



IDC Technology Spotlight

Accelerating Digital Business with IT4IT

Sponsored by: Orbus Software

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IDC OPINION

The transformation to digital business is affecting organisations large and small, in all sectors, as they seek to gain or retain their edge against competitors old and new, using advanced, 3rd Platform technologies. The move to leverage cloud, mobile, social and Big Data analytics – and new accelerators like cognitive systems – requires new approaches to business and IT transformation, and therefore application development. IDC believes that organisations' ability to grow and compete will increasingly depend on their digital "innovation capacity, which is tightly linked to the talent and capability of their software development teams. Digital is ultimately about making organisations more responsive to customer demands; IT thus needs to be more responsive to business demands, through new approaches like DevOps and agile. This, in turn requires new approaches to IT governance: viewing IT as a service business, creating and leveraging internal and external (cloud-sourced) services in the pursuit of added value.

The Open Group's recently launched standard for IT governance, IT4IT, is a notable contribution to this effort. This new framework is relevant to any company focused on managing the business of IT, and especially those with an interest in business and IT transformation. IT4IT aims to allow the IT function within an organisation to achieve the same level of business discipline, predictability and efficiency as other functions in the business.

It comprises a reference architecture and operating model based on a value chains concept, independent of particular development approaches. IT4IT aims to disseminate best practice in running IT as a value-creating business, and can be seen as complementary to existing enterprise architecture and IT governance standards such as ITIL, CoBIT and TOGAF. It is applicable in organisations that must run older approaches, like waterfall development, alongside the newer agile methods.

An initiative such as IT4IT requires software tool support, and one of the first out of the blocks is Orbus Software, which has been making a name for itself (and growing strongly) with its iServer repository, which supports enterprise architecture and business process modelling as part of its platform for business and IT transformation. iServer, which is designed to run in conjunction with a range of Microsoft (and other) collaboration and documentation tools, supports multiple notations and methods, offering accelerators for various popular standards. IT organisations interested in modernising their approaches to enterprise architecture and IT governance are advised to investigate the IT4IT standards initiative, and to consider iServer as a route to automating the use of IT4IT.

THE DIGITAL BUSINESS IMPERATIVE

Today, a board-level priority for every organisation around the world is *digital transformation* (DX). That is, leveraging digital technologies to improve operational efficiency and business competitiveness: to adapt to or drive disruptive changes in the business, transforming products and services, processes, and relationships with customers, partners and employees.

Across the world, and in every industry, major new sources of competitive advantage are being built by creatively leveraging the cloud, mobile, social, and Big Data technologies – what IDC calls the 3rd Platform of computing – together with the new, emerging innovation accelerators that exploit the 3rd Platform, such as cognitive computing (see Figure 1). Outstanding examples are companies like Uber (the taxi company that owns no vehicles) and Airbnb (the accommodation provider that owns no hotels or rooms) and Alibaba, the world's most valuable retailer (which has no inventory). They have all been able to build scale in a way that could not have been imagined a few short years ago by leveraging these technologies to create disruptive new business models.

The 3rd Platform of computing, then, is the foundation for digital transformation, enabling the evolution and expansion of every industry over the next several years. IDC is already seeing rapid acceleration in the adoption of these technologies. Enterprises and organisations alike are grappling with how to address the impact of these technologies not only on their decision-making processes, operations, product rollouts, and promotions but also, most importantly, on how they engage with their customers.

FIGURE 1

3rd Platform Technologies and Innovation Accelerators Enabling Digital Transformation



Source: IDC, 2016

Consequently, organisations' ability to manage change is critical. The potential complexity of the move to the 3rd Platform requires an architectural approach to managing the impact of digital transformation. Organisations' entire futures will depend on their ability to build systems to exploit these new technologies, through in-house development and creative use of external services to build advantage. Examples of where this is happening right now include:

- Telecoms service providers analysing customer usage data to spot likely defectors and reduce customer churn
- Airlines improving customer service and building new business by leveraging social media interactions with their customers
- Retailers improving sales through smarter, data-driven decisions for inventory and warehouse management, based on faster and better analysis of sales trends and external data like weather patterns
- Banks analysing customer transaction data to detect and prevent payment fraud, reducing costs and business risk

IDC predicts that the scale-up of digital business strategies will drive more than half of enterprise IT spending within the next 24 months, rising to 60% by 2020. Mastery of 3rd Platform technologies will be table stakes for successfully executing digital business initiatives and "Cloud First" will become the new mantra for enterprise IT. Virtually none of the other 3rd Platform technologies or major DX initiatives are possible in scaled-up implementations without the cloud as the foundation.

