The future of the enterprise IT function
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Executive summary
What is the future of the enterprise IT function? Is it a dinosaur that has had its day or an increasingly vital enabler of innovation for the business?

Opinions on this vary. Some argue that in five to ten years’ time many organisations will no longer have a central IT department as we know it; others predict a more evolutionary level of change.

The IBM Strategic Outsourcing Innovation team works with clients across a range of industries and geographies – and we have discussed the future of the enterprise IT function with many of them. Their input, along with wider research, has been incorporated into this paper, which offers a point of view on three key questions:

1. Why is the role of the enterprise IT function changing?
2. What are the implications of these changes for Chief Information Officers (CIOs) and their teams?
3. What actions can an IT function take to drive the change agenda?

What’s the point?
There is evidence all around us that the pace of technological change is continuing to accelerate – and there are two key drivers behind this:

• Business demand and, crucially, business expectation
• Technological innovation.

Our objective here is to generate further discussion and assist CIOs and their teams as they consider how best to drive the change agenda. The focus is on the changes our clients are seeing, the implications for enterprise IT and what CIOs and their teams can do to shape their future as a highly valued business function.

Key findings
The pace of change is forcing CIOs and their IT functions to react quickly. However, this should not be happening without taking full advantage of the opportunity afforded: we recommend proactive engagement across enterprise functions to build a new, more agile, business-relevant operation.

CEOs identify “technology factors” as the most important external force on their business1 – so there is a specific opportunity to re-purpose IT as an innovation development and delivery function, which can continually exploit technological advances to drive business value.

The challenges of external service providers working for and with enterprise IT functions mirror those of the internal IT function itself. In order to remain relevant in the longer term, both parties need to be proactive in delivering and communicating value. Service providers like IBM need to make changes both to support and help drive the change agenda of their clients; working together to address common challenges is crucial.

“IT needs to lead the change – we need to much more proactively take innovation to the business.”

— IBM client
Introduction – Today’s IT department

Change is not new. The pace may be increasing, but since their inception enterprise IT functions have always been faced with change – they have had to adapt accordingly.

It is fair to say that some organisations still continue to do the following:

• Develop the majority of their applications in-house
• Supplement in-house applications with off-the-shelf software packages
• Run their applications and supporting middleware on directly procured and owned hardware (for example servers, storage and network equipment)
• Host and manage IT hardware using on-premise, in-house owned data centres and/or server rooms
• Directly procure and manage end user devices and associated IT support, service desk and service management functions
• Deliver all IT related change programmes using in-house resources.

But these organisations are now in the minority: most enterprises today source a proportion of their IT services from third parties, and they use a range of sourcing and delivery models to do it. These can include the use of contract staff, off- or near-shoring, out-tasking, outsourcing and cloud-based services.

As a result, the typical IT department has had to evolve. It is now expected to operate as a translator of business-generated demand. It may also be an orchestrator of third-party service provision. Specialist activities are needed, including commercial and vendor management and varying levels of solution, change and service integration across multiple providers (each responsible for one or more parts of an end-to-end business solution). As such, retained roles like Enterprise Architect and Business Relationship Manager are now more important than ever.

The structure of an enterprise IT function

To illustrate the impact of change on an enterprise IT function, we have used the IBM patented Component Business Model™ for the Business of IT (CBM for IT). CBM for IT considers an enterprise’s IT function as a business entity in its own right. It breaks down and documents the IT function into a set of specific components. These are the high-level summary activities that an enterprise typically needs to deliver its IT function, whether they are retained in-house or delivered by an external provider.

Each component is underpinned by a series of more detailed activities, so the model can be used in a number of ways. For example, it can be used for:

• Detailed cost analysis
• Skill and resource allocation and gap analysis
• Organisation design
• Sourcing design.

Here we have used the model to highlight the implications of the change agenda on the IT function and to help identify areas of focus moving forward.

Figure 1 highlights the functional components commonly sourced by enterprises today, in whole or in part, from external service providers. The level of activity and the number of components sourced in this way does, of course, vary from one organisation to the next.

