

WHITE PAPER

CIO Survival Strategies: Staying Ahead Via ICT Transformation

Sponsored by: Multimedia Development Corporation

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IN THIS WHITE PAPER

Information technology (IT) emerged as a term as systems evolved from basic data processing to more communications and advanced analytical solutions, but at the epicenter of the IT evolution has always been data. For many organizations today, however, data is simply the bits and bytes stored inside the hardware and the valuable part for the business is the information that is derived from the data. Due to changes in the velocity of business in today's markets the CIO is under ever more pressure to provide rapid business value based on, for many, what is an archaic and inflexible infrastructure, ensuring that the business need is never fully realized and that IT management is constantly under pressure simply to provide the basic services.

IDC has been studying this trend in the Asia/Pacific region for a number of years now and, in this White Paper, will present the findings from a recent study commissioned by Multimedia Development Corporation (MDeC) to better understand how IT strategy is aligned to business strategy and to identify areas in which IT management could potentially improve operations and performance. IDC, together with iLead Consulting in India, built a benchmark survey with the aim of helping Malaysian organizations assess their state of transformation relative to their peers in each of the three areas: facilities, infrastructure and information. We established a set of criteria and developed an online survey linked to an engine that weighed the responses based on size/scale, complexity, and strategic nature of the measurement variables.

Key to the overall assessment was to uncover the ability of the 101 Malaysian respondent organizations to manage the information within their organizations. The results revealed that while most organizations understand the need for better information management, IT management are generally challenged to deliver the right types of information that the business needs and to get more value from their IT investments.

SITUATION OVERVIEW

Understanding the ICT Transformation Journey

Today's IT tools are evolving at a rapid pace. The latest trends include the emergence of server virtualization on the x86 platform as a means to drive massive efficiencies in terms of scale and speed; the constantly connected nature of business today and the ever expanding range of devices that are now connected to the corporate network; and the realization that cloud computing offers not just an alternative source of computing power but also at a scale previously only reserved for governments or education institutes.

However, the core essence for the existence of IT has not changed. From the days of the first business computer, the primary role of IT has been to manage the underlying data that organizations create and use. In recent times, the realization that this data is a valuable resource to the organization has energized the business to demand more from its data management environment, at the heart of which is the datacenter.

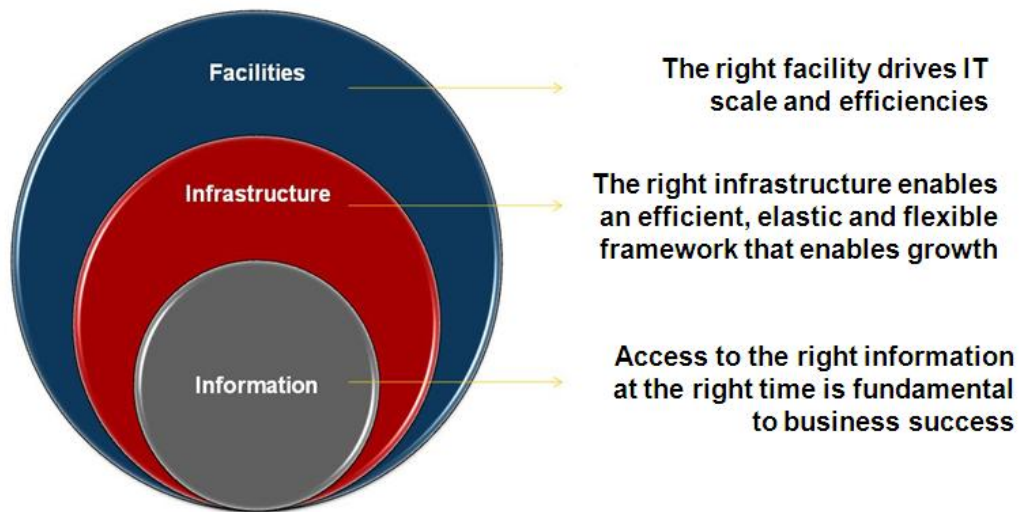
Datacenters are critical in enabling businesses to compete in today's globally connected economy. Those organizations that can best harness the power of their datacenter will come out as a winner in the current environment where IT plays such a crucial role in the daily lives of almost everyone on the planet, and more so in developing and mature economies where these tools are extending both the business hour and the business reach. The concept of 24 x 7 x 365 used to apply only to systems and internal processes of an organization, but advances in technology across both mobile and Internet environments now enable a persistent business presence globally — Web sites, ecommerce sites and mobile applications ensure that businesses are never closed.