Driven by Code

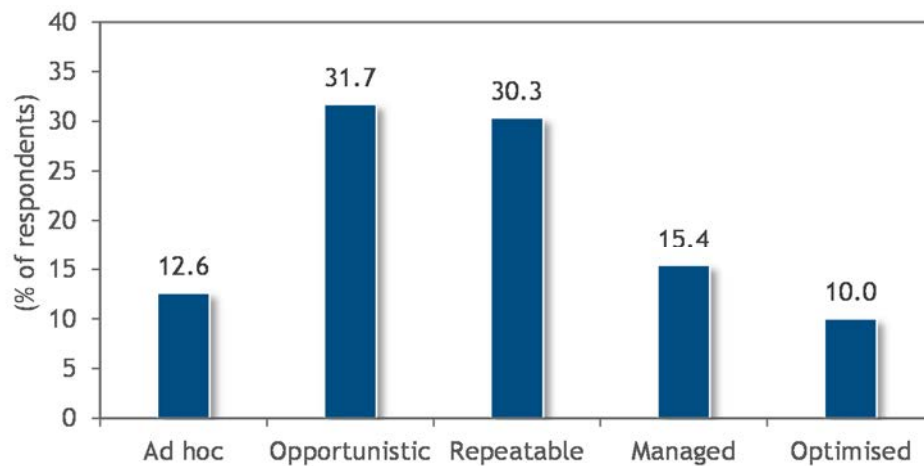
The digital business – operating at scale – will be driven primarily by code. Organisations' ability to grow and compete will increasingly depend on their digital "innovation capacity" which is tightly linked to the talent and capability of their software development teams. In this regard, every company will increasingly be a software company. By 2018, IDC predicts that enterprises pursuing DX initiatives will more than double the size of their developer resources, focusing those developers almost entirely on DX initiatives.

Therefore, old approaches to software development are no longer adequate and it is critical that organisations transition their IT operations to newer forms, such as agile and DevOps, as they look to improve time to value and build business advantage by blending internal and external services, data and function in the "API economy".

This new approach to development in turn demands a new approach to IT governance – a new look at managing the "business of IT". An organisation cannot expect to digitally transform its business operations if it does not also transform its IT operations to suit its business goals and aspirations. A mark of what IDC calls *digital transformation thrivers* – that is, leaders in the move to digital business – is to have all operating models within the business adhere to a digital framework that is autonomic, and contextually aware. IDC research around the world shows that at present only a minority of businesses are in that position (Figure 2). Managing the IT business in a new way will be a critical enabler for the modern and competitive digital business.

FIGURE 2

Digital Transformation Operating Model – Respondent Distribution



Source: IDC's Digital Transformation MaturityScape Benchmark Survey, February 2015

IT RESPONDS: THE RISING POPULARITY OF DEVOPS

IDC's recent CIO discussions highlight that many organisations continue to be faced with the divergence of old and new IT, with new investments increasingly driven by non-IT management. IT organisations are being asked to support rapid growth, often from a perspective that is difficult to grasp and requires a truly agile enterprise to make possible. Showing and proving value to the business through understandable metrics is a key target, as is addressing the existing IT culture in an effort to fix the basics and overcome cultural barriers to change. A key focus is on changing the culture from "over-engineering – no mistakes tolerated" to a "fail fast – fail early" culture.

The key challenge is essentially how to enable faster delivery of better quality (and often custom) business solutions that address and meet continuously changing business and customer needs. The creation of custom agile apps is the hallmark of the digital enterprise: if organisations are to keep up then embracing more collaborative ways of working is critical

With this rapid shift to digital transformation, IDC finds that DevOps practices are rapidly becoming more inviting, and indeed necessary, for enterprise survival. DevOps is not so new, but is something that many organisations are currently trying to get to grips with, understand and implement successfully. So what do we mean by DevOps? IDC defines DevOps as a methodology, or set of practices, that unifies a team consisting of business leadership, development/testing, and operations to be responsible for the creation and delivery of business capabilities.

