ACCELERATING BUSINESS TRANSFORMATION THROUGH IT INNOVATION

Getting the Business Leader Take on the IT Change Mandate

Full Report | August 2015

BPI NETWORK™

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CONTENTS

INTRODUCTION

In today's data-driven business environment, it's become achingly clear that no company will thrive without agility, speed and, perhaps most of all, innovation. Agility allows a company to change direction in response to shifting market conditions. Speed lets it change quickly. And innovation gives enterprises the ability to disrupt the industry by bringing new processes, products and services that improve their efficiency, bolster profit margins, turn existing buyers into evangelists and attract new, life-long customers. When they are combined, agility, speed and innovation gain power, often leading to phrases like "the next big thing" and "record profits."

Today, emerging data technologies are lifting these qualities to new heights for industry segment leaders and challengers, and the importance of embracing these advances is rising in the minds of many business leaders around the globe. Business leaders overwhelmingly see the strategic importance of technology as growing, but many fewer are satisfied with the rate of technology innovation. Almost 70 percent of global business managers surveyed by the BPI Network for this report believe technology has become "far more important" in the past five years. Yet less than half rate the level of innovation in their companies as good or very high. Only two in five think their IT groups do a good job at helping them become more strategic, responsive or valued as a business partner.

What's wrong here? Why the disconnect? Aren't IT groups normally the champions of new technology?

As a global advocacy group of executive change agents, the Business Performance Innovation (BPI) Network has repeatedly studied innovation, agility and time to market through a variety of reports and initiatives. In "Startup Innovation Inspiring Business Transformation," we looked at how startups and other nimble young companies prompted larger, incumbent competitors to embrace change by investing in new talent, technology and processes.

In "Innovation: The New Competitive Equation," our staff reported on efforts to make innovation more intrusive and actionable through programs, leadership and recognition. And in "Causetech: Succeed Where There's a Need," the BPI Network in conjunction with the CMO Council launched an initiative to crowdsource ideas, technologies and products to advance the work of the UNICEF Innovation Center.

Earlier this year, in partnership with Dimension Data, a global leader in the provision and management of IT infrastructure solutions and services, we launched "Transform to Better Perform" to examine how well enterprise-level companies are embracing a new model of business-responsive data centers and networks to support the innovation, agility and speed needed today. Specifically, the initiative set out to look at the ways in which hybrid data systems bridged the gap between traditional data centers and new cloud-based capabilities to give companies an unprecedented opportunity to grow more rapidly, more securely and more profitably. You can find further insights on this topic in Dimension Data's commentary beginning on page 36 of this report.

The Transform program has already produced one major report, called "Accelerate How You Innovate," which was based on interviews with scores of senior executives, communities and stakeholder groups. Dimension Data and our partner DatacenterDynamics contributed their expertise as well. In that report, we analyzed how IT staffing, costs, business goals, emerging technologies and disaster recovery enabled companies to adapt and innovate in the age of big data, including case studies of companies that were leading that transformation.

The six conclusions from that initial study called for major shifts in business, technology and data processing. For example, it noted the traditional on-premises data centers built at high costs with an expected lifespan of 15-20 years are rapidly fading into the category of legacy technology as new cloud-based capabilities provide better performance in many cases at a much lower cost. A second finding spoke to the need for business managers to gain more agility to respond to competition and better-serve distant customers with new apps, analytics and ever-richer data.

That initial study also concluded that there is a need for a "new IT." That meant that information technology teams must evolve with new technologies. We noted the emergence of a "shadow IT" effort in which business leaders, frustrated with the lack of progress, were embracing Software-as-a-Service and other approaches that helped them achieve business goals without the direct involvement of IT.

This second study, "Accelerating Business Transformation Through IT Innovation: Getting the Business Leader Take on the IT Change Mandate," marks the next phase of the ongoing Transform initiative. It is built squarely on the opinions of 250 business executives across a wide plane of disciplines in different parts of the world. We set out to learn how these executives are adapting to the changes discussed in the first Transform report. We asked them about how important technology is to them, who is driving change in their organizations, how they interact with IT groups, what they view as top priorities for IT, the business impacts of technologies, as well as many other topics.

Their voices send clear messages about the importance of technology in providing agility, speed and innovation, and about their frustration with the pace at which their IT groups are embracing modern technologies. They also suggest the need for a new scorecard to use in evaluating the performance of enterprise IT departments.

Although they recognized the apparent urgency of embracing transformative technologies, the majority of executives also took a surprisingly laid-back "we're working on it" tone to taking the very steps needed to ensure higher levels of agility, speed and innovation.

This isn't the end of it. We call on all business and technology managers reading this report to participate in the ongoing Transform initiative by visiting the project website at ReinventDatacenters. com. There you'll find interviews, case studies and stories about the challenges and achievements of those carrying out a technology transformation. You'll also find topical briefs, a schedule of events and, coming this fall, an online community where IT and datacenter professionals can exchange information about this topic. Please visit us, share the link with colleagues and let us know what you think through a comment on the site.

EXECUTIVE SUMMARY: TOWARD A NEW SCORECARD FOR IT

AGILITY. SPEED. INNOVATION.
That's the mantra for today's data-driven business leaders, particularly those at the forefront of their sectors. The exact words may vary – nimble, lean, predictive, adaptive, flexible, inventive – but the core thinking remains the same: markets change quickly and those who have the analytical insights and the technology to respond instantly will find themselves best-positioned to profit.

An overwhelming majority of executives see these new technologies as the critical ingredient for success, but a global survey by the Business Performance Innovation (BPI) Network has found that most leaders are frustrated with their IT organization's sluggishness in providing it. Business leaders want to migrate as soon as possible to hybrid IT solutions that blend modernized datacenters with cloud-enabled technologies. They want new business-changing applications and customer experiences delivered more rapidly. They want deeper business insights from their growing stores of data. And they want the IT group to be held more accountable for providing them.

As this study makes clear, business leaders around the world are creating a new scorecard for IT organizations. With technology-savvy challengers making competitive gains in virtually every industry and marketplace, executives feel a new urgency around the adoption of more agile IT infrastructures and transformative technologies and business models. As a result, IT needs to be measured by a new set of metrics linked to how effectively it helps the company respond to market conditions and innovate products and services. These new metrics still include traditional IT goals like maintaining a secure network, but increasingly they also embrace core business objectives related to growth, customer acquisition and organizational effectiveness.

As Sean Shoffstall, VP of Innovation and Strategy at Teradata, puts it: "No longer does IT have to be a cost center. It can be targeted to help drive revenue. That means it can be tracked to business-related metrics."

To be sure, technology can no longer be an issue confined to the IT organization. If it is, you're looking at a company that is lagging the competition. Business leaders throughout the enterprise are becoming far more involved in understanding and exploiting the strategic implications of new technologies. They must also commit to a deeper collaboration with IT to make change happen.

"IT'S TIME FOR THE TECHNOLOGY TEAM TO RISE TO THE OCCASION."

PAIGE FRANCIS
FAIRFIELD UNIVERSITY

Seven in 10 business leaders say technology has become "far more important" over the past five years, and nine in 10 agree it is at least "somewhat" more important. Yet less than half – just 47 percent of the 250 participating leaders – rated their IT groups as high or very high in the area of innovation. More than a quarter rated their IT teams as "poor" at innovation.

"A lot of our clients are looking at how they drive change from a business standpoint," said Richard Garratt, Director of Next Generation Data Centers at Dimension Data Americas. "In part, it requires some business process change. It requires new skill sets for the corporate IT departments in how they interact with business units. And it requires a change in thinking on the role of IT in the organization versus the historical role, which was really very infrastructure-geared."

There's no shortage of data itself. Business is drowning in a rising tide of data that could help measure changes in sales, marketing, supply chain, manufacturing, finance and other parts of the business.

There's plenty of raw data to score customer attitude on social media, get instant feedback on a new products, know when to expect the next delivery of parts at the factory, and even forecast profits. The volume of data is soaring. Multiple sources note that 90 percent of the data in the world was generated in just the past two years.

The real challenge stems from transforming that raging river of data into a pure stream of actionable intelligence. "We have so much data out of many, many different silos," said Barry Money, GM for Retail Development for Toyota's Australian operations. "But really, it's not the data that we need. It's insight out of the data that we need. And that insight will drive the strategy, and that strategy will drive the innovation."

The reasons for upgrading data center technology are very clear. The top benefits cited in the survey were operational efficiency, customer experience and organizational alignment. Magdalena Kotek, former CMO for GE Capital's Global Financial Solutions, explained that from a marketing perspective: "You cannot be a successful marketer without having an understanding of data and analytics."

At a CIO Roundtable discussion in San Francisco just before the release of this report, technology leaders from a broad array of industries acknowledged the critical connection of new data technologies to business. "In the 21st Century, every company is an information technology company. Many companies don't realize it yet," Dr. Jonathan Koomey, a Research Fellow at Stanford University who specializes in the connection of IT and energy use, said afterward. "As more people start to understand the importance of IT to the institutional transformation as well as improving efficiency, we'll see even more attention paid to these technologies."

Our analysis of the survey results, along with continuing interviews with business executives worldwide, has led us to four major findings. They are summarized here and discussed in much greater detail in this report:

1. From the C-suite to operational units, senior managers are eager to see progress in implementing a broad range of technologies that increase their agility, improve customer experience and make their companies more competitive.

   - 65% say technology has become "far more important" to their organizations in the past five years. Another 28% see it as "somewhat" more important.
   - 47% say they're spending more time on understanding strategic implications of new technologies, and another 38% say they're "working on it."
   - The three most-pressing IT imperatives were: improve responsiveness to ever-changing business requirements (36%); Focus on digital experience as a competitive advantage (30%); and delivering applications faster, better, and at a low cost (28%).
   - Three areas that would benefit most from transformative technologies: Operational efficiency and effectiveness (52%); Customer experience, monetization and retention (33%); and Organizational alignment, culture and collaboration (27%).

2. Specifically, business leaders see major benefits from data center and cloud transformation.

   - Top three benefits of data center and cloud transformation: Increased agility and responsiveness to business changes (70%); Greater cost efficiencies (57%); Faster time to innovation for new applications (47%)

- How executives plan to change their data centers: Modernize and upgrade (45%); Migrate to hybrid IT that blends traditional data centers with the cloud (44%); consolidate servers (32%)
- Three most transformative technologies to give a competitive advantage: Real-time intelligence from embedded sensors – IoT (35%); Always on, highly scalable and web based models (33%); Social media data mining and more efficient engagement (29%)

3. Overall, senior business managers are dissatisfied with the pace of innovation in their IT organizations and want new metrics to measure IT performance.

- Only 14% rate the level of innovation in IT organizations as "very high" vs. 15% that chose "poor." Most gave middle ratings: "making progress" (37%) or "good" (33%).
- How well is the IT organization executing on it's mandate to transform and become a more strategic, responsive and a valued business partner? Only 14% said "very well" while 10% said "poor." Most were in the middle: 28% said "good" and 44% said "making progress."
- What business metrics would you use to evaluate IT performance and effectiveness (top 3): Reliability, scalability and security of IT infrastructure (46%); Ideas and solutions for furthering business performance (38%); Quality and timeliness or app delivery (36%).

4. There is a clear disconnect across organizations between the recognized need to adopt new technologies and actually achieving that goal. The top five barriers to adopting them were:

- Gaining consensus and support for new technology investments: 44%
- Determining needs and optimal solution available: 41%
- Minimizing information security risk, vulnerability and threats: 34%
- Successfully implementing and gaining organizational adoption: 31%
- Aging IT infrastructures that need updating and modernization: 28%

To be sure, technology alone won't produce agility, speed and innovation. That will require a commitment from the top as well as a cultural shift throughout the organization.

