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The Next Generation of IT Operating Models 6 Key Themes for CIO's



6 key themes looking at how the impact of new technology drivers are changing IT operating models.

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How is the traditional enterprise IT operating model evolving?

New, disruptive technologies are impacting the people, processes and governance in IT departments.

A more inter-connected world is driving changes in the way that technology is used within businesses and by individual consumers. The ability of customers and employees to access services through an array of channels, stay in touch around the globe and consume & share information, any time, anywhere is becoming near ubiquitous.

Unfortunately, green-field IT is a rare thing these days. CIO's now have to build continually on foundations and plans that were established by their predecessors over the last few decades when enterprise technology, communications and channels to market were very

IT organisations need to evolve and ensure their operating models are meeting the many and varied challenges of the new technologies in the interconnected world.

Broadly, many enterprise IT organisations have developed in response to four key drivers:

Simple & Reliable **Service Delivery**

Standardisation

Lower **Cost Base** Centralisation and Control

Our experience is now showing that in the past 12 - 24 months there has a been a rapid evolution of these traditionally inward-facing drivers for IT. This is resulting in a brand new set of challenges that CIO's must address. These drivers can be summarised as:

Driver

Description

Disruptive New Technologies

Responding to new, on-demand, SaaS, and IaaS offerings, cyber security requirements, leveraging the Internet of Things as well as integrating social and mobile technologies



Higher business dependency on IT

Digitisation of business processes, Big Data and Business Intelligence driving predictive analytics and blurring any distinction between IT and the business



Focus on Business Outcomes

Delivery of end-to-end, outcome based services driven and enabled by IT focussing on creating, building and maintaining business value



Speed of Delivery

Delivering better, more innovative and intuitive technology and services faster and cheaper than ever before

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IT is the business Back-office no longer ...

Technology increasingly underpins all aspects of the business from the back-office, through operations, and into commercial and customerfacing functions. IT plays a fundamental role in a business' ability to deliver products and services that meet or exceed customer expectations.

What is the trend?

As businesses evolve, information and technology will increasingly underpin every aspect of the new business models. CIO's need to grow and evolve their IT departments enabling the digitisation of business processes and delivering products and services to business users and customers that drive the creation of business value. IT cannot do this stuck in a back-office.

Expectations on IT have never been higher

Heightened user expectations are requiring greater IT reach. With the creation of new customer touchpoints and channels to market, an increasing demand for digital content and a shift towards thin client terminals and tablet based apps, businesses must adapt to keep up with the pace of innovation. Ever-inflating customer expectations are pushing businesses to respond, leveraging their IT capabilities to get closer to their customers and pulling multiple data sources together intelligently to deliver more value, both to the customer and the business. Customer-facing IT services must meet the quality, speed and versatility expected of it.

Knowledge (and data) is power

Companies are recognising the power of analytics, using it to provide real-time insights to inform new imperatives and business decisions.

While management has traditionally had access to real-time data, weaving analytics into workspaces from the shop-floor to back-office functions enables employees to set goals, identify problems and be proactive in identifying new opportunities and risks. For analytics to become a powerful tool in creating a proactive company culture, the organisation must have full-system visibility and access to real-time, trustworthy data. Embedded analytics will enable employees to monitor issues continually, predict customer needs and make well informed decisions.

If you've never failed, you've never lived

New digital technologies are changing the way that people within IT organisations must work. For analytics to deliver actionable insight and for multi-channel offerings to deliver real value, a culture of innovation must be encouraged. IT leaders must encourage their staff to spend time on innovative projects. These behaviours must first be embedded and then *expected*. There must be a level of tolerance for creative failure to encourage risk taking in an environment where fallout and impact is contained.

IT as a Venture Capitalist

IT organisations must embrace the challenge to trade on its assets, talent, risk and results. IT organisations that are keen to help drive business growth and innovation must develop a new mind-set alongside new capabilities. IT should encourage intelligent risk-taking; failure due to poor execution is unacceptable, however setbacks arising from exploring and testing innovative ideas are inevitable for those that want to compete and thrive in a high-growth environment. The portfolio mindset of a VC needs to be adopted; balancing investments in legacy systems and innovation, communicating portfolio performance in terms of business value, and aligning talent with the business mission.