The pace of change today highlights the need for IT organisations to become more efficient and really embrace business and customer alignment at speed. This drives a growing debate about the need for speed, and the nuances between waterfall and agile application development methods; DevOps takes Agile practices a step further, and looks to add more of a business and customer-centric perspective to certain workloads that require faster deployment capabilities.

Increasingly, enterprises consider DevOps to be the solution to the ongoing struggle between the need for developers to innovate and update applications through agile development methodologies and IT operations' charter to guarantee reliability, resiliency and availability of infrastructure and

applications based on ITIL practices. Ultimately, DevOps practices offer IT organisations a tremendous opportunity to transform how they develop and operate IT services.

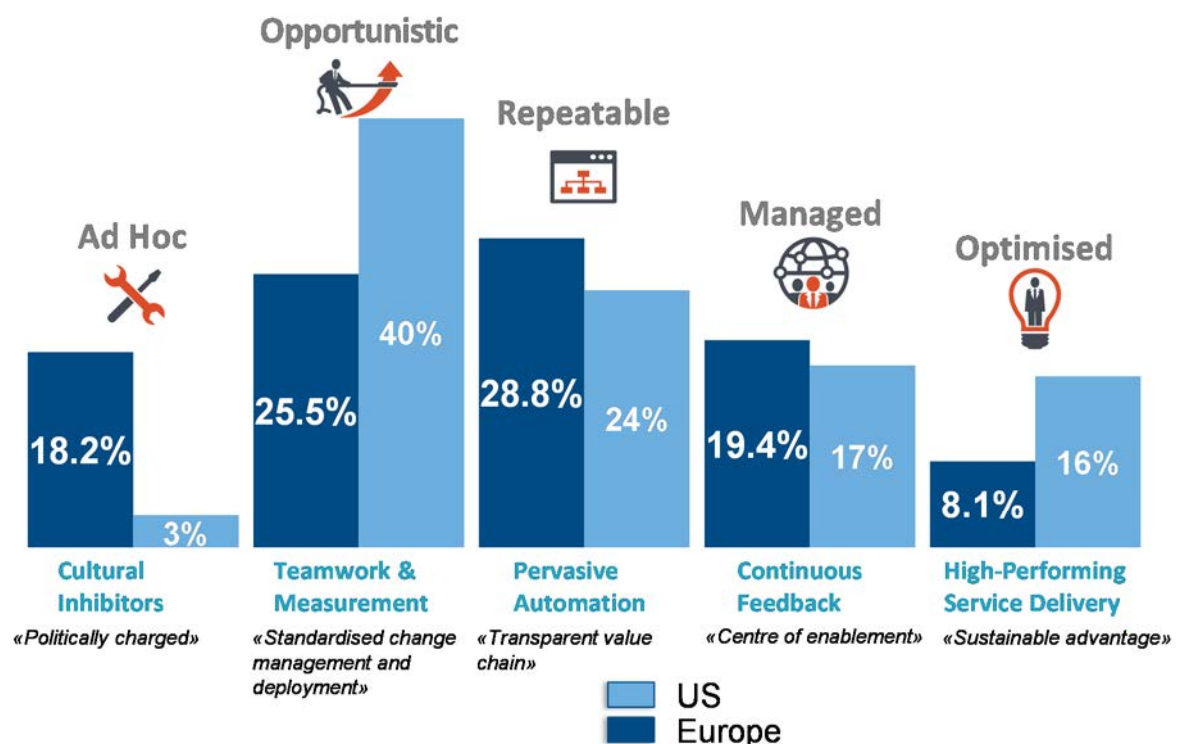
Measuring and Monitoring Maturity

To be able to assess overall enterprise DevOps maturity, IDC has created a model to gauge DevOps competence and sophistication through five stages of maturity: ad hoc, opportunistic, repeatable, managed, and optimised (see Figure 2, and References section).

Overall, IDC finds that around a third of enterprises using DevOps practices to be fairly advanced in driving and developing the right capabilities and competencies for DevOps success. However, what is clearly evident is that the majority of enterprises are – to varying degrees – just beginning to get their arms around what DevOps means, what's required and what benefits can be delivered. It is evident that an increasing number of CIOs understand the value and benefits of DevOps, but must now work to overcome barriers around skills, culture change and legacy IT process mindsets to accelerate adoption: clearly an IT governance issue that requires the right, up-to-date approaches.

