

The Barbour Report 2001

Construction Product Information -
Delivery Preferences and Trends
a guide for building product manufacturers

Barbour Index plc

Barbour Index is the leading UK supplier of specialist information services to construction professionals, facilities managers and those responsible for health and safety at work. The company's services are available via a range of media including the web, CD ROM and hard copy.

For more than forty years, Barbour has connected building product manufacturers with key buyers and specifiers. Services such as the Building Product Compendium, the Enquiry Service and Building Product Expert put manufacturers in touch with product decision makers, providing suppliers with excellent opportunities for generating new business.

Barbour has utilised the latest technology to create seamless links between its services, forming an integrated set of working tools that give users fast and easy access to the technical and product information they require. As an example, Construction Expert and Building Product Expert offer an integrated service available at the user's desktop, developed specifically to meet the needs of design professionals.

Barbour Index has a long-term commitment to meeting its customers' changing information needs and delivering them in the formats the market demands. To meet this commitment, the company has an ongoing programme aimed at improving existing services and developing new ones. Over the last two years, there has been increased investment in the development of market-leading electronic services across the range of markets that Barbour serves.

This has included the development of Barbour Expert, the information portal for professionals in the built environment, which includes a fully searchable building products database, breaking news stories, jobs, research reports and safety guidance notes.

Lychgate Projects Ltd

Lychgate is a marketing, market research and lead generation company, offering a specialist service throughout the construction market. Lychgate has an excellent knowledge and understanding of the dynamics of the industry, applying this expertise to tailored studies designed to meet clients' specific information requirements. Studies are also conducted for companies in the IT sector, where particular expertise has been developed in customer satisfaction monitoring and new product development.

Interviews are regularly carried out across the full breadth of the construction industry, from design professionals to Main Contractors, Sub-contractors, Developers and end users, including major repeat buyers of construction projects. The company's field force of interviewers is highly experienced in the challenges of identifying and questioning decision-makers within business environments.

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FOREWORD

Michael G Ankers, Chief Executive, Construction Products Association

The mood for change in the construction industry is stronger than for a generation or more. Although following Sir John Egan's report, 'Rethinking Construction', many saw the Clients and Contractors as the key drivers of change, it has become increasingly apparent that product manufacturers and suppliers, who between them account for more than 40% of construction output, have at least as important a role to play in bringing about the vision of the construction industry of the future. With this in mind, it is essential that all those in the construction team have access to up to date and reliable information, and this latest Barbour Report provides a fascinating insight into current practice and how this is likely to change over the next few years.

At first glance you could be forgiven for thinking the construction industry – traditionally slow to embrace change – has not yet woken up to the opportunities of information technology, with hard copy product directories and manufacturers' literature still the most frequently used sources of information. However, as the results of the research unfold, a very different picture emerges, with use of the internet by product specifiers to gather information having increased from just 7% last year to nearly 30% in this report. Altogether, 86% of those interviewed now use at least one of the electronic formats for product information.

The report also has very clear messages for product manufacturers and suppliers. In those early, heady days of the 'dot com' revolution at the end of 1999 and the beginning of 2000, too many companies felt it was imperative to establish their web sites and to go online without giving sufficient attention to how this would actually add value to the links with their customers. As a result, the main complaint of those trying to access information via a web site is that it is often difficult to locate the information that they actually require, and that the main improvements they want to see relate to the ability to search for products that match a specific requirement.

The Barbour Report 2001 also paints a very positive picture of the way the use of electronic media for product information will develop in the future. Almost 90% of product decision-makers expect their use of web sites to increase over the next 2 years at the expense of hard copy, and well over a third of those professionals with hard copy libraries have a policy to reduce them. These and many of the other changes anticipated in the Barbour Report 2001 will benefit both the providers and the users of the product information. What is essential is that they work together to ensure that we really do maximize the opportunities that greater use of electronic media provides for improving the future efficiency of the construction industry.

1. INTRODUCTION

Robert Gibb, Divisional Director, Barbour Index

Advances in communications technology over recent years have brought ever-increasing opportunities to the construction industry, but have also presented greater choice. Manufacturers are having to find more effective ways to allocate marketing resources in order to provide product information in the diverse forms which specifiers and others demand.

Following the 1997 Barbour Report's investigation into the electronic delivery of product information, the 2001 report assesses the extent to which expectations at that time have been realised, and the resulting consequences for manufacturers.

To this end, the report addresses the following key questions:

- How do specifiers use various media when sourcing products?
- Why do specifiers prefer certain media over others?
- How do user requirements vary across different professions and organisation types?
- What are the trends for the future?
- What action must manufacturers take to meet the specifier's information needs more precisely?

This research demonstrates that specifiers and other product decision-makers require the differing functionality provided by various media. However, they are also looking for a more cohesive and useful presentation of information.

The 2001 Barbour Report highlights some of the key communication issues relevant to manufacturers today, and offers practical guidance as to how these areas can be tackled for the future.

2. REPORT HIGHLIGHTS

- Use of electronic sources has increased across all professions. 86% of specifiers and others with an influence on product selection use at least one of the main electronic formats - the internet or CD ROM - to source product information.
- In spite of the growth in use of electronic product information sources, these have not replaced hard copy sources at the anticipated rate.
- Although a high proportion of specifiers are familiar with electronic media, hard copy (manufacturers' literature and product directories) is used for 72% of the time spent looking at product information.
- For the majority, electronic sources are complimentary but secondary information tools. Only 15% turn to an electronic source first when searching for product information.
- Manufacturers' web sites are more frequently used in the early stages of sourcing products than other electronic tools. To find these sites, four in ten use industry portals.
- Given the rise in use of electronic media, the use of hard copy libraries would be expected to decline. Although 88% of product decision-makers and influencers have retained a hard copy library, four in ten have policies to reduce this facility.
- Use of the internet has increased dramatically and now matches CD ROM.
- Users of product information often need to make direct contact with manufacturers. Electronically delivered information has not reduced the need for this contact, with one in five making direct contact with a manufacturer as a result of using an electronic source. When this contact is made, over half of manufacturers do not ask how their details were identified.
- Hard copy is preferred because it continues to be easier to access, to find information and to compare products. On the other hand, electronic media are perceived to be better for delivering up to date information and incorporating information into other documents.
- Information sourced from web sites and CD ROMs is transferred electronically into documents or CAD files on only 14% of occasions that electronic media is used. The majority of design professionals print out information for reference purposes.
- The main features of electronic product information sources required by users are: the facility to search for products to match requirements, diagrams, detailing and specification clauses which can be downloaded. However, these are also the features identified by users as most requiring improvement. These deficiencies have been recognised by a number of manufacturers, who are planning to improve their sites accordingly.
- The facility to place an order online is not rated highly by many, including Contractors and Buyers.
- Over the next two years, 87% of product decision-makers expect their use of web sites to increase and 62% expect their use of CD ROM to grow. Nearly two-thirds anticipate a fall in the use of hard copy.

3. RESEARCH SOURCES

Method

As with previous Barbour Reports, information has been compiled from a number of different research sources to provide a comprehensive picture of the topics examined, and to provide evidence from which to draw conclusions.

Group discussions

A manufacturer consultation group provided guidance on the subject of this year's Barbour Report. A user group was subsequently organised, involving a mix of Specifiers and Contractors, for clarification of the key issues relating to media usage. The factors identified were included in the telephone interview programme for investigation and quantification in the wider market.

In-depth telephone interview programme

The relative use of hard copy and electronic sources of product information was examined by means of an in-depth telephone programme of 350 interviews, averaging half an hour each.

The interview programme was structured to include a mix of professions and organisations responsible for specifying or buying products, or with an influence on the product selection process. The 2000 Barbour Report 'Influencing Product Decisions' identified the relative importance of the parties in product choice. It confirmed the continued role of the design professions in specifying brands, and highlighted the extent of change made by Contractors to specifications. The sample for this year's research was structured in the light of these findings.

Participants included leading design and multi-disciplinary practices, top Construction companies and Housebuilders, as well as major Clients who are repeat purchasers of construction projects in both the public and private sector, such as financial institutions, retailers, leisure companies, developers, NHS Trusts and district and county councils.

- The Barbour Report interview programme

	Number of interviews	%
By profession		
Architects	141	40%
Structural Engineers	37	11%
M&E Engineers	35	10%
Building Surveyors	38	11%
Quantity Surveyors	29	8%
Contracts Managers	19	5%
Project Managers	14	4%
Facilities Managers	20	6%
Buyers	7	2%
Other	10	3%
Total	350	100%
By organisation		
Private practice consultancies	202	58%
Housebuilders	19	5%
Contractors	44	13%
Clients – public sector	47	13%
Clients – private sector	38	11%
Total	350	100%

Note: Other includes Librarians, Technical Managers.

Public sector includes Architects, and those responsible for facilities management.

Barbour Index Building Product Compendium User Survey

Barbour issues a questionnaire to all 22,000 recipients of the Building Product Compendium each year. These professionals cover the entire building process, from Clients at the briefing stage, through to those involved in design, specification and construction. The opportunity is taken to include questions related to the topic of each year's Barbour Report.

The first questionnaires received within 3 weeks of distribution of the Compendium, typically totalling in excess of 5,000 responses, are independently analysed by Lychgate, providing the largest sample surveyed across the full range of professions in all major sectors of the industry each year. Results illustrating the information needs of construction professionals have been included in this report.

- Building Product Compendium respondent analysis 2001

	Self-fill questionnaires returned	%
Architects	1897	35%
Quantity Surveyors	530	10%
Building Surveyors	558	10%
Architectural Technologists	482	9%
Civil/Structural/Building Services Engineers	450	8%
Buyers	351	7%
Project Managers/Contracts Managers	298	6%
Estimators	200	4%
Other Chartered Surveyors	186	3%
Interior Designers	145	3%
Chartered Builders	99	2%
Facilities Managers/Estates Managers	117	2%
Lecturers/Librarians	128	2%
Other	189	4%
Total	5400	104%

Note: 230 respondents (4%) gave more than one profession, hence total does not add to 100%.

Manufacturer research

For purposes of comparison, some results taken from an independent study carried out by Lychgate in December 2000 have been included. 49 product manufacturers, representing a mix of product types, completed a questionnaire about their sales and marketing activities. This included questions about their expenditure, trends in use of electronic information sources, and features incorporated in their web sites and CD ROMs.

Previous Barbour Reports

Within this document, reference is made to previous Barbour Reports. The topics for this programme of research reports, published annually since 1993, have been chosen to define specification and communication practice and identify trends in the construction industry. Since 1993, Barbour Index has commissioned nearly 4,000 in-depth interviews and has analysed over 45,000 detailed questionnaire responses from industry professionals in the preparation of these reports. Many of the issues identified in earlier reports remain relevant today.

The series consists of the following titles:

- 2000 Influencing Product Decisions
- 1999 The Sourcing and Exchange of Information
- 1998 The Building Maintenance and Refurbishment Market
- 1997 Electronic Delivery of Product Information
- 1996 Communicating with Construction Customers
- 1995 The Influence of Clients on Product Decisions
- 1994 Contractors' Influence on Product Decisions
- 1993 The Changing Face of Specification

4. PRODUCT INFORMATION SOURCES USED UNDER DIFFERENT CIRCUMSTANCES

Specifiers and others with an influence on product decisions turn to product information at different stages of the process. A main aim of the research for this year's Barbour Report was to identify the types of information sources used to meet these requirements, and the extent of referral to hard copy and electronic media.

Product information may be required for a number of reasons:

- For ideas and inspiration to create a particular effect.
- To identify products able to meet specific performance criteria.
- For further details, having identified a product as potentially suitable.
- To find alternatives to a specified brand.

