



IT Operations Management Solutions

Introduction

As technology has enabled new ways of doing business, organisations have come to rely heavily on their IT departments for continued growth and competitive edge. Along the way, vast sums have been invested in improving access to information, customer service and productivity. These enhancements have greatly improved businesses' agility when responding to market changes, while driving down costs through more efficient processes.

However, there is now some question over the extent to which many IT departments have succeeded in adapting to meet the new responsibilities that come with this pivotal role of pan-organisational service provider. As the importance of technology has spread to touch all areas, from payroll to customer service, so has the need to effectively manage the business risk associated with IT failure and poor performance.

IT Operations management solutions provide businesses with a suite of processes and tools that manage, monitor and assist with operational challenges such as fault resolution, configuration management and change management. IT operations management is often the 'silent' engine within the IT department that ensures business critical corporate systems are running efficiently and effectively.

In a study commissioned by Dimension Data (UK) - in partnership with technology vendors InfoVista, OPNET and EMCsmarts - evidence from 200 interviews with FTSE 750 organisations, undertaken by independent research organisation Coleman-Parkes, provides a real depth of insight into the issues surrounding IT operations management.

November 29, 2005

Executive summary

Despite being critical to efficiency, productivity and, therefore, competitive ability of the majority of businesses surveyed, the IT function continues to be poorly understood by those outside the IT department – the line-of-business (LOB) users and managers. It is also inadequately integrated into the management and reporting structures used elsewhere. End-users are apathetic on the subject of IT service delivery, have little idea about what is behind the technology failings that damage their productivity and, while individual business units are ultimately footing the bill for increased IT investment, they are unable to quantify the value they ultimately receive.

For the many businesses that lack adequate formalised monitoring for system downtime or other technology failures, it is unsurprising that neither the IT department or individual business units make the crucial link between IT and business risk. The result is diminishing returns on a growing IT spend; a lack of business agility – both internally and in customer-facing operations; and a chaotic approach to change management, which reflects poor understanding of users' needs.

With IT playing such a pivotal role across all mission-critical business areas, there must be a corresponding step-change in the way IT departments measure and report their performance. Internal service level agreements (SLAs) – rarely used and even more rarely meaningful – should be introduced across the board, with robust frameworks for best practice and with real penalties for under-performance.

Both IT departments and the business units they serve must find a new relationship, more akin to that of a supplier and client. Currently reporting directly to the top of the organisation, the internal IT supplier should, in future, be accountable to department heads, who must be better informed about the level of service they can expect and how this stacks up against actual delivery. Fundamentally, greater visibility would enable the IT department to make the transition from a cost-centre to an enabler, with a positive, measurable impact to the bottom-line.

IT Operations management

▲ CIOs continue to make the best of incomplete IT toolsets.

The basic need to monitor and manage key performance metrics, such as network capacity and application availability, is indisputably at the heart of any effective IT department. Yet, only thirty-five per cent of CIOs state they have a comprehensive and integrated set of tools to fulfil this key function. An alarming fifty per cent of respondents described their operations management tool set as “partial” or “inadequate”. Armed with the right tools for the job – rather than simply making the best of what is available – a step-change in responsiveness and delivery is urgently required.

Despite these incomplete toolsets, IT departments continue to monitor their own capacity and performance. The availability of IT infrastructure is tracked by ninety-eight per cent of businesses, while seventy per cent report that they monitor network and application performance against internal targets.