FIGURE 3

DevOps Maturity Distribution across Stages



Source: IDC's MaturityScape Benchmark Survey, 2015 & 2014; N= 400

Recent IDC research finds that by 2016, 80% of large enterprises will use DevOps to optimise the delivery of business services across both development and operations teams. These same organisations often use the IT infrastructure library to help streamline their operational processes.

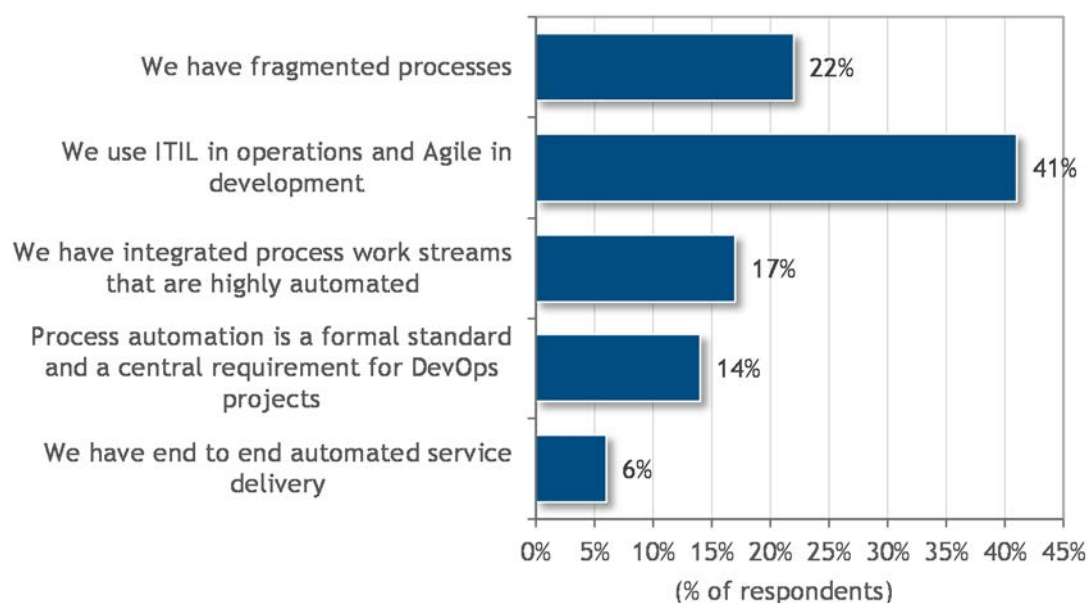
Over the past 15 years, ITIL has been used across IT operations teams to drive operational process excellence and stability. With a related, but separate focus, development organisations have utilised agile methodologies to help optimise development processes and better organise work streams. DevOps looks to bring the best of both ITIL and Agile to the forefront while elevating the real reason for these investments, which is driving business value and outcomes. Our research shows that organisations are moving forwards with process automation: for 14% of large organisations process automation is already a formal standard and central requirement for DevOps projects (Figure 3).

IT organisations have a tremendous opportunity to collaborate across both sets of practices to accelerate and optimise business value. DevOps and ITIL work well separately; however, tighter integration can increase process efficiencies, team work, collaboration, and overall business value. There is an expectation that DevOps-led projects will accelerate the delivery of capabilities to the customer by an average of 15%-20%.

FIGURE 4

Current Level of Process Standardisation

Q. What level of process standardisation does your IT organisation utilise for DevOps?



Source: IDC DevOps Maturity Benchmark Survey 2015, N= 250

IT4IT — A NEW GOVERNANCE MODEL BORNE OF THE NEED FOR DIGITAL BUSINESS

In this report we have established that there is a strong movement towards new development processes and methods in tune with the move to digital business. But as stated earlier, this needs an appropriate approach to IT governance – to managing the *business* of IT in a way that is congruent with the need for digital business transformation.

This is therefore a key goal for CIOs today. And so, the question arises: can this governance be codified in some way, in a way that can assist the IT function in shaping its operations to support digital business modernisation quickly, and without undue risk?

The answer is yes. In particular, the long-established IT standards body The Open Group, developer of TOGAF, the widely known standard for enterprise architecture, has taken a fresh look at this issue and has created a reference architecture and operating model for IT governance in this new age, collectively called "IT4IT".

IT4IT, which was launched in Edinburgh in October 2015, can best be described as "a vendor-neutral, technology-agnostic and industry-agnostic reference architecture for managing the business of IT".

