Taking centre stage

More companies are getting the point of arcane integration and development technologies, says PMP Research

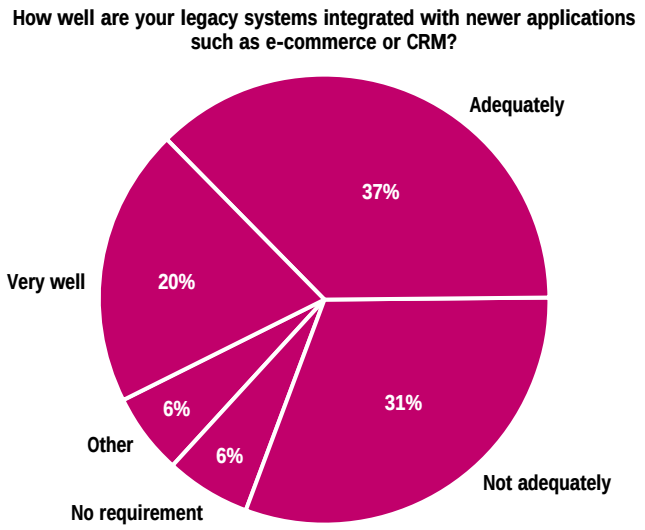
Integration used to be the preserve of the back-room 'boffins' who revelled in the technical requirements of stitching together different applications. Now it is a frontline activity whose business benefits are at least as significant as the technological challenges.

The current economic climate means there is little money available for investing in new IT systems, so many organisations are keen to find other ways of improving the performance of their key applications. Most have the same goals in mind. They are looking to create a single view of the customer across several different contact points within the organisation and they also want to introduce end-to-end processes so they can provide seamless service.

In this way companies hope to improve their operational effectiveness. For some organisations, most notably in the financial services area, this is not merely a desirable outcome but an essential one, since new regulatory requirements and compliance issues mean they must have better means of tracking information through all their internal systems. But as this year's PMP Research survey shows, organisations face some significant issues in achieving this.

The first is the sheer welter of legacy systems now in place after many years of IT investment, with companies taking a variety of approaches. For example, while around a third of our sample (30%) rely mainly on bespoke applications, one in five (20%) have opted for integrated ERP packages and 16% have a mix of standalone and bespoke packages. Several respondents admit to a combination of all of these.

FIGURE 1: Levels of integration



This complexity of installed base is a potential problem given many organisations now want to link their existing systems with newer applications, particularly in areas such as e-commerce and CRM.

However, while 20% of our respondents reckon their legacy systems are 'very well' integrated with newer applications and 37% feel the level of integration is 'adequate', getting on for a third (31%) concede that they are not adequately able to integrate older systems with online developments (see Figure 1).

This is a worry for many companies, given that improving operational effectiveness emerges as the key business driver for enterprise integration projects, according to 86% of those polled. This is closely followed by the desire to achieve end-to-end processes, mentioned by three-quarters (74%), with half (54%) also looking for increased interaction with customers.

Improving strategic and operational agility is another significant driver, cited by 48%, as are compliance and regulation requirements (44%) and a focus on B2B

SURVEY STATISTICS

We interviewed a broad range of organisations for this year's survey into the enterprise application and data integration market.

The companies vary considerably in size. At the lower end, 2% have a turnover in the £5 million to £10 million range, while 12% come into the £10 million to £50 million bracket. A further 10% have turnovers of between £50 million and £100 million, while 12% report turnover from £100 million to £150 million.