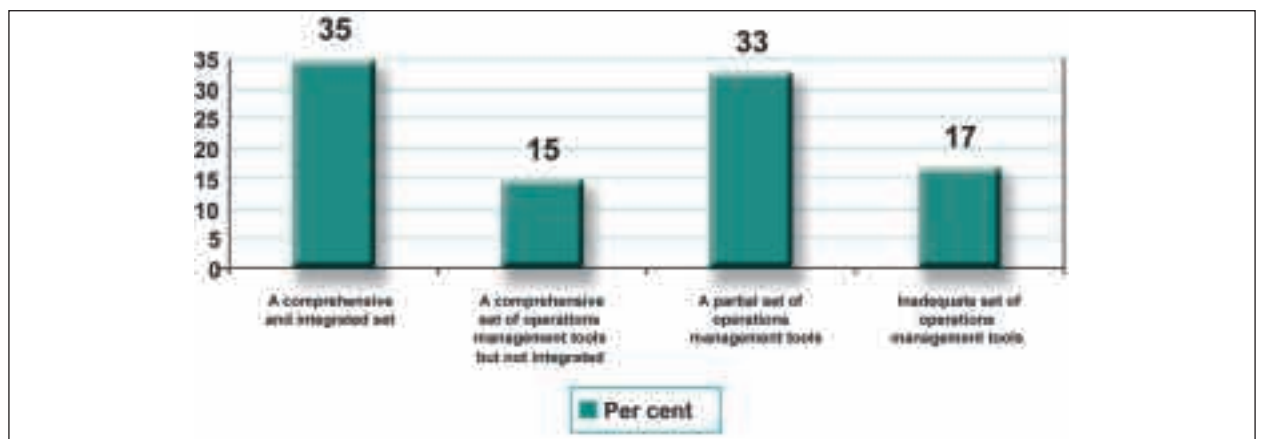


Figure 1: Comprehensive nature of the IT operations management tools
Base = 107 CIO interviews

Fault management

▲ IT faults are costly, poorly understood and becoming more common.

The cost of IT faults to the UK economy is immeasurable. On average, a company will lose 235 hours per year in different faults, or nearly fourteen per cent of a typical man year (1,725 contracted hours).

From the Operations Management Solutions Survey, it was established that, on average, 5.3 network faults were reported in the last three months, with an average resolution time of 2.3 hours. Server faults were slightly less common, with the same average resolution time. Ultimately, application faults were the main cost incurred, taking an average 4.5 hours to resolve. There are around eight application faults per three-month period.

Unsurprisingly, all areas, from servers through to networks and applications, are monitored for faults by the majority of companies questioned. However, only twenty-two per cent of firms currently use root cause analysis tools to identify the true point of failure. The majority are, potentially, missing a major opportunity to improve their problem and fault resolution performance, by understanding the root causes and predicting future performance trouble spots.

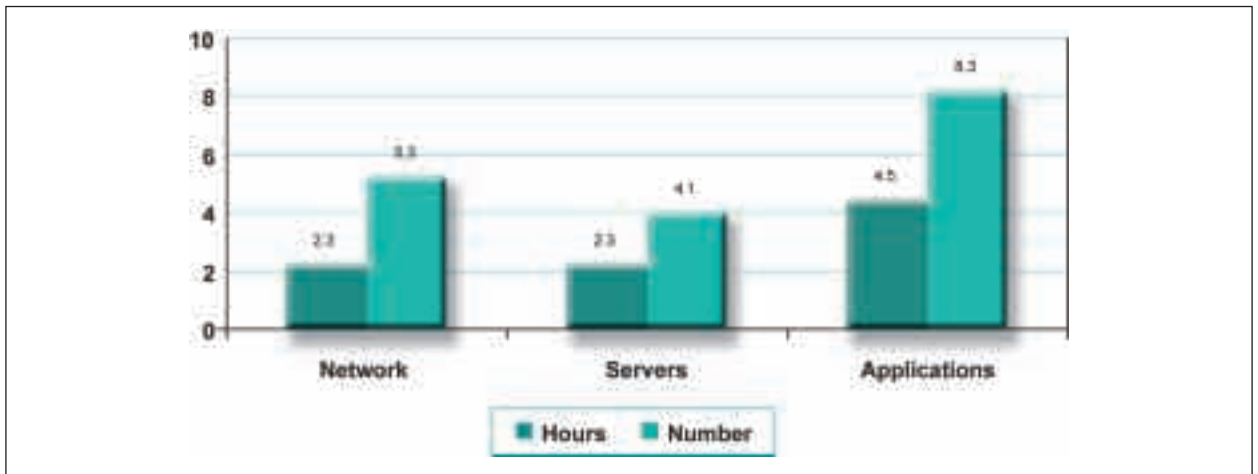


Figure 2: Average time for fault resolution and average number of faults over a three-month period.
Base = 107 CIO interviews