"Few executives would not argue that speed and innovation are critical success factors in today's digital world. Being able to innovate quickly and cheaply, test digital products and services in the market, refine them and release them on a regular basis has become a competitive advantage," said an article by three McKinsey consultants, Satty Bhens, Ling Law and Shahar Markovitch. They advise companies to adopt "an agile-software-development culture that goes beyond delivering one-time results to continuously adapting and growing over time."

"I THINK THE METRICS FOR IT SHOULD BE NO. 1: CUSTOMER SATISFACTION."

SCOTT OFFERMANN CUSHMAN AND WAKEFIELD

From Eastern Europe to the Canadian prairie to the outback of Australia, many organizations have told us they have established cross-functional teams to update their data technologies and are working more closely with business leaders. Yet, as the BPI Network survey and this report show, much remains to be done to improve the responsiveness by IT groups to the needs of businesses today.

IT'S ABOUT THE CUSTOMER

As you'll see in the Detailed Findings, there are multiple benefits that business leaders expect from new technologies. However, whether they have to do with market analysis, purchasing forecast or data-driven customer experience technologies, they all tie back to relationships with external buyers of goods and services and internal partners. Digital engagement and customer experience drive business

in both the B2C and B2B arenas. With the right data and the right tools to analyze it, companies can see deeply into their markets, predict trends far into the future and adjust their products and services quickly in response to shifting data on customer expectations. Our survey found that business managers understand this reality on a sophisticated level and have high expectations for IT groups to deliver on this promise.

This is especially critical in digital marketing, as noted in a recent article by two McKinsey & Company executives, David Edelman and Jason Heller. "That capability directly enables the speed, agility, iterative development, experimentation and responsiveness that successful companies need to react to and shape the marketplace," they wrote.

In our interviews with business managers and in the survey results, we found organizations have formed cross-functional groups or appointed specific business managers to study technological solutions. For example, in Saskatchewan, Canada, a group comprised of business managers and technologists looks at the strategic needs of various departments and the potential benefits of new technology. It also looks at costs, use of legacy systems and other factors, then forwards its recommendations to the budget committee.

"The lens that my team is now looking through is that technology in the enabler to drive what the business needs," said Monica Field, Executive Director of Strategic Systems and Innovation for the province. "There are no technological projects. There are components of a business project that help deliver it. The biggest challenge is getting that paradigm shift from 'It's an IT project' to it being a business project with an IT component to it."

The transformation of data centers into cloud-enabled and business-responsive systems, of course, requires far more than choosing, buying and integrating technology. It also requires a sea change in organizational thinking, including the way business leaders work with IT. Whether in the private or public sector, there's a need to shift from a reactive mindset to a pro-active approach that leverages real-time (or near-real-time) data to guide design, orders, pricing, supply chain and other factors that add to successful outcomes. Steve Nola, Group Executive for IT-as-a-Service at Dimension Data, summed it up this way:

"OBVIOUSLY, THERE'S BEEN A BIG PUSH TOWARDS WHAT EVERYONE'S CALLING THE CLOUD."

BRETT RHODUS
CCP GLOBAL

"I think the biggest shift that has to occur is the shift of, 'Is IT an enabler for me to really be able to differentiate my business in the marketplace? I think fundamentally if you take that approach and answer that question, then the next steps become quite logical around saying, 'Okay, how do we then change potentially some of the processes? How do we start to potentially enable these applications? Which ones need to be able to move? What new tool, what new benefits from automation could I potentially use to drive better efficiency around my product road maps for a particular company?'"

RAISING IT PERFORMANCE

Of course, for IT to be a business enabler requires an IT organization that is not only aligned with business goals, but contributes fresh ideas, innovative solutions, speedy application development and other factors that help make the company more competitive. The survey found many companies working toward that goal, but relatively few that rate their IT groups highly on such qualities as innovation or following business priorities.

"I think anyone in a front-end retail research and development environment like myself is always going to be dissatisfied with the pace of IT innovation and the pace of data extraction, analytics and the provision of insights. From my point of view, I'm always dissatisfied," said Money, the Toyota executive.

Kevin Rota, CIO for Dassault Systèmes, believes IT groups get low ratings from the business side "because too often the focus in IT has been placed on the technology itself, and not on the business outcome it provides. To improve performance, IT must integrate with business as part of cross-functional organizations focused on creating outcomes."

To be sure, the new scorecard for IT that perception business benefits on par with security and reliability marks a major shift from the thinking of just a few years ago, according to Kevin Leahy, Group General Manager for Data Center Solutions for Dimension Data. "In the new era – the digital economy, if you will – you're seeing business in terms of realignment," he said. "The first step that they need to take is to make IT in all of its forms, like cloud and on-premises systems, align with the business. So they look into aligned spending, speed, as well as availability."

Our data was anonymized, so we do not know if the highly rated IT teams are associated with leading companies that have completed this transition or smaller, more nimble companies. Nor do we know if the perceived failure to innovate stems from measureable performance or from a lack of understanding in the complexity of enterprise technology.

"Innovation is an often misunderstood and misused term," said Scott Offermann, Director of Critical Operations at Cushman and Wakefield. He added that "true and incremental innovation is rarely recognized and even more rarely acknowledged." The fact that nearly half the survey's respondents said they're "making progress" supports Offermann's perception that smaller steps are taking place.

That said, many leaders in both the technology and business world think the sluggishness of innovation is more than a matter of perception. For them, it is a reality. "I think it's real and it's big," Tim Chou, an IT lecturer at Stanford University, said after the San Francisco CIO Roundtable. "I would claim right now there is almost no innovation occurring in most corporations."

"I SEE THE OPPORTUNITY. AND THE OPPORTUNITY IS HUGE."

DR. NATALIE PETOUHOFF CONSTELLATION RESEARCH

While any degree of innovation is important, speed and agility are also critical. To achieve that, many companies are moving toward hybrid IT models that blend upgraded datacenter technology with the multiple benefits of the cloud. "Obviously, there's been a big push towards what everyone's calling the cloud," said Brett Rhodus, Partner at CCP Global. "And I think the business reason for that is businesses are looking for more flexibility."

Unlike legacy systems that solved one problem, hybrid IT can be – and almost always is – tailored to the specific business needs of an organization. One company may put more emphasis on real-time personalization in digital marketing systems while another may focus more on improved internal collaboration between far-flung work groups. In the survey, we see a wide range of responses from business managers on what they consider their top priorities.

Here's an example. To ensure that technology is aligned with the business, Daniel Dumas, VP and Manufacturing Practice Manager for Integra-co, told us his company added business analysts to the IT group to better understand business processes and to acknowledge the gap between documented processes and reality. "Users have their minds in running their day-to-day operations and don't have time to step back to appreciate the whole picture or to come up with well-thought-out processes that use the latest enabling technology with tomorrow's best practices," he said.

It's one thing to say that business managers want to move quickly to enhance the customer experience or improve the efficiency of operations, but it isn't always clear which technologies would accomplish that best in a given company or a particular geographic region. "There's more competition as companies are trying to be faster, trying to give better service to the customers. And that's where IT has to play a role," said David Wilcox, General Manager for Data Center and Cloud for Dimension Data in Europe. "Each market has got its own dynamics, but they have something in common, too: they want to be fast, they want to differentiate themselves."

ORGANIZATIONAL HURDLES
In a similar sense, organizations face different obstacles in their journey from learning about new technologies to actually using them to improve their operations and lift earnings. The survey found steep organizational challenges such as reaching broad agreement to move forward on new technologies, convincing those with purchasing power to pay for the changes and subsequently getting teams of employees in IT and/or operations to integrate and adopt them. The challenge of such changes cannot be overestimated.

"Change is not easy. It has to be led well and you have to have strong leadership," says Dr. Natalie Petouhoff, an Principal Analyst for Constellation research who specializes in integrating traditional business strategy with digital transformation. "Being a business process person, I see the opportunity. And the opportunity is huge."

The reward for overcoming those obstacles can be grand, and there are many examples of companies where the IT team has enthusiastically embraced the mission of improving customer experiences to the delight of business managers. Case in point: Eurostar, which operates the popular high-speed trains between London, Paris and Brussels. It has already moved much of its operations to the cloud to improve the business. CIO Antoine de Kerviler boasted that his technology team is now ahead of the company's business managers in adopting customer-centric strategies. "One of the things we've done was to tell people in information services that there's no such thing as an internal client," he said. "There's only one client – the person who sits on board the train. And we've done a number of thing to align [technology] in this way."

Like the technologies themselves, the metrics for the IT department may vary from company to company. But Martin Summerhayes, head of Delivery Strategy and Business Changes at Fujitsu, told us IT should no longer be rated simply on measures like uptime or report publication dates. "Rather," he said, "the IT Group should be measured on the responsiveness and ability to deliver the business changes that IT are involved in – the speed of being able to create, publish and adjust key reports and KPIs that reflect the changes in the business."

Like many technologists we interviewed, Paige Francis, CIO for Fairfield University, said she is a strong advocate of setting a new scorecard for IT. "Now more than ever, it's time for the technology team to rise to the occasion and start becoming an integral part of the strategy of any company or institution where they're involved. And I think that what's interesting is that suddenly, the business side seems to want to up their pace to match that of technology."

AGILITY. SPEED. INNOVATION.

Leading organizations are leveraging data to become more nimble, lean, predictive, adaptive, change-minded, and inventive

Innovative Companies Know:
TECHNOLOGY IS AN ASSET

93%

of Global Executives say technology is more important than 5 years ago

85%

trying to understand the strategic implications of new technologies

Most Pressing IT Imperatives

1 IMPROVE **RESPONSIVENESS**

2 FOCUS ON **DIGITAL EXPERIENCE**

3 DELIVER APPLICATIONS **FASTER, BETTER AND AT LOW COST**

Technologies Seen as MOST TRANSFORMATIVE

1 REAL-TIME INTELLIGENCE

2 CONTINUAL, SCALABLE WEB-BASED MODELS

3 SOCIAL MEDIA DATA MINING + ENGAGEMENT
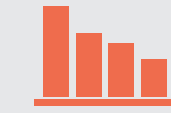
4 MICRO-TARGETING USING BIG DATA ANALYTICS

5 PROLIFERATION OF SMART MOBILE DEVICES + APPLICATIONS

Biggest Benefits From Transformative Technologies

52% Operational efficiency + effectiveness

33% Customer experience, monetization + retention

Data Center & Cloud Transformation IS DRIVING BUSINESS SUCCESS

Faster time to innovation for new applications

Greater cost efficiencies
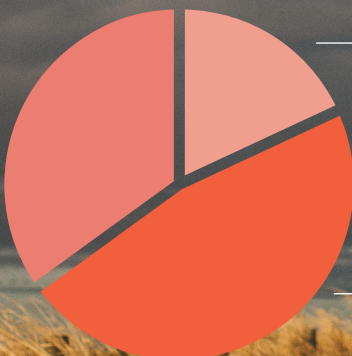
Key Competitive Gains of Data Center and Cloud Transformation

Increased agility + responsiveness

How Executives Plan to
CHANGE THEIR DATA CENTERS

MODERNIZE AND UPGRADE

MIGRATE TO A **HYBRID IT MODEL**

CONSOLIDATE SERVERS

Barriers to New Technology Adoption

1 Gaining consensus + support for **NEW INVESTMENTS**

2 Determining **NEEDS + OPTIMAL SOLUTION** available

3 Minimizing **INFORMATION SECURITY RISK, VULNERABILITY + THREATS**

4 Successfully implementing and gaining **ORGANIZATIONAL ADOPTION**

5 Aging IT infrastructure that needs **UPGRADING + MODERNIZATION**

Business Leader View of NEW METRICS FOR IT

46% Reliability, scalability and security of IT infrastructure

38% Ideas and solutions for furthering business performance

35% Quality and timeliness of app delivery

DETAILED FINDINGS

1. HOW WELL IS YOUR COMPANY EMBRACING MODERN TECHNOLOGIES AND NEW CHANNELS OF DIGITAL ENGAGEMENT AND EXPERIENCE?

Companies today recognize the importance of adopting emerging technologies that enhance digital engagement and buyer experience. A full 92 percent of our respondents said they are, at the very least, "making progress" toward that goal, and indicate they're further along. Just over two in five respondents said their organizations are embracing new technologies "exceptionally well" or "very well." While some thrive, others are just putting along. Half the business managers said their companies are "making progress" in a move to new technologies. Still others appear to be struggling. Eight percent confessed their companies are not doing very well in this regard.

