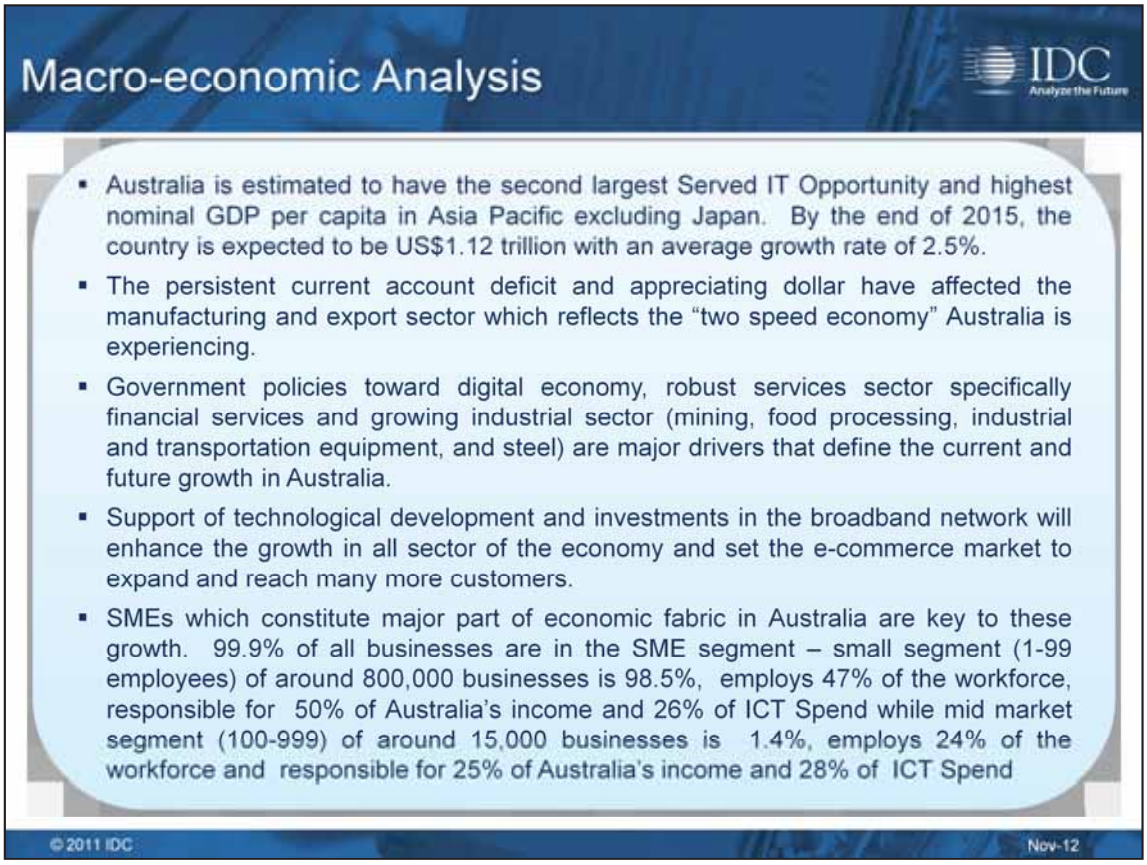
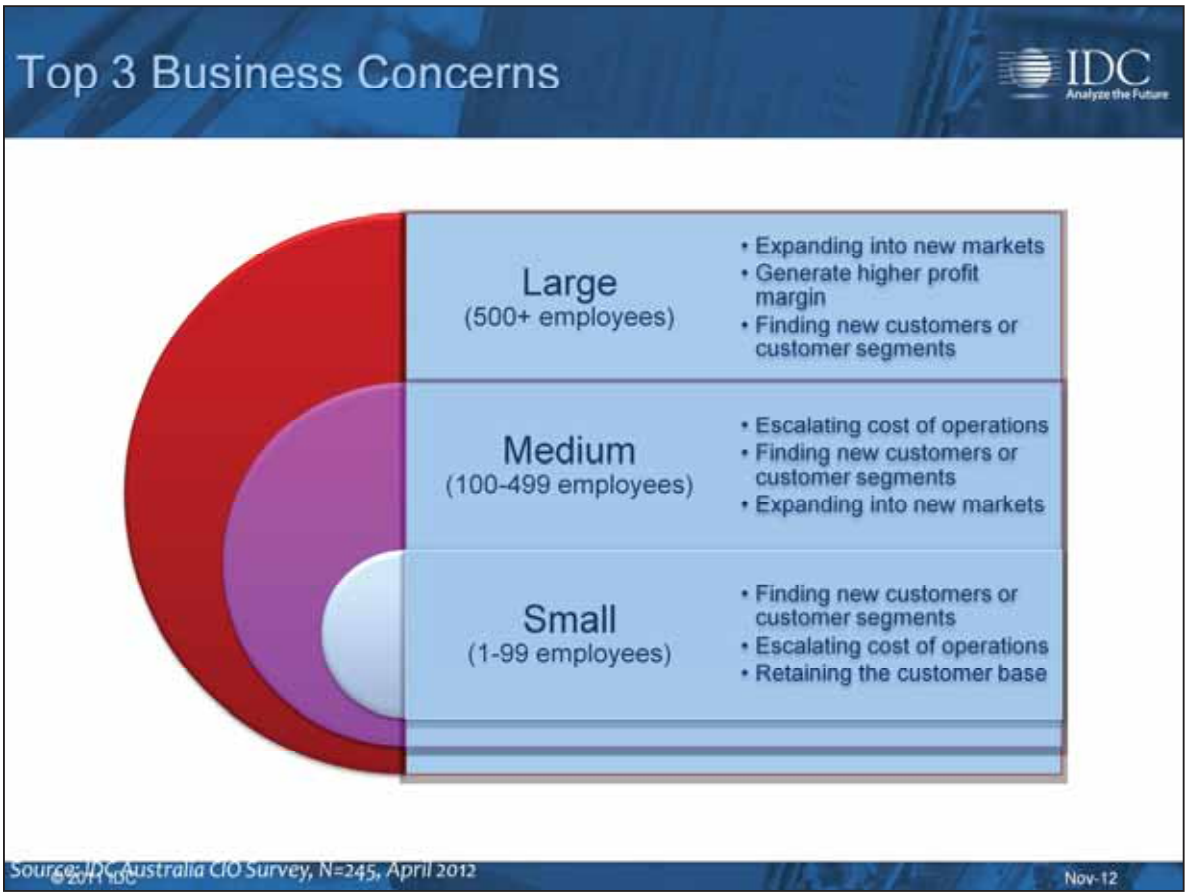
ICT Skills in the Workplace Forum
Parliament House
21 November 2012