If most businesses now have some form of fault monitoring in place, it is still possible to glean some insight into attitudes towards IT risk from the way the effect of such faults is measured. Typically, impact is measured at the internal user level (fifty-four per cent), service level (fifty-one per cent) and customer level (forty-two per cent). The fact that less than one-third of respondents stated they measured the impact on the company's revenue generation ability suggests many IT departments are failing to take active steps in managing business risk.

This is clearly a situation that cannot be allowed to continue, as the current approach seems to be delivering no discernable improvement. Eighty-three per cent of companies reported static or declining application performance over the last 12 months. The average time to resolution of these faults also remained the same or increased for seventy-five per cent of respondents. Despite increasing sophistication and investment, the trend for IT reliability appears to be on a continuing downward slide.

Only by targeting investment at reducing failures and accelerating resolution times will businesses be able to reduce operating costs, mitigate risk and improve agility.

Configuration and change management

- ▲ Human error is a bigger problem than hardware failure.
- ▲ The importance of change management is not reflected by the tools in place.

Configuration management remains a key concern, with fifty-seven per cent of companies reporting that faults are caused by configuration errors, compared with the forty-three per cent that see hardware failures as the cause of faults. By failing to mitigate the risk of such human error, through the deployment of configuration management tools, companies are unnecessarily carrying a large cost burden, while forgoing the ability to provide a faster and more efficient service.

Change management was also high on the agenda for CIOs, although half of the respondents admitted they lacked effective change management processes and tools. Furthermore, only eight per cent of all companies are planning to make an investment in change management solutions, meaning this will remain an area of some concern into the future.

Dynamic inventory / asset tools are being used by twenty-eight per cent of companies and, encouragingly, twenty per cent are planning to make an investment in the next 12 months. This will go some way to making the introduction of new applications and solutions smoother for the user community. Typically, hardware, network configuration and network links are the main relationships mapped at this level, which allow for the IT department to see the impact of a change from one area to the other.

There is clearly room for improvement in terms of current change management approaches. Only forty-four per cent of companies have policies to which they strictly adhere and one-third rarely or never adhere to the processes.

Re-connecting IT with the user-base

- ▲ There is a serious disconnect between IT and end-users.
- ▲ Frequency of communication and lines of accountability are inadequate.
- ▲ Poor understanding of users' needs introduces unnecessary risk.

Operations management solutions are powerful tools, capable of providing insight into, as well as exercising control over, complex business and IT processes. However, answers are worthless unless you ask the right questions and control is positively dangerous without understanding. Where there is a lack of real engagement between the IT department and its internal clients, it is easy for the IT department to fall into the trap of setting benchmarks and implementing policies, without any reference to the needs of the business at large.

This weakness can be seen across the survey results. Users and LOB managers recognise the need for improvement in the key areas of fault resolution (seventy-five per cent), helpdesk operations (sixty-four per cent) and application development (five per cent). One-third of respondents went so far as to agree that any improvement in IT performance would, in percentage terms, deliver equal gains in departmental productivity. Yet, despite acknowledging both the problem and the potential benefits of a solution, users are generally apathetic about how IT services are delivered.