- The pace of technological change and the rise of multi-channel is increasing business reliance on IT and technology
- Increasing number of consumer touchpoints requires IT to respond to demands and provide seamless integration across business channels through operations and into corporate IT and processes
- Utilising analytics and real-time data, IT departments can proactively monitor and predict future customer trends allowing for differentiation and improved customer and user experience
- Leverage the creative power of IT staff by embedding a culture of innovation: gamification can also help IT to deliver what the business needs

How should IT respond?

New or Impacted Roles

- Touchpoint Specialists build a detailed knowledge of specific customer touchpoints in order to understand the key influences on the customer experience
- Head of Innovation overall accountability for encouraging and enabling innovation within the IT department and more widely into the business

Process

- Digitisation of processes means that IT will underpin and enable more and more of the core business processes
- Performance management processes should encourage and incentivise staff to spend time pursuing innovative solutions and IT leaders should encourage and reward progressive failure
- Innovation Portfolio Management processes should exist to provide the necessary access to finance required to fund innovation and the time people spend developing ideas

Technology

- Development of Integration layers to enable services to be delivered across multiple channels (and their associated touchpoints) to avoid creating information siloes
- Invest in technologies that allow data to be interrogated so that analytics will provide actionable insight
- Sand-pit capabilities need to be established where innovative solutions can be tried and tested

In the future, information and technology will underpin and enable every aspect of the business operating model.

E2E: Business-outcome focussed IT Defining everything we do by the value delivered

IT plays a critical part in delivering business outcomes. When these outcomes are not delivered any excuses from IT around technology-based SLAs being met will no longer be acceptable. IT needs to understand the part it plays in creating business and shareholder value, and in driving company performance.

What is the trend?

IT is not a back-office ivory tower, nor should it be divorced from the business, operating with a 'them and us' mentality. Instead IT and the business need to work together, contributing to the creation of business value. In some instances, as discussed elsewhere, IT is the business.

The business expects: IT must deliver

Businesses depend on IT to make money and this dependency is increasing with the digitisation and automation of business processes. IT must think of everything it does in terms of End-to-End delivery across the business value chain.



IT can no longer be oblivious to what happens when points of failure occur in the value chain

Business outcomes are dependent on IT outcomes and are enabled by the managed integration of IT services. As such, when a business outcome is not met it is extremely likely that a piece of technology or infrastructure that sits behind it is at least partially to blame; an application crashed, a server went offline or there was a network outage of some description.

Satisfaction with Enterprise IT's performance is therefore based on the enablement and improvement of business outcomes rather than achieving traditional technical tower-based SLAs and targets.

If IT does not understand the End-to-End value contribution of individual IT components of the service, there is potential for a disconnect to be created between what matters to the business and what matters to IT leaders and CIO's. For example, it is possible for IT to achieve all of its technical tower-based SLAs and targets, but remain oblivious to the fact that something has fallen over in the wider business value chain (e.g. product not having been shipped or reports not having been generated).

Understanding what failure to deliver means to the end user

End-to-End Operating Models see tower-provided services replaced with complete End-to-End service stacks that are integrated across technologies and articulated in terms of End-to-End business processes. Dedicated service owners are responsible for each service and are able to influence the delivery of all tower IT components that form this service. The service owner would understand the impact of failure for each component

This is not to say that there should be a wholesale shift to an End-to-End model, rather that it is an appropriate model to adopt when delivering a defined and manageable number of critical business outcomes.

- If a technology component goes down IT needs to understand the real cost of any outage. The lack of a functioning technology component may result in sales not taking place, revenue leakage and reputational damage. By understanding the costs associated and statistics around the value of the supporting technology, IT can provide a better service to the business
- Depending on the industry and the service provided to the consumer, an outage may result in the loss of customers. For example, if a business is offering a commodity service, such as online shopping, a user may switch instantly to a competitor and then future sales are lost

How should IT respond?