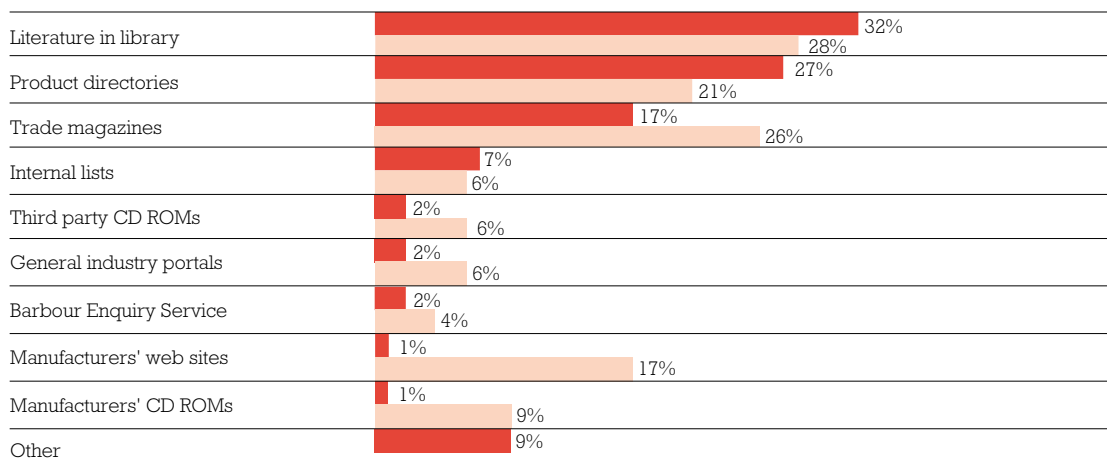
An objective of this year's Barbour Report was to identify the sources used under different circumstances. To achieve this, a series of questions was included in the telephone interview programme.

The answers show that hard copy sources, both manufacturers' literature and product directories, continue to be frequently used. Web sites and CD ROMs tend to be referred to as a secondary information source, while direct contact with manufacturers is still very important to gain further information once a product has been identified. The reasons for preferences are described later in the report.

4.1 Browsing for product ideas

When designing a building, specifiers turn to a variety of sources for ideas. In doing so, there is a good chance that the product which has attracted them may actually be used. Literature to hand, usually held in the library, is often used to provide this assistance, followed by illustrations in product directories, and trade magazines. Electronic sources are rarely referred to first, but manufacturers' web sites are more frequently used as a secondary source.

- Sources used when browsing for inspiration



■ % turning to source first □ % using as secondary source

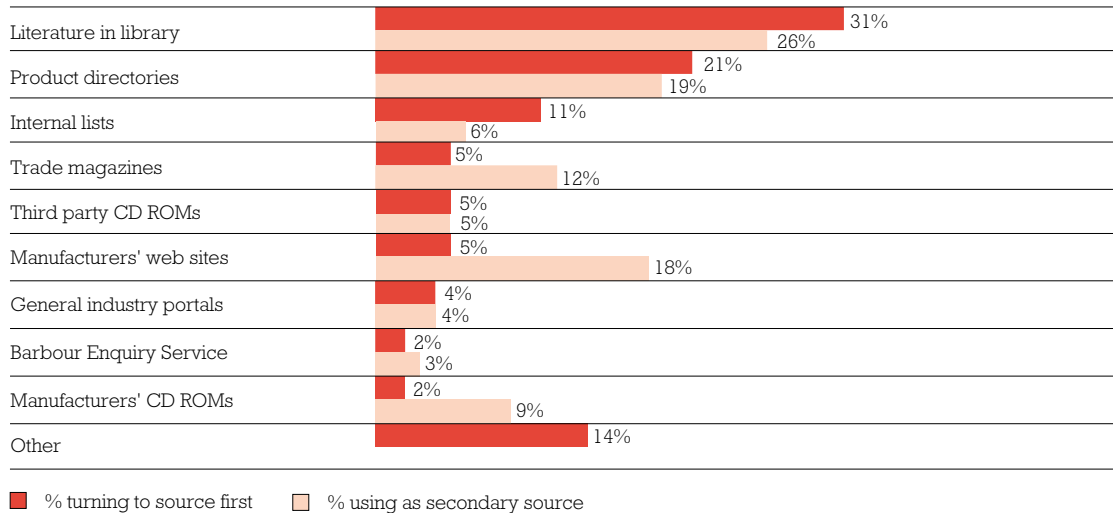
Source: Telephone programme, base 321 (excludes Quantity Surveyors, not asked this question).

Note: Other sources used first include asking colleagues, other team members, trade associations.

4.2 Looking for products to meet specific criteria

Generally, a specifier has performance criteria in mind when selecting products for a building. These may include technical criteria, functional requirements and/or aesthetic ones. To locate suitable products, literature in the library is typically the first source used, with product directories also playing an important role.

- Sources used when looking for products to meet specific criteria

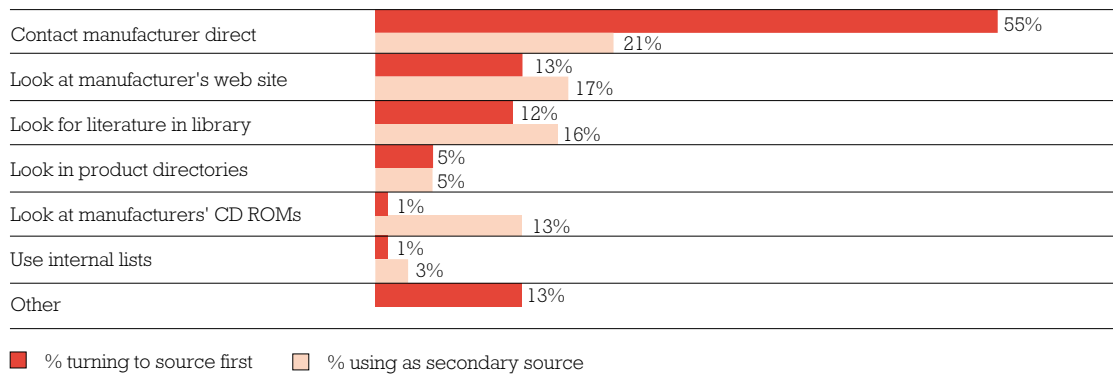


Source: Telephone programme, base 321 (excludes Quantity Surveyors, not asked this question).
 Note: Other sources used first include asking colleagues, other team members, trade associations.

4.3 Obtaining further information on a product identified as suitable

When a product has been identified and further information is required from the manufacturer, over half of product decision-makers make direct contact with the manufacturer for this information. Only 13% start the process by looking at a manufacturer's web site and 1% refer to a manufacturer's CD ROM at this stage, although 30% may use one of these as a secondary source.

- Method of obtaining further information about a manufacturer



Source: Telephone programme, base 350.
 Note: Other sources used first include asking colleagues, other team members, trade associations.
 31% of those contacting a manufacturer direct do not use any alternative.

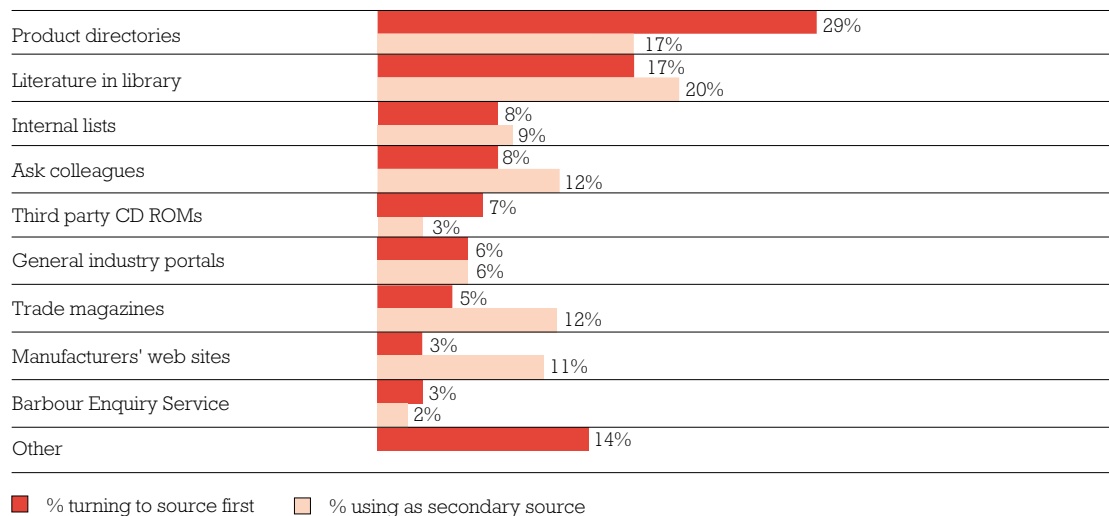
When asked how they make contact with manufacturers, 93% said by phone, with the balance using fax or e-mail.

This direct contact is a good opportunity for manufacturers to not only promote the benefits of their products, but also to identify how their potential customers have sourced their details. A question was included in the Building Product Compendium user questionnaire to understand the extent to which manufacturers ask this question. According to product decision-makers, 57% of manufacturers never or rarely ask where callers found their details.

4.4 Looking for alternatives

The process of seeking alternatives to a specified brand is a common one, especially amongst Contractors and Quantity Surveyors. It is at this stage that a non-specified product may be put forward as an alternative. The results show that product directories are the most used first source to identify suitable alternatives.

- Sources used when looking for alternative products



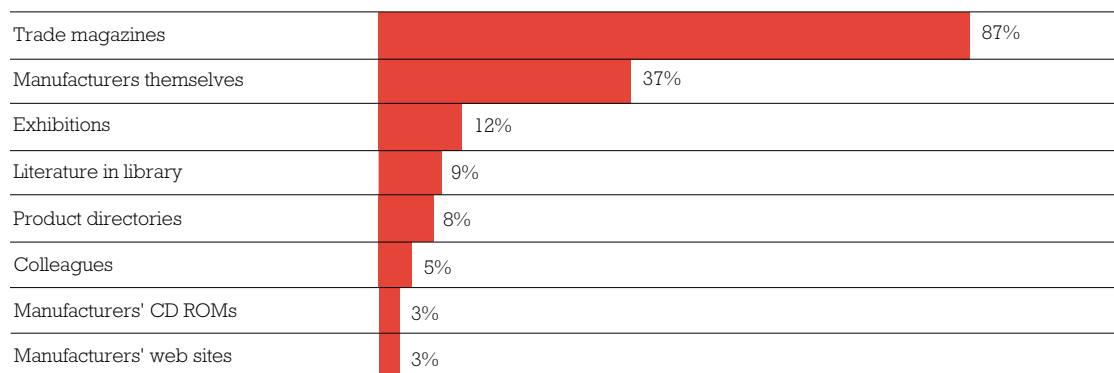
Source: Telephone programme, base 350.

Note: Other sources used first include asking colleagues, other team members, trade associations.

4.5 Hearing about newly launched products

Trade magazines are the main source of knowledge about new products, followed by information received direct from the manufacturers themselves.

- Sources for information on new products



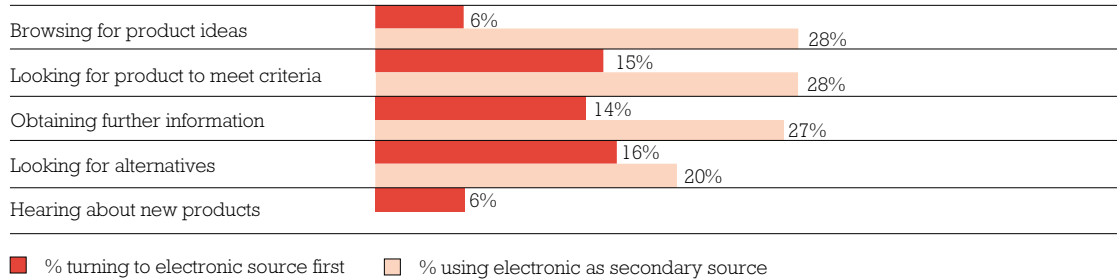
Source: Telephone programme, base 350.

Note: First and second source not asked separately. Adds to over 100% as more than one source used.

4.6 Summary of extent of use of electronic sources

It can be seen in the previous graphs that hard copy is still the primary source for product information. However, electronic sources are often used as a secondary source, possibly if the information required is not to hand in the library. A minority have listed electronic methods as their first preference. In the following graph, all electronic sources identified have been added together and any use of electronic is given as a total.

