

BI FOR ALL

The move to 'pervasive' business intelligence is underway but is by no means straightforward. Cliff Mills has the details of our latest survey.

Making better use of information is vital for all organisations. It provides the foundation for improved decision making, effective yet flexible management control, and the visibility and integrity of business operations.

To some extent, business intelligence applications have been deployed as tactical solutions to specific problems and have, more often than not, been the preserve of specialist data analysts or IT technicians.

Today, there is a significant change in demand for BI at all levels within organisations, as senior executives, managers, information workers and consumers all seek more information and clearer insights, to assist with common tasks and processes.

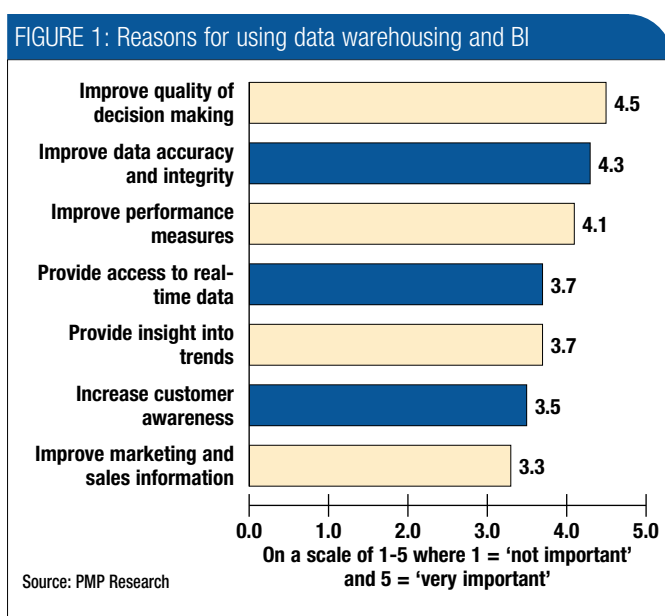
Technology too has evolved, and given rise to the idea of pervasive BI, a framework that provides all these participants with access to information that is relevant to their roles and activities within the organisation, delivered over many different channels.

With the increasing amount of data present in organisations, this challenge is becoming more complex and a clear information strategy is essential to deliver timely and meaningful information.

For most organisations, the first stage in this strategy is the creation of a data warehouse. Yet according to our latest survey (see Survey Statistics box, page 3), only 14% of companies have widely implemented data warehousing and BI across the whole organisation, while a further 31% have done so in some parts.

However, there is still much activity in this area, with 25% of companies currently developing or implementing data warehousing, 11% running a feasibility study or pilot project, and 6% undertaking a formal analysis to determine their requirements. A further 11% have identified this as an area for future activity – leaving only 3% of companies with no plans to implement a data warehouse.

Many organisations are recent converts to data warehousing – 28% have only implemented it in the last six months and 11% in the past year. Around 14% have been using the technology for between one and two years and 22% for three to five years.



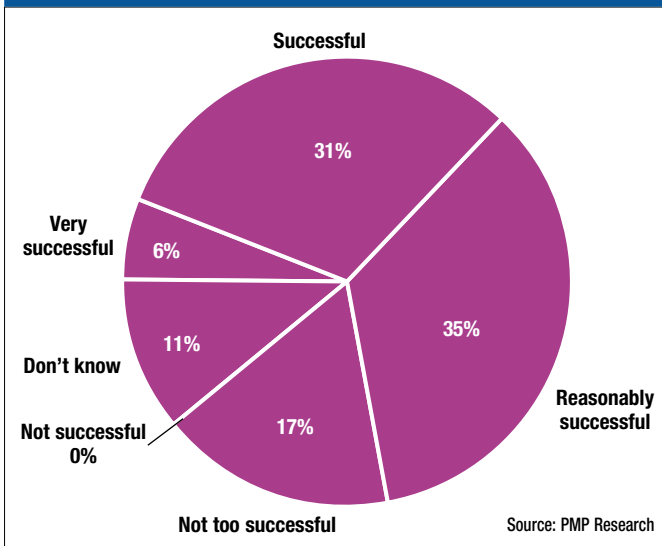
A few companies now have extensive experience of data warehousing, with 11% having been involved for six to 10 years and 3% for more than 10 years.

We asked the respondents to identify their reasons for using data warehousing and BI tools, based on a scale of 1 to 5 where 1 indicates 'not important' and 5 'very important'. The top two drivers (see Figure 1) are to improve the quality of decision making (4.5) and to increase the accuracy and integrity of their data (4.3).