Despite its powerful role as the nerve center of modern business, the datacenter can be more of an Achilles Heel for many businesses. That is because it can also be the weakest link in a chain of people, processes and technology that provide the organization with the opportunity to excel. If not managed properly the datacenter can be a drain on valuable resources which can be better utilized elsewhere; and when managed very well, the datacenter can enable a far more competitive environment for the organization, allowing them to outperform their competitors, win more customers, and be more profitable.

Whilst the goal of IT is to deliver greater and more agile access to information for the business user, the reality is that more time is spent managing the systems and facilities that host this information and very little time is spent on ensuring the quality, accuracy, integrity and vitality of information. However, ICT as a whole is a very broad discussion, and IDC has broken this up into three critical tenants: facilities, the shell within which ICT resides; infrastructure, the engine that drives ICT for a business; and information, the strategic differentiator that, with the right ICT strategy, can help drive the business forward (see Figure 1).

FIGURE 1

Transformation Index



Source: IDC, 2013

STUDY OVERVIEW

The study set out to survey 100 Malaysian organizations to better understand how IT strategy is aligned to business strategy and to identify areas in which IT management could potentially improve operations and performance. Key to the overall assessment was uncovering the ability of organizations to manage the information within their organizations and it became apparent that while most organizations understood the need for better information management, only a small percentage (17.8%) had some formalized strategy; at the other end of the scale, a small percentage (12.9%) could not identify why such a strategy could be important to their organization (see Figure 2).

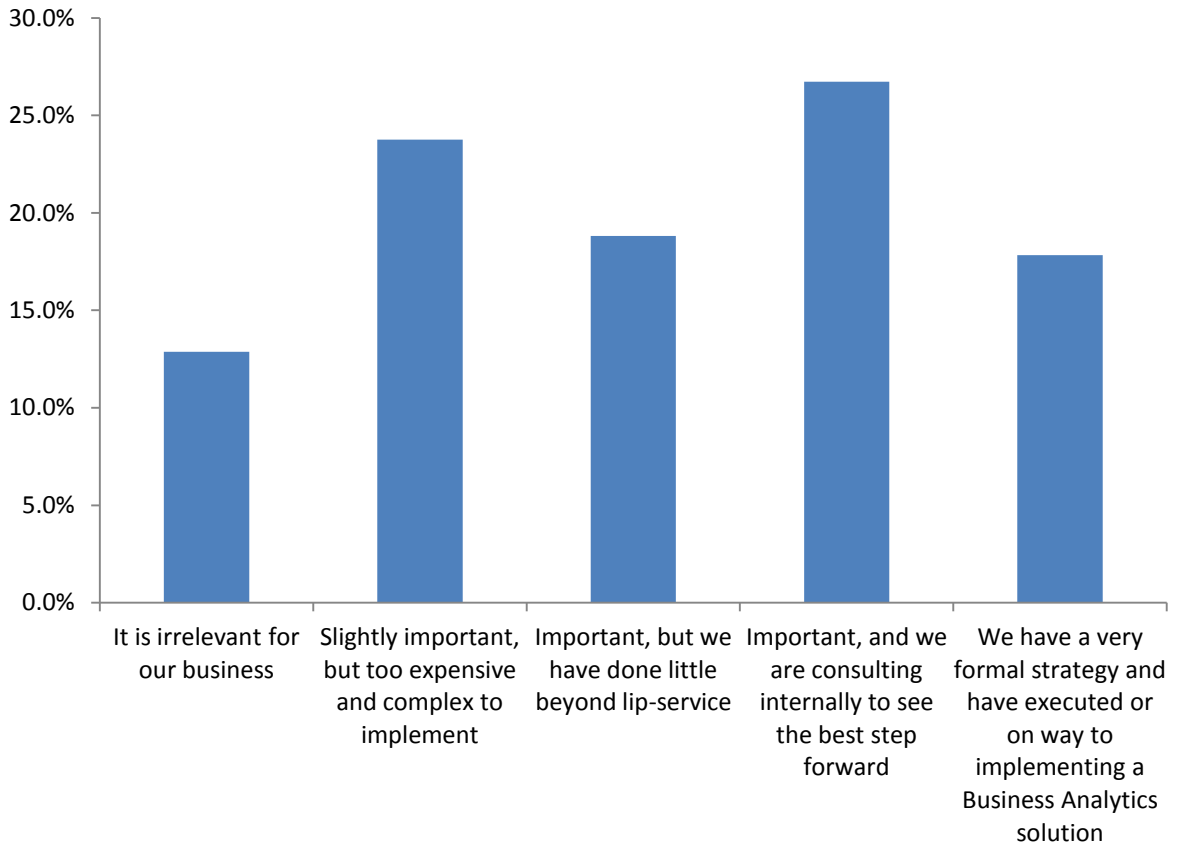
This then became the primary objective of the study: to try to better understand why IT management is, generally, challenged to deliver the right types of information that the business needs, and what, if anything, IDC could recommend to CIOs to help them more readily achieve what the business seeks from its IT investments.