- Any use of electronic



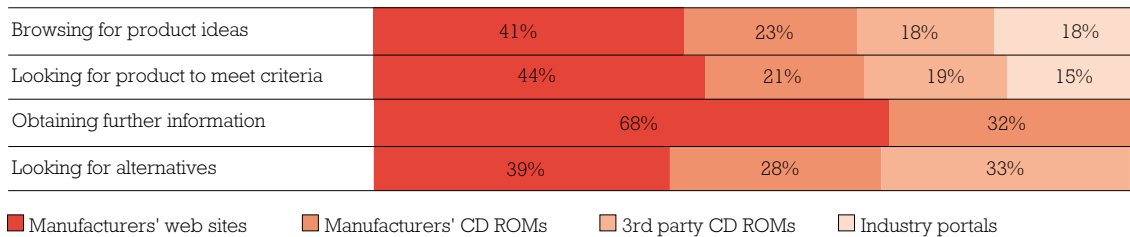
Source: Telephone programme, base 350.

Note: Hearing about new products: total of any source used, whether first or secondary.

There are variations in the electronic delivery media used under different circumstances. In the graph which follows, both first and secondary use of electronic media have been combined, to provide an evaluation of referral to electronic formats for product information.

Manufacturers' web sites are the most used electronic source for the product information needs described, particularly when further information is required. When looking for alternatives, industry portals and third party CD ROMs are also useful.

- Analysis of electronic source used



Source: Telephone programme, base 300 using any electronic source.

4.7 Use by profession

There are interesting differences in the use of product information sources by profession. Manufacturers targeting specific professions should note these differences. For example, when browsing for ideas, Architects are most likely to use product directories, and when looking for a product to meet specific criteria, Engineers use the literature in their libraries. A higher proportion of Project Managers and Buyers refer to internal lists. Buyers are more likely than any other profession to look for a manufacturer's web site when more information is required, and they also have a much greater tendency than others to collect new product information by attending exhibitions.

The three most used sources in each category are given in the tables.

- Browsing for product ideas (main sources turned to first)

	Literature in library	Product directories	Trade magazines
All	32%	27%	17%
By profession			
Architects	28%	40%	13%
Structural Engineers	43%	11%	11%
M&E Engineers	43%	20%	23%
Building Surveyors	26%	29%	16%
Contracts Managers	42%	11%	11%
Project Managers	14%	7%	21%
Facilities Managers	35%	20%	25%
Buyers	29%	-	14%
By organisation			
Private practice consultancies	34%	30%	11%
Housebuilders	22%	17%	33%
Contractors	28%	15%	21%
Clients – public sector	38%	29%	18%
Clients – private sector	21%	26%	29%

Source: Telephone programme, base 350 (29 Quantity Surveyors not included in first two tables as question not asked).

- Looking for product to meet specific criteria (main sources turned to first)

	Literature in library	Product directories	Internal lists
All	31%	21%	11%
By profession			
Architects	30%	29%	7%
Structural Engineers	41%	8%	11%
M&E Engineers	40%	11%	6%
Building Surveyors	34%	13%	8%
Contracts Managers	21%	21%	21%
Project Managers	7%	14%	29%
Facilities Managers	20%	25%	20%
Buyers	29%	14%	43%
By organisation			
Private practice consultancies	36%	20%	7%
Housebuilders	44%	28%	6%
Contractors	21%	15%	21%
Clients – public sector	31%	22%	7%
Clients – private sector	16%	21%	26%

- Obtaining further information on a manufacturer identified as suitable (main sources turned to first)

	Contact manufacturer	Look for manufacturer's web site	Look for literature in library
All	55%	13%	12%
By profession			
Architects	57%	13%	9%
Structural Engineers	59%	11%	8%
M&E Engineers	57%	11%	17%
Building Surveyors	61%	11%	16%
Quantity Surveyors	31%	10%	31%
Contracts Managers	58%	21%	-
Project Managers	50%	14%	14%
Facilities Managers	50%	15%	5%
Buyers	57%	29%	14%
By organisation			
Private practice consultancies	52%	12%	16%
Housebuilders	53%	16%	5%
Contractors	59%	16%	5%
Clients – public sector	53%	13%	15%
Clients – private sector	66%	13%	3%

- Looking for alternatives (main sources turned to first)

	Product directories	Literature in library	Internal lists
All	29%	17%	8%
By profession			
Architects	40%	15%	4%
Structural Engineers	14%	22%	5%
M&E Engineers	20%	31%	9%
Building Surveyors	32%	18%	5%
Quantity Surveyors	24%	14%	7%
Contracts Managers	21%	-	16%
Project Managers	21%	-	21%
Facilities Managers	10%	15%	20%
Buyers	14%	29%	29%
By organisation			
Private practice consultancies	32%	20%	3%
Housebuilders	21%	11%	5%
Contractors	27%	7%	23%
Clients – public sector	17%	19%	6%
Clients – private sector	29%	11%	16%

- Hearing about newly launched products (all sources)

	Trade magazines	Manufacturers themselves	Exhibitions
All	87%	37%	12%
By profession			
Architects	91%	46%	15%
Structural Engineers	86%	41%	8%
M&E Engineers	80%	29%	14%
Building Surveyors	89%	24%	5%
Quantity Surveyors	79%	31%	-
Contracts Managers	79%	21%	16%
Project Managers	93%	29%	14%
Facilities Managers	90%	35%	20%
Buyers	57%	43%	43%
By organisation			
Private practice consultancies	89%	38%	7%
Housebuilders	84%	47%	21%
Contractors	86%	32%	14%
Clients – public sector	79%	49%	19%
Clients – private sector	87%	24%	26%

5. **PATTERNS OF USE ACROSS MEDIA TYPES**

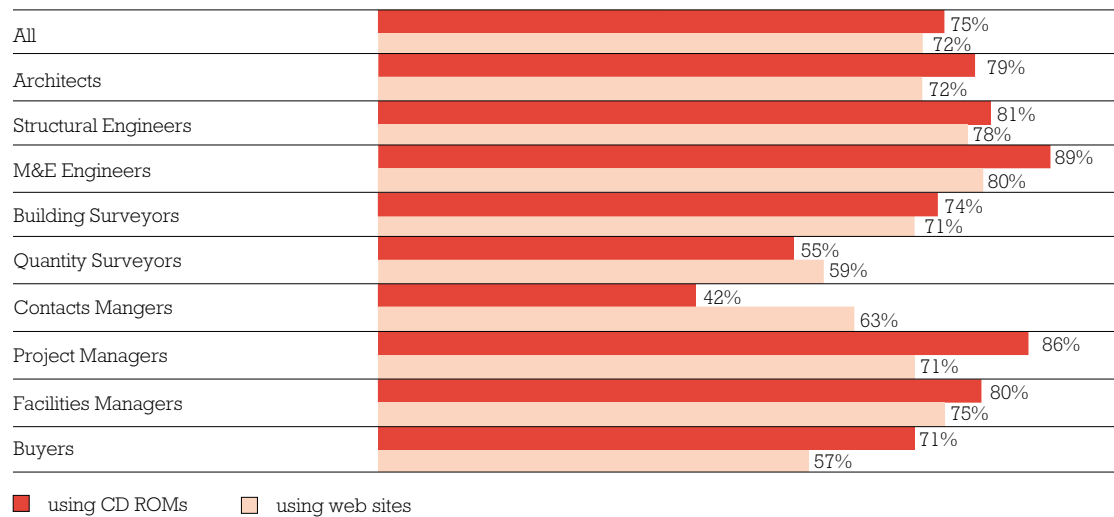
Those referring to electronic sources as a first step to obtaining product information have been shown in the previous section to be in the minority. The research also examined the extent to which product decision-makers and influencers turn to electronic sources at some time. The results show that high proportions are using product information in at least one of the formats, and that almost equal numbers are using web sites and CD ROMs. It is not lack of familiarity with accessing information electronically which is causing low use.

5.1 **Use of manufacturers' web sites and CD ROMs for product information**

When respondents to the telephone interview programme were asked whether they use manufacturers' web sites or CD ROM at some time, the majority are doing so, suggesting familiarity with using these sources and a role for both hard copy and electronic media. 86% of those interviewed in the telephone programme are using at least one of the electronic methods to source product information.

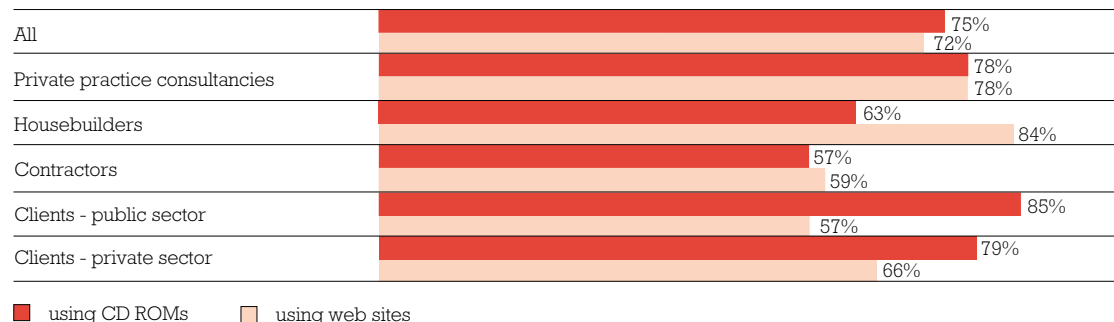
The design professionals show highest use of electronic media for manufacturers' information, and Contracts Managers and Quantity Surveyors the lowest. Use of the internet is now at a similar level to use of CD ROM. There is little variation in this pattern across professions, with the exception of Contracts Managers (working for Contractors and Housebuilders) and Quantity Surveyors, a higher proportion of which use the internet. Some of the comments made during the course of the interviews show that these groups do not receive CD ROMs from manufacturers, which may explain why their referral to the internet is higher.

• **Use of product manufacturers' CD ROMs and web sites (by profession)**



Source: Telephone programme, base 350.

• **Use of product manufacturers' CD ROMs and web sites (by organisation type)**



Source: Telephone programme, base 350.

By age, the results show that there is slightly lower use of electronic media for accessing product information amongst those aged 50+. Use is also higher amongst the larger organisations.

- Use of product manufacturers' CD ROMs and web sites (by age of respondent)



Source: Telephone programme, base 350.

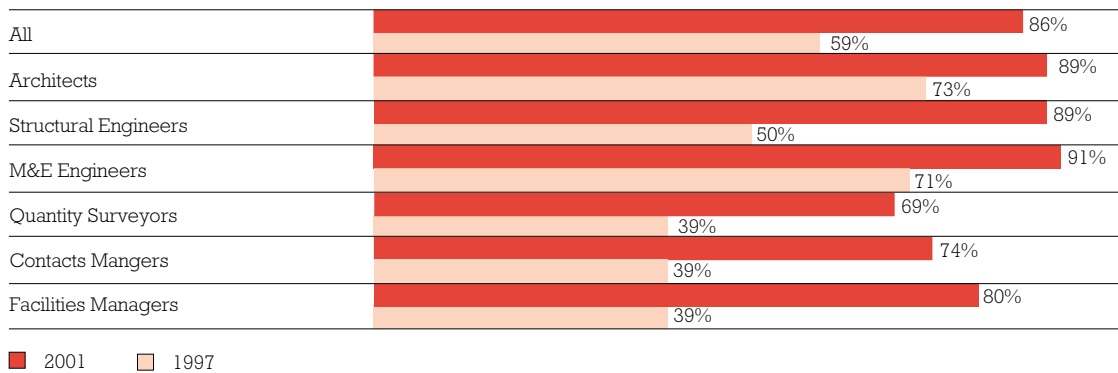
- Use of product manufacturers' CD ROMs and web sites (by organisation size)



Source: Telephone programme, base 350.

This year's finding that 86% use at least one of the electronic formats for product information compares with 59% found in a similar research programme for The Barbour Report 1997 'Electronic Delivery of Product Information', an increase of nearly half. Growth in use has occurred across all professions, although relatively high proportions of Architects and M&E Engineers were already using electronic tools 4 years ago.

- Use of any electronic method



Source: 2001: Telephone programme, base 350.

Source: 1997: Telephone programme, base 401.

Note: Comparisons given only where profession included in both surveys.

Not surprisingly, the greatest growth is in use of the internet. In 1997 only 6% were using the internet to source product information, compared with 72% in this year's survey. Referral to CD ROM has also grown, but at a slower pace. The internet is now almost as popular as a product information source as CD ROM.