Evidently, while fewer components are typically sourced externally than from within the business, most of the cost of enterprise functions is concentrated in these areas. For example, the bottom right hand corner of the model includes the development and delivery of change as well as the day-to-day running of applications and supporting IT infrastructure.
**Figure 1:** IBM Component business model for IT

Some or all activities often delivered by external service
How and why the enterprise IT function is changing

What the business wants
Enterprise business functions are demanding increasing levels of speed, agility and flexibility from their internal and external IT providers. In parallel, the IT function continues to relentlessly drive out cost and limit future IT spend. They seek a combination of sometimes differentiating and at other times generic industry-standard solutions and services.

Businesses are also increasingly demanding easy and consumable access to information sources; they want to obtain insight about their customers, their markets, their competition and anything else that could give them a competitive edge.

But can any of us remember a time when businesses did not demand greater agility and lower cost from their IT function and suppliers? What is different now? The biggest change in recent years has not been in the requirements themselves but in the level of expectation relating to what can be delivered, and at what cost, by the entity that is “IT”.

Technology changes
Changes, including the consumerisation of IT, have had a major – and in many ways disruptive – impact on the enterprise IT function:
1. The way technology is accessed – using a plethora of devices with a smart interactive interface
2. The application of technology – for immediate insight and action, for managing and processing huge volumes of information, in response to “big data” and analytics trends
3. The way technology is architected and supplied – from a combination of consolidated, virtualised and standardised services and/or integrated solutions (cloud and integrated appliance trends.)
4. The way people think, act, collaborate and work together, inside and outside the enterprise – consumer and enterprise social networking.

These business and technology trends are unquestionably intertwined. What is more, the marked increase in business expectation may be seen as a direct result of the changes in technology.

The rising force of “technology factors”
The impact of technology as a force on enterprises has been tracked by the bi-annual IBM Chief Executive Officer (CEO) Study. As part of this research CEOs have been asked “What are the most important external forces that will impact your organisation over the next three to five years?”

In 2004, “technology factors” came in at number six (see Figure 2). Since then, it has climbed steadily – reaching the top spot for the first time in 2012.

Perhaps this should not come as a surprise. Today technology affects supply chains and customers, shaping both our work environment and our homes. In our daily lives, we access technology, social networks and other applications from smartphones and tablets, anytime, anywhere. We increasingly use cloud-based services to access email, entertainment and other media and we expect a slick, interactive user interface as well as real-time results. So why is it that we cannot have the same facilities at work?

In the business world, there are significant implications to consider – we need to balance the benefits and the risks. For example, enterprises need to ensure that corporate usage of cloud services, mobile devices and apps meets specific levels of security and risk management and adheres to regulatory requirements. A business needs to protect its customers and its brand, as well as keep its employees happy.

Picking up the pace
The accelerated pace of technological change is driving a step change in what the business expects from “IT”. Some have likened the shift to the advent of the PC: “I can buy the same thing more quickly and cheaply from the local computer warehouse, so why should I have to get a PC from the IT department?” Today, it does not stop at the end-user device. This expectation now relates to applications, back-end information, storage and much more.
A number of challenges come hand-in-hand with this consumerised, bring-your-own model:
• What do we do if something goes wrong?
• If a service delivered by multiple functions and providers is not working, how do we know which part is not working correctly?
• When we know something is not working, who do we contact, communicate with and, if necessary, complain to?
• How are security, data privacy and other key elements managed? How can we show regulatory compliance and our own security policies are being met?

Cloud-based services are driving a disassociation of IT operations with the business – the business expects ‘plug and play’ solutions.”

— European CIO of global property services company

They add to an already long list of challenges for traditional enterprise IT delivery. In fact, a large part of the IT function’s remit concerns how to meet both old and new challenges in parallel – managing the legacy of existing IT systems alongside ever-increasing expectations, driven by technological advances and the consumerisation of IT.
The future of the enterprise IT function

What this means for the CIO and the IT function

Consider for a moment the complexity of the IT mandate:
A key role has always been to align business demand with technological possibilities in order to drive up business value. This does not get easier as the pace of change and expectation levels increase. Equally important is managing the estate.

Most enterprise IT functions operate in a context that includes a legacy environment of existing systems and a range of service providers. Many applications have a level of enterprise-bespoke or non-standard functionality. Some are written in old code, some are run on aging infrastructure and some depend on unsupported operating systems due to the cost of upgrade or the lack of an upgrade path. Changes to such systems take time and money to develop, test and implement. Newer systems may be more standardised and easier to update, but even these are likely to have interfaces with legacy systems.