12%	Exceptionally well
30%	Very well
50%	Making progress
8%	Not very well
0%	Not sure
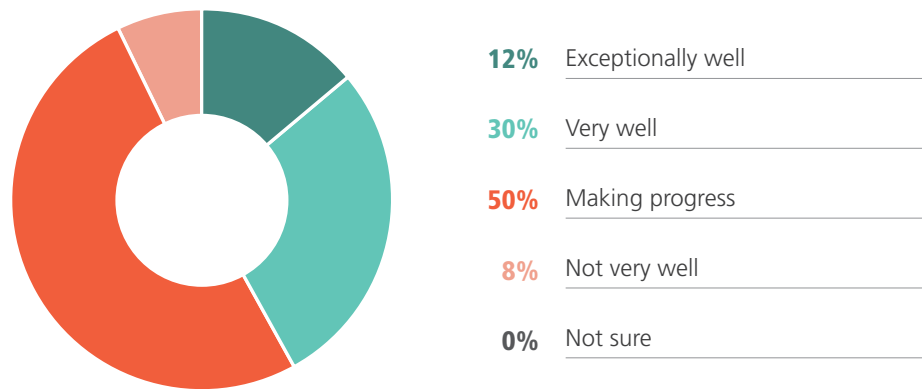
2. ARE BUSINESS UNITS WITHIN YOUR ORGANIZATION DEVOTING MORE TIME TO UNDERSTANDING THE STRATEGIC IMPLICATIONS OF NEW TECHNOLOGIES?

Allocating the time and resources required to understand and integrate new technologies often represents a significant challenge for time-strapped business and technology managers. Yet nearly half of our respondents said their business groups were devoting more time to understanding how emerging technologies will affect their strategies. Another two in five said they were "working on it," suggesting there is clear intent to do so, but less action. Discussions over which technologies will help the company to improve performance are often suggested as the first step in a technological transformation project. Yet 16 percent of the respondents indicated their companies are not taking action or they're unaware that such reviews are underway.

47%	Yes
10%	No
38%	Working on it
6%	Not sure
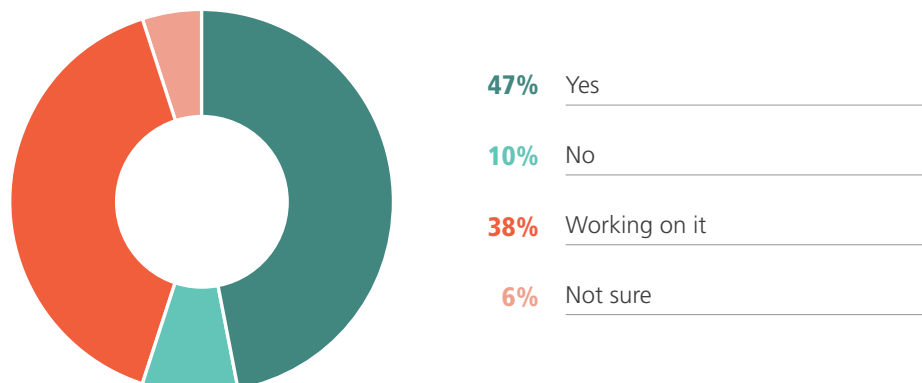
3. WHICH FUNCTIONAL LEADERS ARE WORKING MOST EFFECTIVELY TO INTEGRATE AND ALIGN THE CIO AND THE IT ORGANIZATION WITH NEW BUSINESS DEMANDS, RISKS, REQUIREMENTS AND DYNAMICS?

In the past, the direction of technology often fell to the CTO, who would then seek Cap-Ex funding from the CFO and the chief executive. Today, however, many organizations have established cross-functional teams to ensure that technologies support business goals. As these results show, many business leaders today are directly involved in aligning technologies with the risks and requirements of business groups ranging from sales and marketing to finance and legal. Not surprisingly, more than a third of the respondents said the CEO and CTO are involved. But 35 percent also said the discussions include the chief sales, revenue or customer experience officers. Other top choices showed these discussions often include line-of-business managers, the chief operating office, the CFO and the head of product development.

%	Role
42%	CEO
37%	Chief Sales, Marketing or Customer Experience Officer
34%	Chief Technology Officer
28%	Line or Business Leaders
21%	CFO
19%	Head of Strategic Planning
16%	COO
15%	Head of Product Development
9%	Chief Digital Officer
9%	Head of Compliance and Governance
5%	Chief Security Officer
2%	General Counsel
7%	Other
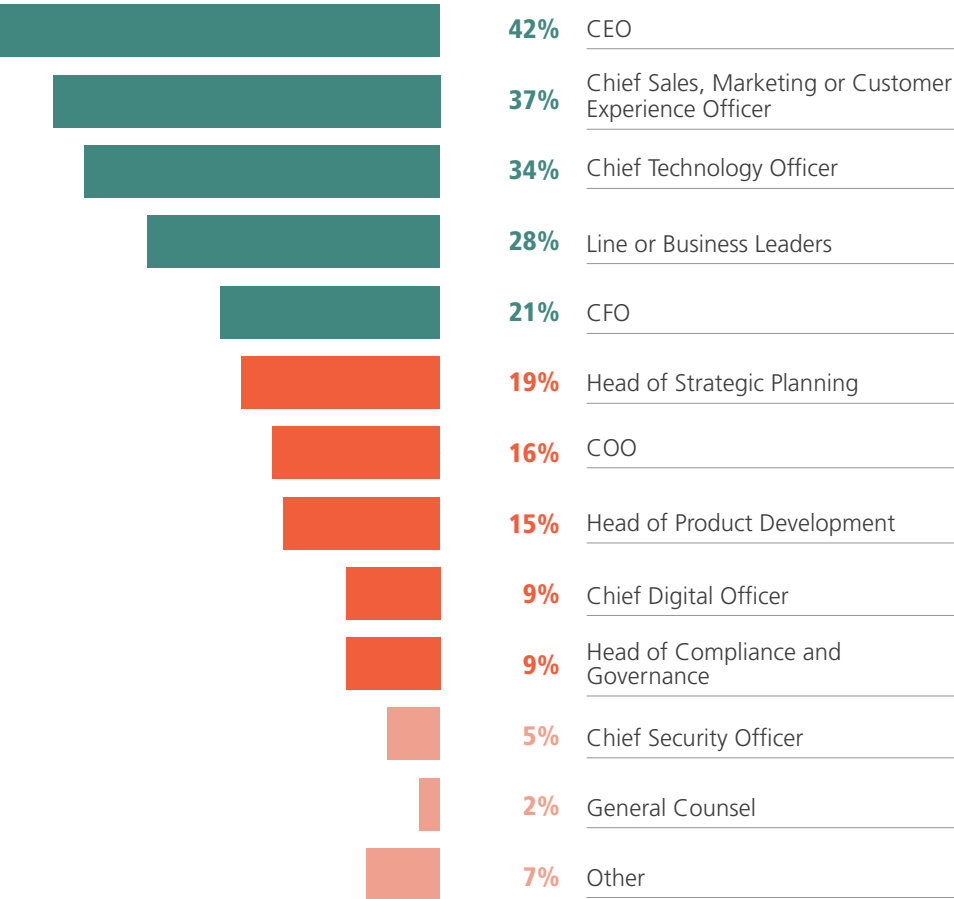
4. WHAT DO YOU SEE AS THE MAJOR BENEFITS OF DATA CENTER AND CLOUD TRANSFORMATION?

Seventy percent of the business managers who responded to the BPI Network survey believe a shift to hybrid IT – the blend of data center and cloud technologies – would result in increased agility and responsiveness to changes in business conditions. That is the highest number for a single answer in the survey, a response that echoes the core themes of the overall Transform to Better Perform initiative. The second and third responses, respectively, were greater cost efficiencies and faster time to innovation for new applications and services – both of which are well-established byproducts of the hybrid IT approach. Taken together, this response echoes the first three words in this report: agility, speed and innovation.

70%	Increased agility and responsiveness to business changes
57%	Greater cost efficiencies
47%	Faster time to innovation for new applications and services
42%	Better performance and uptime
30%	Improved data security
22%	Staying ahead of competitors
3%	Other
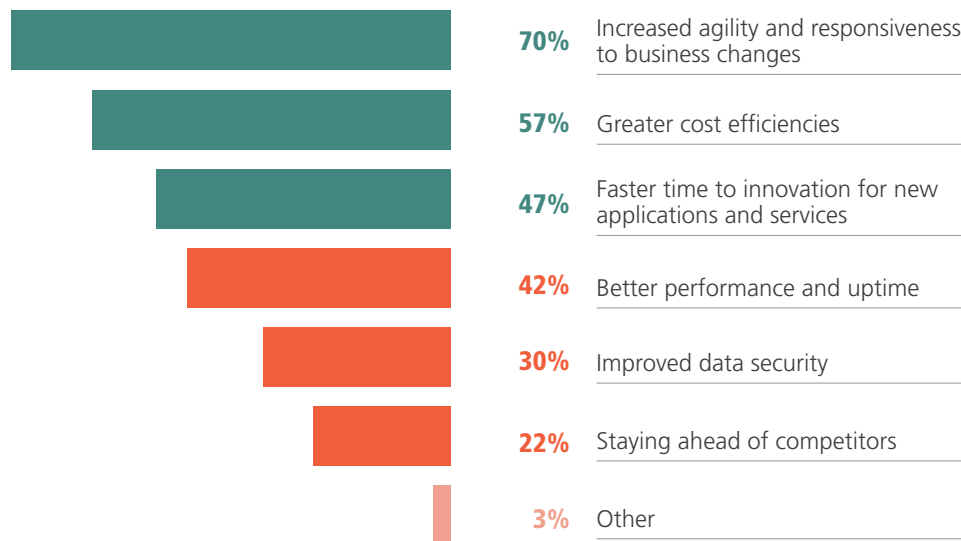
5. HOW DO YOU RATE THE LEVEL OF INNOVATION IN YOUR IT ORGANIZATION?

While there may be strong direction from senior management for IT groups to line up their efforts with the business goals of the organization, there is a clear break between that and the confidence of the respondents in the level of innovation they see coming from in-house technology efforts. While agility, speed and innovation have become the mantra of today's business leaders, a mere 14 percent – just one in eight respondents – rates the level of innovation "very high." They are slightly outnumbered by 15 percent who rate it "poor." In today's competitive world, mediocre performance isn't enough to ensure business success, yet 69 percent of the respondents gave their IT teams a middle rating when it comes to innovation.

14%	Very high
33%	Good
37%	Making progress
15%	Poor
1%	Not sure
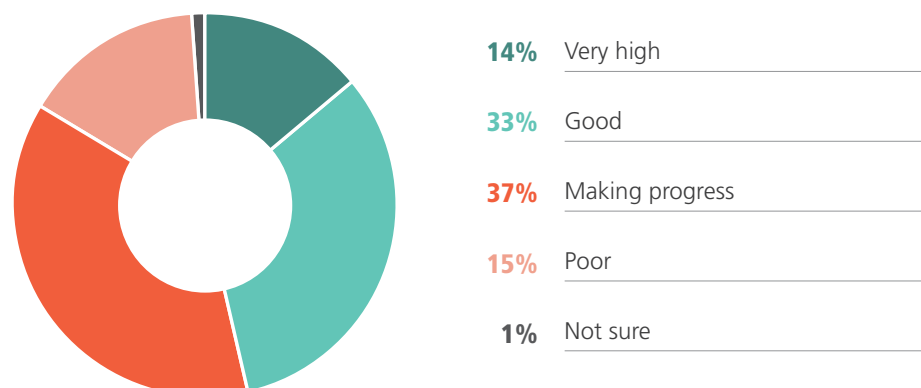
6. TO WHAT DEGREE HAS TECHNOLOGY BECOME MORE OR LESS IMPORTANT TO YOUR BUSINESS OVER THE PAST FIVE YEARS?