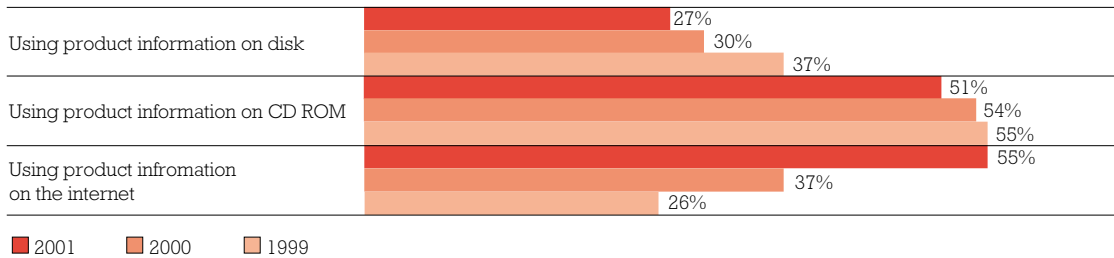
● Use of the CD ROM and the internet for product information 2001 and 1997



Source: 2001: Telephone programme, base 350.
 Source: 1997: Telephone programme, base 401.

The Building Product Compendium user questionnaire results, which include a higher number of responses from smaller organisations, show that 51% use CD ROM and 55% the internet for accessing manufacturer information. This survey also shows the growth in use of the internet for product information, while use of disk is declining.

● Use of product information supplied by manufacturers on disk, CD ROM or the internet



Source: Barbour Compendium User Questionnaire (Base 2001: 5400, 2000: 5095, 1999: 4948).

5.2 Incidence of hard copy libraries

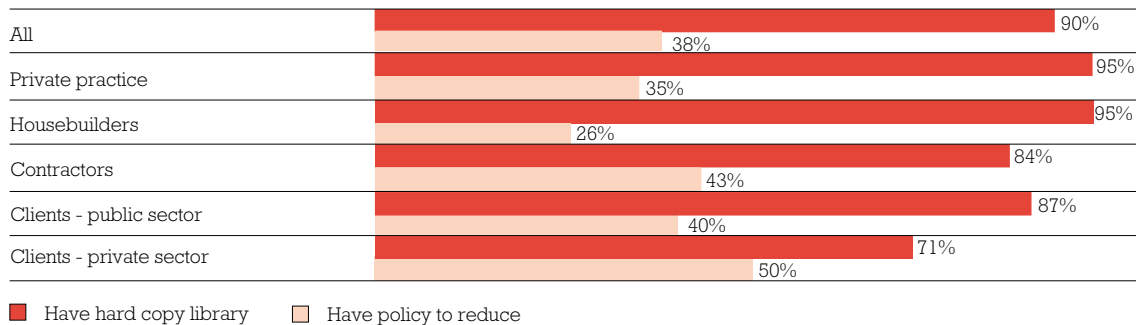
Traditionally those requiring product information have maintained libraries for referral purposes. While use of hard copy has been shown to be significant, it may be expected that, with the introduction of alternative electronic sources, use of hard copy libraries may be in decline.

The Barbour Report 2000 identified that 88% of organisations had a hard copy library. There has been no reduction in this, with 90% in this year's research reporting that this is the case. A similar question in the Building Product Compendium user questionnaire has shown consistent results, with no declining trend.

In the research for the 2000 Barbour Report 'Influencing Product Decisions', three-quarters of Architects said the literature in their library influenced the products they selected.

Although almost all professionals have hard copy libraries, nearly four in ten have a policy to reduce these, and half of Client companies in the private sector have such policies.

● Professionals with hard copy library

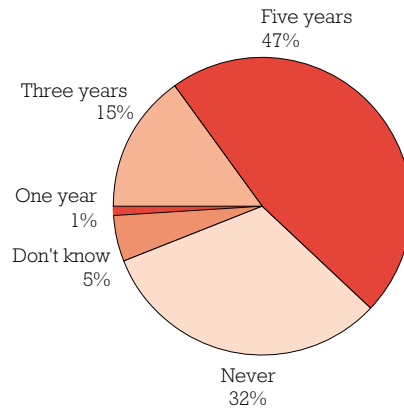


Source: Telephone programme, base 350.

5.3 Users' expectations versus actual use

The research for the Barbour Report 1997 identified that by 2002 nearly two-thirds of product decision-makers expected electronically delivered information to have replaced manufacturers' literature.

- When will electronic information replace manufacturers' literature?



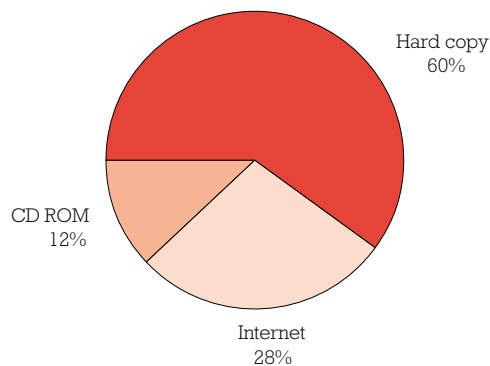
Source: The Barbour Report 1997 'Electronic Delivery of Product Information'. Telephone interview programme, base: 401 respondents.

To set these perceptions in context we have examined current practice.

Although a high proportion of professionals are using electronic formats for product information, the frequency of use of hard copy continues to exceed the use of electronic alternatives, with six in ten referring to information in hard copy, either product directories or manufacturers' literature, when they last required product information.

In the research for The Barbour Report 2000, it was found that 7% of product specifiers had used the internet in gathering information for a recent specification, and 11% a CD ROM. In this year's results, use of web sites now exceeds CD ROM, with just under 30% saying they used the internet on the last occasion they required product information, and 12% a CD ROM. This is a four-fold increase in use of the internet compared with 2000.

- Media used when last sourced product information (% respondents)



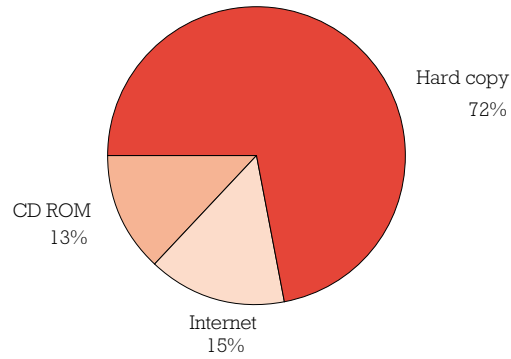
Source: Telephone programme, base 350.

Note: 1% used both CD and web.

To further demonstrate the relative use of hard copy and electronic sources, a question was included in the telephone programme to identify how much time is spent using the different formats. If the time spent referring to product information in any format is 100%, then hard copy is used for nearly three-quarters of this time.

Although a higher proportion used the internet than CD ROM on the last occasion product information was used, a similar amount of time is spent referring to each of these two sources.

- Time spent using each media when referring to product information



Source: Telephone programme, base 350.

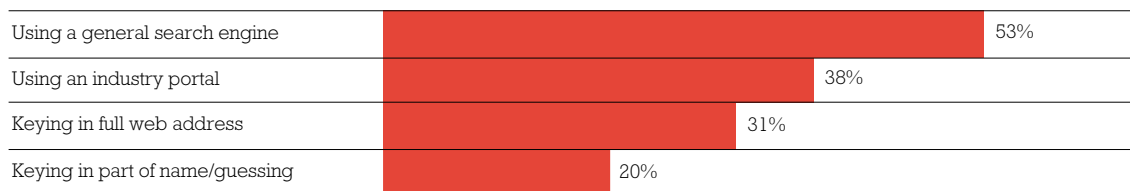
6. ACCESSING AND USING ELECTRONIC MEDIA

6.1 Locating manufacturers' web sites

Electronic formats are used for delivering product information, but use remains lower than hard copy. New ways of working must be learnt to access and use electronically delivered information. For example, locating a manufacturer's web site without the address is not straightforward. There are a number of options; using a general search engine and keying in the manufacturer's name, which may generate many other similarly named web sites, or directly keying in a guess at the manufacturer's web address. Another alternative is to use a dedicated construction industry portal, which facilitates the process of identifying and contacting manufacturers.

Research shows that over half of those currently referring to manufacturers' web sites locate them by using a general search engine, however almost four in ten use an industry portal.

• How manufacturers' web sites are located



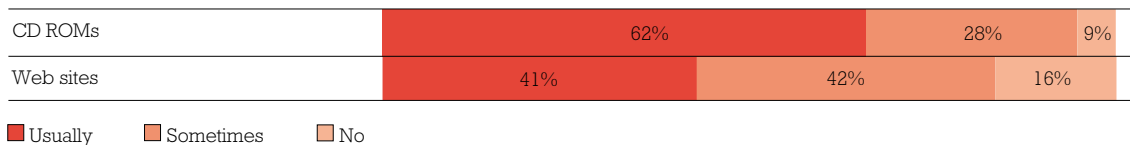
Source: Telephone programme, base 252 using manufacturers' web sites.

Note: Industry portals specific to the construction industry, such as BarbourExpert.com.

6.2 Ease of finding information

Users were asked whether they generally find the information they require when looking for product information on web sites and CD ROM. Over half of those using web sites said they do not always find the information that they are seeking. A lower figure, just over a third, gave a similar reply for CD ROM, and so it may be concluded that it is more difficult to find information on web sites than on CD ROM.

• Do you find the information required when using electronic media from product manufacturers?



Source: Telephone programme, base 252 using manufacturers' web sites and 264 using CD ROMs.

6.3 Requirement for further information

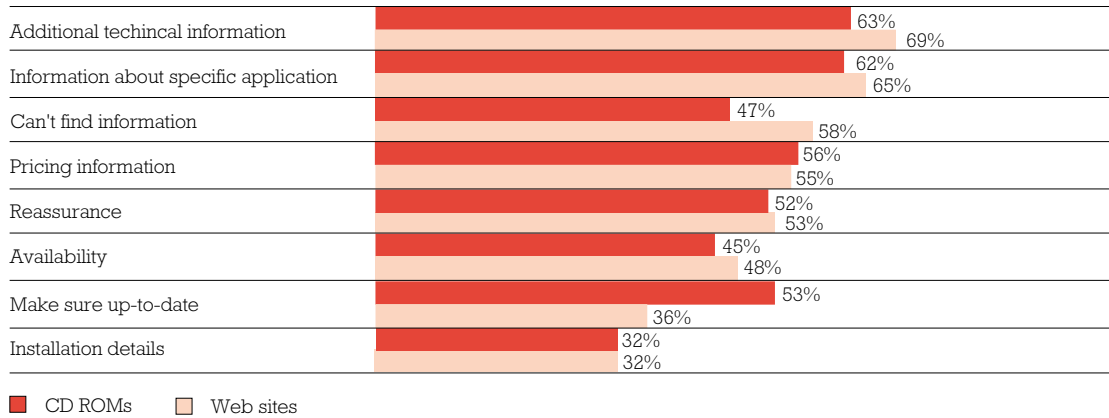
Those using electronic media were asked why they might still need to contact the manufacturer, following referral to CD ROMs and web sites.

Just under half of those using CD ROMs and over half of those using web sites stated that they cannot find the information they require (see following graph), and therefore need to contact the manufacturer, supporting the findings that it is harder to locate the information on a web site.

However, the most common reasons for further contact are a need for additional technical information, or for assistance in using the information and applying it to the project in-hand. Seeking reassurance from manufacturers that the information is up-to-date is more common with CD ROMs than web sites, implying a perception that web sites carry information which is more up-to-date than CD ROMs.

Direct contact with a professional who is about to specify or is considering specifying a product is a benefit to manufacturers. These results show that product decision-makers using electronic media still require direct contact, which will be welcomed.

● **Main reasons for contact with manufacturer after referral to electronic media**

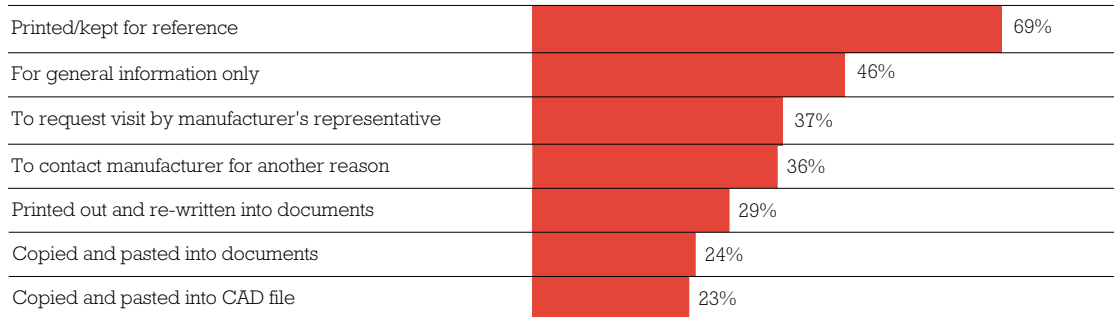


Source: Telephone programme, base 252 using manufacturers' web sites and 264 using CD ROMs.