Market Overview

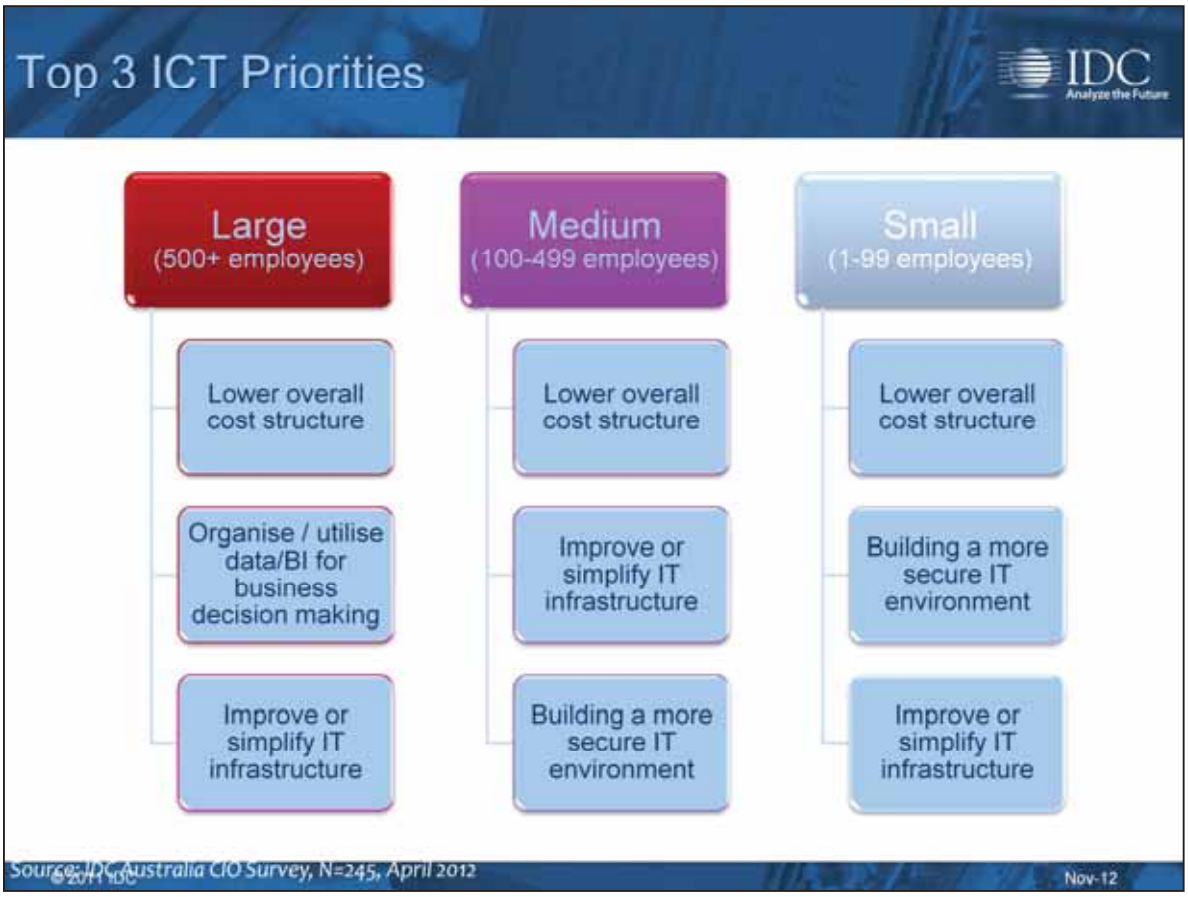
ICT Skills in the Workplace Forum

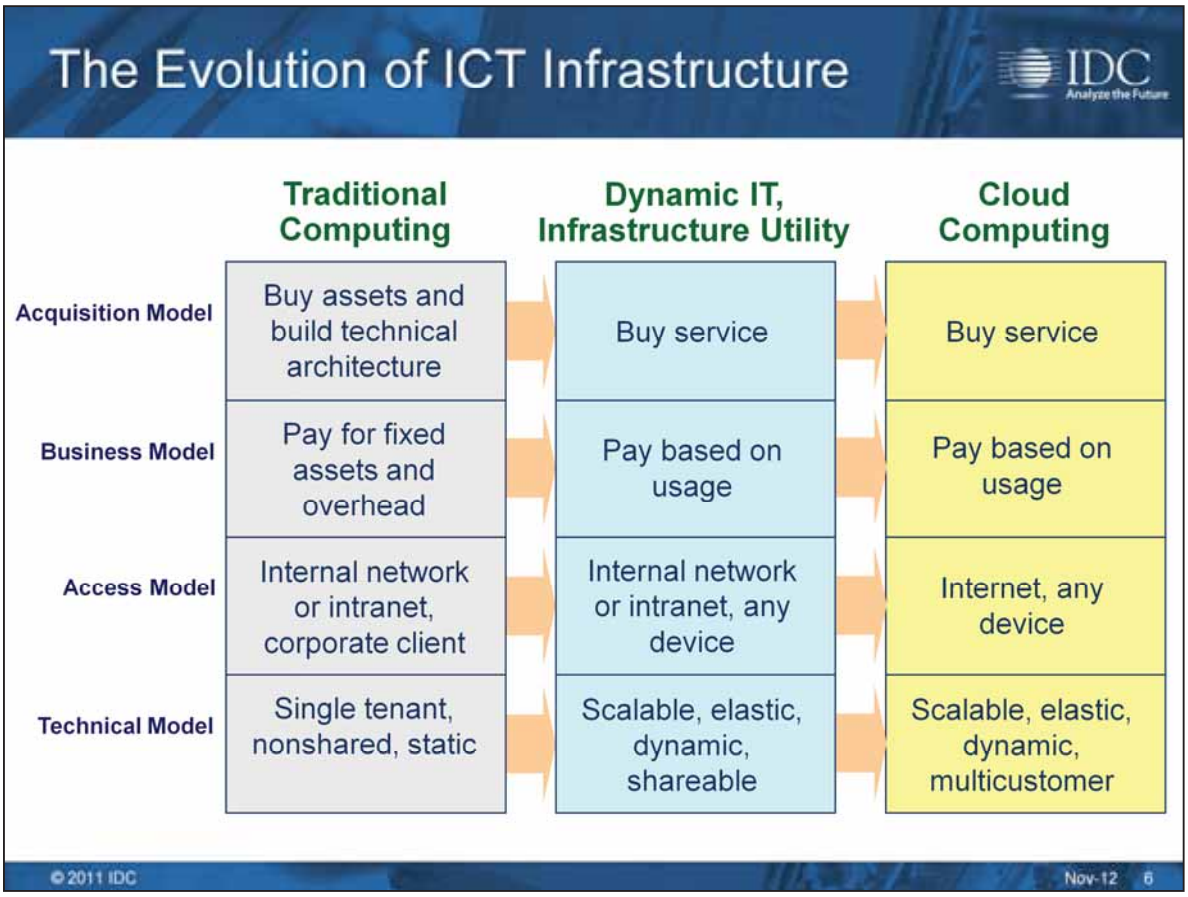

Macro-economic Analysis
IDC
Analyze the Future
Australia is estimated to have the second largest Served IT Opportunity and highest nominal GDP per capita in Asia Pacific excluding Japan. By the end of 2015, the country is expected to be US$1.12 trillion with an average growth rate of 2.5%.
The persistent current account deficit and appreciating dollar have affected the manufacturing and export sector which reflects the "two speed economy" Australia is experiencing.
Government policies toward digital economy, robust services sector specifically financial services and growing industrial sector (mining, food processing, industrial and transportation equipment, and steel) are major drivers that define the current and future growth in Australia.
Support of technological development and investments in the broadband network will enhance the growth in all sector of the economy and set the e-commerce market to expand and reach many more customers.
SMEs which constitute major part of economic fabric in Australia are key to these growth. 99.9% of all businesses are in the SME segment – small segment (1-99 employees) of around 800,000 businesses is 98.5%, employs 47% of the workforce, responsible for 50% of Australia's income and 26% of ICT Spend while mid market segment (100-999) of around 15,000 businesses is 1.4%, employs 24% of the workforce and responsible for 25% of Australia's income and 28% of ICT Spend
© 2011 IDC
Nov-12

ICT Skills in the Workplace Forum



ICT Skills in the Workplace Forum

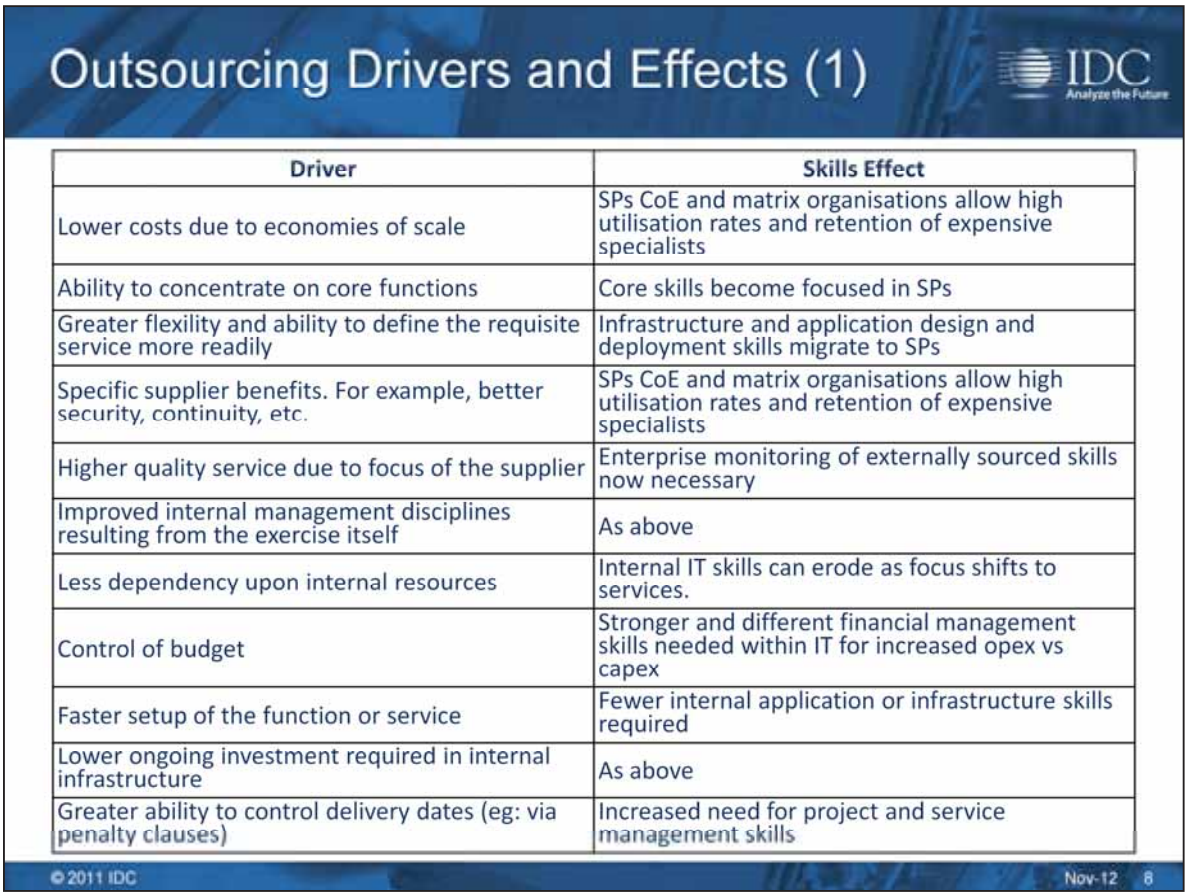




Major drivers for new applications in 2013 are expected to be mobility and social application business requirements

Cloud infrastructure will be the underlying deployment model for these new workloads as its cost-effectiveness compared to on-premises infrastructure is unbeatable. These new applications would not be viable without cloud infrastructure.

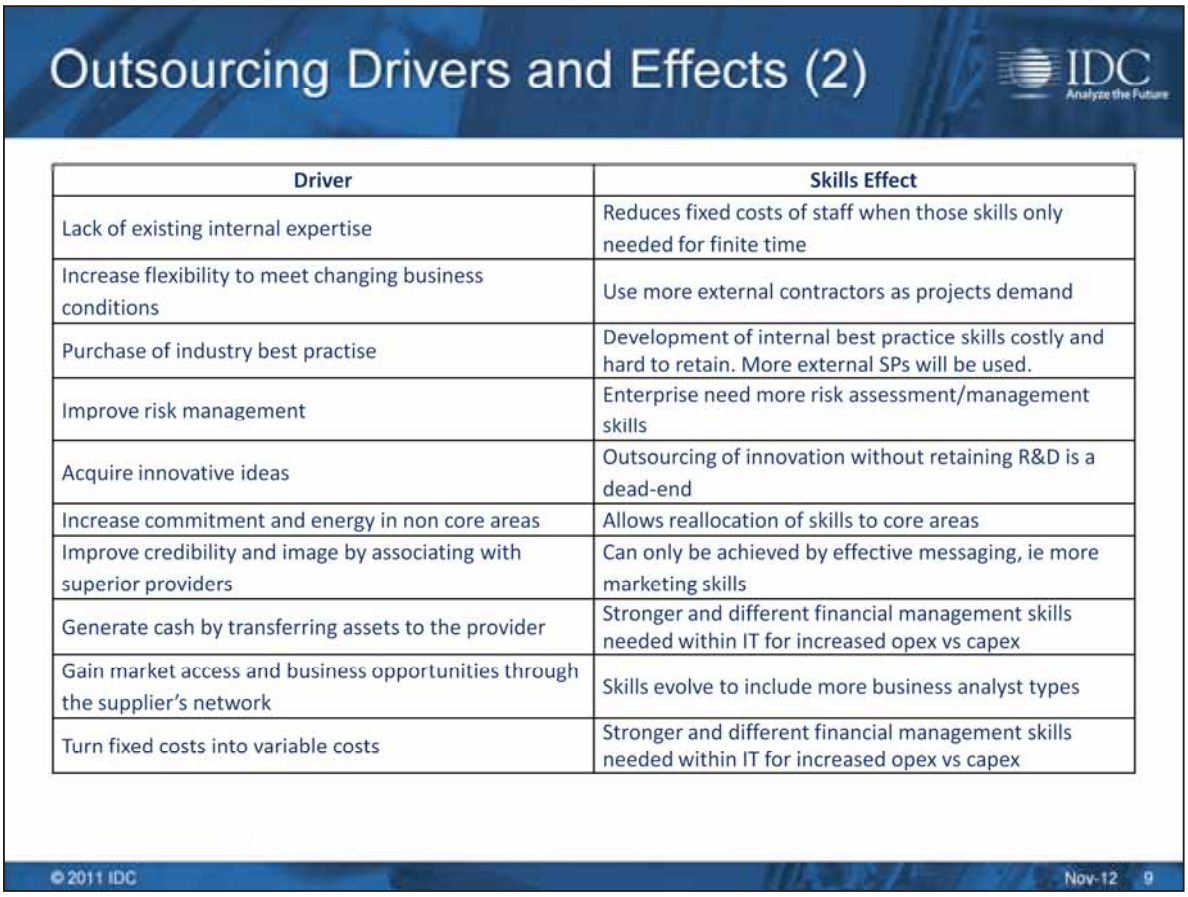
Analytics and big data (analysis of very large volumes of structured and unstructured data ie voice, video) will be both driver – as it will consume cloud services – and also an enabler as it will be the tool with which value – or business insight – is extracted from the enormous amounts of data collected by the new applications and already held in the enterprise.



