DIGITAL TRANSFORMATION AND ENTERPRISE SERVICE MANAGEMENT WHAT'S NEXT?

KEY QUESTIONS:

IFS WHITE PAPER

Tom Bowe, Global Industry Director, Service Provider Industries, IFS, June 2016

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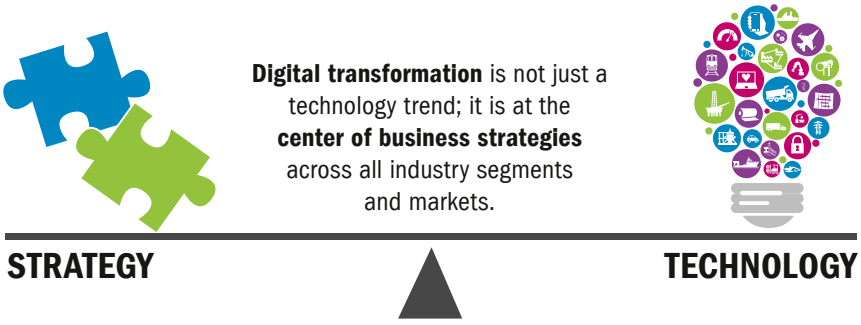
DIGITAL TRANSFORMATION AND ENTERPRISE SERVICE MANAGEMENT

TOM BOWE, GLOBAL INDUSTRY DIRECTOR, SERVICE PROVIDER INDUSTRIES, IFS

Digital transformation is the predominant trend impacting today's global business. Broadly speaking, digital transformation speaks to the changes produced by the application of digital technology to society at large—just walk down a street or go into a coffee shop and look at the eyes focused on the ubiquitous smartphone. But for business, digital transformation goes beyond the tactical application of technology—something that has been happening in enterprises for years—to the strategic incorporation of digital technology as the very basis for competition. It is transforming business models by speeding innovation and making ongoing practical gains in operational efficiencies, product design, development and delivery, and customer relationships. It's changing the way companies think about coming to market.



Consider what digital transformation has done to the service sector—moving it from the periphery of enterprise operations (i.e., a necessary cost of doing business) to an increasingly pivotal role as a profit center, revenue stream, and competitive differentiator in terms of customer satisfaction. The combination of technological innovation with the prevalence of economic uncertainty has transformed the environment for service management from one that was fragmented and reactive to one marked by increasing speed and agility, greater integration, and more transparency all the way to the end-user. This is necessary to better meet rising customer demands.

In this age of digital transformation, the old methods of service simply don't apply anymore. World-class organizations must now anticipate service needs before they manifest as problems by taking a proactive approach to service delivery. To be sure, the technologies driving the digital transformation are both ratcheting up the pressure on service while providing new opportunities. Those companies looking to what's next as service continues to evolve will benefit greatly as the digital transformation continues.

DIGITAL TRANSFORMATION IS...

transforming business models by speeding innovation and making ongoing practical gains in operational efficiencies, product design, development and delivery, and customer relationships.

STRATEGY

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DRIVING THE TRANSFORMATION

The technologies of social media, mobile computing, cloud computing, analytics, and the Internet of Things (IoT) are the principal drivers of digital transformation. As a group, these technologies comprise a platform defined by the interdependencies between them, and Gartner notes that these interdependent trends are "transforming the way people and businesses relate to technology."[1]

Particularly key to the service sector has been the development of IoT. According to IDC, "The Internet of Things is one of a handful of technology areas [that] are set to drive growth and innovation in the coming decade. It both enables and is fueled by digital transformation—it allows companies to digitalize, optimize, and automate processes [that] were not previously connected to IT systems."[2]

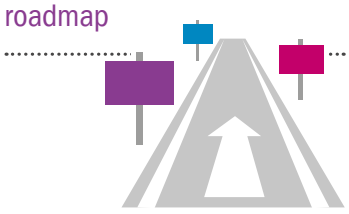
As the number of connected endpoints grows exponentially, massive amounts of data will be produced:

- The installed base of IoT endpoints will grow to more than 30 billion by the end of the decade from just less than 13 billion units in 2015.
- As a consequence, machine-generated data will comprise an increasing share of stored data: by 2020, 10 percent of the 44 zettabyte digital universe will originate from IoT devices.
- In five years, there will be seven times more IoT data than there is today.