6.4 **Next steps after referring to electronic media**

Having referred to product information held electronically, how is this information used? Is the information transferred electronically into designs and other documentation or is it used for reference purposes only? For the majority the latter appears to be the case, with seven in ten printing it out and keeping it for reference.

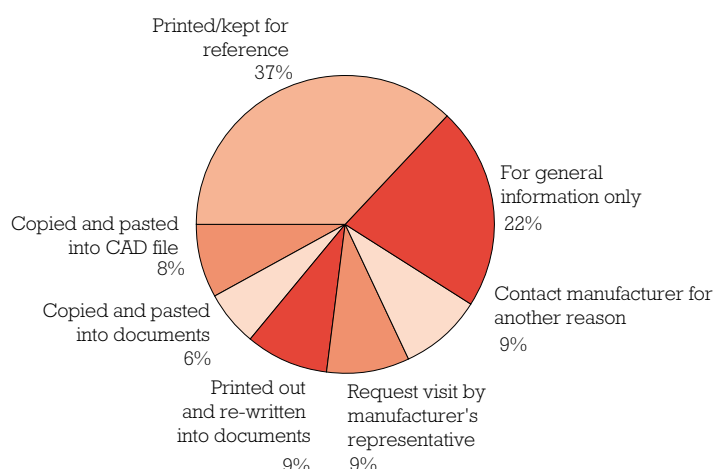
● **How electronic information is used**
(% respondents taking step described)



Source: Telephone programme, base 300 using electronic media for product information.

An additional question sought to identify the frequency with which the actions are taken. The previous graph shows that nearly one-quarter have at some time copied and pasted the information they have gathered electronically into a CAD file. Examined as a proportion of all the occasions that electronic media is used, in only 8% of these occasions is information incorporated electronically into a CAD file. It is also surprising that information is copied and pasted into another type of document on only 6% of occasions.

● Action taken as proportion of occasions electronic media is used



Source: Telephone programme, base 300 using electronic media for product information

37% use the information gathered electronically to contact the manufacturer and request a visit from a representative. On nearly one in five occasions that an electronic source is used, direct contact is made with a manufacturer.

● How electronic information is used (% of respondents taking step described)

	Printed/kept for reference	General info only	To request a visit	To contact mfr for another reason	Printed out, re-written	Copied/pasted into documents	Copied/pasted into CAD
All	69%	46%	37%	36%	29%	24%	23%
By profession							
Architects	64%	48%	42%	39%	35%	31%	37%
Structural Engineers	79%	39%	36%	42%	33%	33%	27%
M&E Engineers	81%	44%	47%	28%	22%	19%	19%
Building Surveyors	76%	18%	24%	39%	36%	18%	15%
Quantity Surveyors	50%	65%	10%	20%	35%	15%	-
Contracts Managers	86%	57%	36%	36%	-	14%	-
Project Managers	54%	46%	46%	31%	8%	8%	-
Facilities Managers	75%	56%	44%	38%	13%	25%	6%
Buyers	50%	67%	17%	17%	17%	-	-
By organisation							
Private practice consultancies	67%	44%	36%	38%	34%	29%	29%
Housebuilders	94%	35%	35%	18%	24%	24%	24%
Contractors	69%	53%	34%	31%	3%	6%	3%
Clients - public sector	63%	49%	39%	41%	37%	22%	24%
Clients - private sector	69%	50%	44%	34%	22%	19%	3%

Source: Telephone programme, base 300 using electronic media for product information.

There are variations by profession in the use of electronic information. 37% of Architects have transferred product information electronically into a CAD file, compared with 23% across the sample.

It may be surprising that a high number print out the data from an electronic source. However when some of the features of this type of media are considered, it may be better understood. For example, search facilities lead users to the product in a manufacturer's range which will meet their needs, and once identified this may be printed out and is therefore recorded. Some electronic media incorporate templates designed to provide schedules for printing out and passing on to other parties such as Contractors, incorporating information such as standards, and preparation and installation instructions. Paper versions may also be required for record purposes, archiving and audit trails.

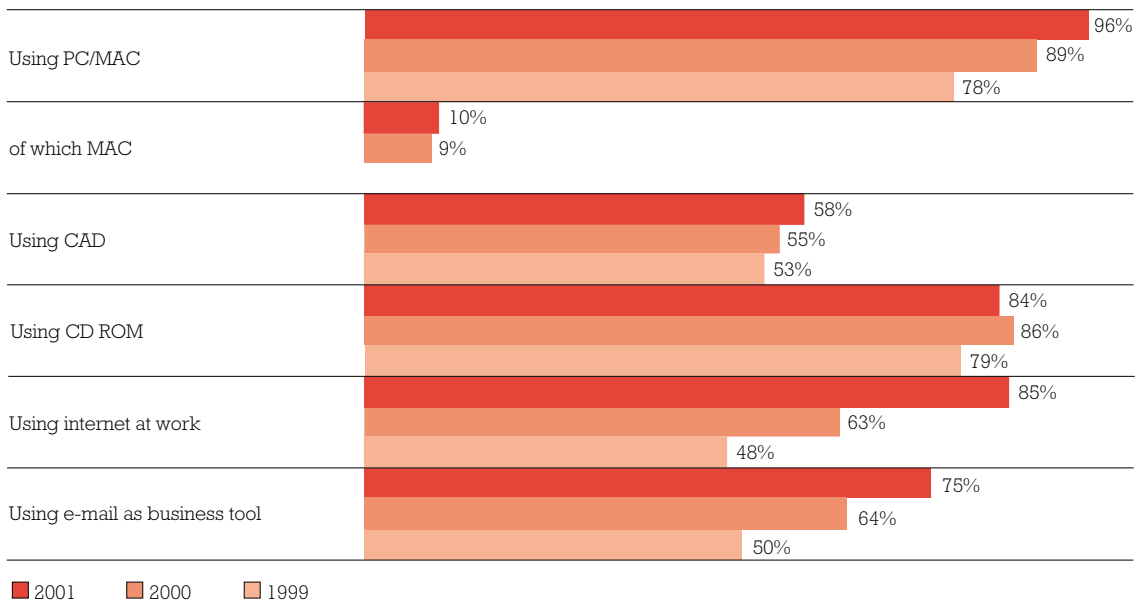
7. TRENDS IN USE OF IT

7.1 Access to IT tools

Results show that electronic information sources are used, but by a minority as the first step. Use of the basic IT tools has been measured to identify those able to source product information electronically. Questions have been included in Barbour's Building Product Compendium user questionnaire over a number of years which have allowed trends to be plotted.

Results show very high levels of use of all electronic business tools; 96% now use a computer at work, an increase of 23% over the last two years. Greatest growth has been seen in use of the internet, with the number of users in the industry increasing steadily at about one-third for each of the last two years.

- Trends in use of the tools



Source: Barbour Compendium User Questionnaire (Base 2001: 5400, 2000: 5095, 1999: 4948).

Note: Use of MAC introduced in 2000 questionnaire. 11% of Architects only use MAC, and a further 9% use both MAC and a PC.

Use of CAD measured across a number of professions. Around three-quarters of design professionals use CAD.

Results of the Building Product Compendium user questionnaire also show that two-thirds of computers are networked, demonstrating the capability of the majority to share information.

Analysis of some of these results by size of organisation and age of respondent show high levels of use across all organisations and age groups, although there are slightly lower levels of internet usage amongst smaller practices and the over 55s.

● Use of IT tools

	Using PC/Mac	Using internet at work
All	96%	85%
By number of professional/technical staff at location		
1	89%	74%
2-5	97%	86%
6-10	98%	88%
11-20	99%	88%
21-50	98%	88%
51-100	98%	85%
Over 100	99%	87%
By respondents' age		
30 or under	99%	92%
31-45	99%	85%
46-55	97%	86%
Over 55	88%	71%

Source: Barbour Compendium User Questionnaire 2001, base 5400.

By profession, the highest users of electronic tools are all types of Engineer; over 80% use these tools, with more than 90% using the internet and CD ROM. Buyers/Estimators show lowest use, with only two-thirds using e-mail and three-quarters the internet/CD ROM.

● Use of IT tools
(By profession)

	Using CAD	Using CD ROM	Using internet at work	Using e-mail for business
All	58%	84%	85%	75%
Architects	73%	83%	84%	73%
Architectural Technologists	75%	87%	82%	68%
Building Services Engineers	83%	93%	90%	88%
Building Surveyors	56%	83%	83%	75%
Buyers/Estimators	17%	73%	75%	66%
Chartered Builders	28%	82%	90%	69%
Chartered Surveyors	36%	84%	86%	76%
Civil/Structural Engineers	83%	96%	93%	84%
Contracts Managers	34%	81%	81%	73%
Facilities Managers/Estates Managers	51%	87%	83%	79%
Interior Designers	69%	86%	91%	79%
Lecturers/Librarians	57%	97%	98%	93%
Project Managers	64%	89%	93%	88%
Quantity Surveyors	25%	77%	85%	76%

Source: Barbour Compendium User Questionnaire 2001, base 5400.

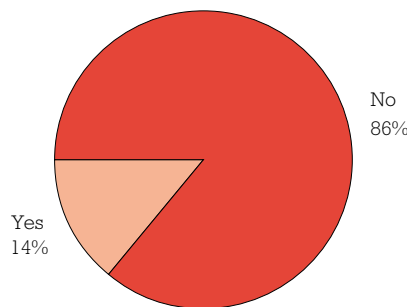
7.2 Project collaboration

High proportions of product decision-makers are using the basic tools which will allow them to access product information electronically. To further set into context their use of product information in these formats, the research has examined the methods of exchange of information on projects. Are specifiers and others operating in an environment where electronic exchange of project information across teams is now common-place? If so, they may expect information providers to deliver product and technical data in a way which is consistent with their handling of project information, and in a format which may be incorporated into their electronic documents.

'IT usage in the construction team', published at the end of 1999 by The Building Centre Trust, under the IT Construction Best Practice Programme, found that 13% of projects had a dedicated web site, rising to 27% of projects over £50m. This year's Barbour Report sought to identify how this has changed. Results show that there has little variation in the past two years, with only 14% of those interviewed in the telephone programme having worked on a project where the documentation was held on a web site. Reports from those attending the group discussion, conducted as part of the research for this report, suggest that this continues to be limited to major projects and repeat clients. On this type and size of project the cost of setting up the infrastructure represents a small proportion of the total value, and the savings in printing and postage costs are greater, making it more cost-effective to establish a web site.

One-quarter of the private sector Clients interviewed in the research for this year's Barbour Report have worked on web-based projects, which further supports the evidence that it is mainly large projects, and possibly repeat buyers of construction work, where web sites are used for document management.

- Have you worked on any projects where the documentation was held on a project web site?



Source: Telephone programme, base 350.

Although use of web-based document management is low, it is important to note however that the 1999 Barbour Report showed that over two-thirds of design professionals are exchanging documents and drawings electronically between each other. However, the report also identified that, when passing information to Contractors, paper is the common media.

Site offices need to have internet access if all the documentation on projects is to be managed using electronic methods. If designers are using electronic methods to capture product information, to what extent can they pass this information to others electronically, particularly those responsible for construction? 41% of those interviewed for this year's Barbour Report who have worked on projects reaching construction stage in the last 12 months, stated that one or more of these site offices had access to the internet. However, on average only 17% of all their projects reaching construction stage in this period have had site access to the internet. Housebuilders experienced lowest internet access, at only 1% of projects. The Contractors interviewed, of which a large proportion were in the top 100, stated that one-quarter of their projects had internet access in the last 12 months.

- Site offices with internet access

% with experience of project(s) lasting 12 months where site office had internet access	41%
% of site offices with internet access in last 12 months	17%

Source: Telephone programme, base 280 involved in construction projects reaching construction stage in last 12 months.