Notable companies that have already started to work with IT4IT include insurance companies Delta Lloyd and Munich Re, global consultancy Accenture, and the oil giant Shell.

Services and Value-Chain Oriented

In IDC's view, the key design premises setting IT4IT apart from other current standards of enterprise architecture and governance are twofold:

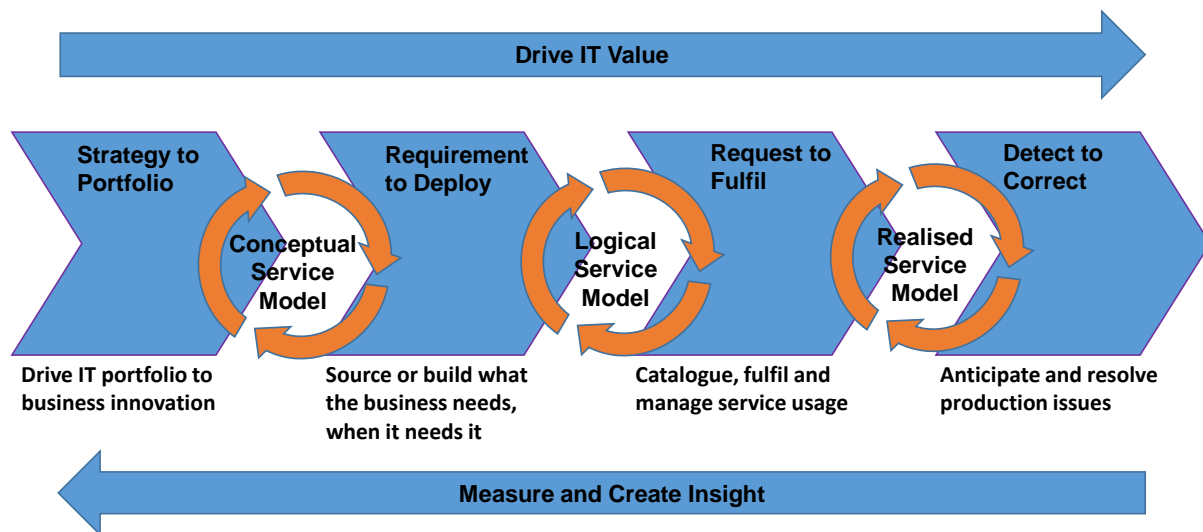
- IT4IT has been explicitly designed with a services orientation, and recognises that modern systems are *assembled* from a mixture of internally and externally sourced services (and that internal systems will increasingly be created as a set of microservices).
- IT4IT recognises that IT is in a state of evolution from older, often waterfall, methods of design and build, towards the new world of agile and DevOps, and that successful IT governance must be able to manage both the older and newer approaches coherently. It therefore is *process-agnostic*: independent of any particular system design and management methodologies.

IT4IT is influenced by management guru Michael Porter's work on value chains, and is designed to provide support for four key IT "value streams" (see Figure 4), which are seen as driving IT's value to the business:

- Services planning, or "strategy to portfolio" – where demand for services is captured and conceptual service blueprints created and stored
- Services sourcing/creation, or "requirement to deploy"
- Services offer/deployment, or "request to fulfil"
- Services management and maintenance, or "detect to correct"

FIGURE 5

The IT Value Chain as Expressed in IT4IT's Four Value Streams



Source: The Open Group, adapted by IDC

With its value chain orientation and process agnosticism, it could fairly be said that IT4IT is more outcome-based than other enterprise architecture standards, which is an important differentiator to other approaches. The designers see it as complementary to, rather than competing with, TOGAF, ITIL, CoBIT and other standards.

Rather than processes, IT4IT describes a reference architecture for focused on capturing and managing the data needed to manage a service through its lifecycle. It describes the functional components (software or services) that are required to produce and consume the data. Once integrated together, a system of record for IT management is created that ensures full visibility and traceability of the services throughout their lifecycle.

Of course, such a reference architecture and operating model is most readily deployed using a software toolset. One company that has taken the lead in supporting the IT4IT standard is Orbus Software, which has offered support for IT4IT from its launch.

ORBUS SOFTWARE: CREATING TOOLS FOR IT TRANSFORMATION

Orbus Software is a mid-sized, privately owned software company headquartered in the UK, but with business around the world. Its customer base comprises over 400 large enterprises in the US, Europe and Asia-Pacific, including Amtrak, Barclays, Cathay Pacific, Deutsche Bank, GSK, NASA, Novartis, and Virgin Atlantic. Orbus has 80+ employees and offices in New York, London and Sydney, and customers in 28 countries, and has grown at around 30% per year for the past five years.