All this will drive the need for more enterprise systems to deploy, manage, and make use of IoT, as well as the necessity to establish standards for interoperability and connectivity. From an infrastructure perspective, traffic will shift from the center of the network outward to inward from the edge, as increasingly more data flows from the connected devices of IoT into the data center. This will affect computing and communications architectures.

Two related developments are the convergence of technologies and edge data processing. As operational technologies (OT) increasingly include software and sensors, OT and IT converge in systems comprising smart machines, storage systems, and facilities capable of autonomously exchanging information, triggering actions, and controlling each other independently. While IoT data can be processed at the data center or at the edge of the network, the amount of content that will be generated at the edge will demand that process queries be delivered to the data rather than bringing the data to the enterprise data center. Indeed, edge processing will drive innovation in analytics, systems, and services management.

To succeed with IoT and digital transformation more broadly, [it] is important to address it as an evolutionary process and have a clear roadmap



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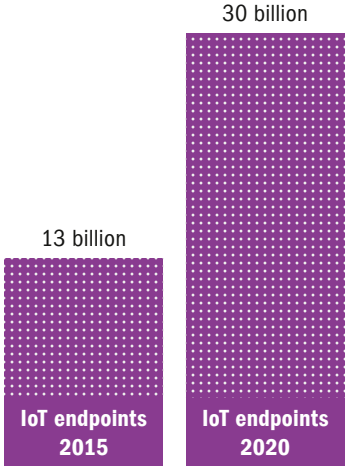

[1] Gartner, "The Nexus of Forces: Social, Mobile, Cloud and Information," December 3, 2014; www.gartner.com/technology/research/nexus-of-forces/

[2] IDC, "Digital Transformation: An Internet of Things Perspective," March 2016

DRIVING THE ADOPTION

For businesses, the move to leverage IoT and realize digital transformation is driven by the real value the transformation promises in three key areas:

Customers

Companies will win business and differentiate themselves through the greater customer satisfaction and better customer experiences facilitated by digital transformation.

Operations

Digital transformation will open up new operational efficiencies, productivity gains, and cost benefits for those companies that successfully make the transformation.

Offerings

By enabling businesses greater agility to broaden or change their business models, digital transformation supports the introduction of innovative products and services to meet changing market dynamics.

For digital adopters, the focus must be on applying their industries' most important innovations in a way that adds tangible business value and benefits in the here and now while always looking ahead to what's around the corner. This is essential if companies are to meet the unique challenges and capitalize on the opportunities digitally transformed approaches present for realizing cost savings, performance gains and competitive differentiation.

A KEY ADVANTAGE OF IoT...

is that it provides objective insight into business processes, allowing you to pinpoint the exact parts of the process that should be addressed.

IMPACTS ON SERVICE

For service providers, the digital transformation will mean increasing competitive pressure in terms of time to response. At IFS, we believe there will be a rapid escalation in response time competition across the service provider industry. Response times are shortening because of customer expectations, technology capabilities, and competitive pressure .

Because of the disruptive nature of technologies such as IoT, the change will not be incremental. If your current response time is a week, it's not enough to reduce it to six days. It will have to be a more dramatic reduction, and those that move first will have an advantage. Expectations are changing from days to hours or minutes, and those that are left behind will lose business.

Knowing the status of different devices enables a more streamlined service organization that leverages predictive maintenance.

Organizations that leverage IoT and digital transformation can shift the service paradigm in their markets by reducing their response times by 80–90%. Equipment is a revenue-generating item, and when equipment fails, that failure has a significant impact on revenue and productivity. Customers can change the game and reduce penalties associated with service-level agreements by increasing the uptime of equipment. If things do go down, being able to respond in minutes is a significant advantage, one that can dramatically affect margins and growth.

By leveraging IoT and Digital transformation organizations can reduce response times by **80-90%**

IoT IN ACTION—ADDING A COMPETITIVE EDGE IN REAL LIFE

A good example of this phenomenon is happening at Cubic Transportation Systems, a San Diego, California-based company that manages transportation systems in large metropolitan cities such as San Francisco, Atlanta, and London. Cubic is responsible for making the whole transportation system structure as reliable and efficient as possible. Say, for example, a ticketing machine goes down; it's critical that they resolve that problem quickly. Having the tools and capabilities to respond in minutes is extremely beneficial to their business model. To accomplish this, one of the tools Cubic employs is dynamic scheduling optimization through IFS's Dynamic Scheduling Engine. This allows them to dynamically route the technicians with the right skills to the most urgent tasks in a matter of seconds.