FIGURE 2

Business Intelligence as a Competitive Tool

Q. How important is it to have a business intelligence/business analytics strategy as a competitive differentiator?

Percentage of respondents



N = 101

Source: IDC Information Enterprise Study, Sponsored by MDeC

The Respondents

The study targeted businesses that would leverage IT but excluded IT service providers and any business that rely on IT to deliver their products or services as well as government departments, education establishments, and telcos. No specific vertical was targeted and as a result, a broad cross section of verticals were represented with manufacturing, construction, professional services, resources and retail being well represented.

IT decision makers and influencers were surveyed via a phone interview and the study focused on three main areas: infrastructure, information and business alignment. The results were fed into an existing data model developed by IDC in 2011 for its Transformation Index and a ranking was created to help organizations understand where they sit on a transformation index. Respondents received a

personalized report on their transformative journey, with guidance on areas they could consider improving.

Perspectives from Different Ends of the BI Scale

Overall the respondents fell into the middle of the continuum, as may be expected for an emerging market, with about one-fifth being quite advanced in the three areas studied. Concurrently there was a small contingent, generally around 12% of the sample, which clearly have issues with IT and business alignment. Although the specific organizations remained anonymous to IDC, the traits exhibited by this group were useful to understand if only to ensure they should be avoided by those trying to move along the scale to a more strategically aligned IT environment. As a result, the best process for sharing this information was to compare two groups at either end of the scale.

- ☒ Business intelligence users: The 17.8% of respondents who responded with “we have a very formal strategy and have executed or on way to implementing a business analytics solution”.
- ☒ Non-business intelligence users: The 36.6% of respondents who replied with either “it is irrelevant for our business” and “slightly important, but too expensive and complex to implement”.

What became apparent through the analysis of the results was this: While many IT managers believed they were aligned to what the business expected of them, when analyzing how they viewed issues such as cloud computing, business intelligence and other aspects of IT infrastructure, it was clear that strategic aspiration and tactical implementation were frequently conspiring against one another. Many were not running IT operations in a manner that was aligned to what the business required and expects.

IDC considered these results and identified what we believe is the key challenge facing IT management professionals in today’s environments. Although the goal of IT is to deliver greater and more agile access to information for business user, the reality is that more time is spent managing the systems and facilities that host this information, and very little time is spent on ensuring the quality, accuracy, integrity and vitality of information.

Key Findings

At the highest levels, the key findings fell into three distinct categories

- ☒ **Business alignment:** All respondents were able to articulate the key business strategies, which were mainly around growth and acquisition; However all IT strategy and tactics were designed to improve efficiency, reduce costs, and none called out any project or IT strategy that directly supported this business expansion strategy.

- ☒ **Infrastructure optimization:** Although cloud computing is on the radar of all respondents, datacenter outsourcing is not well thought of with cost/price being cited as the main inhibitor. However, a significant number of respondents have never considered it. Other forms of outsourcing, however, appear to be well-established.
- ☒ Information management strategy was declared to be “advanced”; however at a tactical level, there was no evidence of processes and technologies to support this point.