Outsourcing Drivers and Effects (1)

IDC Analyze the Future

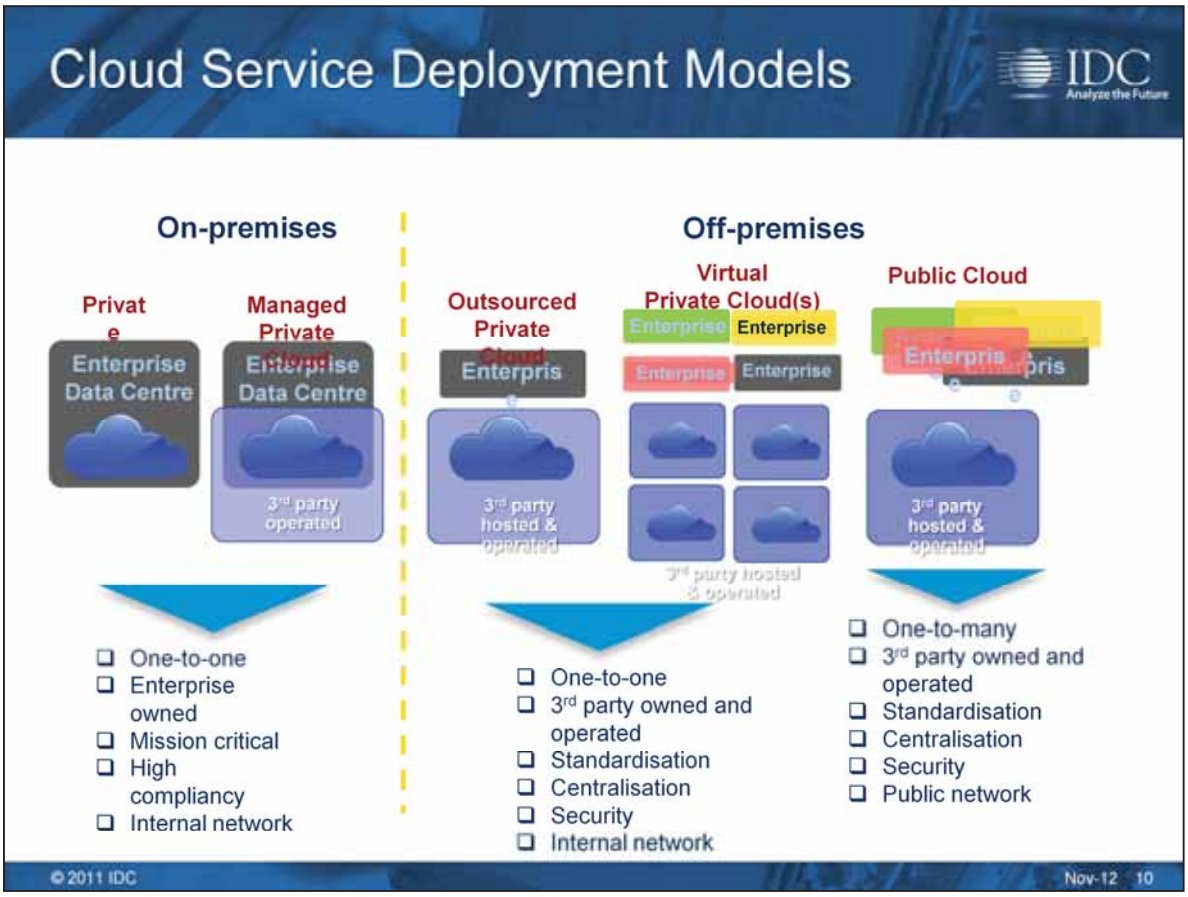
Driver	Skills Effect
Lower costs due to economies of scale	SPs CoE and matrix organisations allow high utilisation rates and retention of expensive specialists
Ability to concentrate on core functions	Core skills become focused in SPs
Greater flexility and ability to define the requisite service more readily	Infrastructure and application design and deployment skills migrate to SPs
Specific supplier benefits. For example, better security, continuity, etc.	SPs CoE and matrix organisations allow high utilisation rates and retention of expensive specialists
Higher quality service due to focus of the supplier	Enterprise monitoring of externally sourced skills now necessary
Improved internal management disciplines resulting from the exercise itself	As above
Less dependency upon internal resources	Internal IT skills can erode as focus shifts to services.
Control of budget	Stronger and different financial management skills needed within IT for increased opex vs capex
Faster setup of the function or service	Fewer internal application or infrastructure skills required
Lower ongoing investment required in internal infrastructure	As above
Greater ability to control delivery dates (eg: via penalty clauses)	Increased need for project and service management skills



Outsourcing Drivers and Effects (2)

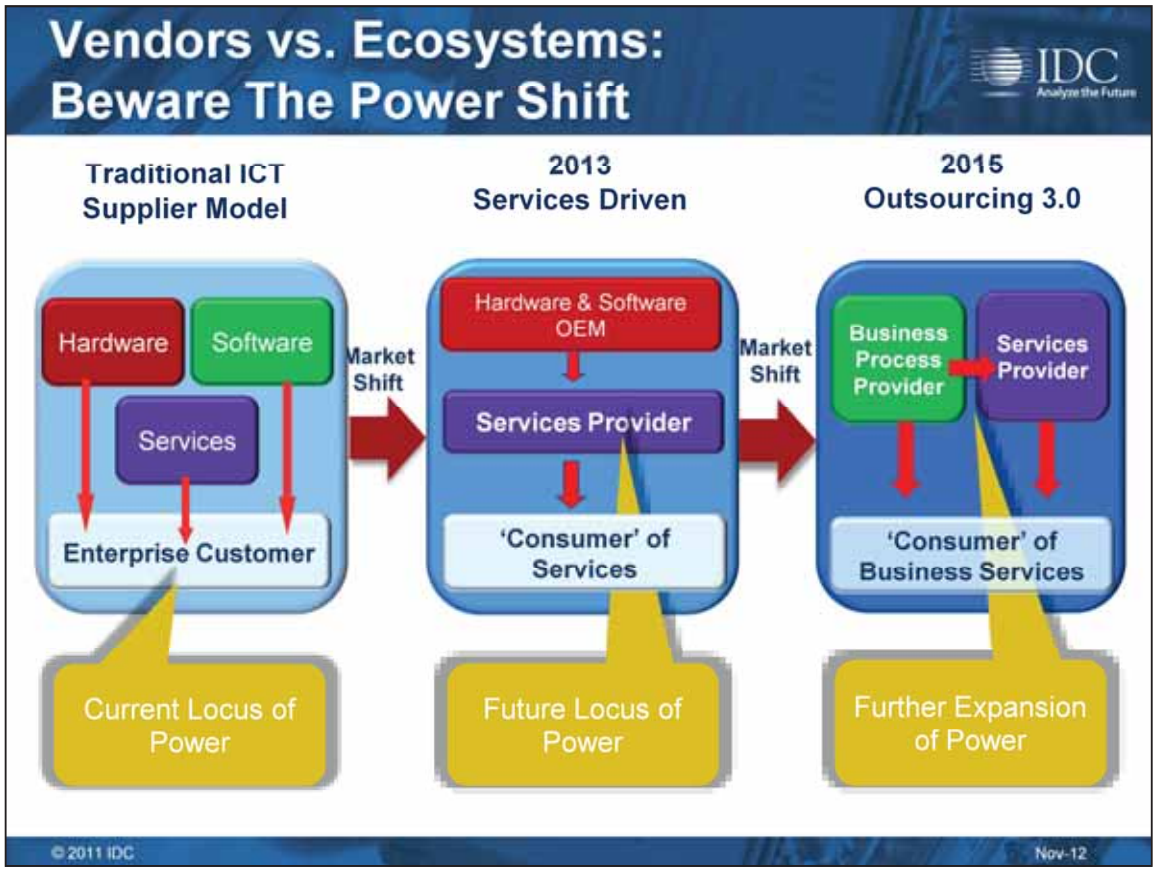
IDC Analyze the Future

Driver	Skills Effect
Lack of existing internal expertise	Reduces fixed costs of staff when those skills only needed for finite time
Increase flexibility to meet changing business conditions	Use more external contractors as projects demand
Purchase of industry best practise	Development of internal best practice skills costly and hard to retain. More external SPs will be used.
Improve risk management	Enterprise need more risk assessment/management skills
Acquire innovative ideas	Outsourcing of innovation without retaining R&D is a dead-end
Increase commitment and energy in non core areas	Allows reallocation of skills to core areas
Improve credibility and image by associating with superior providers	Can only be achieved by effective messaging, ie more marketing skills
Generate cash by transferring assets to the provider	Stronger and different financial management skills needed within IT for increased opex vs capex
Gain market access and business opportunities through the supplier's network	Skills evolve to include more business analyst types
Turn fixed costs into variable costs	Stronger and different financial management skills needed within IT for increased opex vs capex

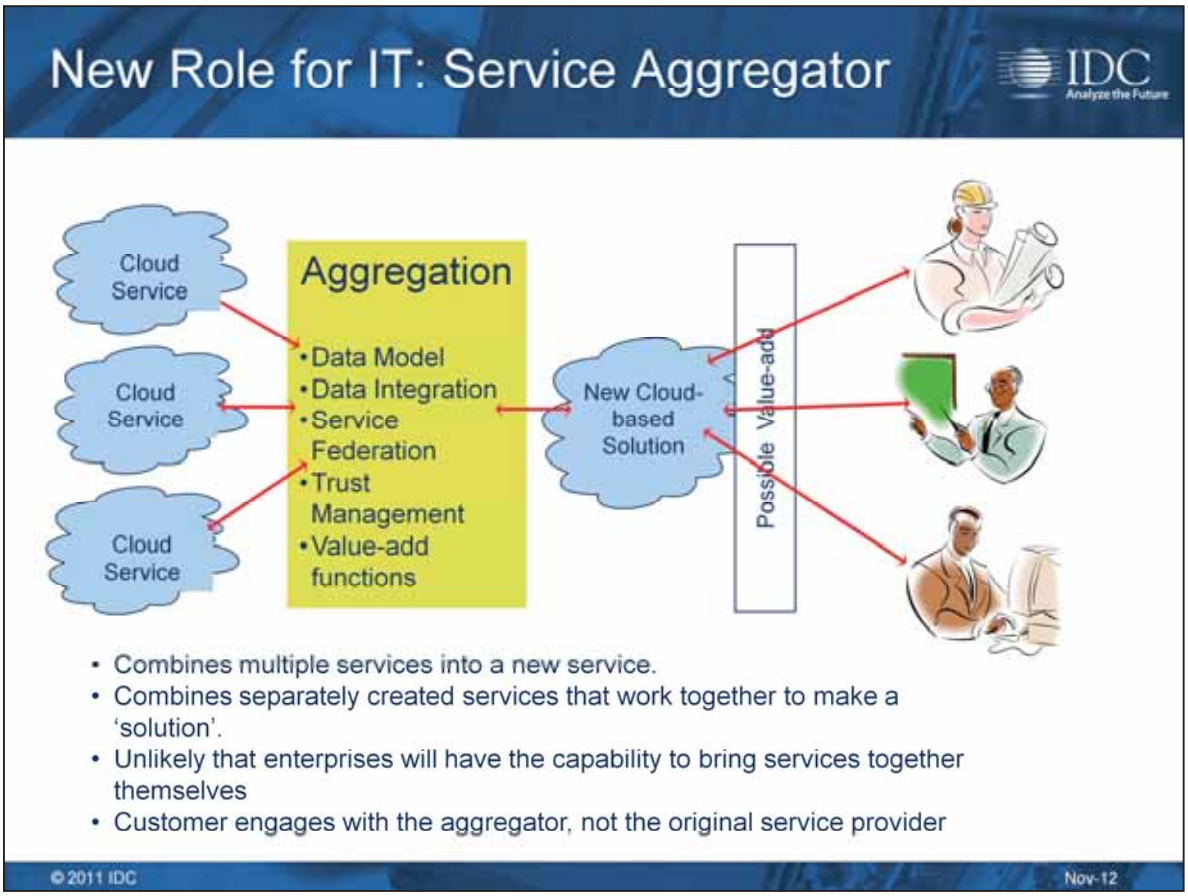


- There is no single ‘cloud’.
- Cloud can be considered as an extension of the current outsourcing model, where IT and business services are sourced from external providers. The technology deployment model and the commercial constructs differ, but essentially cloud is an extension of normal sourcing practice.
- There are a range of deployment models based on the core cloud technologies of virtualisation, automation and service management.
- The cloud deployment models can be either on-premises (in the customer’s own data centre) or hosted in the datacentre of a third party.
- Growth in these cloud areas – which are mostly delivered by cloud service providers (SPs) - is draining skills from all sizes of organisations.
- However, the larger enterprises can afford to stay more competitive with salaries offered by the SPs than the SME sector.
- Lack of access to affordable FTE-based skills is continuing to attract these customers towards managed and cloud services.