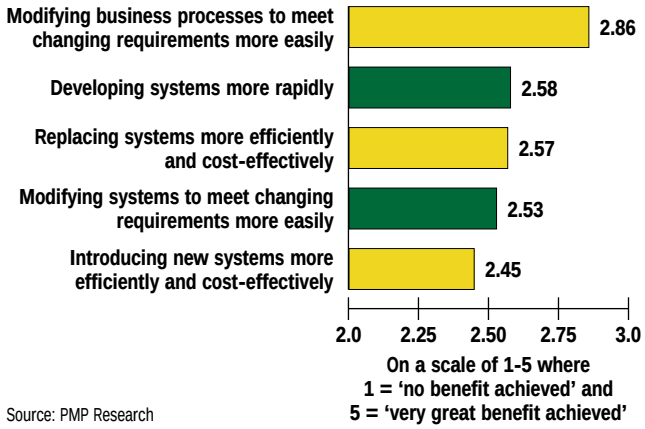
Moving towards the top end, getting on for a third (30%) have a turnover of between £150 million and £1 billion. Larger organisations are also included in our sample, with 8% recording turnovers in the £1 billion to £5 billion bracket and 20% topping the £5 billion mark.

The industry background of our interviewees is equally varied and includes companies in distribution, the energy & utilities market, leisure & tourism, information technology, publishing and the chemical & pharmaceutical industry.

A significant proportion are drawn from the manufacturing (16%) and financial services arenas (16%). Both these markets have seen technology produce major changes in the ways companies operate, as has the retail industry (14% of our sample).

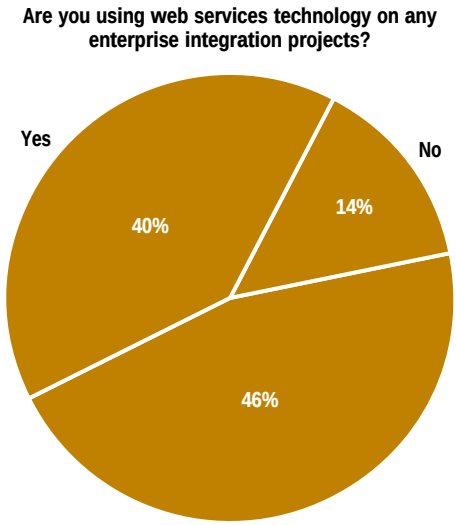
We also sought the views of local authorities, government departments and other organisations within the public sector (10%) where recent e-Gov initiatives have prompted often complex integration projects.

FIGURE 2: Key benefits of using integration technology



Source: PMP Research

FIGURE 3: Take-up of web services



Source: PMP Research

collaboration (42%). Individual replies draw attention to other specific factors, such as government performance requirements under the current e-Gov initiative and the need for data consistency.

The inability to integrate legacy systems with newer CRM or online applications is a substantial barrier to achieving all these aims. In many companies, while web-based systems work well at the front end, they remain unconnected with the back-office processing systems so there are major challenges in linking processes together from start to finish in any one transaction. Nevertheless, organisations are making some headway. Our sample identified several reasons for introducing enterprise integration technology projects which all carried roughly equal weight.

These include being able to introduce new systems more efficiently and cost-effectively; being able to modify or replace systems more easily; being able to modify business processes to meet changing requirements; and being able to develop systems more rapidly. According to the majority of the respondents, these aims all have similar importance in their eyes. But looking at this issue in more detail, it becomes clear that some ambitions are easier to achieve than others.

We asked the respondents to rate their success at achieving the required benefits from integration technology projects using a scale of 1 to 5, where 1 represents 'no benefit achieved' and 5 shows 'very great benefit achieved'. The aggregated scores from this exercise (see Figure 2) show that organisations are most likely to be able to modify business processes to meet changing requirements as a result of implementing enterprise integration technology (2.86). Companies are also able to develop systems more rapidly using integration technology (2.58) and replace systems more efficiently and cost-effectively (2.57).

However, modifying systems to meeting changing requirements does not necessarily get much easier after an integration technology project (2.53), while the goal of introducing new systems more efficiently and cost-effectively remains elusive for many (2.45). Given their success in modifying business processes as a result of integration technology, it is surprising to discover that organisations are fairly lukewarm about the potential for using workflow or business process management (BPM) software in such projects.

Although 18% indicate some reliance on this technology, only 2% report that they plan to use workflow or BPM to a 'very great extent'. In contrast, 45% anticipate making limited use of it, while a quarter (25%) have no great plans in this area. Organisations display a greater enthusiasm for web services within the integration arena, with 40% indicating they have already used this technology on an integration technology project and 46% suggesting they may do so in the future (see Figure 3).