Adopting data warehousing forces organisations to ensure data consistency across multiple systems; this can then provide more accurate and insightful information that leads to improved decision making.

Improved performance measurement is also seen as a key objective (4.1). Providing access to real-time

FIGURE 2: Success at meeting data warehousing/BI objectives



information (3.7), thus allowing better insight into business trends (3.7) and increased customer awareness (3.5) and improved marketing & sales information (3.3) are also key elements.

Most organisations are fairly satisfied with the results of their data warehousing and BI initiatives, though there is still plenty of room for improvement. Only 17% feel they have been 'not too successful' with their efforts (see Figure 2), compared to 35% and 31% respectively who think they have either been 'reasonably successful' or 'successful'. A few companies (6%) rate their implementation as 'very successful'.

The good news is that, by and large, data warehousing and BI now has a high profile in the majority of organisations. Two-thirds of senior

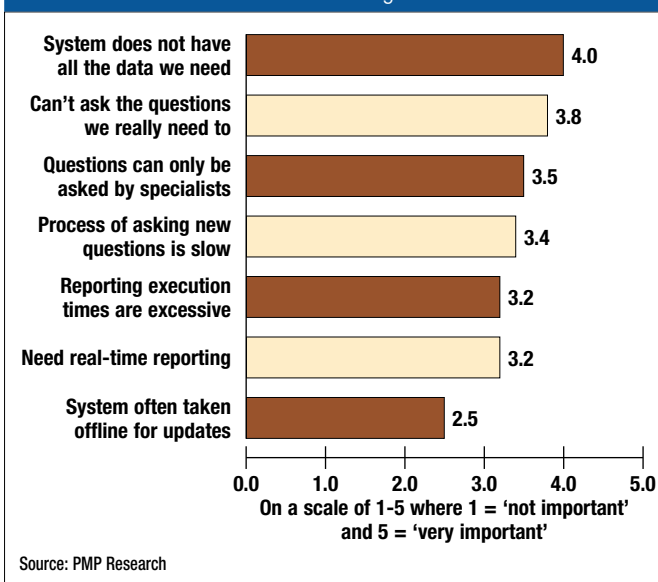
managers either see it as 'very important' (40%) or 'important' (26%) to their decision-making process. This is followed by 29% who feel it is 'reasonably important'. Only a few respondents see it as of 'little importance' (3%) or 'no importance' (3%).

This positive appreciation is reflected in the fact that 67% are planning to extend the scope of their data warehousing activities to new functional areas, while 64% will be further exploiting the use of their existing information, and 53% will be expanding the use of the system to new users.

Hand in hand with this, 39% will be buying new tools to enhance their data analysis capabilities and provide more extensive and detailed reporting. In addition, 28% are looking to improve the performance of their system and 17% regard controlling the rising costs as an issue.

But while users are generally happy with the facilities provided by their data warehousing system, there are still a number of issues to be addressed. We asked the respondents to identify the key areas they would like to see improved, using a scale of 1 to 5 where 1 equals 'not important' and 5 'very important'.

FIGURE 3: Issues with data warehousing/BI

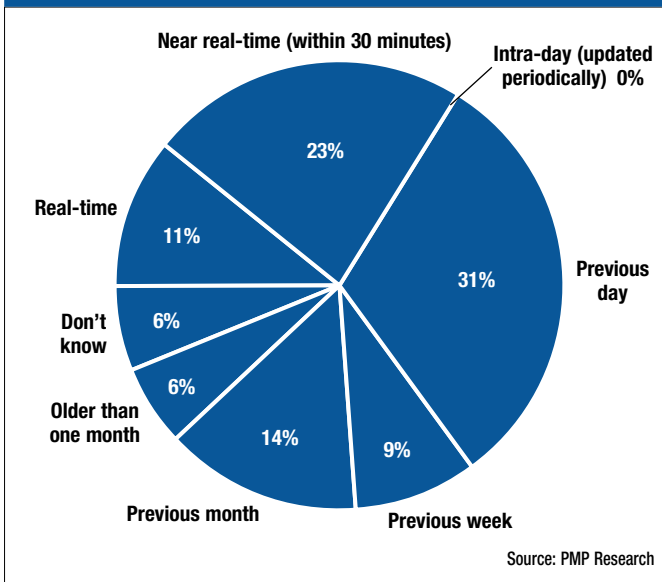


The most critical issue (see Figure 3) is that the system does not contain all the data that is required (4.0). This ties in with the second concern, that users cannot ask all the questions and obtain all the information they would like (3.8).

