples, online thesauruses tailored to your needs, training and awareness programs.

**Typography and graphic design** - Information designers use typography and graphic design to clearly structure and articulate information with the needs of particular users and circumstances of use in mind. They improve many kinds of explanatory and instructional texts by transforming complex material into a graphic form that is easy to understand as well as being attractive.

**Process analysis** - Information designers understand that documents have contexts. They exist in real organisations and have real jobs to do. To make them work may well mean changing the way the organisation works as well as changing the way a document looks and

reads. It may mean adding new, or abolishing existing, documents, or changing the way information moves - for instance from paper to electronic. And it means being ready and able to measure the business impact of new ways of doing things.

**Multiple media publishing** - Today, many information products, from dictionaries through city guides to parts catalogues may be accessed via paper, the internet, digital TV and phones or PDAs from a single information base. Information designers can help to make that information usable by shaping different interfaces for each 'channel' to meet needs of users and the characteristics of the channel.

**Research and copywriting** - Information designers can take an idea and follow through with research and copywriting to meet the communication needs. Because many information designers write and design together, the resulting product is far more focused on a vision of what will work with particular users. This approach also has management advantages: 'drafts' (and revisions) normally appear faster, and sometime cost less than doing two jobs separately and trying to synchronise them. Information designers draw on research in a number of fields, such as the psychology of reading and learning, human-computer interaction, usability and linguistics.

Further definitions can be found at:

website:

[www.bogieland.com](http://www.bogieland.com)

website:

[www.stcsig.org/id/definitions.html](http://www.stcsig.org/id/definitions.html)

website:

[www.iiid.net](http://www.iiid.net)



## Why it matters to business

'When a company conveys a vision of itself, there's promise and reality. The promise is delivered by promotional items; reality is often delivered by information design; and it's the quality of reality which leads to further business.'

Rob Waller, *IDeAs* Issue 13, September 1994, p.3

Good information design reduces the cost of doing business while making the experience more pleasant for customers:

- good instructions reduce calls to help desks or customer centres
- clear forms cut customer 'errors' which lose sales and create delay
- straightforward bills and payment demands increase cashflow
- comprehensible annual reports tell the story more effectively
- simple process descriptions and procedures promote quality and traceability
- good signs in the right places save everyone time and spare their frustration.

Applying information design principles to internal documents such as forms, spreadsheets, databases and reports helps to ensure the efficient and effective gathering, processing and dissemination of information. Decision-makers will benefit particularly from clear internal reports and presentations.

Information design will also help a business to communicate effectively with its customers via its tender documents, brochures, technical specifications, instructions for use, publications, website, contracts, invoices, bills, etc. There is now the potential for customising many of these documents, but this introduces



a new range of design challenges. Badly designed documents cost money because they fail to elicit the response required, and they may frustrate and even alienate customers who have the option of shopping elsewhere.

## Why it matters to public services

Information design can dramatically improve people's relationships with public services through user-friendly documents and systems. Effective information design can enhance the efficiency with which these services are run, improve the uptake of services, and help to create a positive relationship between service suppliers and service users.

Like business, public services benefit from more efficient internal communication, and the facilitation of decisionmaking through clearly presented data in reports and presentations. In the public sector such documents may be produced without the help of a designer, but the design issues they raise may be too complex to be adequately dealt with by untrained staff.

## Examples

Project: **Wayfinding in complex healthcare environments**

Client: **NHS**

Designer: **Enterprise IDU**

Year: **2000**

At healthcare sites, people are often stressed before they arrive; being unable to find their destination only adds to their anxiety. This study of 27 sites led to the NHS commissioning new guidelines for wayfinding systems.

Project: **Information design methods and productivity in the insurance industry**

Client: **Capita**

Designer: **Communication Research Institute of Australia**

Year: **1989**

The application of principles of information design to an Australian insurance company's forms resulted in a significant reduction in errors and processing costs. Techniques used included measurement of errors and their costs, practical iterative testing, and user consultation.

Project: **Simplifying environment forms**

Client: **The Environment Agency**

Designer: **Text Matters**

Year: **1998-2002**

Using stakeholder review, business process analysis and systematic, user-focused forms analysis, authoring and design helped the Environment Agency reduce the number of customer-facing forms it administers from 1,200 to fewer than 250. More management attention to fewer



forms resulted in better, clearer forms and allowed more recent developments, such as changes in Data Protection legislation and the need to deliver paperless forms, to be delivered in a straightforward and consistent way.