Business managers say technology is playing a bigger role in determining business outcomes than it has in the past. In responses to the first four questions, we saw signs there is strong intent to understand and embrace new technologies. In this response, 93 percent of the respondents say technology has become more important over the past five years. And almost two-thirds say it is "far more important." With the growing emphasis on aligning IT with business goals, it's imperative that IT leaders transform their organizations into responsive groups that work with the business managers to achieve mutual goals in product development, marketing, analytics and other key business functions. Only 6 percent think the role of technology hasn't changed in recent years, and only 1 in 100 managers thinks the importance of technology has declined.

65%	Far more important
28%	Somewhat more important
6%	Stayed the same
1%	Less important
0%	Not sure
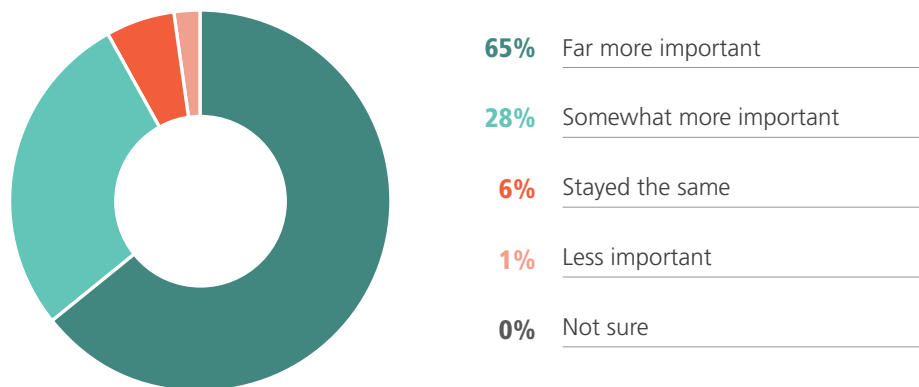
7. HOW WELL IS THE IT ORGANIZATION EXECUTING ON ITS MANDATE TO TRANSFORM AND BECOME A MORE STRATEGIC, RESPONSIVE AND VALUED BUSINESS PARTNER?

Traditionally, the IT group had priorities that focused on the security and dependability of critical systems. Today, there are new priorities that complement the old – a mandate to become a strategic, responsive and valued business partner. Yet just 14 percent of our respondents think their IT organization is making that transition "very well" while one in 10 rated IT's business performance as "poor." As in the earlier question where respondents rated their IT group's ability to innovate, the vast majority rated the IT group as "making progress" or "good" – the middle range of the curve – at a time when few businesses want to be in the middle of the pack.

14%	Very well
28%	Good
44%	Making progress
10%	Poor
4%	Not sure
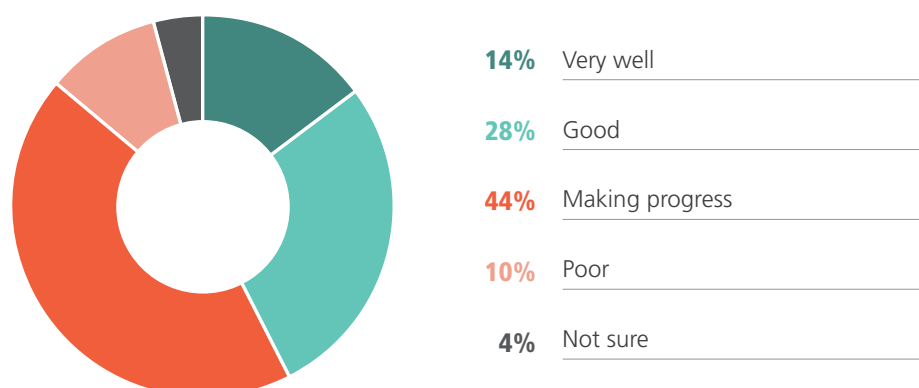
8. WHAT DO YOU CONSIDER TO BE THE MOST PRESSING IT TRANSFORMATIONAL IMPERATIVES IN YOUR ORGANIZATION?

There is not only a strong desire among business leaders to embrace new technologies, but a clear imperative to use those technologies to generate agility, enhance the digital experience and disrupt the marketplace. The top priority for our respondents was to "improve responsiveness to ever-changing business requirements," with 36 percent of the respondents choosing that. The second and third highest priorities were to enhance the digital experience to competitive advantage and producing applications faster, better and cheaper. Eight other responses focused on adopting disruptive technologies, reducing dependency on outdated systems and migrating systems to the cloud or other technology visions. The 11 responses in double-digits show that business managers see an urgent need across the organization for a transformation to faster, more-agile technologies.

%	
36%	Improve responsiveness to ever-changing business requirements
30%	Focus on digital experience as a competitive advantage
28%	Deliver applications faster, better and at low cost
26%	Rethink how we better engage, acquire and service customers
25%	Understand and embrace disruptive technologies
23%	Reduce dependency on old, costly and obsolete legacy systems
19%	Introduce a more strategic mindset to the IT group
18%	Make IT more responsive and accountable to business
17%	Ensure high availability, security, uptime and business continuity
12%	Figure ways to better integrate disparate data from multiplying applications
12%	Migrate to the cloud and third-party service providers
7%	Reduce overhead and operating costs in the IT group
7%	Re-skill IT and data center professionals
6%	Think about how to leverage the Internet of Things (IoT)
5%	Look for sustainability improvements in IT operations
4%	Overhaul and modernize data center operations
4%	Reskill and upgrade technical teams and IT/data center leaders
3%	Other

9. WHAT AREAS OF YOUR BUSINESS COULD MOST BENEFIT FROM A SMARTER USE OF TRANSFORMATIVE TECHNOLOGY?

Business leaders clearly understand how new technologies will raise operational efficiencies and effectiveness across the entire organization. Just over half the respondents believe that improvement would be the greatest benefit of transformative new systems. While that is a broad answer, other top choices reflected a sophisticated understanding of the major impacts that technologies like the cloud and data analytics could have on specific operations. Areas ranking highly included improving the customer experience, aligning departments, raising retention rates, increasing collaboration among employees, and sparking the kind of business innovation that could enhance revenue. The answers also inferred that several departments would benefit from new technologies including marketing, HR, product development and compliance.

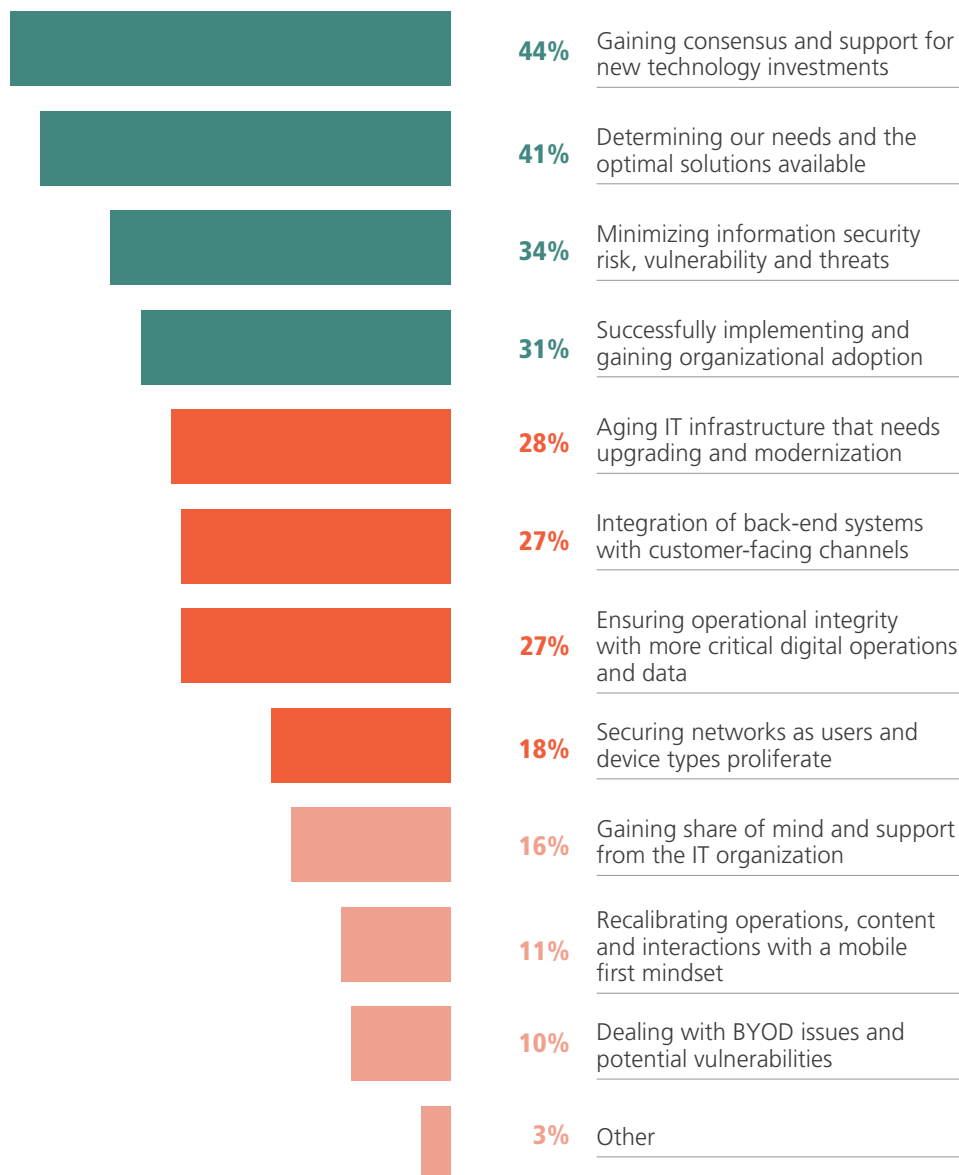| %	Category
52%	Operational efficiency and effectiveness
33%	Customer experience, monetization and retention
27%	Organizational alignment, culture and collaboration
24%	New products and services
22%	Business model innovation and new revenue sources
20%	Automation of essential processes
17%	Globalization and further penetration of markets
15%	Greater predictability of outcomes and decision making
13%	Improved management decision making
11%	Operational visibility and accountability
10%	Brand distinction and differentiation
10%	Marketing impact and campaign outcomes
8%	End-to-end value chain management
6%	Go-to-market processes and deliverables
5%	Better compliance, governance and eDiscovery
5%	Strategic partner selection and value building
3%	Employee engagement and recruitment
1%	Other

10. WHAT DO YOU SEE AS THE MOST TRANSFORMATIVE TECHNOLOGIES THAT MIGHT GIVE YOU COMPETITIVE ADVANTAGE IN THE MARKETPLACE?

Business leaders today understand that a wide array of new technologies that can improve their operations and financial results. Asked which specific technologies that would have the greatest impacts, the top choices fell within a narrow band: real-time intelligence from the Internet of things, data mining from social media and highly scalable web-based business models. However, they also see benefits flowing from several other technologies. In this question, all 12 possible responses registered in double-digits, again demonstrating today's business leaders have a deep understanding of the technical tools at their disposal. For example, significant numbers of respondents chose virtualization, software-defined data centers, machine learning, APIs and predictive analytics – all technologies that might have seemed too arcane for business managers of yesteryear.