New or Impacted Roles

- Service Owners will manage End-to-End IT services and are accountable for the successful delivery of the IT outcomes underpinning business outcomes
- Service Integrators will manage the Service Portfolio and Service Catalogue, monitor and manage suppliers and SLA's
- Professional development should target a greater understanding of how IT enables business value

Process

- Processes will be placed around an End-to-End solution to extend its service wrapper to ensure it meets the business' requirements for availability, capacity, continuity and disaster recovery
- IT must build and embed a culture oriented around innovation and business outcomes
- Service operations will be able to respond to user demand when an End-to-End solution is being used.
 The focus will be on the delivery of the required IT outcomes on which the business depends
- A comprehensive financial model will be required to support transparency of price allocation across the End-to-End IT service
- Procurement will understand the commercial constraints as defined in the OLA/SLA specific to the End-to-End solutions

Technology

 There will be a critical dependency on certain tools such as End-to-End Value Maps in order to deliver seamless End-to-End services

Satisfaction with Enterprise IT's performance is based on the enablement and improvement of business outcomes.

Speed: Delivering better IT faster Reducing the time between idea to value delivered

IT needs to move towards a model that delivers the minimum viable product in ever-shorter periods of time. What would have taken three months, now must take three weeks, because in three months time the entire requirement may have evolved.

What is the trend?

IT needs to deliver more for less, faster than it ever did before. In order to do that, it needs to be smart in the way it delivers its products.

After many years of companies implementing big, 'carrier class' ERP platforms with the associated cost, businesses and consumers are now expecting the minimum viable product to be delivered as soon as possible. They no longer want to wait 18 months before they can feedback on a first release.

Adopting agile Delivery across the enterprise Agile Delivery is an iterative method of delivery that allows an organisation to:

- Deliver business value regularly and incrementally
- Provide visibility to the business throughout the project
- Reduce delivery risk steadily throughout the project
- Maintain adaptability to business change as long as possible



Aim to get minimum viable product delivered as fast as possible

Producing the minimal viable product is a cheaper, smarter version of the final product that can be used as a prototype.

This will allow an organisation to make something which can be taken to the business to understand whether it will meet their needs

Creating a minimal viable product can also highlight the necessary requirements of a process or system, taking away the 'bells and whistles' to deliver the bare minimum to an organisation, whilst still meeting the 'must-have' requirements. The speed to market is dependent on the type of the project and in some environments good-enough is good-enough — as opposed to all-singing, all-dancing, gold-plated delivery.

Put the developers right next to the business users

To support speed of delivery the developers and the business users need to be co-located and rapidly turning round user requirements into software products. This collaborative way of working is also beneficial to business users as they get to see their end product being built.

"Plan big, start small, fail fast and scale soon".

IT should plan and develop on an iterative basis with multiple releases to enhance and improve the product. By releasing a prototype as quickly as possible, IT can reduce production costs alongside allowing the business to feedback to the developers.

The overall result, when executed well, is a reduction on development cost, reduced numbers of re-work cycles and improved levels of business customer satisfaction.

- Enterprise IT needs to remain relevant: they need to be able to compete with market provided offerings such as Cloud and Software as a Service (SaaS). If Enterprise IT cannot be as elastic, responsive and on-demand as Cloud, then the business will bypass IT and go to the Market Provider with their corporate
- · As the half-life of technology continues to shorten, the rate at which new products and services enter the market continues to increase. Organisations that fail to adopt and exploit this technology quickly and securely risk decreasing business customer loyalty

How should IT respond?