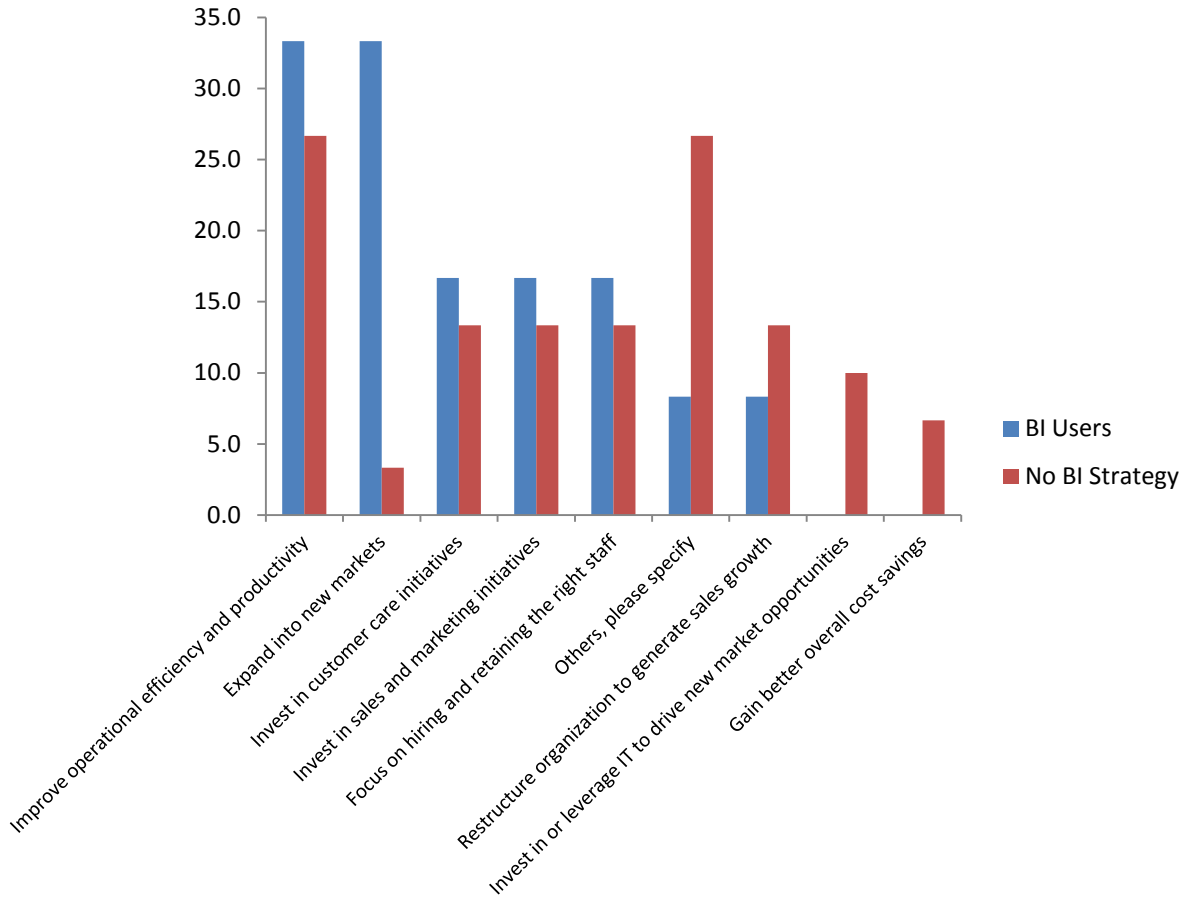
Deeper comparisons between those who have a strong business intelligence (BI) strategy versus those who felt it was irrelevant to their business highlighted a number of key factors.

From a business strategy perspective, when asked about their primary business initiative for the next 12 months, there was a striking distinction between these two types of organizations. For those with a formal BI strategy, cost management and efficiency were on the agenda, but there was also a strong desire to grow the business by expanding into new markets, investing in customer care and sales and marketing initiatives (see Figure 3).

FIGURE 3

Top Business Initiatives

Percentage of respondents



N = 101

Source: IDC Information Enterprise Study, Sponsored by MDeC

By contrast, those without any BI initiative are almost totally focused on cost savings and preservation of capital.

It is also worth mentioning that while these comparisons generally capture the sentiments at either end of the transformation scale, there were exceptions. The example here is that a number of the organizations with no BI strategy are planning to invest in IT to drive new business opportunities. It raises the question: What business opportunity? Without informational insight, it is hard to imagine how such new opportunities could be captured, but this also serves as an example that strategic intent and tactical execution are not synchronized. So applause to those who wish to invest in IT for new market opportunities, but there are concerns that these initiatives may well be doomed to failure since there is neither information nor data to back up such a decision.