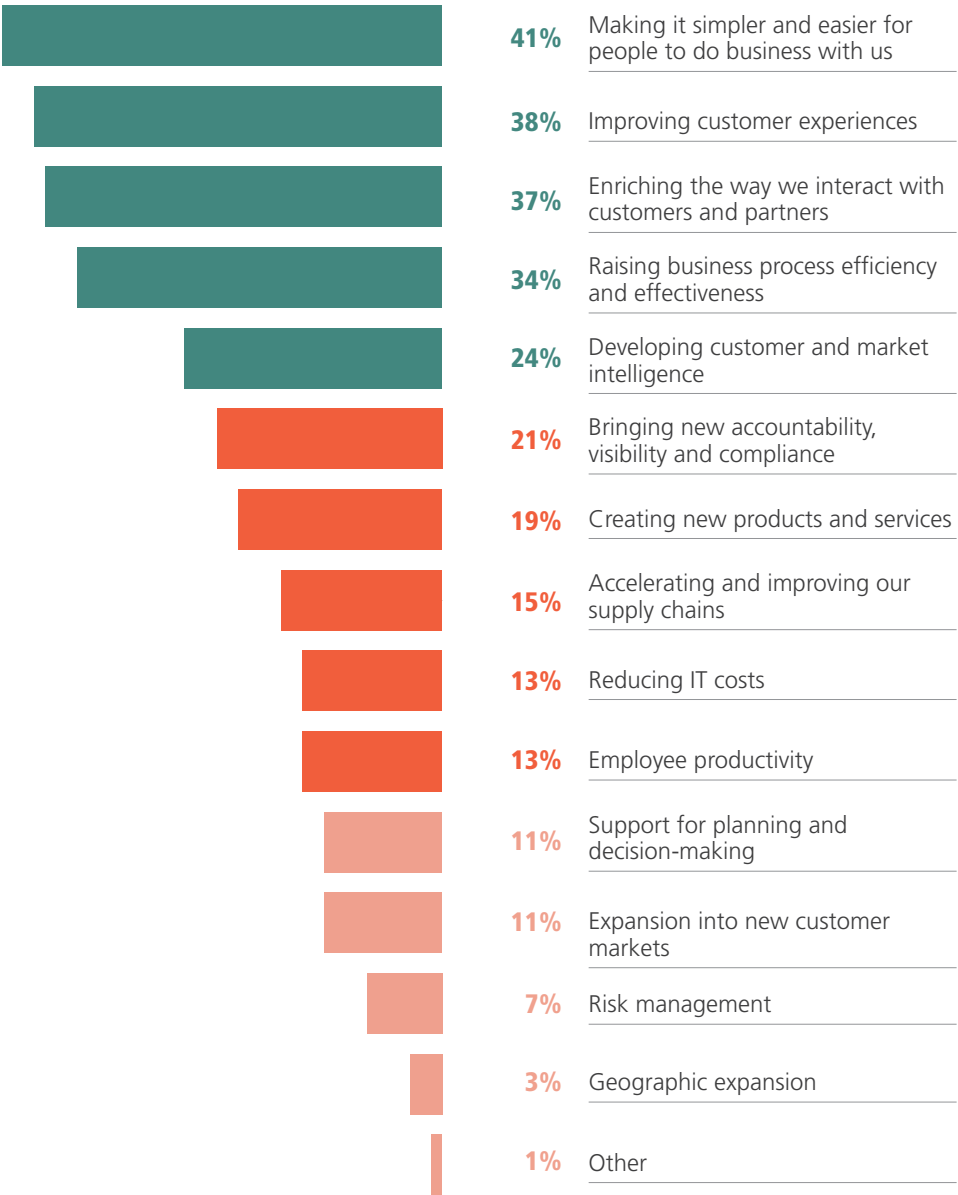|	
35%	Real-time intelligence from embedded sensors (Internet of Things)
33%	Always on, highly scalable and available web-based business models
29%	Social media data mining and more efficient engagement
28%	Micro-targeting and personalization using Big Data analytics
26%	Proliferation of smart mobile devices and applications
22%	API Economy – mobile, hyper-connected customer
22%	Connectivity and growing broadband availability worldwide
19%	Downsizing of corporate IT infrastructures and shift to the cloud
18%	Machine learning and predictive intelligence
18%	Proliferation of platform- and software-as-a-service offerings
17%	Software-defined IT infrastructures and data centers
13%	Commoditization and virtualization of compute resources
3%	Other

11. WHAT ARE SOME OF THE BIGGEST CHALLENGES FACED BY YOUR BUSINESS GROUP RELATIVE TO EMBRACING NEW TECHNOLOGY FOR COMPETITIVE ADVANTAGE?

While business leaders understand that new technologies will lift performance throughout their companies, some age-old concerns remain high in their minds. The top two responses, were agreeing on the best solutions to meet the company's needs and getting budgetary approval to pay for them. Other familiar challenges among that ranked highly reflected concerns over security, integration, adoption and upgrading legacy systems. This was another question where all the responses drew a double-digit rating from the respondents, reflecting a good understanding of the complexities of undertaking a broad technical transformation. Organizational change is never easy, particularly when it involves technologies that ultimately affect all parts of the company. But those risks are balanced against transforming the enterprise into a strategic business tool.

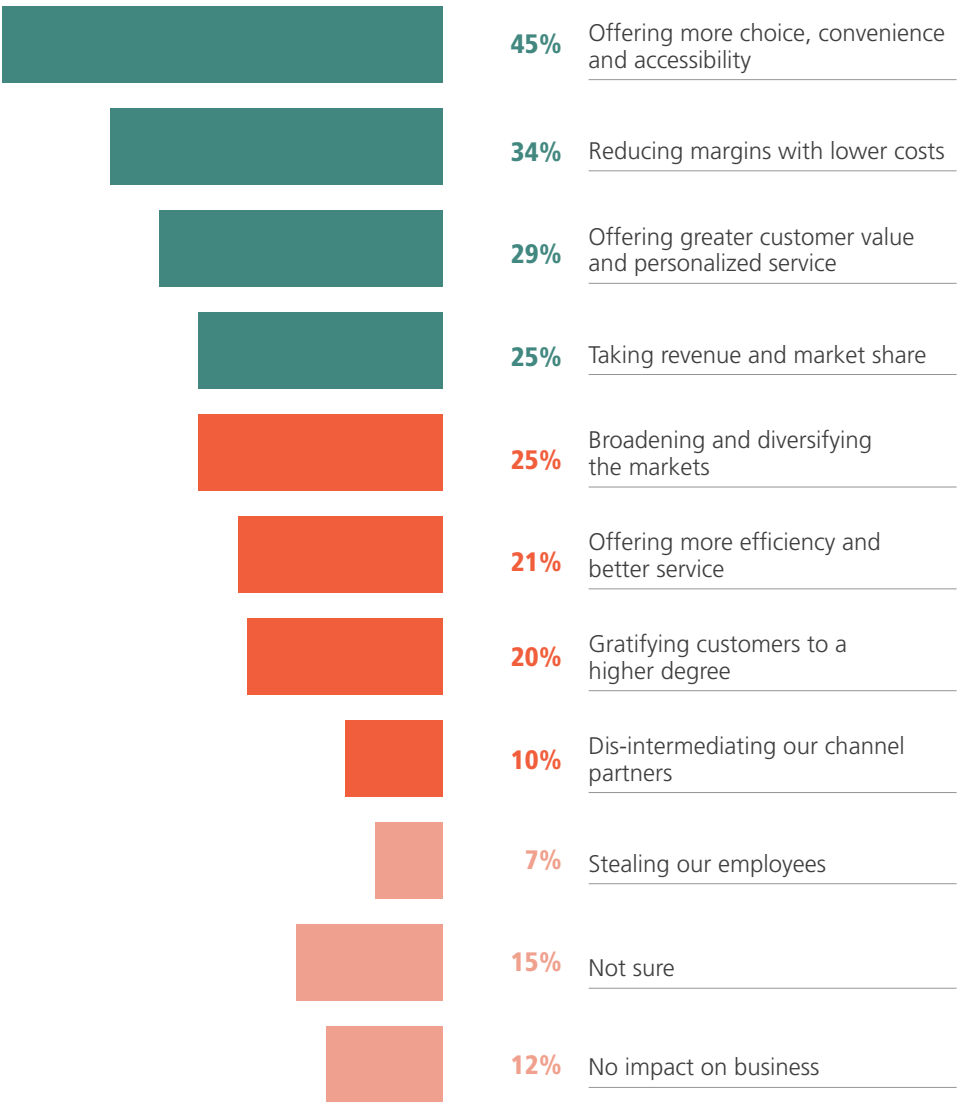| %	Challenge
44%	Gaining consensus and support for new technology investments
41%	Determining our needs and the optimal solutions available
34%	Minimizing information security risk, vulnerability and threats
31%	Successfully implementing and gaining organizational adoption
28%	Aging IT infrastructure that needs upgrading and modernization
27%	Integration of back-end systems with customer-facing channels
27%	Ensuring operational integrity with more critical digital operations and data
18%	Securing networks as users and device types proliferate
16%	Gaining share of mind and support from the IT organization
11%	Recalibrating operations, content and interactions with a mobile first mindset
10%	Dealing with BYOD issues and potential vulnerabilities
3%	Other

12. WHAT ARE THE MOST IMPORTANT AREAS IN WHICH TECHNOLOGY IS TRANSFORMING YOUR BUSINESS?

The digital experience for partners and customers dominates the thinking of survey respondents when it comes to new technology. Asked how new technologies are already transforming their businesses, senior managers said they make it easier to do business with their companies, enrich interactions with customers and partners, and enhance the overall customer experience. The top answers serve as a confirmation that ties the intent of integrating new technologies to positive outcomes. But the impacts of new technologies are being felt in many other ways, too. Highly ranked answers include speeding up the supply chain, raising business performance, inspiring new products and services, improving business planning and raising worker productivity. Clearly, the customer is still No. 1, but new technologies strengthen the entire organization.