It is still the case, in a number of companies, that data queries can only be made by specialists (3.5) and this tends to make the process run slowly when new questions are asked (3.4). There is also a perception that reporting execution times are excessive (3.2) and that in many cases there is a need for real-time reporting (3.2). Some respondents are also concerned that the system is regularly taken offline for updates (2.5).

One key objective of data warehousing is to provide as much insight into the activities of your customers as

FIGURE 4: How up-to-date is information being worked on?



possible, the ultimate aim being a single view of all company interactions with the customer.

To date, only 9% of respondents feel they have achieved this for all their customer base and a further 9% for some of their customers. The largest section, 43%, are still working towards this goal, with a further 29% feeling they are still some way away from achieving this.

Ideally, the information in the data warehouse should be as up-to-date as practical to facilitate informed decision making. In 11% of cases, information is being accessed in real time (see Figure 4) with 23% accessing data updated in the last 30 minutes. The largest proportion of companies (31%) are working on information from the previous day, 9% from the previous week and 14% are using one-month-old data. A small number of companies (6%) are using data older than one month.

A growing problem for most companies is managing the increase in data storage requirements. This is reflected in the data warehousing area, with 42% reporting that data volumes have increased substantially and 33% by a small amount. Only 8% think data volumes have remained static and 3% feel they have decreased.

While some companies are beginning to bite this bullet, it is clear that much remains to be done to prevent the uncontrolled spiralling of data storage. As companies seek ways to reduce IT costs and also make themselves 'greener', then storage requirements will be increasingly under the spotlight.

A number of different strategies are being adopted by organisations to address this issue. A quarter are implementing more effective data management technologies, 19% are being more rigorous about the data they keep, and 14% have implemented improved management controls.

More regular archiving is being used by 17% and offline tape storage by 3%. However, 22% freely admit they are doing nothing to reduce storage and will continue to expand capacity to meet demand.

For a variety of reasons (eg, mergers, re-organisations, etc) a company may have more than one data warehouse or data mart. A data mart is defined as a small data warehouse which might contain specialist data for one particular application and may or may not be linked to a central data warehouse. 44% of companies fall into this category of having several data warehouses and data marts, compared to 28% who only have one and 8% with a single data warehouse and several dependent data marts.

SURVEY STATISTICS

We interviewed a cross-section of organisations for their views on the use of data warehousing and business intelligence applications. The sample includes companies from the manufacturing sector (14%), IT & telecoms (14%), the public sector (12%), retail (9%), distribution & logistics (9%) and banking & finance (9%).

The companies vary in size, with 6% having a turnover in excess of £5 billion, 11% in the £1 billion to £5 billion bracket, and 17% in the £500 million to £1 billion range.

In the middle ground, 25% have between £100 million and £500 million turnover and 6% £50 million to £100 million. At the smaller end, 11% have a turnover of between £10 million and £50 million and 20% £5 million to £10 million.

For those companies with several data warehouses, the most common reason given – mentioned by 39% of respondents – is that it is the result of tactical purchasing of BI products by individual departments. Only 12% say that it is part of a considered strategy, whereas 15% say it has developed through merger activity. For a few companies (4%) it results from purchasing products with in-built business intelligence solutions.

Multiple management

Organisations are taking different approaches to managing multiple data warehouses. Most are looking to integrate them in one way or another, with 11% already engaged in this process and 37% evaluating the options for consolidation. Only 15% plan to keep their data warehouses separate as they contain mutually exclusive data.

The implementation of data warehousing is also forcing organisations to improve the quality of their data, and while it is still some way from perfect, overall there is a marked improvement in data quality.