ICT Skills in the Workplace Forum

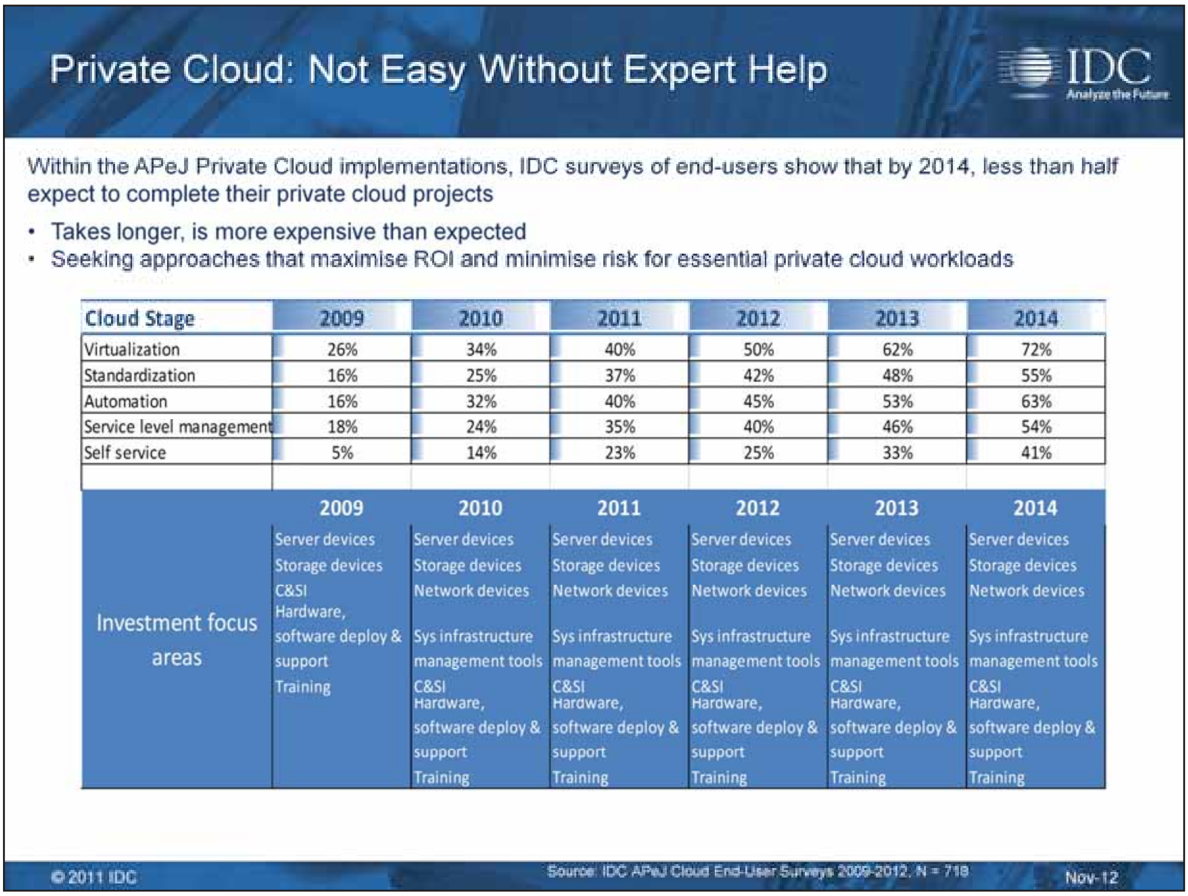


- In the current IT demand/supply relationship, the enterprise customer controls the relationships between their organisation and the suppliers of hardware, software and services
- In a services-driven market – including cloud – the enterprise will be consuming more IT as a service and the importance of relationships with hardware and software vendors decreases.
- However, the service providers become more powerful as they are becoming very major customers of the hardware and software vendors, ahead of enterprise buyers. They will begin to dictate service architecture, standards and price.
- Consumers of IT services will need to acquire skills in evaluating and managing services, not technology as they do now.
- By 2015, when we are in an Outsourcing 3.0 period, business services as well as IT services will be sourced from external providers, further increasing the risk to the enterprise of losing ground compared to others if they have not built robust service management teams and processes.
- The SPs are better able to recruit, train and retain specialist staff as their costs are amortised across multiple clients.
- Technical skills will become more concentrated in the SPs, and user organizations will source more of their skills on a project basis rather than employing FTEs



- By 2015, consumption of IT and business services from external sources will be between 25% and 40% of enterprise IT spend, depending on their industry and size.
- Business solutions will be created by aggregation of multiple external services, potentially sourced from a number of SPs. If the IT organisation is take the role of aggregator, then their skills will need both upgrading and realigning to make sure procurement, governance and technology skills are all included in the IT portfolio.
- With the increase in consumption of IT and business services, the IT team evolves from technology management – and its focus on tech skills – to business service management.
- Creativity shifts from application development to service sourcing, and more so when a solution is to be delivered by way of combining or aggregating a number of different services.
- In this scenario, the IT team need business, architectural, procurement, service management and technology skills.

ICT Skills in the Workplace Forum



Cloud Stage	2009	2010	2011	2012	2013	2014
Virtualization	26%	34%	40%	50%	62%	72%
Standardization	16%	25%	37%	42%	48%	55%
Automation	16%	32%	40%	45%	53%	63%
Service level management	18%	24%	35%	40%	46%	54%
Self service	5%	14%	23%	25%	33%	41%

	2009	2010	2011	2012	2013	2014
Investment focus areas	Server devices Storage devices C&SI Hardware, software deploy & support Training	Server devices Storage devices Network devices Sys infrastructure management tools C&SI Hardware, software deploy & support Training	Server devices Storage devices Network devices Sys infrastructure management tools C&SI Hardware, software deploy & support Training	Server devices Storage devices Network devices Sys infrastructure management tools C&SI Hardware, software deploy & support Training	Server devices Storage devices Network devices Sys infrastructure management tools C&SI Hardware, software deploy & support Training	Server devices Storage devices Network devices Sys infrastructure management tools C&SI Hardware, software deploy & support Training

- IDC has tracked cloud deployment experiences via an annual survey across Asia Pacific countries, including Australia. Australia is one of the leading adopters of cloud services, and because of technical issues such as network latency and compliance issues around data location, have preferred in-country sourcing of cloud services. On-premises private cloud was an early trend.
- The private cloud model, where an organisation develops an on-premises cloud environment, has proven problematic for all but the largest and best-resourced IT departments.
- Private cloud is a complex project and most that we have tracked have taken much longer to complete than expected – and costing much more. Hence a poor ROI.
- The major impediment has been the lack of core skills in virtualisation, service management and service automation. The result has been that intending private cloud users have turned to external professional services providers or sourced externally sourced cloud services.

ICT Skills in the Workplace Forum

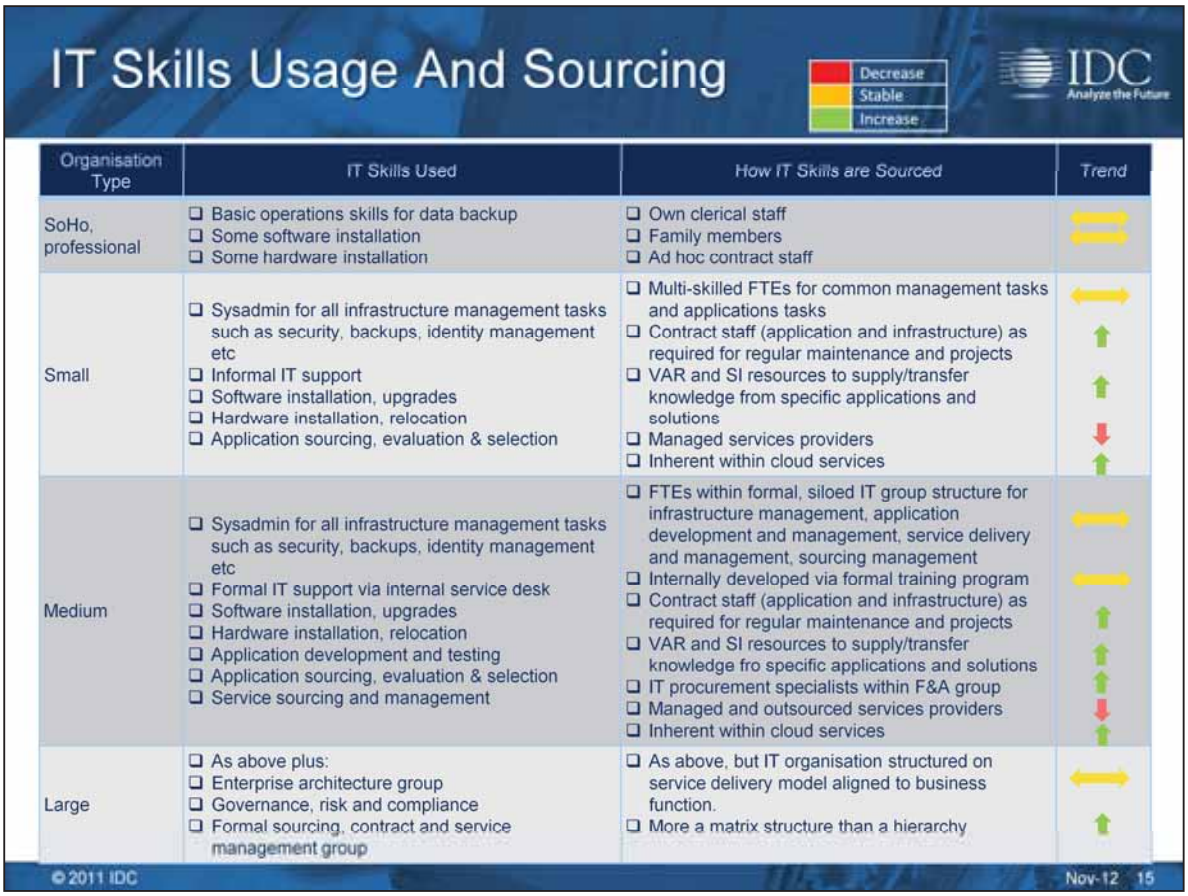
While the notion of technology vendors becoming true business partners has been common in the market for the last decade, little real partnership has happened.

However, what is increasingly expected from customers is that their vendors of technology are able to immerse themselves in the business and provide solutions appropriate to their business goals – not just to suit the technology roadmap of the vendor.

This implies more business-level conversations between enterprise IT and their technology vendors, requiring an expanded set of capabilities.

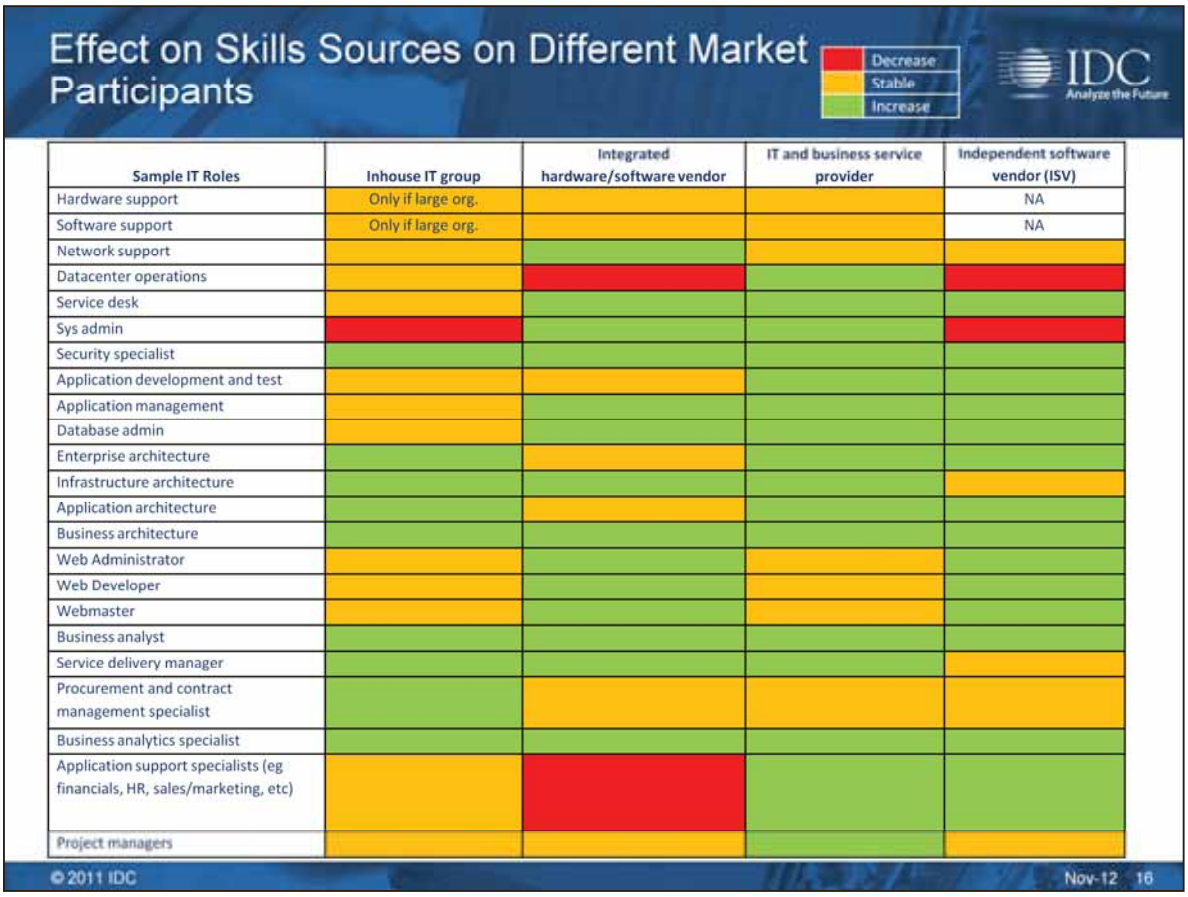
Expertise in IT is no longer an adequate domain for the IT professional.