All the evidence suggests, therefore, that product information, although it may be delivered electronically to designers, must be capable of being printed out for use by others, particularly the site construction team.

8. OPINIONS OF THE DIFFERENT MEDIA

8.1 Benefits and drawbacks of CD ROMs and web sites

A series of questions was asked in the telephone interview programme to identify opinions of CD ROMs and web sites. CD ROMs are considered to be easier and faster to access than web sites, but there is a concern that they may not be up-to-date. Web sites on the other hand are perceived to overcome this problem, but accessing them and finding information are the main drawbacks in use. Concern about viruses was, perhaps surprisingly, mentioned by only one person.

- Main advantages of CD ROMs over web sites (unprompted)
(% of respondents stating each factor)

Easier to access	30%
Faster to access	25%
More information	17%
Easier to use	14%
No cost involved	3%
Better for archiving/filing	3%
Interactive/can incorporate information	2%
Other	20%

Source: Telephone programme, base 300 using electronic media for product information.

Note: Other includes better technical content than web sites, reliability of access, easier to pass to client, no need for internet connection.

- Main drawbacks of CD ROMs (unprompted)
(% of respondents stating each factor)

May be out-of-date	51%
Inability to find information	16%
Not interactive enough	5%
Loading	5%
Take up computer/hard drive space	5%
Risk of damage	2%
Other	25%

Source: Telephone programme, base 300 using electronic media for product information.

Note: Other includes storing CDs, cannot flick through as with literature, will not run with Apple Mac, poor quality scanned images, cannot compare manufacturers.

- Main advantage of web sites over CD ROMs (unprompted)
(% of respondents stating each factor)

Perception that web is up-to-date	59%
Easier access/at your finger tips	17%
More information	15%
Faster to access	10%
More interactive/can incorporate information	8%
Easier to use	5%
Easier for printing out information	1%
Better for archiving/filing purposes	1%
Other	15%

Source: Telephone programme, base 300 using electronic media for product information.

Note: Other includes ability to access more than one manufacturer, cannot lose them, no problems with loading, can e-mail supplier.

- Main drawbacks of web sites (unprompted)
(% of respondents stating each factor)

Speed	42%
Inability to find information	24%
Navigation	14%
Getting connected/unpredictable	12%
May be out-of-date	10%
Inconsistent quality	9%
Cost of use	4%
Locating them	2%
Not interactive enough	1%
Other	20%

Source: Telephone programme, base 300 using electronic media for product information.

Note: Other drawbacks mentioned include restricted internet access, viruses, time-consuming to locate information, ties up phone line, limited information, can crash, poor design.

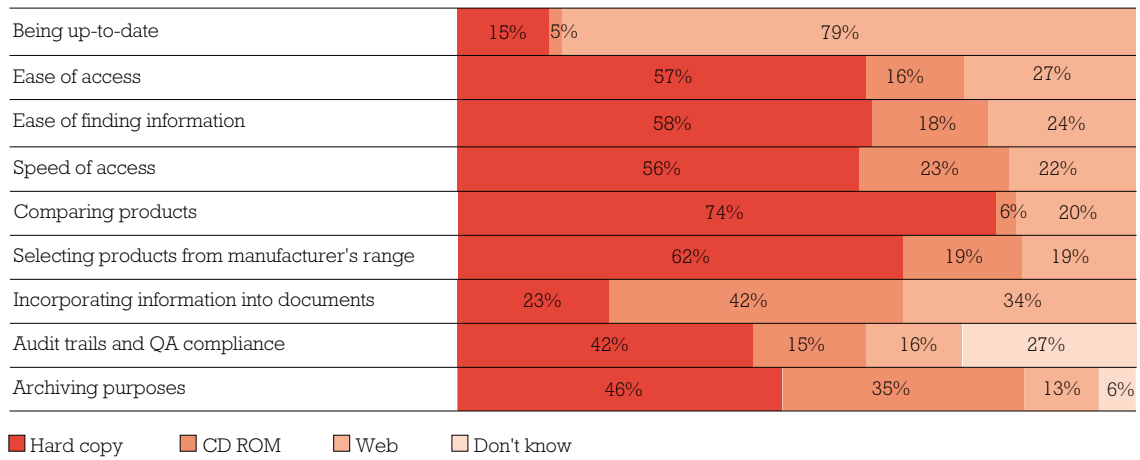
Interestingly, there has been little change in the perception of the drawbacks and benefits of the different media over the last 4 years. Answers to similar questions in the Barbour Report 1997 also showed similar concerns, although awareness has increased as the number of users of electronic media has grown. For example, in 1997 half were not familiar enough with the internet to comment, but amongst those who could give a view, 32% found it slow and 22% that it was not user-friendly. Half considered the main benefit of the internet was that information is kept up-to-date.

8.2 Preferred formats for delivery of product information

Information sources, regardless of the format of delivery, must offer a number of features and benefits if they are to be used by product decision-makers. They should be up-to-date, easy to access and use, and information should be capable of being stored for future reference. Respondents in the interview programme were asked to describe which delivery format they considered to best meet some of these requirements.

Hard copy emerged as the favourite option for most of the criteria, except being up-to-date, where web sites surpassed all other formats. Web sites were considered to meet many criteria better than CD ROM, except for incorporating information into documents and archiving purposes. In particular, a higher proportion of respondents consider web sites easier to access than CD ROM.

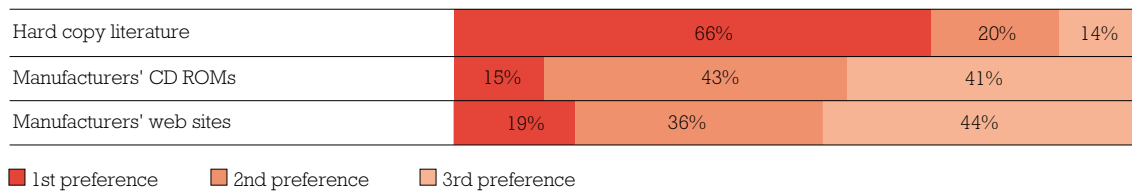
● Format considered best for features and benefits



Source: Telephone programme, base 300 using electronic media for product information

Given the perceived benefits and drawbacks of the different formats, which media do users prefer? Two-thirds expressed a continued preference for hard copy. A slightly higher number prefer to use web sites than CD ROMs. This is a reversal of opinions compared with four years ago; in the 1997 Barbour Report, 4 times the number of users preferred CD ROMs to the internet, although the majority preference then was also for hard copy.

● Format preferred now



Source: Telephone programme, base 300 using electronic media for product information. If those only using hard copy are also included, this increases to 71% preferring hard copy.

The preference for hard copy is universal. However, there are variations across professions and by organisation type in the preference for electronic media. With the exception of Architects, M&E Engineers and Building Surveyors, who have an equal preference for CD ROM and web sites, or a preference for CD ROM, higher numbers in all other professions prefer to use web sites. This may be because of their differing information needs: design professionals require more complex detailing and diagrammatic information.

- Format preferred
(% stating preference for electronic)

	1st preference CD ROMs	1st preference web sites
All	15%	19%
By profession		
Architects	15%	15%
Structural Engineers	12%	30%
M&E Engineers	22%	13%
Building Surveyors	21%	21%
Quantity Surveyors	10%	20%
Contracts Managers	14%	21%
Project Managers	15%	23%
Facilities Managers	6%	25%
Buyers	17%	33%
By organisation		
Private practice consultancies	18%	16%
Housebuilders	6%	24%
Contractors	9%	19%
Clients – public sector	15%	20%
Clients – private sector	9%	28%

Source: Telephone programme, base 300 using electronic media for product information.

Expectations of future preferences show a different picture, however, with the majority expecting a swing to the internet in two years' time, which is highlighted in section 10.

The reasons behind preferences were sought, and whether the preference was for hard copy, web sites or CD ROM, the reasons given were similar, in that users find their preferred media easier to use or to access. The table below summarises the unprompted reasons for preferences.

- Main reasons for media preferences (unprompted)
(% of stated preferences)

Hard copy	
Easier to use, browse, flick through, read	41%
Tradition, habit	9%
Need hard copy to work with, put on file, show others	8%
Easier on eyes, easier than reading from screen	7%
More information available in literature	5%
Graphics, pictures not always very good in electronic media	3%
Web sites	
Quick, easy to access, at my desk	55%
Up-to-date	28%
No storage	9%
CD ROMs	
Easier to work with, use	26%
Easier to access, to hand	24%
Better for storage than hard copy	18%
Contain comprehensive information	16%

Source: Telephone programme, base 300 using electronic media for product information.

Some of the comments further clarify users' reasons for their preferences:

Hard copy

- *I can go readily to the books, I know the binder and spine I am looking for. (Architect)*
- *"Flickability", quick and easy to use. (Client – public sector)*
- *We don't have to load it onto a number of computers. (Architect)*
- *It's so easy to do product comparisons when you have catalogues in front of you. We are a very IT advanced company and we all have large screen computers, but you can't beat the "instancy" of hard copy. You can get lost on the web and it's slow. (M&E Engineer)*
- *Readily available, easier to check how up-to-date it is. We use Barbour Index quite a lot, it's within arm's reach. (Contractor)*
- *Easy to carry around and to show clients. (Client – private sector)*

Web sites

- *It's there at the click of a button. (Architect)*
- *Instant access from my PC. (Structural Engineer)*
- *Easy to use and up-to-date, can get information at the touch of a button. (Client – private sector)*
- *No need to maintain catalogues. (Building Surveyor)*

CD ROMs

- *Easy to incorporate information into CAD. (Structural Engineer)*
- *Easy to store. (Architect)*
- *Speed of access and very comprehensive. (Client – public sector)*
- *Assuming it's up-to-date, I prefer CD ROM because it's accessible and easy to use, a complete "document" from one manufacturer, which can be accessed at any time. (Architect)*

8.3 Reasons for non-use of electronic media

The main factors preventing greater use of product information held electronically are problems in finding and using the information.

- **Factors preventing greater use of manufacturers' CD ROMs and web sites**

Slow to use/locate	44%
Not user-friendly	28%
Cannot find information	25%
No consistency in presentation between manufacturers	24%
Generally poor quality	10%
Don't know	26%

Source: Barbour Compendium User Questionnaire 2001, base 5400.

Some comments made during the course of the telephone interviews demonstrate reasons for lack of use of the electronic formats:

- *I am more than happy with hard copy and am annoyed that the industry forces the new technology on to us. (Architect)*
- *The web and CDs from manufacturers are definitely the way forward but they need a lot of improvement, it needs to be made easier to find what you want. (Quantity Surveyor)*
- *Due to storage problems with hard copy we shall be using more CDs and web sites. At the moment though they are not comprehensive enough. (Client – private sector)*
- *We don't like the manufacturers' CDs as they are just selling tools and do not have the technical information we require. (Architect)*
- *It would be helpful if there was consistency, eg if all the building material suppliers were either on the web or CD ROM. (Building Surveyor)*
- *There needs to be a common format, it would be better if all manufacturers offered a standard approach to their CD ROMs or web sites. (Architect)*
- *We find that people prefer to use hard copy. Web sites are being used more but they need to be improved, with better indexing. (Client – public sector)*

9. FEATURES REQUIRED OF ELECTRONIC MEDIA

9.1 Users' requirements

Electronic delivery of product information provides a number of unique benefits which hard copy cannot match. Although the results show low use of some of these benefits, such as incorporating information directly into other documents, users do appear to require many of the facilities provided. A number of potential features which electronic sources can provide were described to users in the telephone interview programme, who were asked to rate each out of 10 for usefulness. Three features stand out; a facility to search for products to meet the requirement, diagrams and details which can be downloaded and specification clauses which may be downloaded and adapted.

- Usefulness of features of electronic tools
(1 = not at all useful, 10 = very useful)

Facility to search for products matching requirements	7.9
Diagrams and detailing which can be downloaded	7.6
Specification clauses which can be downloaded and adapted	7.6
Illustrations of products	6.8
Features compatible with CAD	6.6
Information on prices	6.2
Information on where to purchase	5.7
Installation instructions	5.7
Ability to place an order online	3.7

Source: Telephone programme, base 300 using electronic media for product information.