The big selling point for web services is that they represent an easy way to send information to companies or trading partners, according to more than three-quarters (78%) of our sample. Half also believe this option is cost-effective (58%) and technology-independent (56%).The principal drawbacks of deploying web services are identified as high development costs (42%), potential performance issues for a corporate network (36%) and the lack of good development tools (30%). Several respondents also expressed concern at the apparent lack of security and the perceived immaturity of the standards, as well as worries about shortages of critical expertise and skills.

Having said that, a third (33%) have used web services to publish services to other organisations and 33% are considering doing so in future – with 37% reporting that the integration process went smoothly and only 14% having difficulties in this area.

FIGURE 4: Percentage of IT spend going on integration

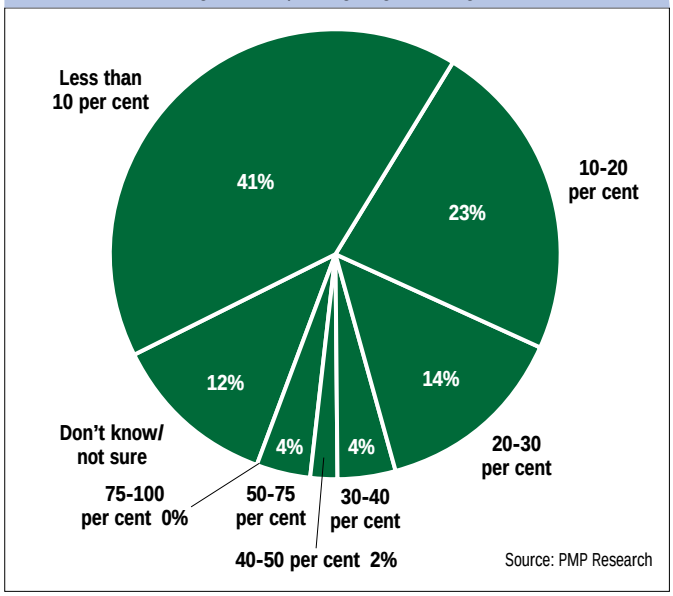
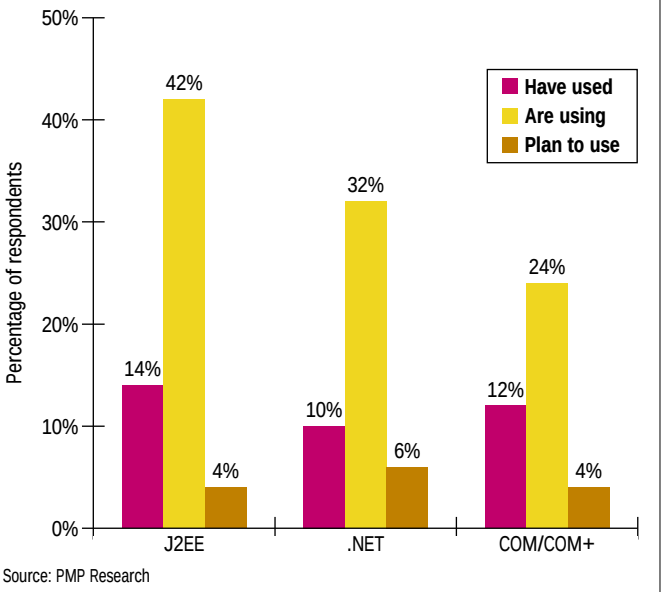


FIGURE 5: Use of specific integration technologies



Commitment

Overall, the survey shows that organisations are committing themselves to integration. We asked the sample to estimate the percentage of their overall IT spend, including hardware, software, consultancy and support costs, that goes into this area. While the biggest group (41%) put less than 10% of their total IT investment into integration, for a quarter of companies (23%) integration consumes 10-20% of the IT budget (see Figure 4).