ICT Skills in the Workplace Forum



- Recent economic conditions have focused CFO attention on IT service delivery costs, with review of core/non-core services for evaluation of possible outsourcing.
- Spending on training and staff hiring and development has also flat-lined.
- Different size organisations have adjusted their skills sourcing/employment practices in different ways, but the overwhelming effect has been to consume more services from external providers – cloud, managed services or professional services from contractors and consultants.

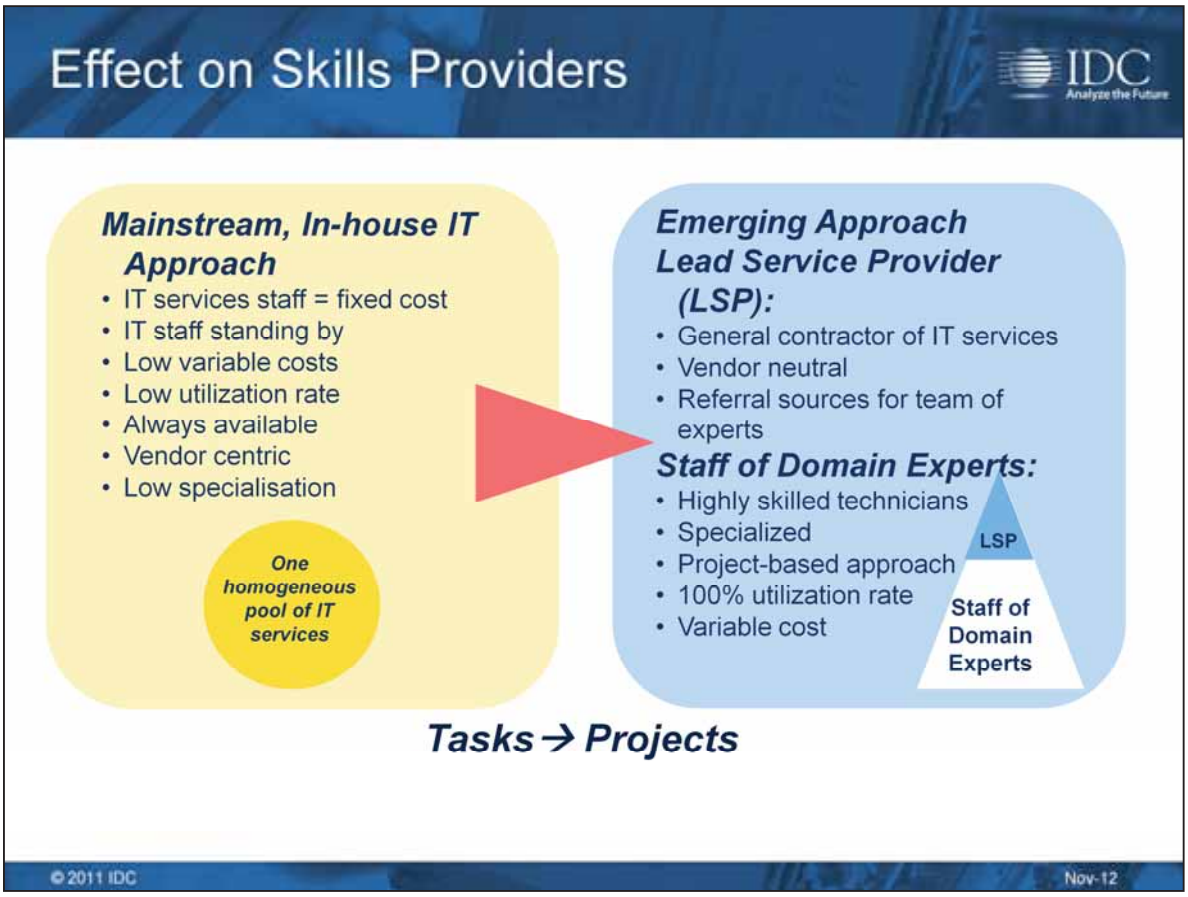
ICT Skills in the Workplace Forum



Sample IT Roles	Inhouse IT group	Integrated hardware/software vendor	IT and business service provider	Independent software vendor (ISV)
Hardware support	Only if large org.			NA
Software support	Only if large org.			NA
Network support				
Datacenter operations				
Service desk				
Sys admin				
Security specialist				
Application development and test				
Application management				
Database admin				
Enterprise architecture				
Infrastructure architecture				
Application architecture				
Business architecture				
Web Administrator				
Web Developer				
Webmaster				
Business analyst				
Service delivery manager				
Procurement and contract management specialist				
Business analytics specialist				
Application support specialists (eg financials, HR, sales/marketing, etc)				
Project managers				

- If we examine the trends for IT roles within different IT market participants, it is seen that different foci requires different skillsets.
- Overall, technology skills are migrating to SPs, and end-user organisations are strengthening their strategic roles such as enterprise architecture, data analysts, business analysts etc

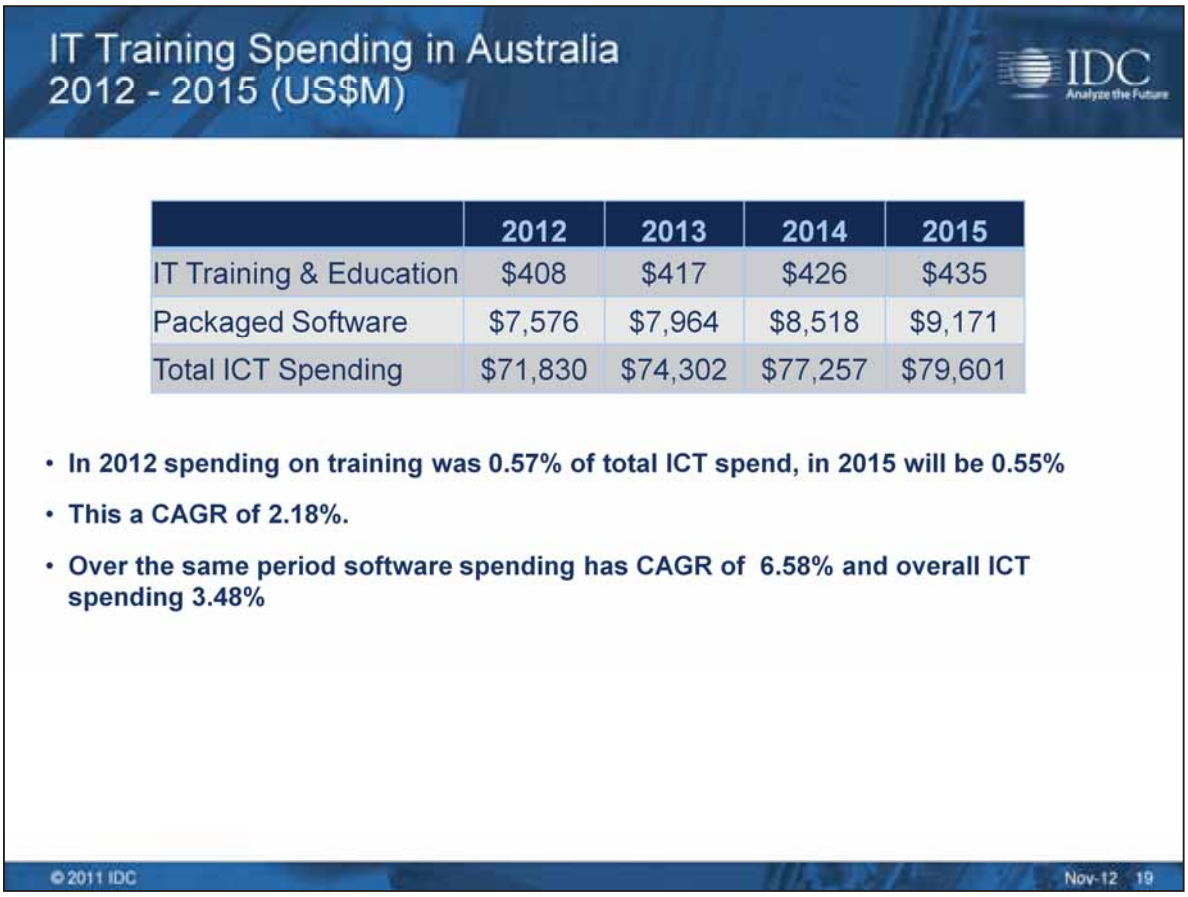
ICT Skills in the Workplace Forum



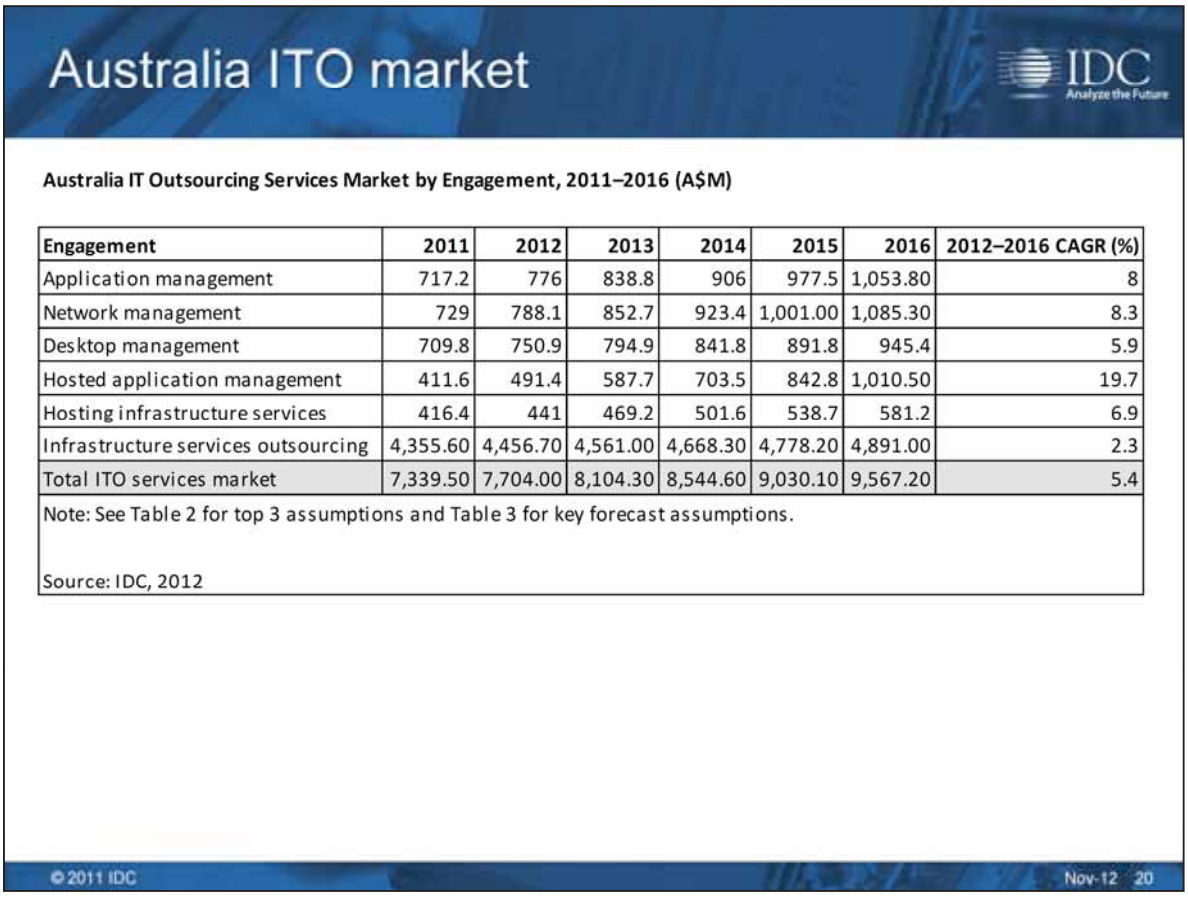
- The effect of the changes in the business and IT landscape is changing the way that IT organisations and vendor organizations structure themselves and how they deliver services. This impacts how they manage their skills
- Traditional approach has been to maintain a group of IT professionals within the organization to service most requirements.
- New emerging approach – for both user and vendor organizations – is to act as a general contractor of IT services, but maintain an inventory of external partners which are highly skilled domain experts.
- Result is that skills in internal enterprise IT organizations shift from specialised roles to roles of a more general nature with a bias toward business analysis, procurement, service management and contract management.