New or Impacted Roles

- The role of both the developer and the business user will change as they work more closely together and have a greater understanding of the value that each party brings to the delivery of products and services
- Developers are going to need better knowledge of the business so as to turn requirements into product faster and more efficiently
- Business users need to be able to understand developers ways of working and also understand key IT constraints (e.g. security) that may make some requirements untenable
- A Business Relationship Manager role will help create a bridge between the business and IT and can act as the point of contact for both IT and the Business, where needed

Process

- Embed methods such as Agile Delivery and Rapid Prototyping into the organisation, offering relevant training to ensure users are up to speed on the latest delivery methods
- Introduce App-a-thons (ultra-rapid prototyping) where people will get together for 36-48 hours to deliver viable product in a matter of days

Technology

• The speed of delivery should not compromise or undermine core enterprise security requirements. The security of customers data as well as internal, commercial data cannot be exposed and speedy delivery must always be balanced against these concerns

Taking away the 'bells and whistles' to deliver minimum viable product that meets the 'must-have' requirements of the business.

The commercialisation of IT Transforming IT from cost centre to revenue stream

IT organisations can generate revenue for the business by recognising and capitalising on the market value of their systems of differentiation, and turning these into long-term sources of competitive advantage.

What is the trend?

IT organisations are taking technology services they have created and are selling them back into industry. A major UK publisher has developed a Digital Rights Management system for eBooks which it now offers as a service for the rest of the industry on a commercial basis, negating the need for competitors to build their own system, resulting in a readily-available platform at a competitive cost.

In addition to providing a revenue stream this model dissuades competitors from developing alternative solutions themselves, moving towards a longer term dependency on the service.

Leveraging the revenue potential of systems of differentiation

New and innovative technology solutions have the highest potential market value as they are the most likely to provide a company with a differentiating competitive advantage. Once these solutions have been proven in-house, and any first mover advantage has been capitalised upon, they risk becoming a depreciating asset. However, they can continue to offer revenue potential if marketed appropriately externally.

Influencing (and dissuading) competitor investment in alternative solutions

Having a valuable system of differentiation with proven commercial benefits will inevitably have a shelf-life. As always, competitors will endeavour to make similar products to compete and neutralise this advantage.

By choosing to provide a set of carefully selected services to the industry, that were previously used to differentiate their own products, a company can potentially influence the investment decisions of competitors, mitigating the risk of a superior solution being brought to the market.

Encouraging competitors to buy, rather than build, leads to a degree of dependency on the service, and positions it as a potential industry standard.

Capitalising on a commercial offering using a mature finance model for IT

Developing a mature cost allocation model for IT is a pre-requisite in enabling the value of any IT or technology asset to be offered successfully to the wider market

Mature IT organisations understand their cost base and their cost-to-serve: internally they may deliver IT and technology services via a basic recharge model but when selling these services externally this recharge model becomes an essential part of getting cash through the door for services delivered.



- A company's ability to commercialise IT services and products, rapidly and at scale, allows them to influence competitor investment, extend the shelf-life of valuable products and services, and potentially generate longer term revenue for the IT department
- · CIO's need to ensure their departments are competitive and offer value. Commercialising IT and understanding the true financial baseline via a cost allocation model enables IT departments to quantify the value they deliver to their organisations. Additionally this facilitates like-for-like comparison of in-house IT services vs. externally available solutions

How should IT respond?

New or Impacted Roles

- External Customer Account Managers will be required to own the relationship with specific consumers of IT services from outside the host organisation
- Commercial IT Managers will be required to support commercial negotiations with new and existing external customers

Process

- Embed a mature strategic and business relationship management capability within IT to ensure that all parties are fully aware of the strategic consequences of any decisions to sell services externally
- · Mature financial management and service charging processes are essential as these will enable IT to accurately and efficiently determine the costs associated with provision of specific services
- Supplier and contract management processes must be able to accommodate the need to monitor the quality of service provision to external customers, and operate an appropriate service credit or penalty mechanism to support this process
- The Enterprise Architecture must accommodate a much larger number of external interfaces

Technology

• Investment in commercial management and service quality tooling will be required to allow IT to monitor the services it is providing to its external customers. This will allow IT to ensure that these services remain compliant with the terms and conditions of specific contracts with specific customers

Generating business revenue by capitalising on the market value of technology assets.