Project: **Helping people work more effectively**

Client: **The PRISM Project**

Designer: **Text Matters**

Year: **2001**

Multinational collaborative research projects between very diverse partners are increasingly the norm - and are very hard to manage and co-ordinate. By using a web-based collaborative workspace, the business and academic partners in the PRISM project probing the nature of 'intangible' assets in national and business life, have been able to share and discuss their work easily and naturally.

Project: **Phone Bills**

Client: **Cable and Wireless**

Designer: **Enterprise IDU**

Enterprise IDU designed phone bills for Cable & Wireless (the business was subsequently sold to ntl) that reduced customer calls to its call centre by over 35% when they were introduced. The design process started with an audit of customer enquiries, and the new bill was designed specifically to eliminate these, as well as to create a more flexible vehicle for billing the more complex and varied products that were being introduced with the launch of digital TV. For many service companies, bills and statements are the most important points of contact with customers, and affect many key business areas, including customer retention, cross-selling, revenue collection, and brand experience.

Project: **Registration materials redesign**

Client: **Open University**



Designer: **Effortmark**

Effortmark recently user-tested the introductory letter, registration form, and accompanying booklet of notes that are sent to new students by the Open University. The OU reworked the form, simplified the wording and restructured the letter and booklet. There was a saving of 25% on printing costs in the first year, which covered the cost of usability testing. The OU was also able to redeploy staff who had previously dealt with problem cases to more productive work.

## Facts and quotes

### Quotes

'Business and industry have learned that their products ought to be aesthetically pleasing. A large community of designers exists to help improve appearances. But appearances are only part of the story: usability and understandability are more important, for if a product can't be used easily and safely, how valuable is its attractiveness? Usable design and aesthetics should go hand in hand: aesthetics need not be sacrificed for usability, which can be designed in from the first conceptualisation of the product.'

Donald Norman, *The Design of Everyday Things*, 1988

'Whether we call our audiences readers, users, customers, or stakeholders, they all want the same thing: to feel that someone has taken the time to speak clearly, knowledgeably, and honestly to them.'

Karen Shriver, *Dynamics in Document Design*, 1996

The point of testing designs is to properly and politely consult people who will end up having to work or play with the product you are developing. Testing is an act of politeness, not a method of science. It is an admission of humility and an expression of one's desire to listen and serve. It is a request for help.'

David Sless, email to InfoDesign-Café, 14 January 2000

'If the product begins with wrong assumptions and faulty premises about the user, the product is almost guaranteed to have usability problems later.'

Jeffrey Rubin, *Handbook of Usability Testing*, 1994

## Challenges

The challenges in information design are common to all sectors:

- There is a need to find new methodologies that usefully combine the strengths of a planned, sequential approach to project management with the strengths of the iterative, intuitive approach of traditional designers.
- An integrated approach to the design of documents, whether printed or electronic, requires a number of different kinds of expertise. Increasingly, no single person is likely to have all the skills needed to carry through a major design project. In particular, information systems professionals need to develop project methodologies which incorporate information design skills early in the project development process.
- Results of research from a number of disciplines can help information designers to avoid unproductive approaches to a problem. The challenge is to locate relevant research and understand its implications.
- With the ready availability of computers and software, there is an increasing tendency in all sectors for printed and electronic documents to be produced by people without any design training. The challenge is to demonstrate that information design can be of real and measurable benefit to both information providers and information users.
- The increasing use of the web as a way of delivering information to the public means that information providers must cater for a range of IT skills and must ensure that people with disabilities are not excluded.
- A multi-channel world encourages the creation of information that can be 'rendered' on paper, on the



web, on digital TV, a phone screen...the challenge for information design is to make this work and to make sure the information is usable in each of these situations.

## Future trends

There is a trend towards the provision of publicly accessible web-delivered information resources, providing information on such matters as public services, health, education, legal matters, etc. The quality of the information design will be a key factor in the success of such resources.

Electronic systems have made it possible to customise many kinds of information to suit the circumstances and needs of individual users or user groups. Billing systems are an example. This is a trend that is likely to continue. It poses special problems for the information designer, who must allow for countless different combinations of data items on a page or screen, and it requires close co-operation between information designers and information and communication technology specialists.

A more holistic, integrated approach to design is becoming widespread among information designers. For example, a good designer, if asked to design a form, will begin by asking what the form does and why it is needed. This may lead to a much wider reappraisal of an organisation's documentation systems. If the need for the form is confirmed, the designer will want to know about the requirements of everyone involved with it in any way (the stakeholders), and will consider the content and wording of the form as well as its visual appearance. Increasingly, this suggests problem-solving teams which include information designers with business process analysts, information systems professionals and so on.