IDC
Analyze the Future
ICT Skills in the Workplace Forum
Parliament House
21 November 2012
Market Size Snapshot
Copyright 2012 IDC. Reproduction is forbidden unless authorized. All rights reserved.

ICT Skills in the Workplace Forum



- In 2012 spending on training was 0.57% of total ICT spend, in 2015 will be 0.55%
- This a CAGR of 2.18%.
- Over the same period software spending has CAGR of 6.58% and overall ICT spending 3.48%
- Spending on training and education lags market average, and falls well below spending on the software which is the key enabler of business growth.
- ROI expectations from investment in new software are difficult to meet if staff are not adequately trained in their implementation, management and day-to-day use.



Australia ITO market

IDC Analyze the Future

Australia IT Outsourcing Services Market by Engagement, 2011–2016 (A$M)

Engagement	2011	2012	2013	2014	2015	2016	2012–2016 CAGR (%)
Application management	717.2	776	838.8	906	977.5	1,053.80	8
Network management	729	788.1	852.7	923.4	1,001.00	1,085.30	8.3
Desktop management	709.8	750.9	794.9	841.8	891.8	945.4	5.9
Hosted application management	411.6	491.4	587.7	703.5	842.8	1,010.50	19.7
Hosting infrastructure services	416.4	441	469.2	501.6	538.7	581.2	6.9
Infrastructure services outsourcing	4,355.60	4,456.70	4,561.00	4,668.30	4,778.20	4,891.00	2.3
Total ITO services market	7,339.50	7,704.00	8,104.30	8,544.60	9,030.10	9,567.20	5.4

Note: See Table 2 for top 3 assumptions and Table 3 for key forecast assumptions.

Source: IDC, 2012

© 2011 IDC Nov-12 20

Observed Trends

- Broader uptake in cloud services across the board: The adoption of cloud-based services will not only continue but accelerate. Customers will look to adopt elements of or the full array of cloud services such as platform as a service (PaaS), application as a service (AaaS), infrastructure as a service (IaaS), and business process as a service (BPaaS). Whilst lowering costs will be part of the need for using these services, speed to market, flexibility, and aligning demand with supply will also play roles in customer use of these services.
- Rise in managed services opportunities for mobility: One of the major trends in 2012 will be the adoption of mobile services to support the increasing need for enterprises to support a more mobile user base, whether that for business to business (B2B), business to consumer (B2C), or business to employee (B2E) purposes. Many of these services will involve mobile application development and testing services as managed mobility.
- Focus on business outcomes: 2012 will involve the shifting focus of customers from concern over underlying technologies when outsourcing to focus on business outcomes. These include increasing customer concern for SLAs that involve, for example, SLAs up the entire stack of technologies or for consistent service globally.

Australia BPO market

Australia Business Process Outsourcing Services Revenue by Business Function, 2011–2016 (A$M)

Engagement	2011	2012	2013	2014	2015	2016	2011–2016 CAGR (%)
Customer care	1,295.30	1,402.80	1,520.70	1,649.90	1,791.80	1,947.70	8.5
Finance and accounting	3,587.60	3,832.50	4,094.80	4,375.90	4,677.20	4,999.90	6.9
Human resources	1,057.90	1,135.10	1,216.90	1,303.30	1,394.50	1,490.70	7.1
Human resource processing services	1,370.20	1,446.90	1,532.30	1,624.30	1,723.30	1,830.20	6
Procurement	117.7	129.7	144.2	161.8	183.2	208.7	12.1
Total	7,428.80	7,947.10	8,508.90	9,115.20	9,770.00	10,477.20	7.1

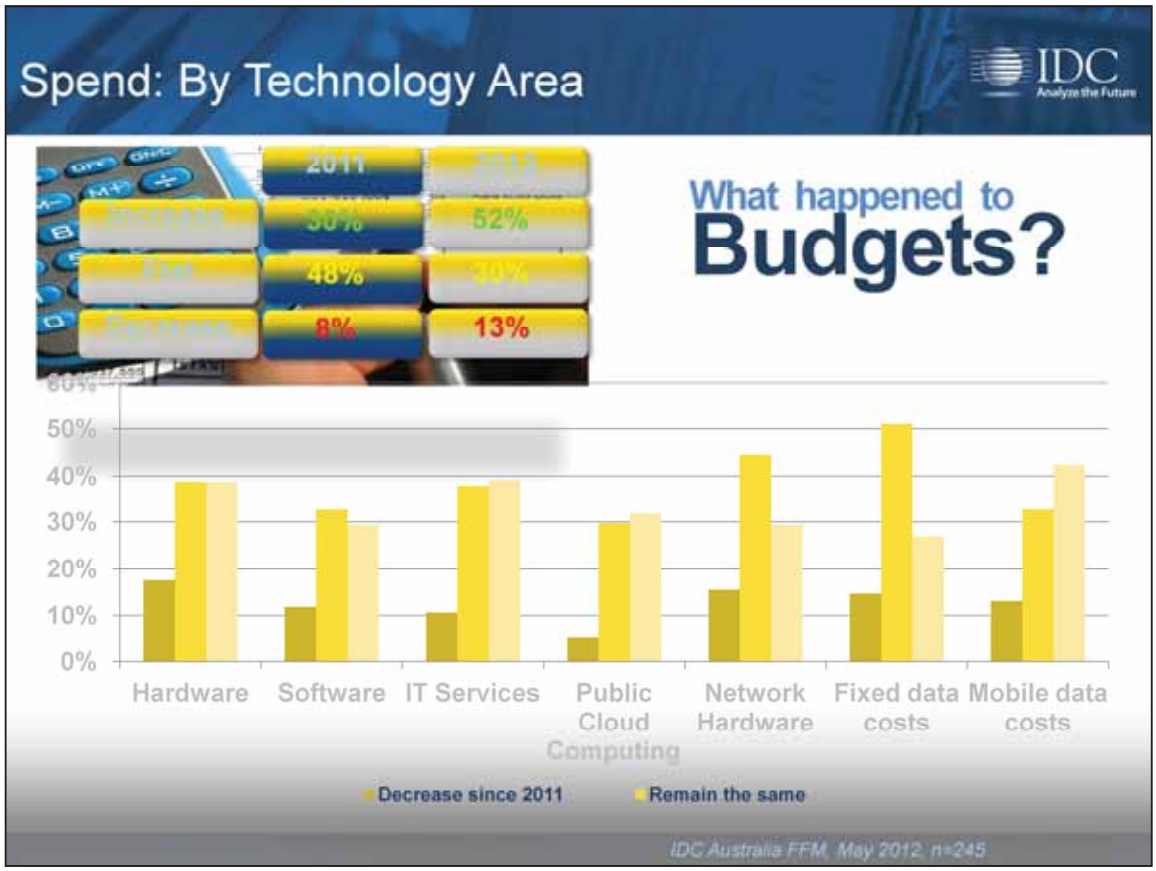
Note: See Table 2 for the top 3 assumptions and Table 3 for the key forecast assumptions.

Source: IDC, 2012

Observed Trends

- Continuing to build platform solutions for key horizontal or industry-specific business processes. Because of legacy enterprise resource planning (ERP), it may take some time for holistic business process-as-a-service (BPaaS) solutions to emerge and, in the meanwhile, these solutions will enable customers to derive additional efficiencies and return on investment (ROI).
- Bundling BPO and business analytic services. BPO providers have, over the years, gathered substantial industry-specific business processes metrics. This enables them to provide consulting related to changes in business processes that will have a positive impact on customer revenue, market share, and profitability.
- Mobile enablement of business processes and analytics. BPO providers are investing in building mobility and analytics solutions and services around their BPO offerings. Customers are showing intent to consume these services, as increasingly higher number of business processes will be mobile enabled in the future.

ICT Skills in the Workplace Forum



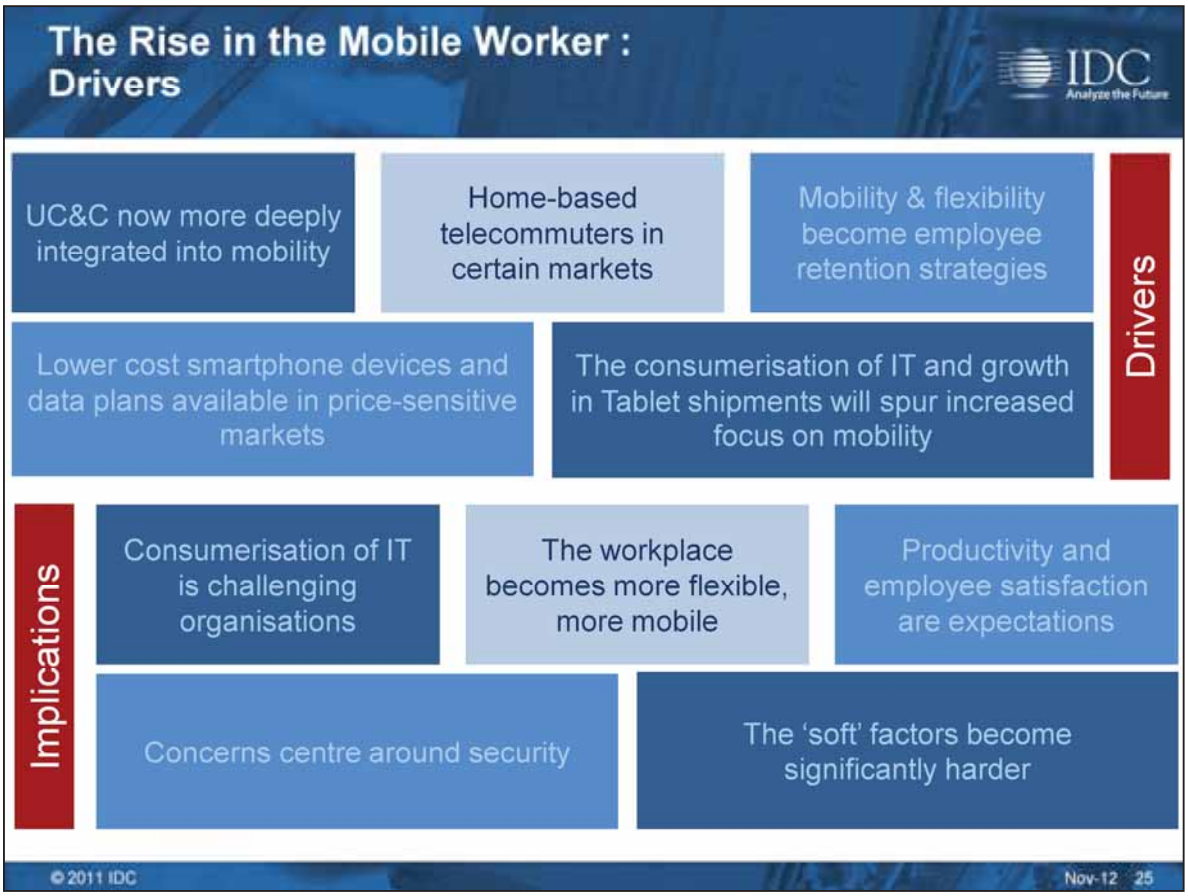

IDC
Analyze the Future
ICT Skills in the Workplace Forum
Parliament House
21 November 2012
Market Trends
Copyright 2012 IDC. Reproduction is forbidden unless authorized. All rights reserved.