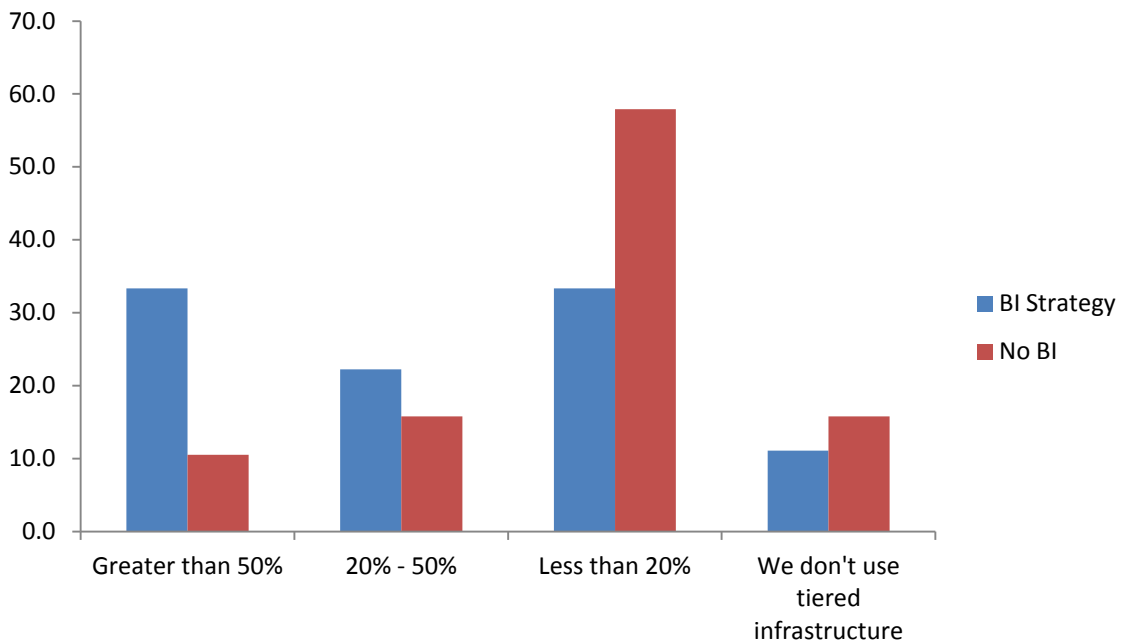
By the same token, a number of the organizations with clear BI strategies also appeared to make somewhat erratic decisions with regards to technology management. For example, in an effort to assess maturity of storage infrastructure the question was posed: "If your organization has a tiered storage infrastructure, what percentage of data is stored on the secondary or near-line tier?"

Assuming that a tiered storage environment is indicative of a more transformed environment, then we see that the general trend is reflected, with the "BI Strategy" group investing more in this area than the non-BI group, but here is an example of the exception: 11% of those that do have a BI strategy had not invested in tiered storage (see Figure 4).

FIGURE 4

Tiered Storage Investments

Percentage of respondents



N = 101

Source: IDC Information Enterprise Study, Sponsored by MDeC

Avoiding the debate of whether or not this is the most valid method of ranking organizations, the point being made is that no organization that responded to the study was "exceptional" in every facet that was measured. However, the trends of transformation was that those who have a BI strategy tended, for the most part, to exhibit more mature and transformed approach to IT investment and alignment to business strategy than those organizations that had not.