And then there is data. Data needs to be protected for security, for compliance, for backup, for disaster recovery – and increasingly it needs to be exploited in new ways to derive new insights.

Failure to manage all types of “legacy” has a negative impact on progress, in particular through a creeping rise in operational costs and the squeezing of budgets, reducing investment available for the value-adding capabilities needed to improve and grow the business. This begs the question – how do we divest the old, embrace the new, drive costs down and drive value up at the same time? This section provides some of the answers.

Out with the old?
The need to systematically address “legacy” was an area highlighted in the IBM Research Global Technology Outlook in 2010 (see Figure 3).

Legacy management is a way of maintaining the health of the IT estate, tackling obsolete or soon to be obsolete architectures and technologies, to lower operational cost and release funds for investment in new, value-adding solutions. Tools are becoming available to help automate this process, but today systematic legacy management is still a largely manual activity. As a result, operational costs remain disappointingly high.

This creates a problem for the enterprise business functions that need new capabilities and that control the IT budget. With the acceleration in availability of cloud-based services, some enterprise business functions have decided that if they cannot get what they want internally, when they want it and at the right price, they will bypass IT and buy direct from elsewhere.

Whilst this approach may work for specific, discrete services, it can introduce risks – security and compliance – as well as issues such as unplanned overspends, unforeseen application and network requirements, and integration with existing systems – including legacy.

There is nothing here that cannot be addressed; however, unforeseen items, in particular, can result in longer lead times, budget overruns and degradation or even destruction of business cases. And it is the IT function, of course, that bears the consequences.
Who needs IT anymore?
A common prediction about the future of IT is that a start-up business will not require an IT function. Certainly, it is true that a greenfield start-up will not have the same legacy issues as an established enterprise; it may well acquire most of its IT from the cloud, “as a service” and adopt a “bring your own device” policy – where employees use their own end-user devices.

However, even for start-ups there is still the need to drive strategy, ensure security and control compliance. And even start-ups will have a need for someone to work out which component is not working when something goes wrong – and then do something about it.

It is true that some of these functions can be provided by external third parties, but ultimately a level of strategy and control is required within all but the smallest organisations. These matters require more than a moderate degree of IT proficiency – typically not the remit of business functions. It is what the IT function does. And whether or not IT exists in an organisational sense, the function will need to be carried out somewhere.
**Working together**

Effective communication between IT and the business has always been a challenge, but is crucial for success in the long term.

In recent years, many enterprises have invested in roles such as business relationship managers, to translate between demand and supply and to improve the understanding and communication between all parties. We have also seen a rise in enterprise architecture functions to determine strategic approaches and address complex and often conflicting challenges (for example speed and quality against cost). Both of these roles can be positioned equally well within the line of business or within the IT function or even span across both.

The dependencies and expectations between the business and IT are echoed in the relationships between IT and its service providers. Collaboration is fundamental to the success for any IT activity.

**Great expectations**

The IT function has high expectations of its service providers. It expects them to deliver faster, more flexible, lower-cost services and to stay abreast of the market. It expects them to make use of the very latest technology – providing cloud, mobility, collaboration and analytics capabilities to modernise and improve their services.

In addition, recent customer satisfaction feedback from 100 of IBM’s European outsourcing clients suggests that the following factors are as important as actual value delivered:

- Proactivity
- Connecting the client to knowledge and experience
- Identifying how technology can be leveraged
- Positioning technology opportunities in the client context.

Getting the balance right is a tricky issue for internal and external providers alike. In many ways, they face the same challenges:

1. Both need to address and improve legacy “services” – to make them faster, more flexible and lower cost for the business.
2. Both need to stay relevant to the “customer” who is keeping them in business; to do this they need to deliver innovation and real business value, in addition to their “Business as Usual (BAU)” services.

As mentioned above, if an IT function does not meet its challenges, the business may bypass the internal IT function altogether. Similarly, if an external service provider fails to address the needs of its primary sponsor (typically the IT function), it too will lose out in terms of current and future business.