Orbus Software is just over a decade old. The founders' original intent back in 2004 was to create a business process software company. It discovered a big opportunity lay in providing tools to support the IT enterprise architecture (EA) function within its customers, and this has become its biggest business line, offering a design repository and process support with its product iServer. In 2009 the Open Group launch of TOGAF 9, with a flexible methodology-driven approach to EA, drove widespread adoption across both corporates and governments worldwide. iServer provides

an integrated approach to business and IT transformation through these rapidly converging management domains: enterprise architecture, strategic planning, business process analysis, governance risk and compliance, IT project and portfolio management and ERP PROCESS management.

Key reasons for Orbus's success in this domain include the breadth of its EA management platform scope (now expanded to IT4IT) and its support for popular third-party reporting, BI and collaboration tools. iServer supports many of the most popular enterprise architecture and business process modelling approaches and standards, including CoBIT, ITIL and TOGAF, and now IT4IT.

Such standards can be complicated (even overwhelming), sometimes dated and rigid, meaning they are often hard to implement in a way that actually realises benefits. Orbus addresses these barriers by providing "accelerators" – preconfigured repositories with a meta-model, templates, reports and dashboards – for these standards and others, including ArchiMate, BPMN and CMM. The leverage and customisation of the meta-model is critical in ensuring easy adoption across organisation size and maturity. The modern organisation being driven by rapid digital transformation requires a very flexible approach to these standards and frameworks.

One of Orbus's most notable differentiators comes from its view that the front-end tools space has been so successfully colonised by Microsoft – with Visio in particular, but also the Office suite – that it is unnecessary to reinvent those wheels. Therefore, it has focused on leveraging these near-ubiquitous offerings from its unique back-end repository. This approach has proven appealing to a significant number of businesses, with Orbus now being recognised by many as a significant player in this market segment. iServer also links to complementary platforms like SAP BPM, Microsoft Project Server, SharePoint, and reporting/analytics tools including Microsoft Power BI and Tableau.

The Orbus philosophy, driving its product development strategy, is to provide a unified platform for business and IT transformation, to enable the digital business. This vision is based on the identification of six management domains (EA, BPA, ITM, PPM, GRC, ERP) which are related and converging and collectively enable transformation (Figure 5). Orbus finds that these are interrelated and that many of its customers wish to have a tool that reflects and supports this.

This is in line with IDC's research findings, which are that while object modelling, data modelling and business process modelling have been largely used by distinct sets of users within enterprises, the field of enterprise architecture tends to tie these functionalities together to achieve a broader and more comprehensive approach, which organises all activity around managing the overall enterprise portfolio. Increasingly, EA is the key umbrella under which other modelling functionality is being sold and indeed deployed and used in the enterprise. The key to the Orbus approach is the platform, which integrates EA to strategic business and IT transformation.

FIGURE 6

Unified Business and IT Transformation Supported by Orbus Software's iServer Platform



Source: Orbus, reproduced with permission

CONCLUSION

Digital transformation is forcing rapid changes in the market, as customers put pressure on their IT partners to help them develop the capabilities to enable them to adapt their businesses much more quickly. This in turn is putting pressure on IT development shops to stay ahead of the curve and be able to provide the value and innovation their users are seeking.

The 3rd Platform of mobility, cloud, Big Data/analytics, and social business has brought a profound transformation to business and to the business' relationship with IT. To achieve long-term success, organisations need to adapt and refine their enterprise architecture (EA). However, the pace of technology introduction, the volume and variety of data, and the complexity of IT-enabled business functions make it tempting for IT organisations and leaders to postpone architecture efforts as unnecessary or low priority. Unfortunately, this couldn't be further from the truth. The only way to manage the increasing complexity and speed of change is to have an architectural vision that addresses the many drivers and forces shaping these changes and to back that with appropriate tool support.

New approaches to IT management and business transformation will help to drive best practice in running IT as a business and allow successful management of the transition from old-style

architecture and development practices to new ones based on a service delivery model, encompassing DevOps, agile and cloud service source. Furthermore we expect to increasingly see these practices unified through modern approaches to enterprise architecture such as the Open Group's IT4IT.

FOR FURTHER INFORMATION

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