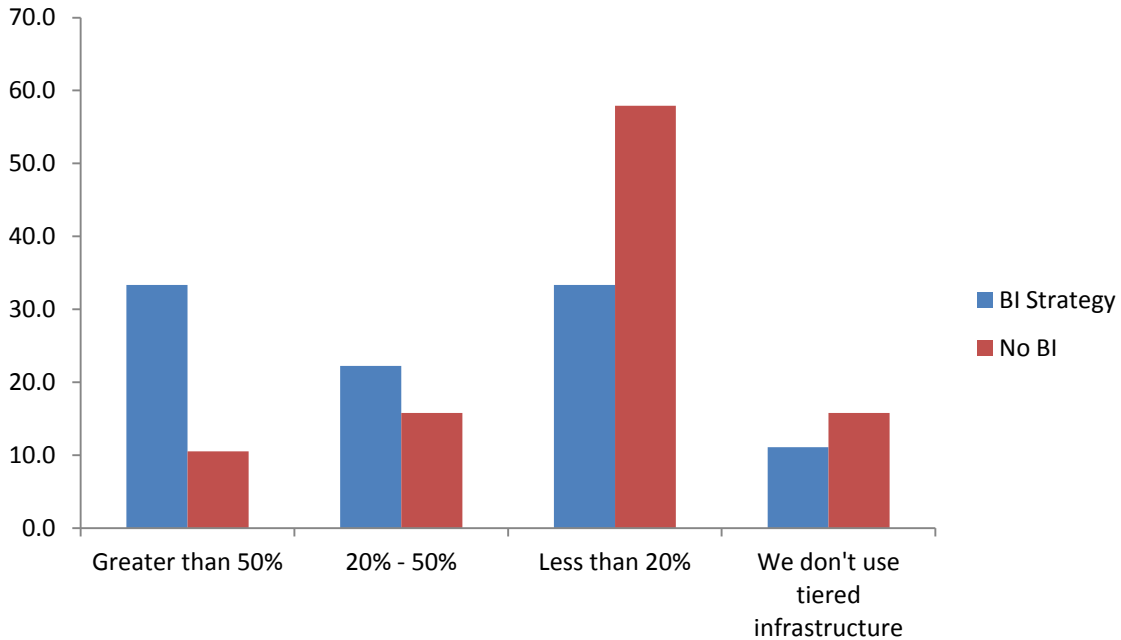
Figures 5 and 6 are representative of this fact.

Perhaps, the most striking was the level of server utilization. Utilization rates are a strong indicator of the efficiency of a datacenter. The higher the utilization, the better performing the investment in IT is; the lower the utilization rate, the less effective an organization is of leveraging their IT investment (see Figure 5).

FIGURE 5

Server Utilization Rates

Percentage of respondents



N = 101

Source: IDC Information Enterprise Study, Sponsored by MDeC

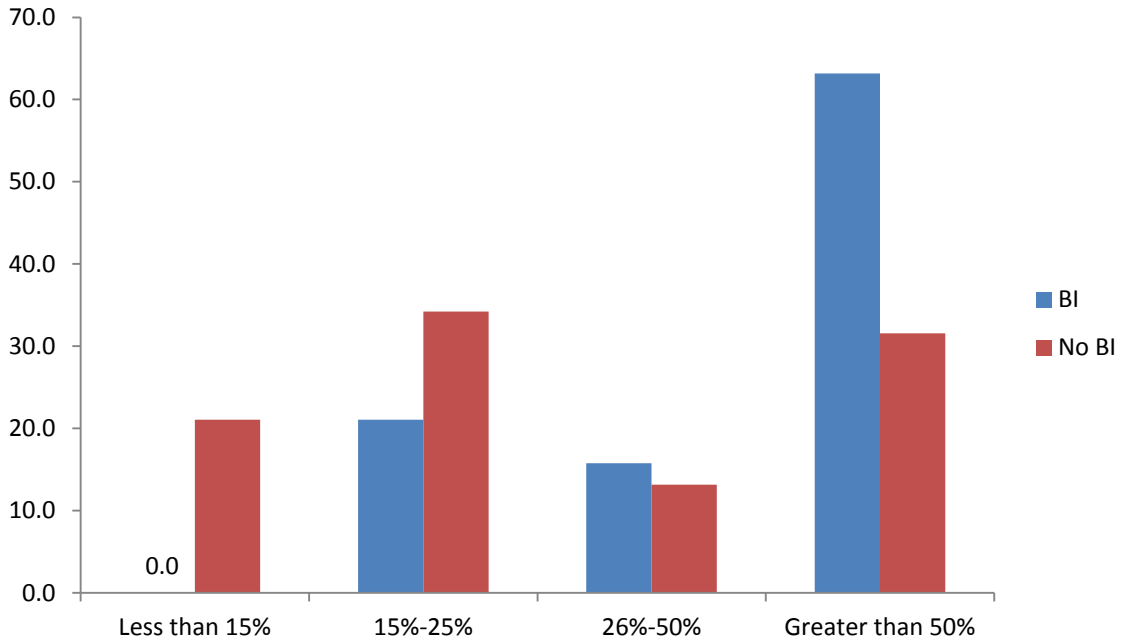
Another example of the issues and challenges that come with having no BI strategy is that it provides an imperfect, and sometimes, completely incorrect view of what is happening. It has long been an accepted fact in the IT world that few organizations are able to invest the majority of their IT budgets into new projects. Studies have shown that the general ratio of IT budget spend on new projects to maintenance is in the 20:80 or 30:70 split.