Knowledge management - helping an organisation to correlate and exploit the information it holds - is critical to success. Information design is increasingly concerned with knowledge management, particularly in finding and presenting significant patterns in disparate information sources.

There may be a move towards laying down minimum acceptable standards or regulations governing the presentation of certain kinds of information. Patient information leaflets and contracts of various kinds might be examples.

The provision of taught postgraduate education in information design is a relatively new and necessary development.

## Glossary

**Effectiveness** - The speed, accuracy and completeness with which users can perform particular tasks in particular circumstances.

**Efficiency** - The resources expended in relation to the speed, accuracy and completeness of tasks performed.

**Empirical testing** - Relying on observation and experiment, rather than theory derived from the literature.

**Ethnographic research** - Testing that is carried out under realistic conditions of use. Results are usually qualitative rather than quantitative.

**Iterative design** - The process whereby a design is tested with users, modified and retested until the result is considered satisfactory by all stakeholders.

**Knowledge management** - Helping an organisation to make full use of the information it holds by correlating separate sources and showing how they can be exploited.

**Legibility research** - Research on typographic variables and their effect on legibility.

**Parallel publication** - Simultaneous publication of a document in printed and electronic form.

**Stakeholder** - Anyone who has an interest in a document (printed or electronic), whether as originator, a processor or as end user.

**Total user experience** - Takes into account all aspects of the circumstances in which a design will be used.

**Usability testing** - Systematic evaluation of design alternatives by a panel of users.

**User-centred approach** - Evaluates the effectiveness of a design for users performing particular tasks in particular circumstances.





# What do I do next : Information Design

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Advice on using and practising information design, including FAQs, tips, standards and regulations, events, a reading list and signposts to further information.

## FAQs

### **1 I have all the latest software, and staff who know how to use it. Why do I need a designer?**

Computer skills alone will not enable your staff to produce well-designed documents. At the very least they will need some basic design skills, and preferably a training in information design, graphic design or interaction design.

### **2 What's the difference between an information designer and a graphic designer?**

Information designers have a particular interest in working with complex documents, whether printed or electronic. They are particularly concerned with the ease with which information can be accessed and understood by the reader. They are likely to want to involve some kind of user evaluation in their working method.

### **3 How can I measure the benefits of information design?**

It depends on the kind of design problem. Some benefits are easily measurable: if a form is easy to understand and to fill in, an organisation is likely to receive fewer phone calls. Much good information design is not noticed: from the user's perspective it is transparent - it does not get in

the way of them finding out what they need to know or do so they don't comment on it directly.

#### **4 Where can I study information design?**

The most established course (1968) that embodies information design principles was the four-year BA Typography & Graphic Communication at the University of Reading, UK. This has now been replaced by two undergraduate programmes that include theory, history and practice of information design: a four-year MDes Graphic Communication (which has replaced the four-year BA) and a three-year BA Design for Graphic Communication.

website:

[www.rdg.ac.uk/Typography/](http://www.rdg.ac.uk/Typography/)

Coventry University runs two information design programmes: BA Communication Authoring and Design; BA Graphic Design.

website:

[www.coventry.ac.uk/csad](http://www.coventry.ac.uk/csad)

A list of courses which offer information design is being compiled by InformationDesign.org.

website:

[www.informationdesign.org](http://www.informationdesign.org)

#### **5 What opportunities are there for studying information design at postgraduate level in the UK and overseas?**

MA Information Design is one of four taught postgraduate programmes offered by the Department of Typography & Graphic Communication at the University of Reading.

website:



[www.rdg.ac.uk/Typography/](http://www.rdg.ac.uk/Typography/)

## Top tips

- 1** Expect an information designer to want to consider your design problem in its business context. This may mean that they will question whether designing what you are asking for will solve your problem.
- 2** When discussing the project with your information designer, try to keep an open mind. You are paying the designer to analyse the problem for you and to recommend what he or she considers to be the best solution.
- 3** Expect an information designer to want to discuss the content and wording of your documents, as well as their appearance.
- 4** If different subcontractors are tackling different aspects of the same project, do make sure that they are able to meet and co-ordinate their approaches. For example, if information technology specialists and designers are working on the same database, they must each be aware of the other's requirements and constraints.
- 5** Whenever possible, try out new documents on a panel of users, or arrange for this to be done. Even if you don't have the resources for formal usability testing, informal trials with just a few users can be very helpful.
- 6** Understand your audience and their needs. Involve them in the project and listen to what they tell you.