There are minor differences in requirements by profession, as may be expected, reflecting roles within the specification and product selection process. Interestingly, features which may be expected to be attractive to Contractors were not rated highly. Although they would like to see information about where to purchase, as would Buyers, Contractors attached lower than average importance to placing an order online. Although online ordering was rated highest by Buyers and Housebuilders, both of these groups still gave a relatively low rating for the usefulness of this feature.

- Rating of usefulness of features
(1 = not at all useful, 10 = very useful)

	Facility to search for products	Specification clauses	Diagrams and detailing which can be downloaded	Illustrations of products
All	7.9	7.6	7.6	6.8
By profession				
Architects	8.0	7.6	7.8	7.1
Structural Engineers	7.8	8.1	7.4	6.7
M&E Engineers	7.5	7.7	8.1	6.4
Building Surveyors	8.2	7.8	7.1	6.1
Quantity Surveyors	7.2	6.8	6.8	6.5
Contracts Managers	7.2	7.4	7.2	6.7
Project Managers	7.3	6.7	7.3	7.0
Facilities Managers	8.2	7.5	8.0	6.9
Buyers	9.0	8.2	9.3	7.8
By organisation				
Private practice consultancies	7.7	7.6	7.7	6.7
Housebuilders	7.9	7.3	7.7	6.9
Contractors	7.8	7.4	7.2	6.8
Clients – public sector	7.9	7.9	7.5	6.5
Clients – private sector	8.8	7.6	7.8	7.7

Source: Telephone programme, base 300 using electronic media for product information.

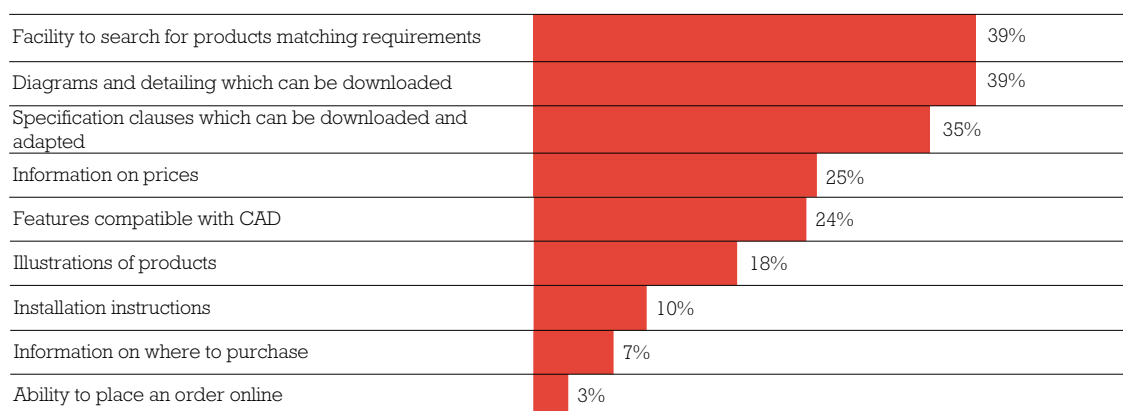
- Rating of usefulness of features
(1 = not at all useful, 10 = very useful)

	Features compatible with CAD	Information on prices	Information on where to purchase	Installation instructions	Ability to place an order online
All	6.6	6.2	5.7	5.7	3.7
By profession					
Architects	7.1	5.4	5.0	5.4	3.3
Structural Engineers	6.9	5.6	5.3	5.8	3.8
M&E Engineers	7.1	6.5	5.1	5.2	3.6
Building Surveyors	6.2	6.1	5.8	6.5	4.7
Quantity Surveyors	5.1	8.0	6.7	5.6	4.0
Contracts Managers	4.4	6.3	7.0	5.1	2.6
Project Managers	5.9	6.8	5.8	5.2	3.7
Facilities Managers	6.1	7.4	7.2	5.8	3.7
Buyers	4.8	8.3	8.7	6.5	5.0
By organisation					
Private practice consultancies	6.7	5.8	5.1	5.7	3.6
Housebuilders	5.0	6.7	6.9	5.7	4.6
Contractors	5.1	7.1	7.1	5.5	3.5
Clients – public sector	7.7	6.3	5.7	5.4	4.1
Clients – private sector	6.0	6.9	6.3	5.6	3.4

Source: Telephone programme, base 300 using electronic media for product information.

However, it is the three features which are regarded as most important which users have also identified as most requiring improvement. It is perhaps the low standard or lack of these facilities which is causing so few to incorporate information directly into their own documents, and which may contribute to the low use of electronic media.

● **Improvements required**
(% of users stating facility can be improved)



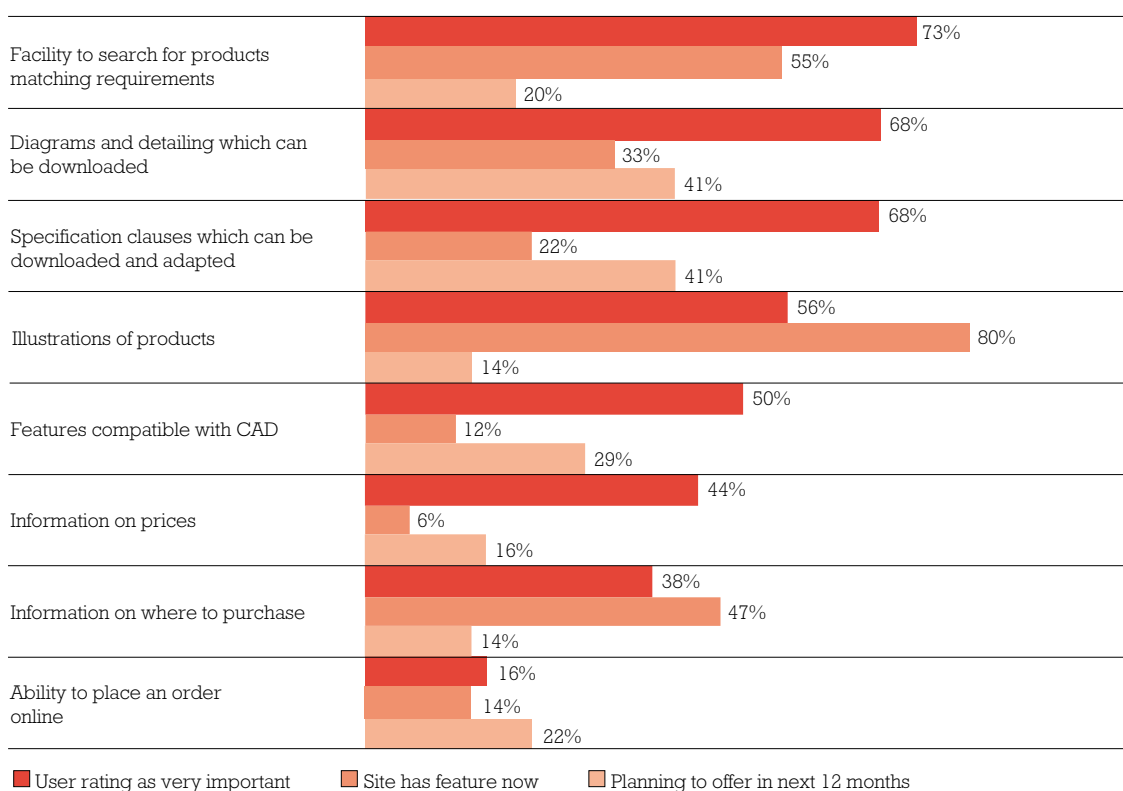
Source: Telephone programme, base 300 using electronic media for product information.

9.2 **Features provided by manufacturers**

In a survey conducted by Lychgate in December 2000, 49 product manufacturers were asked to describe the features provided by their web sites. Their answers are shown graphically below in the order in which respondents to the telephone programme considered features to be important. Respondents' ratings are also given for comparison, based on the percentage rating each feature 7 – 10 for importance.

This analysis shows that users' requirements are not being met. Although just over half of manufacturers provide a product search facility, the main user requirement, only one-third offer diagrams and details which can be downloaded. 68% of product decision-makers consider specification clauses to be important, yet only 22% of manufacturers were providing this information at the time of the survey. Having features compatible with CAD was also rated as important by half of product decision-makers, yet only 12% of manufacturers offer this at present. In all of these areas, manufacturers responding to the survey are planning to improve their electronic information sources.

● **Features of manufacturers' web sites**



Source: Lychgate 'Sales and Marketing in the Construction Industry', base 49 product manufacturers.

Note: Users ratings based on % rating feature 7 – 10 for importance.

9.3 Manufacturers with highly rated CD ROMs and web sites

Respondents to the telephone interview programme were asked to name a manufacturer or manufacturers with highly rated CD ROMs and web sites. 57% were able to name one or more manufacturers for their CD ROMs, but only half this number (28%) could think of a manufacturer's web site which they rated highly. A similar question was included in the Barbour Building Product Compendium questionnaire, and the same companies were named. The ten most mentioned manufacturers are listed, with some companies appearing in both lists:

Manufacturers with highly rated CD ROMs	Manufacturers with highly rated web sites
Armitage Shanks	Redland
Redland	Marshalls
British Gypsum	British Gypsum
Kingspan	Kingspan
Twyford	Velux
Metsec	Ibstock
Ward	Hepworth
Pilkington	Marley
Celcon	Altro
Hepworth	Armitage Shanks

Source: Barbour Compendium User Questionnaire 2001, base first 2000 analysed.

There was consistency in the reasons given by respondents to the telephone programme for naming a manufacturer. To be regarded as a good tool, the following facilities should be provided, listed in order of frequency of mention:

Most mentioned factors making a highly rated CD ROM

Ease of use/navigation
Facility to incorporate information into own documents and drawings
Design information
Technical details
Product search facility
Comprehensive product lists
Good presentation
Calculation information if relevant
Facility to print out selected information

Most mentioned factors making a highly rated web site

Ease of use/navigation
Technical details
Product search facility
Details/drawings may be downloaded
Good presentation
Facility to print out selected information

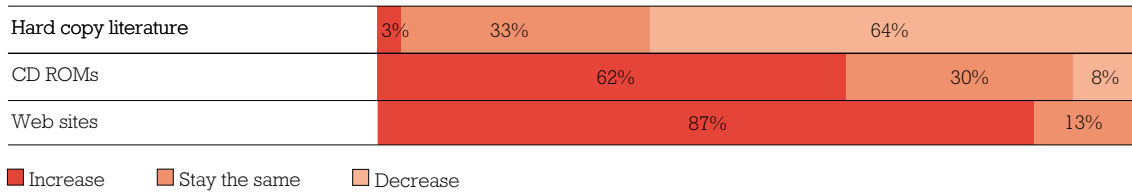
Source: Telephone programme, base 300 using electronic media for product information.

10. **FUTURE TRENDS**

10.1 **Users' expectations of future use of media for product information**

Although there is currently a preference for hard copy, nearly nine in ten product decision-makers expect their use of web sites to increase over the next two years, at the expense of hard copy. Use of CD ROMs is also expected to grow, but not at the same pace as the internet. In 1997, 43% expressed a preference for CD ROM and 11% the internet, when asked for their preference between electronic media. This year's results show a swing to a greater preference for web sites.

● **Anticipated change in use of formats over next two years**



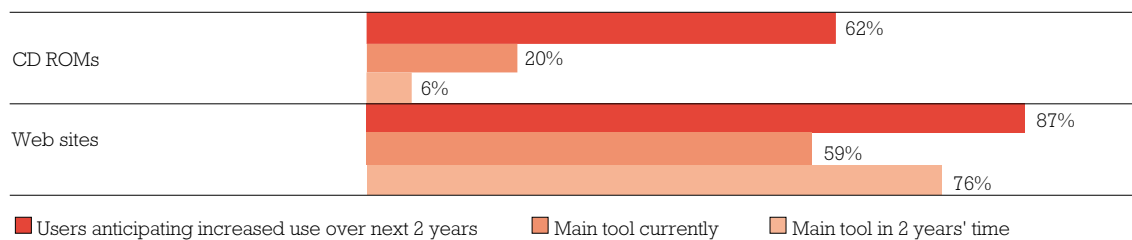
Source: Telephone programme, base 350.

10.2 **Manufacturers' expectations**

In Lychgate's study of manufacturers' sales and marketing activities, manufacturers were asked which of the two electronic tools they regard as the most important now and which they expect to be most important to them in two years' time.