Alignment: Business and Technology

Business Goal	Ranking	IT Goal
New customers/segments	1	Lower costs
Dealing with cost	2	Infrastructure improvement
New market expansion	3	More secure environment
Higher profit margins	4	Better use of BI/BA
Customer retention	5	Improve business processes

IDC Australia CIO Survey , May 2012, n=245

ICT Skills in the Workplace Forum



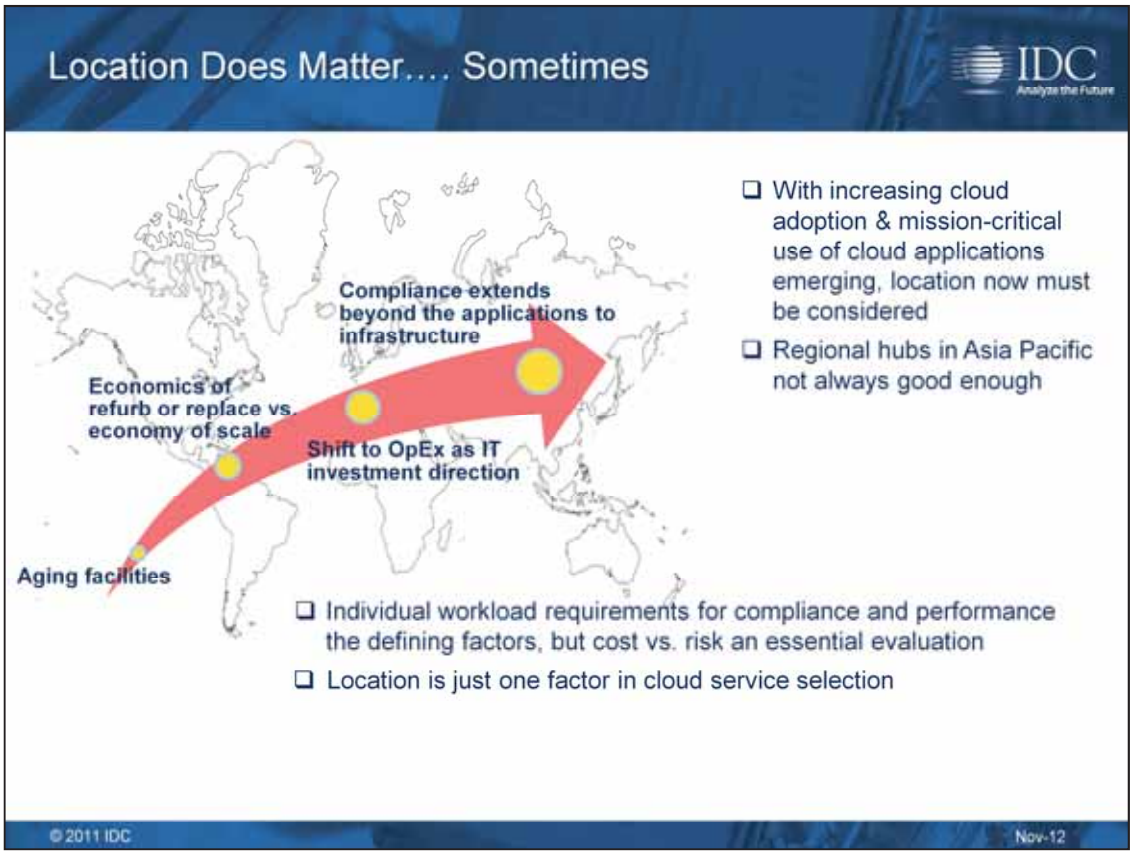
New mobility-focused applications require new skills:

- New platforms – not just Windows
- Increased security required
- Identity management across multiple services and devices becomes critical
- NBN will drive new application types and new device and content management requirements

ICT Skills in the Workplace Forum

- Governance, risk and compliance have long been the responsibility of the CFO, with the GRC committee reporting to the CFO and operating with, but separate from, bsusiness units as required.
- With all business services now delivered via IT, the GRC responsibility significantly overlaps with the IT domain and decisions about services can have impacts on share price, legal compliance and revenue.
- The new period where more services are externally sourced will require the IT organization to be restructured and to add new skills to ensure that:
- Commercial risks with IT projects are understood and mitigated
- Security of transactions across cloud services is maintained
- The vast stores of customer data collected via e-commerce, CRM and social applications is protected, and
- Intellectual property is protected as key business processes are built into commodity cloud services, and ownership becomes blurred.
- IT organization structures, IT roles and IT's relationship with the rest of the organization must be examined as part of a larger organization-wide HR assessment

ICT Skills in the Workplace Forum



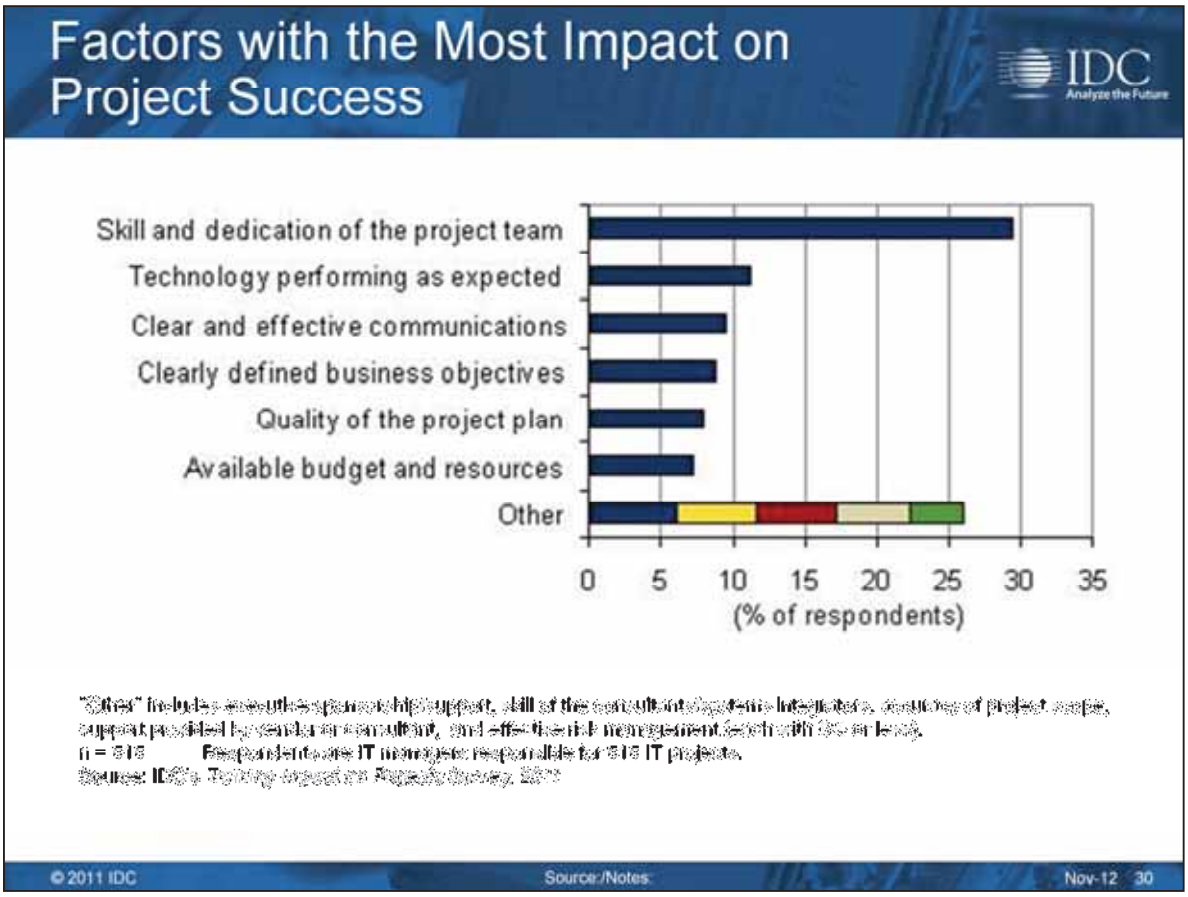
- An often raised perceived risk element from external services is that of the hosting location of the delivered service, ie, where is the datacenter?
- For many workloads, the answer to this question is irrelevant, but for others which are subject to legislative compliance requirements and/or performance requirements the choice of delivery location for a service is critical.
- Within IT, the technical skills exist but understanding of compliance requirements is not.
- While it is not expected that technical staff should understand the legislation, there must be appropriate processes within IT and between IT and the GRC committee to ensure that all sourcing decisions are sound

- Too many enterprises are moving forward with inadequate evaluation & assessment. In sum, enterprise leaders are sometimes signing off on trials & proofs-of-concept without having realistic ideas & insights into how & where these investments will affect IT & business operations & costs within & beyond the scope of the initial programs.
- Our direct work with even the most forward-thinking enterprises supports this; we see too few enterprise IT & business leaders acquiring & deploying emergent, disruptive IT based on realistic expectations & quantified/qualified assessment & evaluation of their impact.
- Such actions result in the following negative effects:
- Lack of adequate data to evaluate the operational & financial impact of these initiatives & develop realistic use cases;
- Lack of context for developing realistic analysis of the initiatives' cost/benefit & risk/reward;
- Inadequate investment in associated & necessary IT & operations management, resulting in inadequate ROI, & unnecessarily high TCO; &
- Loss of jobs for those responsible for the impacts & effects of these initiatives – not necessarily the same as those who were responsible for the initiatives themselves
- The relative affordability, speed, & boundary-free nature of most Cloud initiatives mean that pilots, proofs of concept, & trials tend to be initiated, funded, & executed, without centralized control & too often without any sort of formalized guidance or assessment. Because of the ease of acquisition & distribution, they also too often become integrated into the enterprise at large, without adequate, realistic evaluation or other formal governance.