Intelligent integration Using data to improve the bottom-line

Leveraging legacy systems of record to build systems of differentiation and innovation that provide valuable insight, improved business outcomes, an enhanced customer experience, and business value.

What is the trend?

IT organisations are looking for ways to capitalise on the increasingly large quantities of data that they manage on behalf of the business. By integrating these systems and data, and applying predictive analytics, IT can contextualise and tailor products and services in an intelligent way to maximise the business value delivered.

Systems of record contain a plethora of valuable business information

Traditionally, IT organisations have invested heavily in building expensive ERP systems, and other systems of record, which were seen as critical to business operations. These systems contain large quantities of valuable business and customer information. However, this data currently exists as disparate 'pockets' of information in individual systems spread out across the estate.



Delivering targeted, relevant and personalised services through contextualisation

By investing in architectures that enable the intelligent integration of systems, IT can add value by separating the data layer from the system layer allowing previously siloed data to be analysed collectively. By leveraging this data from across the estate, IT can use information from one system to contextualise the service it is providing, for example an organisation may take past order history to populate a form at checkout automatically. This allows IT to provide targeted, tailored and relevant services to the consumer.

Intelligent integration of systems is fundamental to enabling this contextualisation of data

In order to deliver these highly tailored services, IT systems must be able to efficiently and effectively access a large amount of information stored across the estate without introducing delays for the service consumer or significantly raising its cost.

Intelligent integration enables this analysis and subsequent contextualisation by firstly, providing an architecture between systems that facilitates information exchange and secondly, by optimising the routing of information through this architecture to deliver the desired service.

Creating a consistent, quality customer experience across all channels

Intelligent integration removes the barriers to information exchange between back office systems, and also enables the creation of channel agnostic services. By allowing channels to access information in any system, intelligent integration allows consistency to be enforced as all channels access the same information and have it translated at point of access, rather than maintaining their own versions which must then be synchronised.

- Increasing customer expectations mean that customers want and expect tailored, personalised services to enhance their use of IT
- The explosion in the adoption and use of alternative channels (e.g. mobile and tablet devices) by consumers and mobile workforces is resulting in more data than ever
- The volume of data is increasing exponentially. The method of managing this needs to be implemented sooner rather than later
- Enables IT to maximise the value of existing assets to generate further value for the business

How should IT respond?

New or Impacted Roles

- New 'Data Scientist' roles will need to be created within IT. These are individuals who combine a detailed technical understanding of IT's systems with an intimate business knowledge in order to present data in such a way that business decisions can be made using it
- Enterprise Architects will need to work closely with the Data Scientists to ensure that the estate architecture supports the design and use of systems in this way
- Data Architects must ensure that the data-system layer distinction is maintained wherever possible to avoid embedding data within individual systems

Process

- · Data quality audits will need to be established and regularly undertaken to ensure that data is of a good quality and structured in such a way that it can be easily queried by any system
- Comprehensive data security processes will be required to ensure that the estate remains compliant with any application data protection legislation, and to prevent unauthorised access of information through indirect routes

Technology

- Exchange of information is fundamental to intelligent integration. Therefore, ensure there is adequate investment in appropriate speed and capacity connectivity technologies is essential
- Personalisation and contextualisation of content requires access to a considerable analytical capability, and the large processing capacity associated with these technologies

IT can add value by separating the data layer from the system layer allowing previously siloed data to be analysed collectively.

Vendor collaboration

Partnering for value and flexibility through new sourcing models

New service models have changed the way in which businesses procure IT from outsourcers and third party suppliers. CIO's and Vendor Managers will increasingly favour on-demand, elastic deals over long-term, fixed-scope contracts, integrating suppliers into a plug-and-play ecosystem that protects the commercial interests of their businesses.

What is the trend?

First generation outsourcing has delivered mixed results and as such vendor management remains a key focus for CIO's. IT organisations continue to experiment with a number of sourcing models which have tried to build on the lessons learned from the monolithic deals of the millennium era. Many of those large deals failed to deliver results because the internal IT organisation never developed the capabilities required to manage their IT service providers.