A further 14% put 20-30% of their IT spend into integration, while 4% estimate this figure to be 30-40% and 2% reckon spending is in the 40-50% bracket. There are also some very big spenders on integration, with 4% saying they spend between half and three-quarters of their IT budget on this activity. However, many organisations are clearly still constrained by corporate budget cutbacks. Although 35% have large, enterprise-wide integration programmes either in place or planned, a larger proportion (37%) concede that integration activities are most likely to happen on a case-by-case basis according to development need.

Skills shortages may be another factor in the reluctance to introduce large-scale integration programmes, since almost a third claim it is either 'difficult' (22%) or 'very difficult' (8%) to recruit staff to design, implement and support enterprise integration projects. However, companies are keen not to let mayhem rule. Only a minority (22%) have small individual integration projects currently in place or planned; and the majority (68%) have one central group which co-ordinates all integration activity and enforces standards across the enterprise.

Such an approach is important if companies are not to lose sight of the overall gains from large-scale integration. The danger is that too many small-scale projects, whilst requiring less cash in the short term, could also deliver fewer benefits longer term by jeopardising the overall enterprise vision for integration.

Platforms

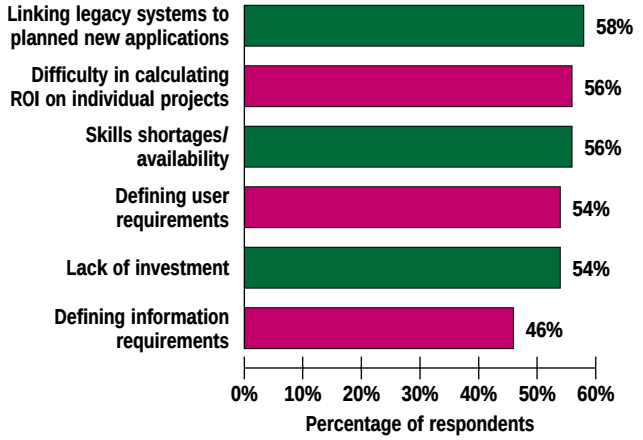
When it comes to choosing the platform for enterprise integration projects, most organisations divide into two camps. Most popular in the past has been J2EE, used by 14%, along with COM/COM+ (12%) and .NET (10%). Currently, 42% are using J2EE, 32% have plumped for .NET and 24% have chosen COM/COM+ (see Figure 5). Looking to the future, this trend is set to continue with 6% of respondents saying they will adopt .NET and 4% selecting either J2EE or COM/COM+.

What unites these technologies – and these choices – is their influence on software development plans. More than half of our sample (59%) say the ability to re-use software components is a key issue for their organisation. By doing this, companies can substantially cut the time and effort it takes to develop new systems. This is a concept which has been widely discussed within the programming world for years, but much less commonly practised.

Interestingly, the majority (55%) say that re-using components is more important now than in the past, with 37% reporting no change in their views and only 4% maintaining this is a less important consideration. And the consensus is that technologies such as J2EE and .NET make this a more achievable goal than in years gone by, with 57% indicating this is now the case.

The close connection between integration requirements and development plans is further highlighted by another finding: as Figure 6 shows, linking systems to planned new applications tops the list of challenges organisations face in software development (58%). This is followed by concerns over skills shortages (56%), difficulty in calculating ROI

FIGURE 6: Biggest challenges in software development



Note: respondents could choose all that apply

Source: PMP Research

(56%), problems in defining user requirements (54%) and lack of investment (54%).

The main areas of software development activity emerge as enhancements to existing systems (70%), developing new systems (60%), developing e-business applications (60%) and integrating legacy and e-business applications (50%). From these findings it is clear that the lines are blurring between what was once regarded as specialised integration activity and what used to be included under the umbrella title of software development.

With so many applications already in place and so little money for direct replacements, almost all companies are now left to 'make do and mend'. This is less of a burden than it might have once been, however, since the widespread adoption of technologies such as J2EE and .NET is paving the way towards the development of re-usable components which will make both integration and development work an easier challenge to meet.

● *If you are interested in this study, please contact Steve Markwell at PMP Research. Email: stevem@pmp.co.uk.*