CUBIC LEVERAGES IoT BY...

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Cubic technicians ride the system and take their breaks in places where they are best able to respond quickly based on predictive analytics that show where and when the next failure or problem is most likely to occur. Cubic looks at its assets in the field and their GPS locations to deploy the right asset to resolve a situation most rapidly. This can even mean moving one technician from an active job and routing another technician to take over that job.

Another IFS client—Lincolnshire, Illinois-based Sysmex America, Inc., a company that markets blood analysis equipment—is a good example of how a company is using digital transformation to change its business model. Sysmex is leveraging IoT to change its service model by assisting technicians using its equipment. Through the sensors on the blood analyzers, Sysmex can provide its customers assisted online training, remote monitoring, and remote troubleshooting.

SYSMEX LEVERAGES IoT BY...

changing its service model by assisting technicians using its equipment.

Even though the medical industry has significant regulations, Sysmex was able to navigate these obstacles and come up with a validated IoT service offering that provides a significant competitive advantage for the company. It can respond to issues remotely, perform software updates and system resets, as well as look at outputs of the equipment online to speed up recognition of, and response to, issues proactively.

SUPPORTING THE DIGITAL TRANSFORMATION IN SERVICE

A company pursuing digital transformation must have tools that allow executives and managers to review and orchestrate processes that align with their business strategy to ensure process execution delivers that strategy. This means bringing data to the desktop, visually, to provide decision makers a complete understanding of which functions deliver real customer value, which are less effective, and which waste both time and resources in terms of meeting organizational goals.

Ultimately, this enables businesses to accelerate the realization of their business strategy—in this case, by moving to become a digitally transformed business—by making better decisions, faster. This can happen by assessing real-time business performance in the context of how it affects key business processes and goals, giving managers real-time operational intelligence and actionable controls to solve issues before they become problems. The solution is about strategy acceleration and execution.

STREAMLINE, AUTOMATE, OPTIMIZE

At IFS, we focus on the execution of the service delivery process. For our customers, optimizing execution is first and foremost, so the primary goal of our software is to have that execution streamlined, automated, and optimized.

We've also invested heavily in predictive analytics, getting ahead of the curve so that when equipment has been instrumented, sensors put data into the cloud. Machine learning algorithms then assess that data, and, in conjunction with historical information, come up with a predictive model that companies can rely on for their service delivery model. That model is optimized. To effectively leverage that, we have intelligence to assess the situation in real time and trigger action based on the assessment.

This leads to an IoT approach. To realize the value from an IoT solution, an organization's enterprise software must capture data effectively, present it in real time, and make it actionable. To get the most out of this, we need to take an integrated look at new technologies. The strength of digital transformation is not in the individual technology, but in how different technologies reinforce each other. A contemporary example is the growing use of drones in industry.

Take the case of aerial power line inspections in forested areas. While aerial power lines are generally easier to run and more cost effective to build, they are vulnerable to severe weather. If a tree falls on a power line, it disrupts service and typically requires a helicopter to be sent out for inspection. Clearly, drones are more cost-effective than helicopters in doing such a scenario.

BENEFITS FOR DECISION MAKERS:

- Progress visible in real time
- Understand functions that deliver real value
- Action on controls
- Make faster and better decisions
- Meet organization goals

By leveraging the Microsoft Azure™ IoT cloud platform, IFS is partnering with Microsoft to collect large IoT data volumes and feed them into IFS Applications™.

IFS took this a step further, combining computer image analysis with the IFS IoT Business Connector™ to enable the drone to work entirely autonomously. The drone flies over the power line, and the video imagery that the drone provides is immediately processed to detect any obstructions in real time. The observations are transmitted through the IFS IoT Business Connector to IFS Applications™, upon which a work order can automatically be scheduled and dispatched in the most optimal way.

In many industries today, drones are providing an array of opportunities and allow businesses to realign resources, gather data, reduce costs, ensure safety, optimize processes, and increase efficiency. Combining that with other new opportunities, such as the internet of things (IoT), opens up for even greater benefits.

Maximum system uptime

Satisfied customers

WHAT'S NEXT?