**Call to action**

Evidently, there is a growing incentive and opportunity for the IT function and external service providers to work together for mutual benefit. There is scope to develop a joint innovation agenda to drive business value – combining the enterprise-specific knowledge and skills of the IT function with the technology and innovation capabilities of the provider.

Proactivity is key to this type of relationship. Both parties need to work together to identify where the greatest business value can be delivered – and focus existing and new capabilities on these areas. In turn, they must measure and communicate the benefits and, where appropriate, move to a new outcome-based commercial approach.
**Recommendations**

The previous section paints a somewhat challenging picture for the CIO of a typical enterprise IT function. But it highlights some real positives too – primarily that disruptive changes offer huge opportunities to those who proactively embrace them.

From cloud, mobility and big data, to analytics and collaboration, there is major potential for the IT enterprise function to drive both incremental and step change improvements, and to become a value-adding partner to the businesses they support.

For most organisations, the trick will be to focus on what matters most to them, balancing investment driven by the pace of change with the need to resource legacy management.

We suggest four key actions for the CIO and enterprise IT function:

1. Create (or adapt) a strategic roadmap to address the change agenda – covering the impact on existing IT and legacy systems, as well as new capabilities
2. Clearly define who is responsible for identifying and acting upon the innovation and value-adding opportunities most relevant to the enterprise
3. Engage the help of key service providers – integrating them into the change roadmap and selectively partnering with them on the delivery of joint innovation projects
4. Create a communications plan that reaches into the business – highlighting plans for the future and celebrating success.

In more detail:

**1. Create (or adapt) a strategic roadmap to address the change agenda**

Since the vast majority of organisations will already have an IT strategy and change roadmap in place, why are we highlighting this recommendation?

The rationale is to review existing plans to ensure specific inclusion of the following:

- A design template of the enterprise IT function required to support the changing mandate of the IT organisation – using a model such as the IBM CBM for IT model highlighted in Figure 1. This will ensure that the impact of the change agenda is reflected in the evolving make-up of the IT function. It should include a view of components and activities that need to be stopped, changed or added. It should also include a strategic sourcing view, to identify key capability or resource gaps and highlight which components will continue to be retained in-house and which ones may be suitable for service provider delivery models such as out-tasking, outsourcing or cloud based delivery models.
- A focus on optimisation of legacy systems in order to identify those with a business case for rationalisation or modernisation and to enable faster, more cost-effective integration with new systems.
- A sufficient focus on management of business expectations.

**2. Clearly define who is responsible for identifying and acting upon the innovation and value-adding opportunities most relevant to the enterprise**

IT has traditionally been reactive rather than proactive, focusing on managing business demand rather than identifying opportunities for innovation and adding business value. If this applies to your organisation, it is worth considering why. The pressure of responding to business change requirements and managing legacy – a big job in its own right – is made much more demanding when IT does not have a seat at the business table.

“There are challenges, but the changes being made in technology offer our business and customers a massive opportunity which we need to hook into.”

— IBM client
Since CEOs now identify that technological change has a major impact on business performance (see Figure 2), and since CIOs have a real desire to stay relevant to the business, we predict that enterprise IT functions will begin to develop their own technology innovation functions defined by a close relationship with the business: sometimes positioned within the IT function itself, sometimes within the business and sometimes between the two. Focus will be broad, from generic technology innovations to specific innovations that change business models, products and customer relationships.

Such a function needs to engage early with strategic changes and work closely with the business to identify ideas, challenges and opportunities for innovation. It must also take an external, cross-industry view and work with partners to identify existing, new and emerging technologies that can make a real difference to the business. Attention will be given to the potential for reuse of innovation applied elsewhere in different industries.

If an enterprise IT function does not already have its own innovation function, the recommendation here is simply to create one – with a named leader responsible for innovation development and delivery. An initial focus on quick wins would be wise, in order to establish credibility. Alignment with a comprehensive communications plan is also a must (see below).

3. Engage with key service providers

Typically, many of the functional components and activities of enterprise IT teams are already being provided by external partners. This is likely to increase as more organisations take up cloud-based services. In effect, this means that to deliver on its change roadmaps, the enterprise will be heavily reliant upon its service providers and so should include them more closely in all relevant planning activities.