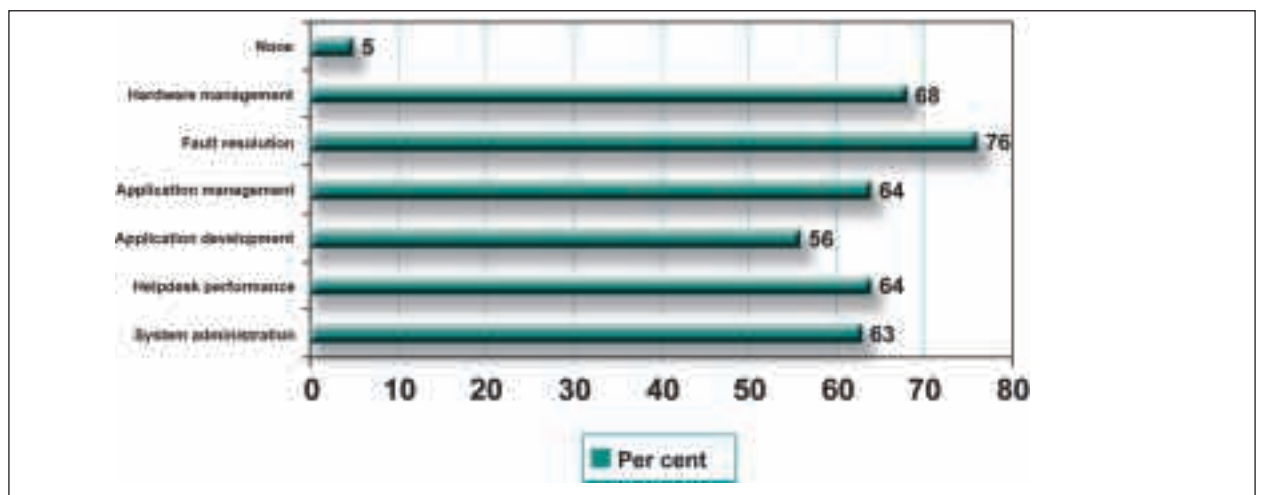


Figure 3: Areas where a performance increase in IT is critical
Base = 107 LOB interviews

At the heart of the challenge lies a fundamental breakdown in communication between IT departments and the business units they serve. LOB managers show little knowledge of quantitative measurements of IT performance, or the way in which the IT department is using them to manage and improve its performance over time. When questioned, only fifty-seven per cent of such managers were aware of the IT department’s service level commitments, thirty-two per cent were unable to give details but suspected they existed, while one in ten were entirely unaware of their existence.

Furthermore, only eighteen per cent of companies hold weekly meetings for end-users to discuss their needs with the IT team, a further seven per cent hold such meetings fortnightly, while one-third do so “hardly ever” or “never”. The fact forty-two per cent of users say that, where communication is conducted, it is done “very well” - with a similar proportion saying “fairly well” – makes the argument for frequent, organised discussion all the more compelling.

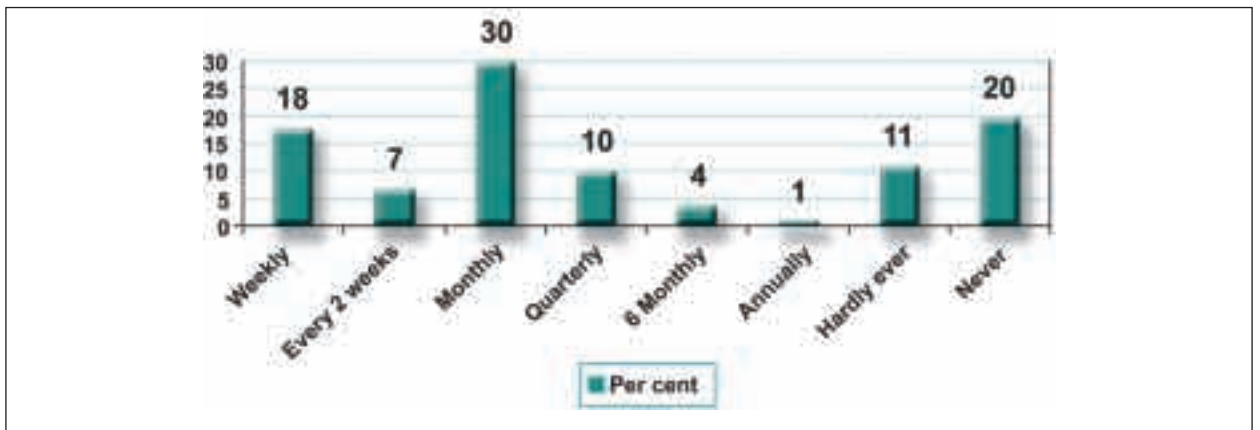


Figure 4: Regularity of meetings with the IT Group to discuss the Department’s business and needs
Base = 107 LOB interviews