When this question was posed to respondents, the results revealed that either a number of Malaysian organizations have achieved global best practice levels that typically only occur within the IT departments of businesses that are IT vendors, or there is a gross lack of understanding where the budgets are actually spent (see Figure 6).

FIGURE 6

Ratio of IT Budget on New Projects to Maintenance

Percentage of respondents



N = 101

Source: IDC Information Enterprise Study, Sponsored by MDeC

The left-hand side of the scale shows 0% for new projects and 100% on maintenance, and here we see a number of the less well-performing organizations fitting in as expected. However, it is those on the right-hand side of this chart that create a thoroughly interesting perspective on the maturity of these organizations. To be able to invest 80% into new projects and only 30% on maintenance is an astounding feat; however, deeper analysis of the data revealed the following:

- Of those who believed, they were investing 60% or more in new projects versus maintenance:
 - 92% operate a captive datacenter; 8% have outsourced their datacenter; 42% were already outsourcing some aspects of IT and an equal 42% had never considered any form of outsourcing.
 - 79% stated that expansion would leverage existing facilities.

Perhaps, the most telling aspect was that most of these organizations (92%) were operating datacenters of less than 1,000 sq ft.

ESSENTIAL GUIDANCE

The implication here is on those organizations with smaller IT departments, in that running datacenters is often a matter of economies of scale. Due to the effects of technologies such as virtualization and automation, fewer resources are required to manage datacenters of scale, but the cost of IT for smaller organizations is higher in terms of manpower. This lack of manpower in turn leads to an inability to fully articulate and execute on the strategic alignment of IT with business requirements. However, it is also very important to note that this inability to align and execute is not restricted only to smaller organizations. Some 21% of those organizations responding to having no need for or having no investment in BI were operating datacenters within the 1,000 – 5,000 sq ft segment.

IDC offers the following guidance to CIOs:

- ☒ High-performance datacenters do not demand extreme designs. Instead, they require a flexible, modular set of components that can be deployed and re-deployed with ease and they require planning for future expansion. As client requirements fluctuate, IDC recommends that future proofing be integrated into datacenter design. This integration will pay off by allowing non-disruptive scaling of the datacenter, lower power usage effectiveness (PUE) and operational expense.
- ☒ A datacenter should enable business, not restrict it. However, traditional datacenter designs have not always met expectations — cooling via raised floors and perimeter computer room air condition (CRAC) units limit the ability to increase density and achieve energy efficiency. Power distribution units (PDUs) and under-floor whips limit flexibility and require downtime for reconfiguration. Messy and tangled underfloor cabling makes growth difficult, impacts the effect of cooling and increases operating expenses.
- ☒ Datacenter managers need to continue to collaborate with IT and the lines of business to ensure they fully understand the forecasted rate of infrastructure growth that the business will take over the short, medium and long term if they are going to head off any bottlenecks and constraints.
- ☒ Consider the range of datacenter infrastructure management software available in the marketplace and evaluate the key unknowns in your datacenter today. Look beyond asset tracking technology and towards software that enables control of electrical and cooling systems as this will have the greatest impact on operational expenses, power usage and, therefore, CO2 emissions.

Information is an essential part of the acronym “IT” — technologies related to the management and processing of information. When it comes to the term IT, although simple and familiar, many seem to have often forgotten its original meaning as enterprises’ investment priorities are often diverted towards the technologies in processing data, rather than information. With numerous IT models and trends emerging, CIOs are often distracted by the assessment of complex external technologies, instead of focusing on the internal alignment of business units to generate information.

Such misalignment is the source of pain for many enterprises. It does not only affect the quality of information and its accessibility, but also impacts users' satisfaction and trust towards the IT organization. The lack of reliable and business-relevant information also reduces an enterprise's adaptability to deal with change and crisis, when executives rely on them to make critical decisions for the enterprise.

If we are to solve the issue of spending too much time managing technology and not enough managing information, then attitudes and approaches to IT need to evolve — this *is* the transformational journey.

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