## Reading list

Much of the writing about information design that is of use to information designers is to be found in journals rather than books.

*Information Design Journal* (IDJ), founded in 1979, is a key information source. It is now published by John Benjamins Publishing company. The most recent issue is volume 10:3, January 2003.

website:

[www.benjamins.nl/idj](http://www.benjamins.nl/idj)

As well as the books listed below, see also the booklist prepared by the US Society for Technical Communication, Information Design Special Interest Group.

website:

[www.stcsig.org/id/booklist.html](http://www.stcsig.org/id/booklist.html)

A Dillon, *Designing Usable Electronic Text: Ergonomic aspects of human information usage*, Taylor and Francis, 2003, ISBN 0415240603

J Hartley, *Designing Instructional Text*, Stylus, 1999, ISBN 074941037X

R E Horn, *Visual Language: Global communication for the 21st century*, MacroVu Press, 1999, ISBN 189263709X

R Jacobson (ed), *Information Design*, MIT Press, 1999, ISBN 026210069X

K A Schriver, *Dynamics in Document Design*, John Wiley & Sons, 1996, ISBN 0471306363

D Sless and R Penman (eds), *Designing Information for People*, Communication Research Institute of Australia, 1994



E T Tufte, *The Visual Display of Quantitative Information*, Graphics Press, 1992, ISBN 096139210X

H Zwaga, T Boersema and H Hoonhout (eds), *Visual Information for Everyday Use: Design and research perspectives*, Taylor and Francis, 1998, ISBN 0748406719

## Further information

### **Academic research organisations**

#### **Department of Typography & Graphic**

**Communication, University of Reading**, one of the leading design research departments in the UK (rated 5 in RAE 2001). Research covers a number of aspects of information design.

2 Earley Gate, Whiteknights, Reading, RG6 6AU

website:

[www.rdg.ac.uk/Typography/](http://www.rdg.ac.uk/Typography/)

#### **Visual and Information Design Research Centre,**

**Coventry School of Art and Design**, conducts research into the design and evaluation of human-computer interfaces and technical communications.

Coventry University, Priory Street, Coventry, CV1 5FB

tel: 02476 887766

website:

[www.coventry.ac.uk/csad](http://www.coventry.ac.uk/csad)

#### **Communication Research Institute of Australia**, a

not-for-profit organisation supported by its members.

Carries out research on websites, billing and letter systems, forms, health information, label and product information, strategic communication reviews, etc.

website:

[www.communication.org.au](http://www.communication.org.au)

### **Organisations**

#### **International Institute for Information Design**

**(IIID)**, Vienna-based international organisation, running





the regular VisionPlus conferences. IIID focuses on information design for business communications, product development, orientation in the environment, training and education, and the better understanding of scientific knowledge.

Joergerstrasse 22/, A-1170 Vienna, Austria

tel: +43 (0)140 36662

email:

[info@iiid.net](mailto:info@iiid.net)

website:

[www.iiid.net](http://www.iiid.net)

**Institute of Scientific and Technical Communicators,**

interests include all aspects of the writing, illustrating, design and publication of scientific and technical information in whatever medium. UK-based.

P.O Box 522, Peterborough, PE2 5WX

tel: 01733 390 141

website:

[www.istc.org.uk](http://www.istc.org.uk)

**Sign Design Society,** society for people involved and interested in sign design, maps and wayfinding. Monthly talks and debates, quarterly newsletter, seminars, sign design awards. UK-based.

66 Derwent Road, Kinsbourne Green, Harpenden, Hertfordshire, AL5 3NX

tel: 01582 713556

email:

[enquiries@signdesignsociety.co.uk](mailto:enquiries@signdesignsociety.co.uk)

website:

[www.signdesignsociety.co.uk](http://www.signdesignsociety.co.uk)

**Electronic Publishing Specialist Group of the British Computer Society**, EPSG is a specialist group under the umbrella of the British Computer Society. The Group holds about four regular one-day meetings a year on subjects of interest within electronic publishing: a large field which includes desktop publishing, digital imaging, multimedia and the Web.