Rather than reporting to – and soliciting feedback from – their end-user clients, ninety-three per cent of IT departments are ultimately responsible only to senior management. This philosophy – which dictates that IT is a centrally managed overhead, rather than a shared resource – appears to run deep, with half of all companies participating in the survey measuring the IT function in terms of cost. Only thirty per cent assess the IT department’s contribution in terms of its positive impact on the bottom-line.

While the strategic importance of IT necessitates a degree of accountability to senior management, such individuals are often not best placed to ask the right detailed questions, set meaningful operational benchmarks, or provide insight from a user point of view.

On top of delivering against baseline performance requirements, the distance between the IT department and its users has a real impact on the organisation’s ability to safely manage change.

Responding quickly to today’s customer needs, changes in the market and competitive forces requires an unprecedented degree of agility. From a risk management perspective, any lack of understanding at this level also directly harms the case for development of the IT infrastructure. Without a clear picture of how change will impact on users, the operational risk carried by any such change, potentially, offsets any gains in productivity or agility, making the business case that much harder to argue.

With this in mind, it is alarming that almost nine out of 10 CIOs admitted they “would, ideally, like to understand the impact of IT application changes on users before they are implemented”, but currently cannot.

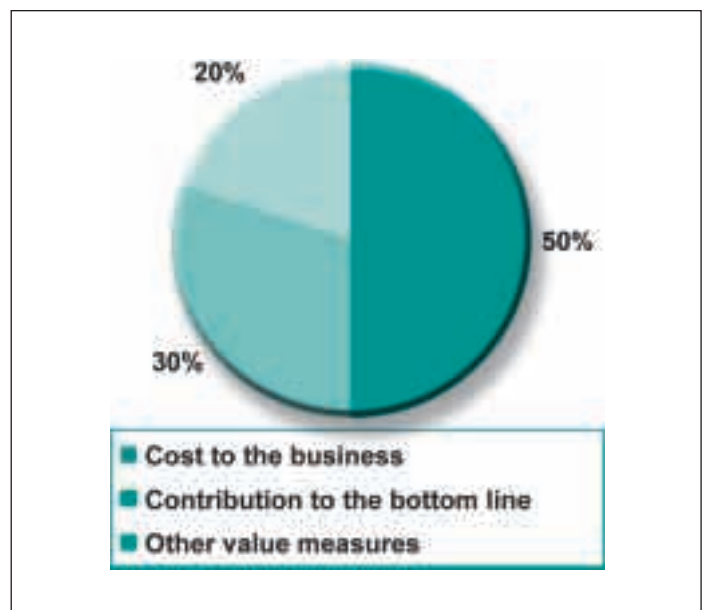


Figure 5: Measurements used to value the IT services provided to the business
Base = 107 CIO interviews

The need to continually improve and refine the IT function provides a further driver for maintaining a reliable base offering through meaningful performance measurement. A significant seventy-nine per cent of senior IT executives highlight the importance of getting to grips with change management and two-thirds cite making ongoing improvements as a key challenge. While the disenfranchisement of users continues to push up operating costs, IT departments may not have the resources needed to implement key new technologies.

Setting delivery objectives

- ▲ SLAs are not universal, rarely adhered to and hardly ever enforced.
- ▲ CIOs lack formal policies for delivery and shun best practice methodologies.

With IT now playing such a pivotal role across all mission-critical business areas, there must be a corresponding step-change in the way IT departments measure and report their performance. Internal service level agreements (SLAs) give IT heads and LOB managers a quantifiable benchmark against which to evaluate the performance and value of their internal IT supplier.