Similarly, we recommend enterprise IT functions that set up their own innovation capabilities work more closely with selected partners to enable development and delivery of the ideas most relevant to their business. Sometimes this will involve co-creation of first-of-a-kind capabilities. More often, it will involve quickly identifying an existing supplier capability that matches a business need and delivering it in the fastest and most cost-effective way possible.

4. Create a communications plan that reaches into the business

The final recommendation for enterprise IT functions is to create a positive and proactive communications plan that serves internal and external stakeholders alike. It should focus on positive communication of delivered capabilities, services and innovation.

Many IT organisations (and service providers) are already delivering a good deal of innovation to the business(es) they support – but we have learned through experience that often this is not recognised due to a simple lack of communication.

A comprehensive communications plan can make a huge difference to the real and perceived impact of the IT enterprise function on the wider business.
Conclusion
We still need IT. The simple conclusion of this paper is just that.

Most businesses will require an enterprise IT function for the foreseeable future. Its shape, size and mandate will undoubtedly continue to change. It may become more and more of an orchestrator. It may get closer and closer to the business. And for some organisations, the IT function may no longer remain a discrete entity. But whatever happens, it will still exist.

Crucially, it will be those IT functions that proactively plan for, embrace and even champion changes in technology and business expectation that ultimately see the most success.

“When the business have an issue, we (the IT function) will still be the go-to place to fix it.” — IBM client

Interview snapshots and client quotes
A wide range of sources informed the content of this paper, including group workshops and one-to-one discussions with IBM clients. We would like to thank all of these clients for their invaluable input.

Here is what some of them had to say:

• “The business is increasingly expecting IT to be simply how you do things – not separate or different to how businesses work. It’s like finance – people no longer say they don’t understand finance; people will be the same with IT.” (European CIO of global property services company)
• “Cloud is driving a big change… as a mechanism towards driving simplicity and cost. We need to use this as a catalyst to drive standardisation and address the legacy.” (Head of Transformation of major UK insurance company)
• “Cloud-based services are driving a disassociation of IT operations with the business – the business expects ‘plug and play’ solutions.” (European CIO of global property services company)
• “More commoditisation and more ‘retail-like’ IT services will drive the IT function towards a service integration role rather than a development type function.” (Head of Transformation of major UK insurance company)
• “Mobility and use of multiple devices and platforms has broken the taboo of standardising on a single platform and device – this will drive a huge change.” (European CIO of global property services company)
• “There will be a change towards cost/price focus on alignment of IT costs with business value and outcomes, for example cost/price of an insurance policy.” (Head of Transformation of major UK insurance company)
• “The future of the IT organisation is about an ongoing drive for more cost-effective use of technology for our business.” (Head of Corporate Clients, UK public sector organisation).
The following comments were made during a cross-client interactive workshop, as part of an IBM Technology Innovation Exchange. The topic of debate was, of course, “the future of the IT function…”

- “There will not be a smooth transition… most organisations have a large percentage of legacy systems that need to be managed and integrated.”
- “IT will change to manage data and information – everything else will be brought in as commodity services.”
- “Open source and other things will make it easier to develop apps that the business wants, cloud will make it easier to host them, so many of the things we do and manage today will change.”
- “Cloud-based services offer a step change but also hidden complexities which many organisations don’t yet understand.”
- “Understanding total cost of ownership across a fragmented supplier and service base, and managing OPEX will become even more important activities in the new world.”
- “We’ll see the rise of strategic integration functions.”
- “We need to stop talking about IT and the business, they are becoming integrated.”
- “We’ll see a move to outcome-based computing.”
- “Change is already happening – elements of cost and service are already moving into and/or being procured by the business.”
- “There are challenges, but the changes being made in technology offer our business and customers a massive opportunity which we need to hook into.”
- “When the business have an issue, we (the IT function) will still be the go-to place to fix it.”
- “IT needs to lead the change – we need to much more proactively take innovation to the business.”

### Additional sources and further reading

The additional IBM and external industry sources used to help shape this document are too numerous to mention.

Three key IBM sources quoted in this paper are:
- IBM Research Global Technology Outlook 2010 – the Future of Legacy – please contact the authors
About the authors

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Tony has 25 years’ experience in the IT industry, the first half of which was spent working in the IT departments of an international consumer products company and two UK financial services organisations. In 1998, Tony transferred into IBM as part of an outsourcing contract.

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