Their answers accord with those of the product decision-makers they are targeting, in that 59% are already placing more emphasis on web sites than CD ROM as a marketing tool, with three-quarters expecting web sites to be their main tool of the two media in two years' time.

● **Electronic media considered by manufacturers to be their main marketing tool**



Source: Lychgate 'Sales and Marketing in the Construction Industry', base 49 product manufacturers.

Note: Balance to 100% (Main tool) = don't know.

10.2 **Manufacturers' sales and marketing expenditure**

The manufacturer survey also analysed sales and marketing expenditure for 2000. Hard copy literature was the main item of expenditure, followed by exhibitions, which may have seen higher than average expenditure as Interbuild took place in 2000. Investment in own CD ROM and web sites each accounted for just under 10% of the budget, together still lower than expenditure on hard copy.

- Product manufacturers' sales and marketing expenditure in 2000 (% of budget)

Product literature	32%
Exhibitions	20%
Trade journals	17%
Direct mail	11%
Product directories	11%
Own CD ROMs	9%
External telesales operation	8%
Own web sites	8%
Sales leads	7%
CPD seminars	7%
Third party electronic services	7%
Market research	6%
Product cards	6%
Other	10%

Source: Lychgate 'Sales and Marketing in the Construction Industry', base 49 product manufacturers.

Note: Other types of activity included Public Relations and promotional items.

11. EFFECT OF ELECTRONIC MEDIA ON MANUFACTURERS' MARKETING APPROACHES

A main issue raised by manufacturers during Barbour's consultation exercise to discuss the subject of this year's Barbour Report was how use of electronic media will affect traditional sales and marketing methods. For example, what is the relative use of hard copy and electronic media, will attendance at exhibitions fall, will direct mail be replaced by a preference for e-mailed communication? Will users require lower levels of manufacturer contact? Questions were therefore included in the telephone programme to identify views.

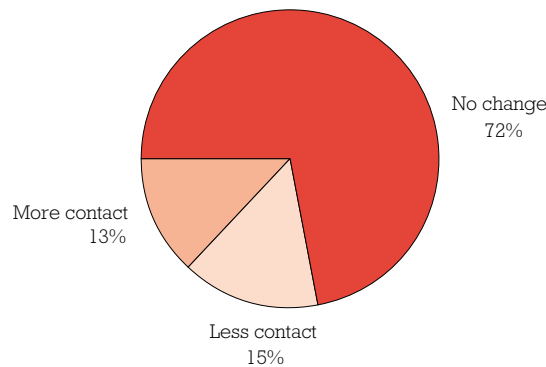
11.1 Contact with manufacturers

Many electronic information tools are designed to provide greater assistance to product decision-makers, allowing them to select the most appropriate products, and incorporate details into their design. This could reduce pressure on manufacturers' technical teams, but it could also affect the opportunity for manufacturers to promote their products and have a direct influence on specifications.

However, the majority of product decision-makers do not expect there to be any change in their levels of contact with manufacturers. 13% expect to have more contact, and 15% less contact. Interestingly, one-third of Contracts Managers, above the average for the sample, expect to have more contact with manufacturers as a result of using electronically delivered product information. This may be because they expect their use of manufacturer information per se to increase as they continue to become more active in product selection.

As shown in section 6.3, users expect to make direct contact for additional technical information, and assistance with using the product in the specific application.

- Effect of electronic media on direct contact with manufacturers

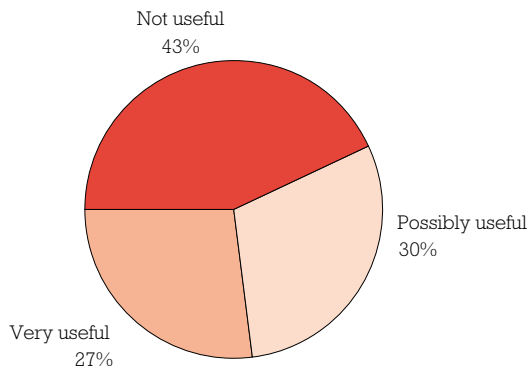


Source: Telephone programme, base 350.

11.2 Direct mail

Direct mail is often held in poor regard by specifiers and others in the industry, and response rates are usually low. E-mails could be used to achieve a similar purpose, keeping product decision-makers informed of new developments. Respondents to the interview programme were asked how useful they would find e-mails from product manufacturers with technical and new product up-dates, provided they have given their permission to receiving such e-mails. Over half said they would find these very or possibly useful, although some added that they would not wish to be inundated.

- Usefulness of up-date e-mails from manufacturers



Source: Telephone programme, base 350.

Analysis by profession and organisation type shows that a higher proportion of M&E Engineers, Contracts Managers, and those working for Housebuilders and the Public Sector would find information from manufacturers delivered by e-mail useful to some degree. This is a tool which manufacturers should consider using, by developing tailored lists of prospects' e-mail addresses. However it should be borne in mind that product decision-makers will not wish to be inundated, and that four in ten would not find e-mails from manufacturers useful. If properly used, this form of maintaining contact with specifiers and others may be very productive.

- Product decision-makers stating e-mails from manufacturers would be very or possibly useful

	%
All	57%
By profession	
Architects	58%
Structural Engineers	51%
M&E Engineers	68%
Building Surveyors	55%
Quantity Surveyors	59%
Contracts Managers	68%
Project Managers	57%
Facilities Managers	40%
Buyers	43%
By organisation	
Private practice consultancies	55%
Housebuilders	79%
Contractors	63%
Clients – public sector	66%
Clients – private sector	42%

Source: Telephone programme, base 350.

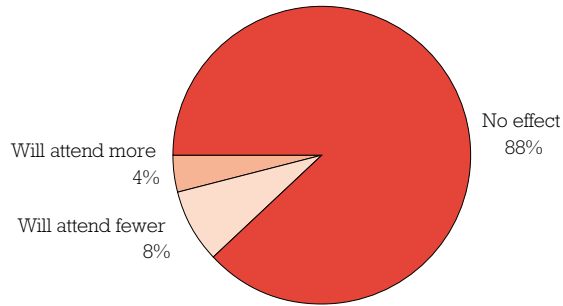
11.3 Exhibition attendance

Increased use of electronic tools may affect attendance at exhibitions, as information can be delivered in different ways. This was also examined in the research, at the request of manufacturers attending the consultation group.

Only one-quarter of those interviewed have attended an industry exhibition in the last 12 months. This is perhaps surprisingly low, given that Interbuild was held within the period. A higher number of Facilities Managers and those in smaller companies had attended an exhibition.

Amongst those who have recently visited an industry exhibition, nearly nine in ten do not expect their future attendance to be affected by the use of electronic sources. One person participating in the group discussion summarised the reasons: "Exhibitions are 'touchy-feely' and that cannot be replaced".

- Effect of electronic delivery of information on exhibition attendance (as % of those attending in last 12 months)



Source: Telephone programme, base 350.

It appears that, rather than reducing contact with product decision-makers, the use of electronic sources will have little effect on current levels of contact, giving manufacturers the opportunity for direct dialogue and promotion of product benefits.

12. **PROFILES**

Results in the main body of the report are the aggregate of the telephone interview results, with some breakdowns by profession and organisation type. There are differences in use of information sources by these breakdowns, and here some of these categories used are given for ease of comparison.

	Architects	M&E Engineers	Quantity Surveyors	Contractors
Browsing for product ideas				
% using literature in library	64%	63%	Not asked	44%
% using product directories	58%	37%		44%
% using electronic sources	42%	55%		27%
Looking for product to meet criteria				
% using literature in library	62%	69%	Not asked	38%
% using product directories	51%	17%		28%
% using electronic sources	52%	58%		34%
Looking for alternatives				
% using literature in library	37%	46%	38%	20%
% using product directories	58%	31%	41%	45%
% using electronic sources	43%	49%	27%	23%
Use of electronic information				
% of time copy/paste into CAD	15%	5%	0%	3%
% of time copy/paste into other documents	9%	5%	2%	1%
% of time print out for reference	28%	39%	30%	42%
Using product manufacturers' web sites	72%	80%	59%	59%
Using product manufacturers' CD ROMs	79%	89%	55%	57%
% using web last time needed product information	28%	16%	35%	44%
% using CD ROM last time needed product information	18%	13%	15%	6%
Have hard copy library	93%	100%	86%	84%
1st preference CD ROM	15%	22%	10%	9%
1st preference web sites	15%	13%	20%	19%
Expecting to increase use of product information on CD ROM in next 2 years	63%	63%	52%	70%
Expecting to increase use of product information on web in next 2 years	86%	69%	76%	89%
E-mails from manufacturers very or possibly useful	58%	68%	59%	63%
Expecting to have more direct contact with manufacturers as result of using electronic tools	10%	11%	7%	25%
Have attended industry exhibition in last 12 months	28%	34%	7%	27%

	Building Surveyors	Housebuilders	Clients – private sector	Clients – public sector
Browsing for product ideas				
% using literature in library	53%	56%	39%	78%
% using product directories	45%	39%	45%	51%
% using electronic sources	32%	50%	37%	49%
Looking for product to meet criteria				
% using literature in library	63%	67%	29%	64%
% using product directories	37%	44%	34%	42%
% using electronic sources	51%	33%	37%	60%
Looking for alternatives				
% using literature in library	45%	37%	18%	45%
% using product directories	50%	42%	47%	38%
% using electronic sources	49%	38%	38%	55%
Use of electronic information				
% of time copy/paste into CAD	8%	9%	0%	10%
% of time copy/paste into other documents	3%	8%	4%	8%
% of time print out for reference	47%	57%	37%	30%
Using product manufacturers' web sites	71%	84%	66%	57%
Using product manufacturers' CD ROMs	74%	63%	79%	85%
% using web last time needed product information	48%	35%	28%	37%
% using CD ROM last time needed product information	18%	12%	22%	20%
Have hard copy library	84%	95%	71%	87%
1st preference CD ROM	21%	6%	9%	15%
1st preference web sites	21%	24%	28%	20%
Expecting to increase use of product information on CD ROM in next 2 years	55%	58%	55%	53%
Expected to increase use of product information on web in next 2 years	76%	79%	84%	85%
E-mails from manufacturers very or possibly useful	55%	79%	42%	66%
Expecting to have more direct contact with manufacturers as result of using electronic tools	21%	11%	16%	15%
Have attended industry exhibition in last 12 months	24%	11%	28%	53%

Note: sources include any mention, whether a main or secondary source.

Contractors, Housebuilders, private and public sector Clients represented by a mix of professions.

13. CONCLUSIONS

The overall conclusion of the 2001 Barbour Report is that, until manufacturers provide information in electronic formats incorporating features that match users' requirements, and until electronic media become more efficient, hard copy will continue to be the preference of many.

There is no doubt, however, that there is a significant increase in the usage of electronic tools and that their potential for delivering flexible and comprehensive data far exceeds that of hard copy. As such, manufacturers must ensure that their product information is available in a variety of media so that it reaches all stages of the construction process, making the most of the benefits each format provides to the user.

This report will assist manufacturers in tailoring the delivery of their product information to ensure that it meets the needs of each profession in the process of specification, brand selection and purchase.

There are several factors for manufacturers to consider arising from this year's research:

- Literature continues to be important. Manufacturers should check that up-to-date copies of their literature are held in users' libraries.
- Directories are still considered to be a very useful tool for product selection. Manufacturers should ensure that their products are featured in those directories which are frequently used across the construction process.
- Web sites should be easy to locate over the internet, and once a user is on the site, navigation must be user-friendly.
- Electronic sources must add value and not simply duplicate literature. They should provide the features required by users to facilitate use, such as product search facilities, diagrams and detailing, specification clauses, product illustrations and features compatible with CAD.
- The individual requirements of those professions targeted by manufacturers should be taken into account. It is not just designers who are using the tools, but also those who switch specifications and those who purchase products.
- Electronic tools help to incorporate products in the design process but users still want direct contact and assistance. Sales forces will not become redundant, and contact by telephone is important. Manufacturers should have good call handling capabilities with procedures for checking where callers sourced their details to evaluate how the different media are working for them.
- Contact with potential customers by e-mail should be considered, but permission must be sought. This should be carefully monitored to avoid being counter-productive.
- The ability to order online is not required by many at this stage.
- There is a perception that information on web sites is up-to-date. Manufacturers should take steps to ensure that this is the case or indicate otherwise.

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