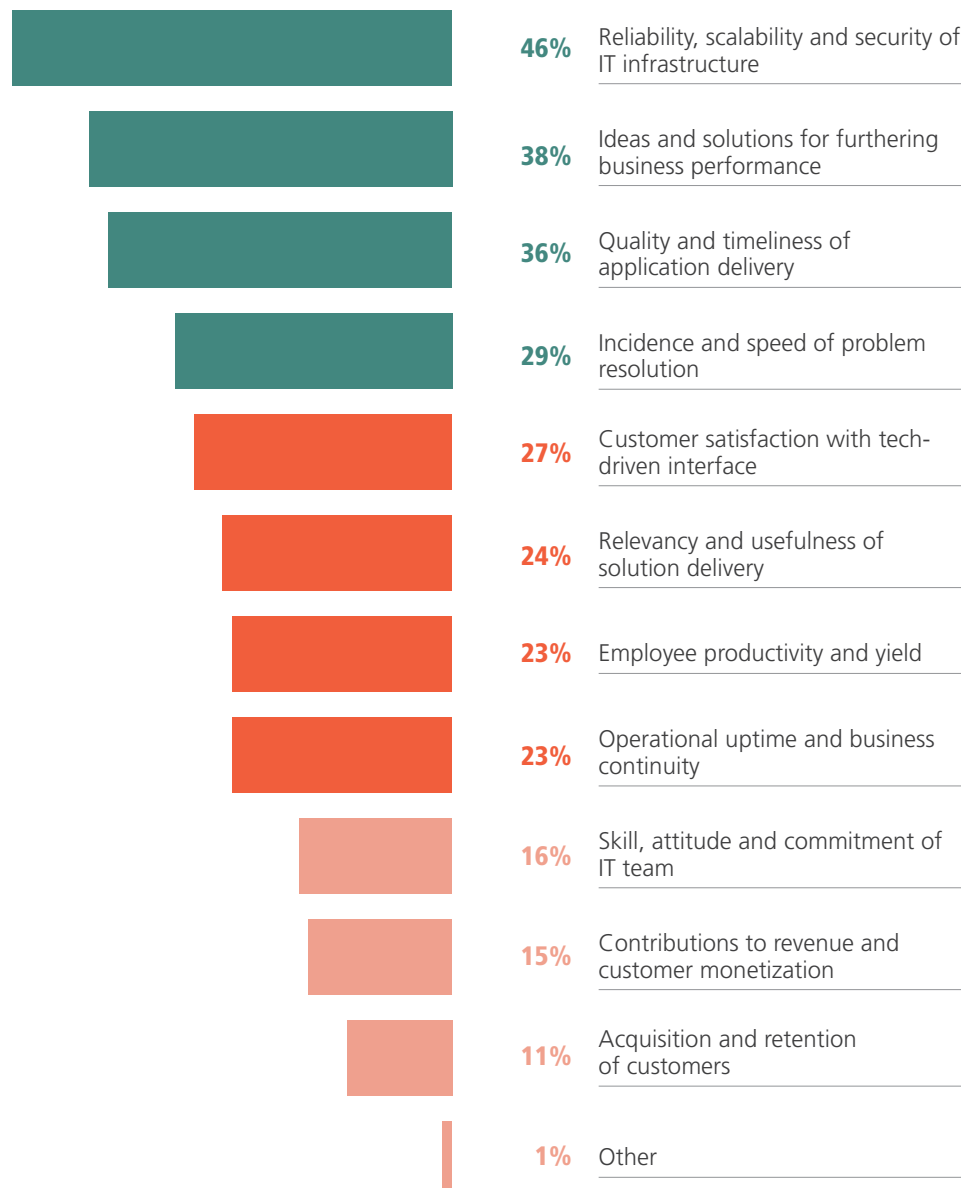|	
41%	Making it simpler and easier for people to do business with us
38%	Improving customer experiences
37%	Enriching the way we interact with customers and partners
34%	Raising business process efficiency and effectiveness
24%	Developing customer and market intelligence
21%	Bringing new accountability, visibility and compliance
19%	Creating new products and services
15%	Accelerating and improving our supply chains
13%	Reducing IT costs
13%	Employee productivity
11%	Support for planning and decision-making
11%	Expansion into new customer markets
7%	Risk management
3%	Geographic expansion
1%	Other

13. HOW ARE COMPETITORS USING NEW TECHNOLOGIES TO DISRUPT YOUR MARKET?

Just as survey respondents are already seeing the impact of new technologies across their companies, they also see their rivals disrupting the market with the help of new systems. Forty-five percent says new technologies help their competitors to offer more choice, convenience and accessibility to customers. Just over a third say competitors cut their costs with the help of new technologies. And more than a quarter say competitors are taking market share and taking revenue out of their coffers while offering customers better value and improved service. Several similar responses also drew high ratings: gratifying customers, stealing employees and offering greater efficiency. These effects largely mirror the benefits that the business managers either see now are would like to see in their own organizations.

45%	Offering more choice, convenience and accessibility
34%	Reducing margins with lower costs
29%	Offering greater customer value and personalized service
25%	Taking revenue and market share
25%	Broadening and diversifying the markets
21%	Offering more efficiency and better service
20%	Gratifying customers to a higher degree
10%	Dis-intermediating our channel partners
7%	Stealing our employees
15%	Not sure
12%	No impact on business

14. WHAT BUSINESS METRICS WOULD YOU USE TO EVALUATE IT ORGANIZATIONAL PERFORMANCE AND EFFECTIVENESS?

The IT group today faces some big challenges in mastering new skills, integrating new technologies and meeting demands from business managers. Still, the overarching imperative for IT is to keep the systems running securely and reliably. Those messages came through loud and clear as business managers rated the metrics by which they would measure the performance of their technical colleagues. Nearly half chose a traditional measure as the most important metric: the reliability, security and scale of the IT infrastructure. But a new scorecard of business objectives followed close behind with managers saying they'd like to see the IT group's performance rated based on the ideas it generates to further the business, the timeliness and quality of new applications and the speed with which it responds to problems. The proposed business metrics extend to such goals as customer acquisition and retention, monetization of customers, and user interfaces that raise customer satisfaction levels.

Percentage	Metric
46%	Reliability, scalability and security of IT infrastructure
38%	Ideas and solutions for furthering business performance
36%	Quality and timeliness of application delivery
29%	Incidence and speed of problem resolution
27%	Customer satisfaction with tech-driven interface
24%	Relevancy and usefulness of solution delivery
23%	Employee productivity and yield
23%	Operational uptime and business continuity
16%	Skill, attitude and commitment of IT team
15%	Contributions to revenue and customer monetization
11%	Acquisition and retention of customers
1%	Other

15. WHAT IS YOUR COMPANY LIKELY TO DO WITH ITS DATA CENTER OVER THE NEXT SEVERAL YEARS?

Companies will upgrade their data centers and move some operations to the cloud in coming years, according to our respondents. The performance of the data center, of course, is at the heart of many of the technology goals identified earlier by the survey respondents, particularly those related to speeding application delivery, producing actionable intelligence from real-time data and using analytics to predict business outcomes. Asked about their company's plans for the data center in the next several years, two responses had a significant lead. Those responses were to modernize existing facilities and migrating to a hybrid IT model that combines on-premises systems with the cloud. Related answers also scored highly, including consolidating servers and improving energy efficiency – both of which look would be byproducts of the hybrid IT model.

48%	Modernize and upgrade
44%	Migration to hybrid IT model combining on-premises data center and cloud
32%	Consolidate servers
25%	Better sustainability and energy utilization
20%	Major shift to the public cloud
17%	Not sure
16%	Development of new data centers
15%	Downsizing and outsourcing of data center management
6%	Other
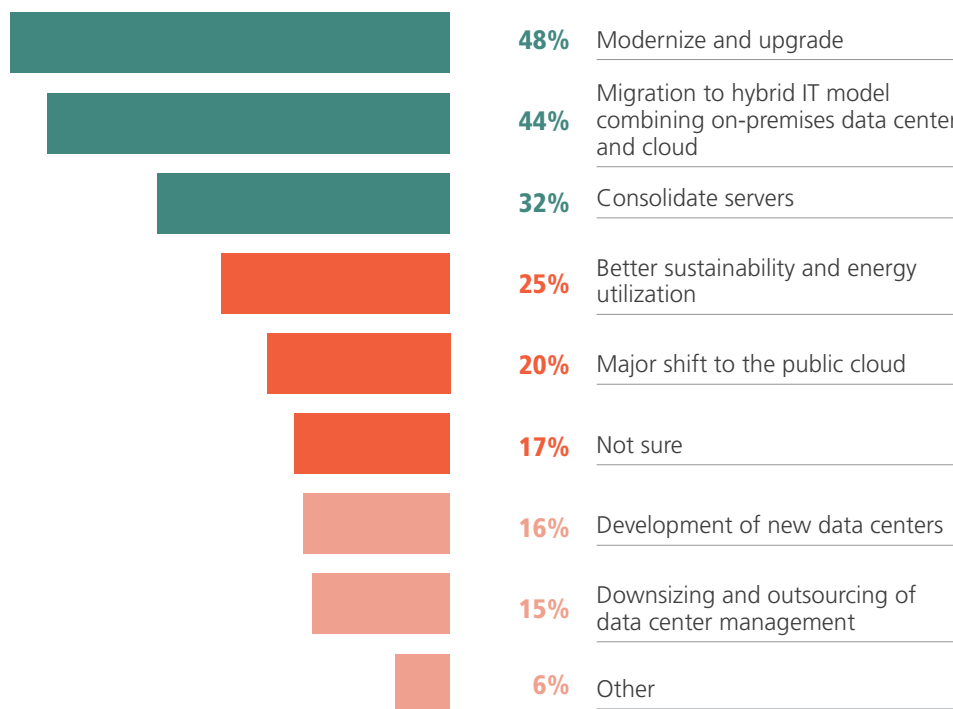
About Our Survey Participants

The 250 respondents to the BPI Network survey included a broad sampling of business and technology managers from around the globe. Nearly half were CEOs or other C-level executives; the remainder included managers in operations, sales, marketing, technology and other areas. Over half of the respondents work at companies with more than $100 million in revenue; nearly a quarter of the companies have in excess of $1 billion in sales. Participation by industry was led by healthcare, manufacturing and technology, with no industry representing more than 10 percent of the respondents. Just under half the respondents were from North America and 19 percent from Europe. The remainder represented Asia, Latin America, South America, South Pacific, Australia, Africa and other countries. The survey was conducted between May and July of 2015.

EXECUTIVE PERSPECTIVES

Immediately after concluding our survey, we asked a panel of 14 executives for their thoughts about three key topics that surfaced in the results:

- The need for a new scorecard to evaluate IT groups;
- How to improve the sluggish rate of innovation; and
- The key obstacles to adopting new technologies.

Our Panelists:

Scott Offermann
Director of Critical
Operations
Cushman and Wakefield
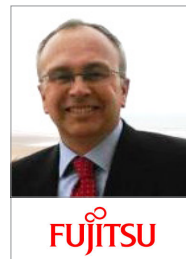
Martin Summerhayes
Head of Delivery Strategy
and Business Change
Fujitsu

Kevin Rota
CIO
Dassault Systèmes

Daniel Dumas
VP and Manufacturing
Practice Manager
Integra-co

Antoine de Kerviler
CIO
Eurostar International Ltd.
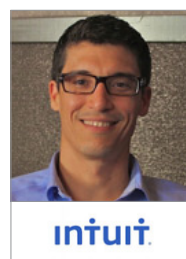
Bennett Blank
Head of Innovation
Intuit
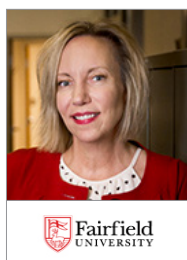
Paige Francis
CIO
Fairfield University
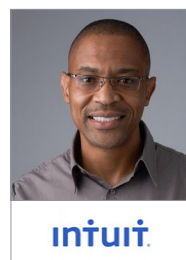
Hugh Molotsi
Vice President
Intuit Labs

Haluk Durudogan
President
Meggitt Aircraft

Dr. Kai-Henrik Barth
CEO
The Small Group

Nicole Alexander
VP Innovation
Nielsen

Barry Money
General Manager, Retail
Development
Toyota Australia

Sean Shoffstall
VP of Innovation &
Strategy
Teradata

Keith Brooks
CIO
VanessaBrooks

QUESTION 1: THE IT SCORECARD
MANY MANAGERS THINK THE PERFORMANCE OF THE IT GROUP SHOULD BE RATED AGAINST BUSINESS-RELATED GOALS. WHAT METRICS WOULD YOU APPLY AND WHY?

Barry Money, GM for Retail Development, Toyota Australia

Certainly the desire to take on greater responsibility for business outcomes is becoming more prevalent among senior technology executives. And these days, a new business venture is more than likely reliant upon a new technical solution. So, therefore the launch of KPIs should be shared equally between the IT side of the team as well as the business side. Only with a shared vision and shared goals, will the two silos of business and technology truly become partners in the delivery of innovative strategies.

Paige Francis, CIO, Fairfield University

I think that when you look at IT as a partner on the campus, we sort of clearly impact every facet of daily life. If you have a sort of leader in your IT department who's not bringing ideas, who's not at the table for change – and improvement, innovation, sustainability, attracting whoever it is that you're trying to attract – if your IT leader is not an active part of that driving thoughtful change, then you're missing out because in many ways …. I think they're saying Current statistics tell us that 50 percent or more of the today's CIOs will be retiring within the next five years and I think it's time. I think that it's time to have the more strategic- and business-minded individuals in the technology leadership positions. I think that it's important to have technology experience, but I think that in some ways, that is slowly but surely going to dip down on the priority list for technology leadership … Now more than ever, it's time for the technology team to rise to the occasion and start becoming an integral part of the strategy of any company or institution where they're involved. And I think that what's interesting is that suddenly, the business side seems to want to up their pace to match that of technology.