An enterprise's ability to exploit this avalanche of new services in the cloud depends on competence when using and managing cloud services
All change:
- ***Asset management processes***
- ***Staff profiles***
- ***Budgeting and chargeback processes***

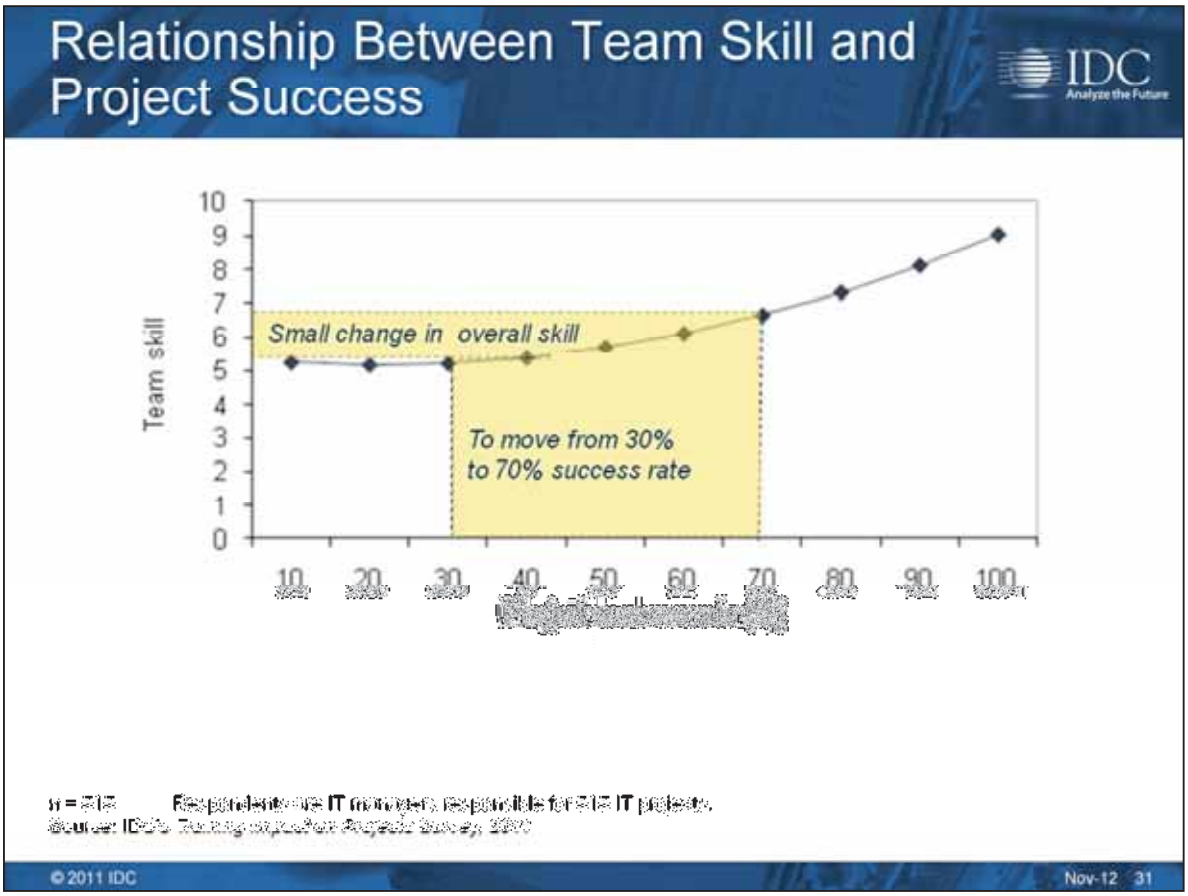

IDC
Analyze the Future
ICT Skills in the Workplace Forum
Parliament House
21 November 2012
Why Training is Important
Copyright 2012 IDC. Reproduction is forbidden unless authorized. All rights reserved.

ICT Skills in the Workplace Forum

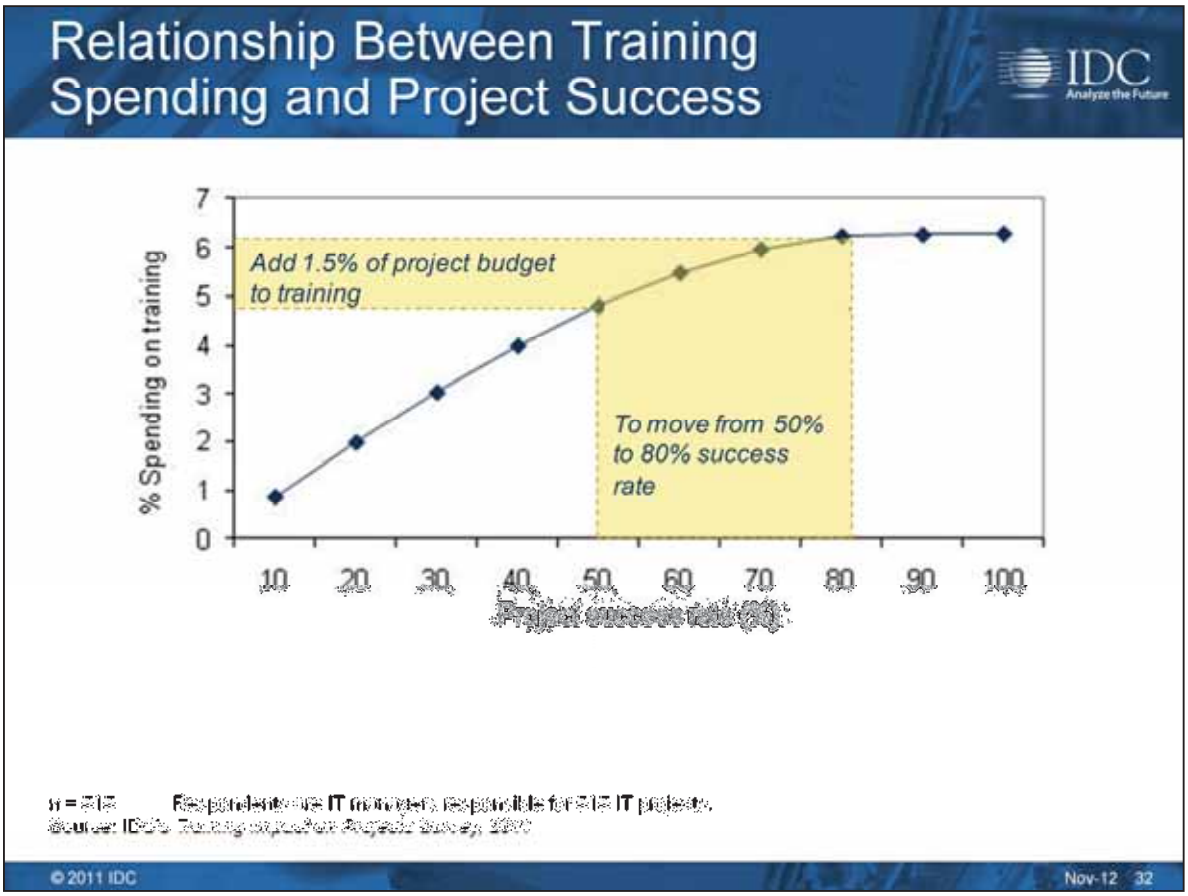


- Productivity increases gained during an economic downturn or recovery are especially valuable. In difficult economic conditions, organizations thoroughly weigh costs and opportunities associated with every project. IT managers responsible for new projects and initiatives must use all tools at their disposal to ensure their projects meet the corporate and IT objectives. IT executives simultaneously manage several factors that can affect team performance.
- Nearly 30% of IT managers attribute most project success to a combination of the project team's skill and dedication.
- Even though managers believe skill and dedication of the project team is the biggest contributor to successful projects, IT managers attempt to control other factors more aggressively. They continually seek ways to cost effectively reduce risks to IT projects by carefully selecting the most appropriate technologies, hiring the most affordable and experienced consultants, and using sophisticated management practices to ensure functional success.

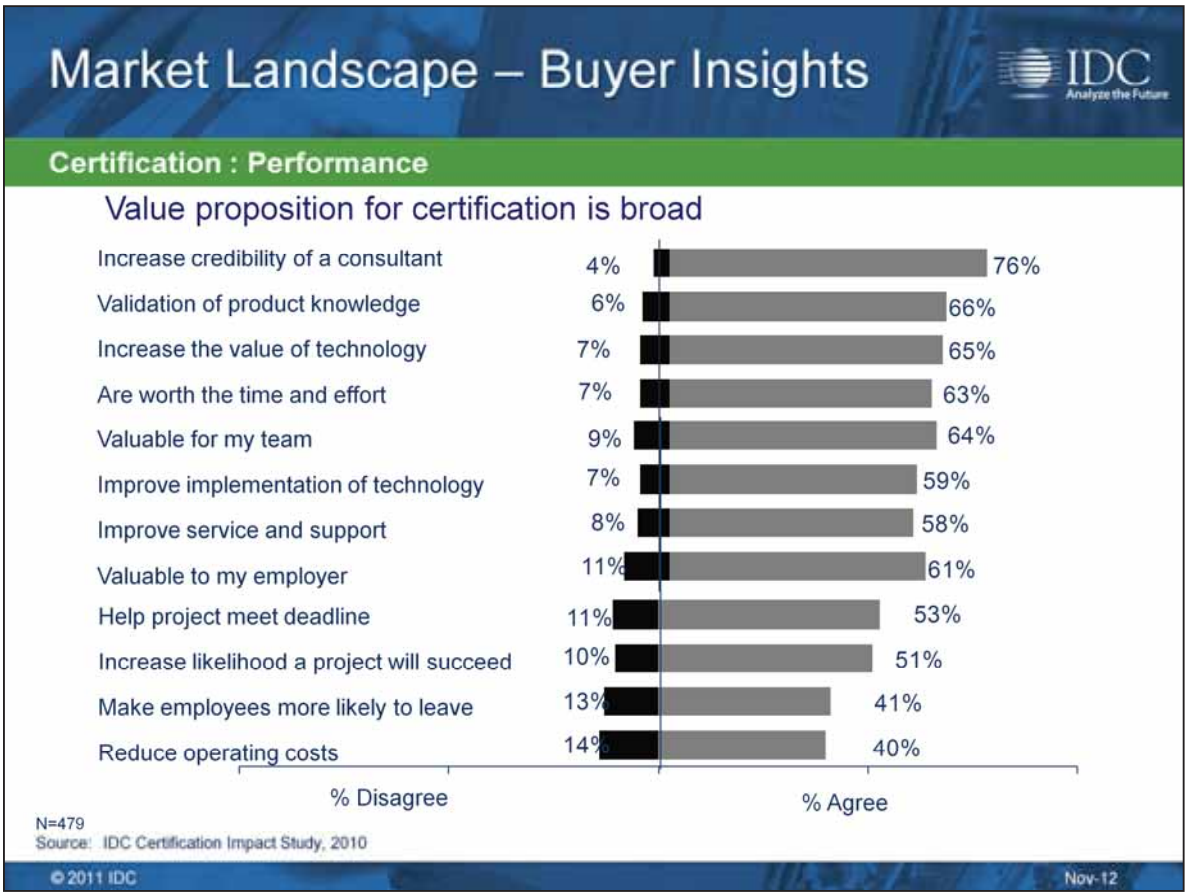
ICT Skills in the Workplace Forum



- IT team talent often goes overlooked as the critical element of IT project success. An IT organization's level of embedded skill will affect project outcome regardless of technology complexity. Analysis suggests the likelihood of project success is proportional to the skill level of the team working on it. Stated bluntly, the risk of a project failing to meet its objectives rises when the project team does not have the skills to do the job.
- Risk is inherent in every business venture and IT activity; increasing team skill and employing successful practices reduce risk and contribute to successful implementations.



- Projects allocating more than 6% of the project budget to training were significantly more successful than projects where 3% or less of the budget went to training.
- To get from “average” to high performing might only take 1.5% more of the project budget.



- What is impressive about these findings is that for each major function examined — database development, deployment, management, support, storage, and security — the impact was the same. The impact as reflected in the curves changes somewhat, but overall, the value of each additional certification improves team performance. This illustrates the difference in impact between security and database administration functions.
- It appears that database administration requires more of the team to be certified before the impact is felt. Security receives a bigger boost from the first certifications.
- In responses to IDC surveys, 66% of managers believe certifications improve the overall level of service and support offered to IT end users/customers. Similarly, 75% say certifications are important to team performance. From a quantitative standpoint, the research shows that with a sufficient percentage of team members certified, IT organizational performance can increase by up to an average of 11 percentage points.
- **Certifications add value by increasing project success rates, improving service to users and improving the ROI of the software investment. Expensive software needs skilled people to extract maximum value.**