BCS-EPSG c/o Edgerton Publishing Services, Pett Road,  
Hastings, East Sussex, TN35 4HA

tel: 01424 813003

website:

[www.epsg.org.uk](http://www.epsg.org.uk)

**Designers in Health**, the National Designers in Health Network is a mutual support group that aims to raise the profile of design as an integral part of the UK National Health Service. The sharing of experience, knowledge, technical expertise and examples of good practice is encouraged through one-to-one contacts, an email discussion list and by running learning events.

tel: 0151 707 1555 ext 116

website:

[www.dihnet.org.uk](http://www.dihnet.org.uk)

**Society for Technical Communication, Information Design Special Interest Group**, STC is US-based and has 25,000 members including technical writers, editors, graphic designers, videographers, multimedia artists, web and intranet page information designers, translators and others.



email:

[idsig@pobox.com](mailto:idsig@pobox.com)

website:

[www.stcsig.org/id/index.html](http://www.stcsig.org/id/index.html)

**Association for Computing Machinery, Special Interest Group for Documentation**, members are communication professionals from all technical and scientific disciplines, those who create documentation in the computing community and those who use computers to create documentation in many styles and mediums. US-based.

ACM, 1515 Broadway, New York, NY 10036, USA

tel: +1 212 626 0500

website:

[www.acm.org/sigdoc](http://www.acm.org/sigdoc)

**Professional Communication Society of the IEEE**, interests include distance learning, web design and hypertext, document usability, video, team writing, visual communication, information design, communication and publication management and production, user interface design, and information dissemination, retrieval, and use. US-based.

The Institute, IEEE Operations Center, 445 Hoes Lane, Piscataway NJ 08855-1331, USA

website:

[www.ieeepcs.org](http://www.ieeepcs.org)

### **Discussion forums**

**InfoDesign-Cafe**, unmoderated email discussion group



with around 500 subscribers. Wide-ranging discussion of information design issues.

website:

[list.informationdesign.org/mailman/listinfo/infodesign-cafe](http://list.informationdesign.org/mailman/listinfo/infodesign-cafe)

**InfoDesign list**, a low-traffic, moderated email list with 2,000 subscribers. Broadcasts announcements of events and new publications, with occasional reports and discussions.

website:

[list.informationdesign.org/mailman/listinfo/infodesign](http://list.informationdesign.org/mailman/listinfo/infodesign)

## Annual events

Topics of relevance to information design may be found as part of the programme at various conferences on applied linguistics, applied psychology, ergonomics and so on. Up-to-date lists of conferences that are likely to be of interest to those interested in information design can be found in:

### **InfoDesign website**

website:

[www.bogieland.com/infodesign](http://www.bogieland.com/infodesign)

### **InfoDesign list**

website:

[list.informationdesign.org/mailman/listinfo/infodesign](http://list.informationdesign.org/mailman/listinfo/infodesign)

## Standards and regulations

**ISO DIS 13407:1999** *Human centred design for interactive systems*

**BS EN ISO 9000:2000** *Quality management systems, fundamentals and vocabulary.*

**BS 8888:2000** *Technical product documentation (TPD), specification for defining, specifying and graphically representing products.*

**BS 4884-1:1992** *Technical manuals, specification for presentation of essential information.*

**BS 4884-3:1993** *Technical manuals, guide to presentation.*

**BS 4899-2:1992** *Guide to user's requirements for technical manuals, (Based on the principles of BS 4884). Presentation.*

**BS 4811:1972** *Specification for the presentation of research and development reports*

**BS ISO 999:1996** *Information and documentation, guidelines for the content, organisation and presentation of indexes.*

**BS EN ISO 9241-8:1998** *Ergonomic requirements for office work with visual display terminals (VDTs), requirements for displayed colours.*

**BS EN ISO 9241-11:1998** *Ergonomic requirements for office work with visual display terminals (VDTs), Guidance on usability.*

**BS EN ISO 9241-12:1999** *Ergonomic requirements for office work with visual display terminals (VDTs), presentation of information.*

**BS EN 62079:2001, 62079:2001** *Preparation of instructions, structuring, content and presentation.*

**BS ISO 690-2:1997** *Information and documentation, bibliographic references. Electronic documents or parts thereof.*

**BS 7581:1992** *Guide to the presentation of tables and graphs*

**BS 1991:1976** *Letter symbols, signs and abbreviations*

**BS 1629:1989** *Recommendations for references to published materials*

**BS 5848:1980** *Specification for numbering of divisions and sub-divisions in written documents (point-numbering)*

**BS 5555:1993** *Specification for SI units and recommendations for the use of their multiples and of certain other units*