A recent report on the state of digital transformation had some interesting results: 88 percent of companies surveyed said they were undergoing digital transformation efforts, but only a quarter had an understanding of what it is.[3] The challenge creating this gap, according to Forbes, was not investment in technology but rather the realignment of business models to reflect the transformation being sought.[4] This underscores the point made by IDC: digital transformation is not just a technology trend, but rather a core business approach at the center of enterprise strategies across all industry segments and markets.[5]

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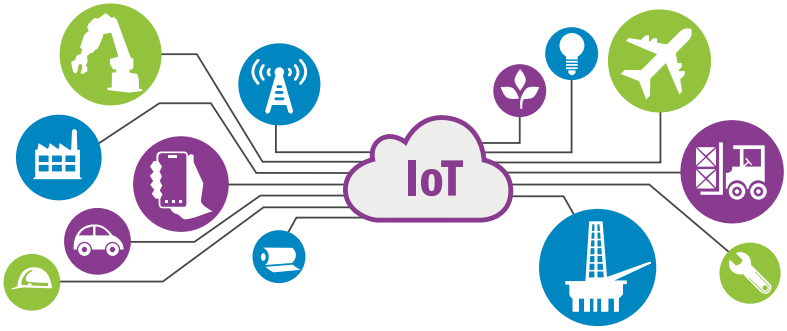

The advent of digital transformation has both immediate and long-term implications for service providers. You need to identify and assess the value of your data and build necessary IT platforms to take advantage of new technologies, particularly IoT—now. You also need to evaluate and reevaluate vendors in the context of what is happening now. Those who will help you realize the digital transformation you seek will have a deep and committed understanding of what digital transformation means—and can achieve—across the enterprise, so they can help you execute effectively when digital opportunities present themselves, as they will.

[3] Solis, Brian, "The 2014 State of Digital Transformation," Altimeter Group, 2014.

[4] Bloomberg, Jason, "Digital Transformation by Any Other Name?" *Forbes*, July 31, 2014.

[5] *Ibid*, IDC.

IDC: The Internet of Things is one of a handful of technology areas [that] are set to drive growth and innovation in the coming decade.

For some organizations, facing these challenges may be threatening or intimidating, but for others, like Cubic and Sysmex, they lead to pragmatic solutions to today's challenges that set them apart as industry leaders.

In these cases, organizations have reached out for what's next—actively seeking it and looking to shape it. Cubic found it in dynamic scheduling; Sysmex in changing its business model to set its service above the crowd. All of them believe their best days are ahead of them—and what's next is what really matters. They don't just take opportunities—they make them by actively participating in the transformation process.

In that sense, they are characteristic of IFS customers.

ABOUT IFS

IFS is a globally recognized leader in developing and delivering enterprise software for enterprise resource planning (ERP), enterprise asset management (EAM) and enterprise service management (ESM). Founded in 1983, IFS brings customers in targeted sectors closer to their business, and helps them be more agile and prepare for what's next in their industry. IFS's 2,800 employees support more than 1 million users worldwide from its network of local offices and through a growing ecosystem of partners.

For more information about IFS, visit **IFSworld.com**

AMERICAS.....**+1 888 437 4968**
ARGENTINA, BRAZIL, CANADA, ECUADOR, MEXICO, UNITED STATES

ASIA PACIFIC..... **+65 63 33 33 00**
AUSTRALIA, INDONESIA, JAPAN, MALAYSIA, NEW ZEALAND, PHILIPPINES, PR CHINA, SINGAPORE, THAILAND

EUROPE EAST AND CENTRAL ASIA.....**+48 22 577 45 00**
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EUROPE CENTRAL.....**+49 9131 77 340**
AUSTRIA, BELGIUM, GERMANY, ITALY, NETHERLANDS, SWITZERLAND

EUROPE WEST..... **+44 1494 428 900**
FRANCE, IRELAND, PORTUGAL, SPAIN, UNITED KINGDOM

MIDDLE EAST AND AFRICA.....**+971 4390 0888**
INDIA, SOUTH AFRICA, SRI LANKA, UNITED ARAB EMIRATES

SCANDINAVIA.....**+46 13 460 4000**
DENMARK, NORWAY, SWEDEN

FINLAND AND THE BALTIC AREA..... **+358 102 17 9300**
ESTONIA, FINLAND, LATVIA, LITHUANIA

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