Antoine de Kerviler, CIO, Eurostar International Ltd.

The information systems division is serving either customers directly through websites or serving people who are serving customers. Therefore, they should monitor business metrics and measure their contribution to the company's strategy. Measuring technical improvements that have no impact on costs, increased revenue or increased customer satisfaction is all very well, but what purpose does it serve? And there's no need to reinvent the wheel, the business metrics should be the same as those used in the rest of the company.

Scott Offermann, Director of Critical Operations, Cushman and Wakefield

II think the metrics should be, No. 1 customer satisfaction. Too many times while the actual issues are addressed the customers are very dissatisfied with the way they were treated, the time it took to resolve and the constraints of the resolution. Today changing technology often times outreaches the speed of response by corporate IT departments. The second metric needs to measure the time to obtain the necessary internal approvals on each step of the process. This will highlight areas that are very time consuming, such as IT Security sign off, change control or procurement. Often times it is these interdependencies that create the obstacles for speed of delivery.

Sean Shoffstall- VP of Innovation & Strategy, Teradata

No longer does IT have to be a cost center, it can be targeted to help drive revenue. That means that can be tracked to business-related metrics. The most common I see are around time to segmentation availability, segmentation hygiene, data decision latency, and attribution accuracy.

Daniel Dumas, VP and Manufacturing Practice Manager, Integra-co
The use of an IT Balanced Scorecard (BSC) is one of the most effective means to help the board and management achieve IT and business alignment. IT BSCs help foster consensus on IT's strategic aims from various stakeholders, demonstrate IT's value and inform about IT's capabilities, risks, and performance. In an IT BSC, the four traditional perspectives need to be redefined into: a) Enterprise contribution perspective captures the business value created from the IT investments – How do business executives view the IT department? b) Future orientation perspective represents the human and technology resources needed by IT to deliver its services over time – How well is IT positioned to meet future needs? c) Operational excellence perspective represents the IT processes employed to develop and deliver the applications – How effective and efficient are the IT processes?, and d) Customer (user) orientation perspective represents the user evaluation of IT – How do users view the IT department. The IT BSC is an important component of modern organizations, it establishes greater accountability, and helps to evaluate and prioritize initiatives more quickly and effectively.

Martin Summerhayes, Head of Delivery Strategy and Business Change, Fujitsu
With the speed of change in the [electronics] business ever-shortening, to less than a year, and in a large number of cases, to seven months or less, the IT group needs to recognize and change the way that they are measured. It is no longer about uptime, or report publication dates, or even quality and timeliness, or app delivery. Rather the IT Group should be measured on the responsiveness and ability to deliver the business changes that IT are involved in and the speed of being able to create, publish and adjust key reports and KPI's that reflect the changes in the business.

QUESTION 2: INNOVATION
THE BPI NETWORK SURVEY FOUND MANAGERS THOUGHT IT WAS VERY IMPORTANT TO INNOVATE, BUT ONLY 13 PERCENT RATED THE LEVEL OF INNOVATION IN THEIR IT GROUP AS "VERY HIGH." WHY DO YOU BELIEVE THAT FIGURE IS SO LOW, AND WHAT DO YOU THINK COMPANIES NEED TO DO TO IMPROVE PERFORMANCE?

Kevin Rota, CIO, Dassault Systèmes
Innovation is about creating new products and services. I believe that the figure for IT is low because too often the focus in IT has been placed on the technology itself and not the business outcome it provides. To improve performance, IT must integrate with business as part of cross-functional organizations focused on creating outcomes.

Daniel Dumas, VP and Manufacturing Practice Manager, Integra-co
It is often a question of having the right people (with the appropriate skills set) at the right place and an enabling organizational culture when suddenly we want our IT group to innovate. We have added business analysts to our IT group and told them to spend time in users' departments to better understand their processes and acknowledge firsthand the gap between documented processes and the reality, and any others problems that they were coming across trying to do their job. We also asked them to identify how new enabling technologies such as intelligent sensors (IoT), multichannel client communications, social networks, mobility, etc., can leverage new benefits for the organization. Users have their minds in running their day-to-day operations and don't have time to step back to appreciate the whole picture and come up with well thought processes that use latest and enabling technology with tomorrow best practices.

Scott Offermann, Director of Critical Operations, Cushman and Wakefield
Innovation is often misunderstood and a misused term. Innovation is typically done in small incremental steps that are only noticeable by the process owner as opposed to a revolutionary idea or game changing product. To create a game changing product requires many incremental innovations put together. The reason for the low rating is that the true and incremental innovation is rarely recognized and even more rarely acknowledged.

Antoine de Kerviler, CIO, Eurostar International Ltd.
I don't know why [the percentage] is so low. I guess because they're not innovating. If these managers think it's so important, why don't they do it? Innovation is not only about money. It's about tools, culture and freedom. The CIO can state "let's innovate," not change anything and expect that the IS division will all of a sudden start to innovate. Tools are essential: agile principles (refer to the Agile Manifesto), simple and lean processes to evaluate and prioritize projects and tasks, minimum viable products, analytics to measure performances. Culture and freedom go hand in hand: if one does not let his team think on their own, there will be no innovation. Let people think, value their ideas, praise them for good (and not so good) ideas, value fast failure and return on experience.

Keith Brooks, CIO, VanessaBrooks
Innovation is everywhere, but creating the solution or product for the innovation is the problem. Sometimes we have the in-house knowledge, sometimes we do not. The process of building anything useful is not a quick process once you reach enterprise level. It is easier for a startup to provide some basic application because they give little thought to security, directory, offline activity, multiple languages or even integration into basic systems like email or business tools, all of which enterprises must keep in mind. That said, enterprises have spent a ton of money on systems and want their proper ROI in the form of long-term usage. We see only at the next refresh interval can enterprise customers make decisions about what is next.

Nicole Alexander, VP Innovation, Nielsen
Younger/smaller organizations tend to have fewer legacy systems, are more agile and are willing to take risks to innovate around their technology and information systems. In part because in a less matrixed organization, fewer executives that need to sign off, and in part because being in stealth mode is part of their DNA for survival. Larger organization need to adopt this mantra and ensure their leaders a) foster a culture that motivates change and inventing the new and b) have talent that reflects that company's culture.

Dr. Kai-Henrik Barth, CEO, The Small Group
Witnessing the increasing pace of technological change, many managers just try to keep up with it and digest everything that's upcoming and new. Few take the time to really think what their business model is and where opportunities and risks might be. Car manufacturers are happily enlarging their value chain by "connecting" their cars in multiple ways. That they allow that new companies may enter into their relationship with the client is often overlooked. What happens when the customer decides that their "connection" is more important than the original car manufacturer? That's one problem with many innovations: out of the company's tradition, truly disruptive thinking is not adopted, and "innovation" stops where cannibalization is felt. Only if innovation is also led by the thought "better we cannibalize ourselves than somebody else is cannibalizing us" true competitive advantage can be reached. Most "innovation" falls short of that.

Hugh Molotsi, VP, Intuit Labs
Perhaps the biggest enemy of innovation within large companies is bureaucracy – the concentration of decision-making in a top-down management structure. In bureaucratic organizations, employees aren't empowered to come up with new ideas and try them out. Instead, ideas must run up the flag pole. Senior leaders must be influenced. Several managers need to be bought in. A single manager, who doesn't like the idea, can derail the whole effort. It may take several meetings and many months to get an idea approved.

Bennett Blank, Head of Innovation, Intuit
Innovation is an organizational capability, which just like any capability, can only be mastered through consistent practice over time. At Intuit, our IT group systematically trains teams on the skills required to innovate, then consistently provides time and space to apply these skills to IT innovation ideas.

Haluk Durudogan, President, Meggitt Aircraft
IIn 1964, Marshall McLuhan, published the book, "Understanding Media: The Extensions of Man." The most quoted line in the piece has become, "The Medium is the Message." My interpretation of this phrase is that it is the medium itself that shapes and controls the level and usage of human engagement and action. In this context, IT is the currently dominant medium. IT is evolving into an increasingly symbiotic relationship with content, product and service. We have witnessed many transformations. The Industrial revolution morphed into the technology revolution, products turned into solutions, data streams became full on fire hoses and long product cycles evolving into real time change. It all looks a beautiful train wreck for the moment, which may explain the difference between the survey responders hope and perception. However, the rewards will go to the special few leaders who can stay on course from today's cacophony through to tomorrow's symphony.

Barry Money, GM for Retail Development, Toyota Australia
Traditionally, in most large corporations, the IT team has been a separate vertical silo that has survived on a compliant, risk-averse culture. After all, to date their mandate has been to prevent down-time, increase efficiency and fix bugs. That still remains imperative today. But the concept of a stand-alone organization that is at best a supplier that speaks a different language, and at worst an obstacle to progress, is no longer a valid position in today's rapidly changing business environment. Therefore, the IT department must transform itself into a partner that combines the best practice of reliability, complete understanding of the business direction, the agility and entrepreneurial spirit to launch lean products into the market for testing and enhancement, and the will-power to learn the skills sets of analytics and insight that will drive innovation and growth. And along with this, only with permission to fail – albeit in small chunks – will the IT department learn that business is about more than just network security and compliance.

QUESTION 3: ADOPTION
MOST RESPONDENTS CONNECTED UPGRADED DATA CENTER OPERATIONS TO INCREASED AGILITY, FASTER TIME TO MARKET AND REDUCED COSTS. BUT LESS THAN TWO IN FIVE SAID THEIR COMPANIES ARE EMBRACING THAT CHANGE "VERY WELL" OR "EXCEPTIONALLY WELL." WHAT DO YOU SEE AS THE PRIMARY OBSTACLES?

Antoine de Kerviler, CIO, Eurostar International Ltd.
Change is always difficult. A lot of IS people are afraid for their jobs – will they stay employed and employable once all these servers have been moved to the cloud? The answer is clearly YES, and IS managers must demonstrate that it will be the case by training their teams and giving them ownership of the transformation. The worst thing would be to hire consultants to define and drive the transformation and leaving the insiders out of it. That's a recipe for failure. There are other obstacles: migration and transformation costs, evaluating ROI for solutions on which we have very limited or no experience , risk of upsetting the "plate of spaghetti" when moving core systems, and more.

Nicole Alexander, VP Innovation, Nielsen
Many companies, historically and today, focus on data and technology to drive transformation without investing in organizational capabilities to ensure that the technology is a means to actionable impact. Technology should be used to feed an insightful and focused strategy that will drive competitive advantage for an organization.

Paige Francis, CIO, Fairfield University
Our biggest struggle right now is funding. I don't mean actually getting the money but identifying it as capital expenditure versus operational expenditure. The current business model, which has been in place for however many years, actually stifles the pursuit of innovative solutions. The way it works in higher education is you get a certain bucket of operational dollars and then you get a certain bucket of capital dollars every year. It used to be that your operational funds stuff would covers your typical expense like compensation and recurring costs. You got your salary, your compensation and then you got your non-compensation, which would be your supplies and training and all that kind of stuff. And then you would go to bat that to get capital dollars every year – and this could be in the six figures, it could be in the seven figures – and you go in and you sort of fight with everybody on campus to try to get these capital dollars for these one-time large project expenses. The game has changed. We're not building anymore; we're putting data in the cloud. Suddenly, we need less capital and more operational. And operational dollars are harder to come by, thereby at times blocking the innovative and encouraging more archaic and clunky solutions.

Sean Shoffstall- VP of Innovation & Strategy, Teradata
Just upgrading your technology isn't enough. The convergence of marketing and IT is speeding up, which means that IT needs to look at the technology and understand how to best leverage it for marketing. I am starting to see the most successful organizations have IT employ more technical marketers.