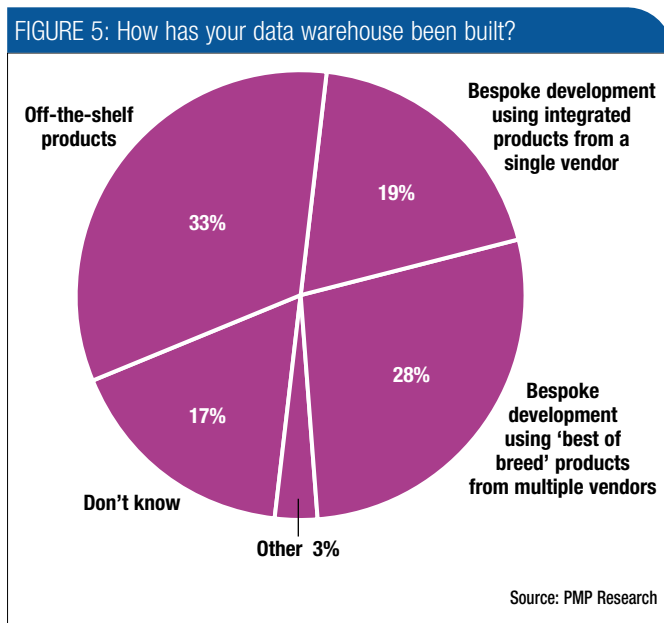
Before data warehousing, 39% considered their data quality to be ‘bad’ but this has now dropped to just 6%. Before implementing their data warehouse, only 6% considered their data to be ‘good’ and 28% felt it was ‘satisfactory’ – compared to 31% who think it is now good and 28% who see it as satisfactory.

The time taken to clean up the data varies greatly from the 11% who took over a year to the 19% who achieved it in less than one month. A further 8% took one to three months, 17% took three to six months and 6% took six to 12 months.

A variety of methods are being used by companies to build their data warehouse: 33% have used off-the-shelf products (see Figure 5), 19% have undertaken bespoke development using integrated products from a single vendor and 28% have developed the system using ‘best of breed’ products from multiple vendors.

There are many different ways to analyse the information in a data warehouse but the majority of respondents (58%) use a variety of specialist business intelligence tools to do this. A further 19% are planning to use specialist tools and just 14% have no intention of doing so.

There appears to be two separate camps concerning the way BI tools are deployed. These tools are used primarily by specialist analysts in 50% of the companies, but in 46% they are routinely deployed as part of operational applications and used by non-specialists.



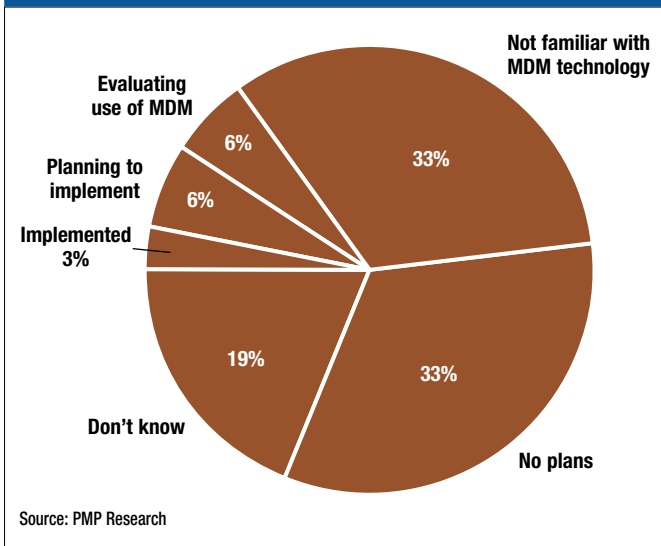
New vendors

A new style of vendor has emerged in recent years offering a data warehousing ‘appliance’. This provides an integrated solution comprising servers, storage, operating system, database and software specifically pre-installed and optimised for data warehousing.

This approach appears to be somewhat slow in gaining general acceptance as none of the companies interviewed have adopted it and only 11% would consider using this type of solution. Slightly worrying for the vendors is that 31% of respondents are unfamiliar with the data warehousing ‘appliance’ approach.

For those companies familiar with the concept, the biggest drawbacks are seen as its proprietary approach (28%), the cost of migrating data across to

FIGURE 6: Is your organisation using MDM?



such a system (28%) and the credibility and stability of the suppliers (12%).

Some organisations have recognised that in order to make full use of their information, they need to extract business intelligence from their whole complement of applications. To do this, the data held across the company has to be managed in the same standard way. This is known as master data management.

The uptake of MDM is still in the early stages, however, with only 3% of companies having adopted it to date (see Figure 6). Another 6% are planning to implement MDM and a further 6% are evaluating its use. This still leaves most companies (33%) with no plans at all and a further third who are unfamiliar with MDM.

Clearly, data warehousing and BI tools are playing a significant role in many organisations and are being used to great effect to aid decision making. However, there is still much more that can and needs to be done to maximise the benefits from the information in the organisation.

Moving to a more pervasive use of business intelligence will take some time and a clear and well-directed information strategy will be a prerequisite for achieving this.

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