Evolving Sourcing Models driven by Cloud

Traditional outsourcing deals have been coin-operated, margin-driven with very few levers to improve quality of services delivered: a relentless focus on driving down supplier costs has reduced the quality of the services and damaged the reputation of IT departments.

IT organisations should avoid being locked into longterm deals (particularly as technology is evolving faster every year). Instead IT should integrate into an ecosystem that focussed on collective success or collective failure.

Cloud has changed the game: IT services can be procured anywhere, anytime, on demand and with transparency of costs. IT outsourcers are under pressure to change their commercial models

With an end-to-end focus on the delivery of business outcomes, cloud providers delivering quantifiable, known outcomes can be preferable to a traditional IT service provider, where the quality of delivery is typically dependent upon the quality of their account and delivery teams.

SIAM: collective success or collective failure

Multiple vendor environments require co-ordination, collaboration and integration for the model to succeed.

An effective Service Integration and Management (SIAM) capability is essential to mitigate the risks of multi-sourcing, ensuring that all vendors work together to provide a service that not only meets business needs but drives the generation of business value.

Incentivising vendors appropriately is increasingly important to align goals and drive collective success or collective failure: pooled service credits and shared penalties promote knowledge sharing and cross-company working within the eco-system.

Back Onshore

With multi-vendor environments and the increasing popularity of SIAM to co-ordinate suppliers, IT organisations are keen to maintain control and oversight over their suppliers' operations. An indirect result of this has been for organisations to repatriate their service desk and gain control over the first line support. Movements of operations back onshore is one way to regain this control, while increasing customer satisfaction and rebuilding bridges between IT and the businesses they serve.

Incentivising vendors to leverage supplier innovation

Vendors need to be incentivised, if not contractually obliged, to deliver new and innovative solutions to benefit businesses. For example, IBM's R&D budget will be greater than the entire annual revenues for many businesses so any commercial engagement with big IT service providers should prioritise the harnessing of any new 'clever IT'.



- Deriving greater value from vendor and supplier relationships is not always about cutting costs: look to incentivise innovation and align suppliers' goals to the key business outcomes
- The changing nature of the vendor landscape is requiring CIO's to readdress their vendor management strategy. On-demand cloud services are making some current outsourcing models redundant
- Migration to a plug and play ecosystem provides opportunities for CIO's to protect the commercial interests of the business
- Vendor collaboration, if managed effectively, can improve the overall quality of service back to the business and reduce or repair reputational damage caused to IT departments

How should IT respond?

New or Impact Roles

- Service Integrator required to manage supplier performance, facilitate the delivery of services and have overall responsibility for the technology platforms
- Supplier Relationship Management manage alliances within a multi-vendor landscape and ensure vendors are meeting their contractual obligations
- Innovation Fund Manager and Innovation Team support vendors with innovative solutions, from budgeting to trial and testing new technologies within dedicated sand-pit environments in the
- Service Owners suppliers who deliver elements of End-to-End services will be accountable to service owners

Process

- IT must engage with the strategic suppliers early in the planning cycle, seeking input and advice on how best to deliver IT outcomes and support business outcomes
- IT will improve supplier performance and drive down supplier costs through innovative and transparent financial engagement models
- Changing business priorities will require break clauses in multi-year supplier deals (e.g. disruptive technologies resulting in current service obsolescence)
- A shared innovation fund will be established with IT and strategic suppliers co-developing innovative solutions focussed on delivering business outcomes or proactively improving service reliability
- In the event of an incident, IT will ensure suppliers prioritise maintenance of established business value over traditional, reactive restoration of IT components

Technology

- With a multi-vendor environment organisations must be able to support different technology platforms
- Different tools will need to be integrated into the landscape to allow for one view of management information

All strategic suppliers will work together, demonstrating a culture of collaboration with a focus on delivering business outcomes and enhancing functionality through innovation.

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