Daniel Dumas, VP and Manufacturing Practice Manager, Integra-co
To deliver business value, technology must come with efficient processes and effective systems. To obtain the required funds to deliver smarter processes and systems using new technologies, IT along with process owners need to develop a business case to convince and need to commit to upper management that value will be created, measured and realized. In some cases, IT was the process owner and business value was demonstrated by the use of a business case.

DIMENSION DATA COMMENTARY

CROSSING THE CHASM – CONSIDERATIONS FOR BRIDGING THE DIVIDE BETWEEN IT AND THE BUSINESS

This report highlights the growing need for IT leaders to ensure that technology makes business more agile, fast and innovative. It also suggests that, in many cases, IT teams aren't meeting these expectations as well as they could. Our conversations with clients and our experience working with them have given us some valuable insights into many of the obstacles and opportunities facing companies as they seek to make this transition.

A common stumbling block is the existence of a 'chasm' between IT leadership and technical experts working in the data centre. Today, CIOs are focused on applications; they're concerned about how services are being delivered to internal stakeholders and external customers. As mobile devices become the user's 'de-facto' point of interface with applications and data, CIOs are concentrating their efforts on ensuring a high-quality user experience and meeting their people's expectation for instant, anywhere access to information. Organisations need to make sure that, back in the data centre, technical experts are devoting the right level of attention to security and ensuring that data is protected when it's accessed on mobile devices.

Our advice to CIOs is: Understand how your customers want to interact with your business and its applications and let your IT teams engage with them directly. Allow them to use the feedback they receive to create user scenarios to determine whether the technology is designed with the customer in mind, and if not, to devise a plan for improvement. This may require new processes, policies, and automation technologies.

Making informed decisions regarding new technology investments is critical to ensuring you extract maximum value from them. The market is shifting away from component-based hardware and software, and moving to bundled technologies that feature high levels of automation. However, it's not always easy to determine how to get the most out of these technologies, and how they'll interoperate with the legacy infrastructures and workloads that may be running in a public cloud.

We believe that this shift is driving organisations to hire different types of IT skills. There's no longer this need for specific domain experts; now you need people who can focus on automation and the integration of application programming interfaces with existing technologies.

Here, organisations would do well to turn to a managed services provider that's already invested in the relevant tools and automation technologies. Such a provider can help you to look beyond the technology, and focus on the outcomes that you want to achieve as a business.

Agility and innovation: it's about exploring the art of the possible

To better meet the business's expectations for agility and innovation, IT organisations need to use technology advancements, such as cloud and Agile development methodologies, to explore the art of the possible ... boldly test new ideas and approaches ... and have fun.

Many IT organisations still operate their data centres the way they did 20 years ago, using waterfall processes and idle-driven systems. They're missing a great opportunity to take advantage of new architectures and systems, which will allow them to be more responsive to their businesses and more cost-effective.

As an example, compare the way Google, Yahoo! or Facebook run their data centres with the approach taken within a typical enterprise data centre. It's completely different. Things just don't run the same way. If someone at Facebook wants to develop a new application or set up a new workload, they'll simply 'slice off' a piece of architecture, and off they go. There's no two-year planning cycle, they don't need to do sizing and business case analysis.

Cloud and recent technology advances have changed the game; they've levelled the playing fields and have brought this level of agility within the reach of all businesses, not just the big players. We need to start thinking differently about how we can use these advancements to drive business outcomes.

Investing in Agile software development technology is a first step in capitalising on these opportunities. IT leaders need to instil a culture of people, processes, and software working together and responding to change, rather than following a rigid plan. We should apply this thinking not just to our development methodologies, but also to how we operate IT. It's about identifying a few key areas and focusing on responsive, iterative development. If you make small incremental changes continuously, you create far more stable environments.

The concept of consumption-based billing for IT capacity is a key enabler of this transformation. But the advantages extend well beyond cost savings alone; this model empowers IT teams to test new ideas quickly, and unleash innovation, without exposing the business to risk.

Developers can try things out without having to put in place formal structures. And if something works, great; if it doesn't, then they can go back and try something else. That's what we love about Agile technology. Agile plays to the benefits of how technologists think – trying things out, seeing what works, making changes, and going back and trying again. As opposed to suggesting a single, 'correct' approach which, if not followed precisely, would supposedly lead to trouble further down the line.

We believe that if organisations can achieve this mind shift, they can look forward to more satisfied end users, who'll benefit from new features and functions, and greater application stability.

It's time to go big about extracting the value of information

While there's a lot of hype in the market around big data and analytics, most organisations are in the early stages of finding ways to derive more value from their data and find ways to translate it into competitive advantage.

Most CIOs we speak to have implemented virtualisation and are starting to explore and adopt cloud. But few have attacked the information challenge head on, mainly because that requires engagement with business units. IT teams and the business aren't used to working so closely. We believe that it's time for data centre professionals to move beyond managing infrastructure and trying to find ways to reduce storage costs, and begin to explore the potential new value inherent in information.

IT teams should consider handing over basic infrastructure management and data protection tasks to a service provider. The provider can also assist in ensuring that data is available quickly – for example, in the event of an audit – and avoid any compliance issues arising.

Decisions regarding data and storage can't be made in isolation, especially in the era of analytics and big data. The type of storage you need will depend on what you want to accomplish with your data and how you want to accomplish it. It's not as simple as saying 'I want to get into big data, so I'll just start accessing the tools.'

Hadoop and MapReduce are built on the premise that you have fast sequential read access to cheap disks. However, traditional cloud servers don't offer this capability. They're designed for highly transactional applications. So it's important to consider what you want to do with your data. Do you want to perform transactions? Or do you want to archive it and later extract it and aggregate it into a big data construct? You also need to think about how applications are optimised to ensure you're able to get the data back out of the storage environment when you need it.

Object storage is an area of growing interest on the part of businesses that are testing the big data waters. This involves posting your data into a Web server. You can export all your Salesforce data to the object store, feed it through a set of predefined Hadoop or MapReduce processes, and then export it back into the object store. That the advantage of this approach is that business users are able to gain access to, and extract value from, the information in a timely manner.

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MAKING THE VISION OF HYBRID IT REAL

It's interesting to note that a total of 44% of those participating in the BPI Network survey expect their companies to migrate to a hybrid IT model combining both on-premise data centre and cloud. But what exactly is hybrid IT? As was the case with the term 'cloud computing' a few years ago, it's something everyone seems to be talking about, yet there doesn't seem to be a clear and common understanding of what it really means.

Many people define hybrid IT as an approach to enterprise computing in which an organisation provides and manages some IT resources in-house but uses cloud-based services for others. That's quite a simple definition. However, Dimension Data defines hybrid IT somewhat differently. We believe that realising the true benefits that a hybrid IT model can deliver, involves more than just sourcing IT in a variety of ways. Our view is that achieving effective hybrid IT, involves the following:

- A significant number of the business's IT assets are leveraging the **cloud**, both on- and off-premise.
- The organisation also has a significant reliance on **dedicated infrastructure**, as opposed to shared or cloud-based resources.
- These two sets of assets are **tightly integrated**, through a **secure network** that allows the organisation to optimise the delivery of services.

Getting started your journey to hybrid IT

If you've decided to pursue a hybrid IT model, your first question is likely to be: 'How do I get started?'

- First, you need to **define** what hybrid IT actually means for your business; you need to decide what you'll do, and where you'll do it.
- The second step is about **execution**: making it work.

In this article, we'll look at the top six considerations to bear in mind, as you proceed on this journey.

1. **Define an architecture that makes it possible**

   Architecture is a critical enabler for making hybrid IT a reality. The fundamental choices that you make regarding architecture will determine how easily you can build, operate and deliver services within a hybrid IT environment. So the first step is to determine how you're going to connect the various elements within your heterogeneous environment. What's the correct architecture? What are the implications on network performance? How do you architect with security in mind?

   We believe that to ensure your hybrid IT environment runs optimally, you need to have a consistent architecture across your on- and off-premise environments. For this reason, we advise selecting a cloud provider whose cloud architecture replicates a standard on-premise enterprise production environment.

2. Applications – where do they belong?

The next step of the path to hybrid IT is to determine where your applications belong. This includes ascertaining their ideal location from a physical and geographical perspective, as well as a consumption perspective. It's not just about the applications themselves, you also need to consider the users of your applications when making these decisions. You must also think through what the applications themselves require access to in order to perform optimally.

Here, considerations will also include the merits of operating your own data centres versus moving certain elements to a single co-location facility. Should you move workloads to a cloud provider's data centre to gain the benefits of physical proximity to the provider's cloud and the network? These kinds of decisions are all critical in executing your plan.

Network availability and performance are also vital considerations when making location-related decisions. As the amount of traffic traversing your network becomes increasingly Internet-based, having access to low-latency points becomes more important.

3. Remember, it's all about the data

As each of your applications has a dependency on data, that's the next obvious area to hone in on as you define your business's hybrid IT model.

Where does your data need to be? How long do you want to retain it? What's the respective business value of different types of data? 'Different forms of data have different life values. Certain types may be extremely important at a particular moment … and then become completely irrelevant five minutes later. Or it may seem unimportant right now, but three years later you'll realise you need to go back and have another look at it.

Once you've made your architecture, application, and data decisions to define your hybrid IT environment's frameworks and boundaries, you're ready to move into the execution phase. \

4. Implement automation and management using managed service

Setting your policies is a vital step, as it lays the foundation for automation. You can't automate something that you can't define. So you need rules, for example, about how long certain types of data should reside in particular locations; what data may or may not reside in the public cloud and under which circumstances; and when various services will be used and when they should be turned off.

In a hybrid world, you never want to introduce manual intervention or ad hoc decision-making. If you do, your workloads will start heading off in wrong directions, governance rules will be broken, and nothing will be auditable or traceable. It's only through the process of defining and then automating policies that you'll get to the point where you can confidently say: 'I've set my rules and I can prove that I'm following them.'

Once you've automated your policies, you'll be in a position to take advantage of innovations such as managed storage services Managed services come with best practice process management and automation toolsto help you cut costs while improving capacity utilisation and performance.

Managing and automating your processes across your on-premise assets, the cloud, and the network is essential to ensure high levels of service quality at the lowest possible cost.

On-premise	Network	In the cloud
Management of physical technologies	Management of Service quality	Management of the use of the services in the cloud
Enable IT Transformation for CIO	Deliver Business Agility for Line of Business	Increase Operational Efficiency for IT

Figure 1: Automation and management of processes are key to delivering business outcomes.

Clearly, 'management', in a heterogeneous environment is a complex and potentially costly endeavour. For this reason, many organisations choose to engage with a service provider that's already invested in the relevant management and automation tools. However, be sure that your provider isn't focused only on certain 'pockets' of the environment and that its portfolio spans everything from on-premise assets, to the cloud, through to the network.

5. Consider your consumption models and commercial constructs

Ideally, a hybrid IT environment will comprise a blend of services and infrastructure that are dedicated and available all the time, and those that are delivered via a consumption-based model, on demand. Striking the right balance between the two is important to ensure you minimise the total cost of ownership of your various technology investments.

Making use of public clouds is generally more expensive than using dedicated, on-premise resources. So you really only save money by using cloud services if you 'turn them off' when you don't need them.

6. See to your security

The final, but critical, step in realising your hybrid IT vision is security. That's because as you move into the world of hybrid IT, you'll inevitably encounter new threats, as you're extending your traditional perimeter and exposing aspects of your environment to new locations. In addition, your users aren't only accessing your data from within the data centre – they're doing so from different places, using different devices.

Meanwhile, cyberattacks are becoming ever-more sophisticated and targeted, so your traditional environment and assets are continuously becoming less secure. All this points to the need for a sharp focus on security awareness and incident response.

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