Unfortunately, while most CIOs believe the IT department is adding real value to the business, thirty-two per cent of all companies report they do not have any SLAs in place to measure IT department activity against a specific target.

Of those with SLAs, only forty-one per cent of CIOs report they are regularly monitored and forty-three per cent regularly report on the SLAs in place. Overall, those with SLAs do not appear to be undertaking a robust level of measurement and monitoring, with only one-quarter of companies using SLAs based around end-to-end measurement of service. The most commonly used measurements for SLAs are non-financial business impact measures (sixty-seven per cent) followed by technical performance measurements (fifty-nine per cent).

This situation is compounded by the fact that only thirty-six per cent of IT directors participating in the survey had formal policies around IT infrastructure service and delivery, with many falling back on informal procedures and guidelines. The inevitable problems, in measuring performance and managing risks and costs, run contrary to the assertion – made by ninety-two per cent of CIOs – that the IT department is a service provider to the user community.

Although SLAs are more typically applied to third-party providers, lapses in IT service now represent a real risk to the business and it is critical that this should be managed. As each business unit is typically paying into the IT budget, either directly or indirectly, the fact that only seven per cent of companies currently impose penalties for IT departments that fail to meet the terms of their SLAs appears to be counter-intuitive.

Meaningful SLAs – incorporating the measurements that matter to users – backed by real penalties for poor performance – will play a key role in bridging the serious and widening gap between IT departments and users.

At the same time, too few companies currently use recognised best practice methodologies and standards. ITIL is evident in only one in five companies at present and is forecast to rise to only one in four in the next year or two. Adoption of Six Sigma, currently used in only one in five companies, appears to be similarly sluggish. Finally, BS15000 is the least used approach, being followed in only fourteen per cent of firms at present.

Outsourcing Operations Management

▲ Outsourcing model presents potential benefits.

Some or all application development and management activity is now outsourced by thirty-six per cent of companies, while thirty per cent outsource infrastructure development and management. One-quarter of companies outsource their helpdesk facility. Attitudes to outsourcing vary from seventeen per cent of companies who will “outsource whenever they can and whenever viable”, to the forty-eight per cent of companies who “outsource when the business case is right for such a move”. Only thirty-five per cent of companies outsource in exceptional cases only.

Companies are now reporting that IT outsourcing decisions are driven more by service improvement and business alignment objectives than simple opportunity for cost reduction. By outsourcing components of IT operations management, a company can potentially reduce the cost of service provision and more effectively manage the overall business and operations risks, while improving the overall levels of service provision and responsiveness.

Conclusion

Fundamentally, when cut off from the wider impact of technological change or failure, the IT department cannot take the necessary managed risk approach to operations management. The ramifications of this failure, in terms of business agility and unnecessary, unexpected cost, cannot be overstated.

IT, for most organisations polled, is seen as a cost and, while there is general agreement that IT performance has a direct link to increased business efficiency, there is little attempt to quantify its impact on the bottom line. In addition, organisations generally do not demand that their internal IT departments adhere to any form of SLA. Combined, these shortcomings mean businesses are paying for a service, but have no idea of what is being delivered for the cost incurred.

As the significant IT investment made in recent years yields ever-diminishing returns, it is becoming clear that the cost of dealing with 58 hours of downtime per three-month period is not only harming agility and productivity today, but also stifling any development of the IT infrastructure. The fact that there is no major trend towards decreasing the time to resolution or the number of faults is a clear signal that the status quo is unsustainable.

Identification and agreement on standards and policies for service delivery, strictly adhered to, must form the basis of any viable solution. Internal IT teams must be made accountable to the LOB departmental heads for the service levels achieved.

Change management and configuration management are the biggest challenges for CIOs and lay at the core of good operations management. Outsourcing, or a blended model, would appear an option to consider for many. Encouragingly, there is agreement that such an approach can improve service delivery, reduce the costs of service provision and more effectively manage risk by leveraging the specialist expertise of third-party providers.



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