



DIGITAL TRANSFORMATION AND ENTERPRISE SERVICE MANAGEMENT WHAT'S NEXT?

KEY QUESTIONS:

P3

How will IoT and 'digital speed' cut service response times by up to 90%?

P3

How can you use the rise in dynamic scheduling to increase field service efficiency?

P8

How can you exploit sensing to pre-empt product failures?

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.

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.



Digital transformation is not just a technology trend; it is at the **center of business strategies** across all industry segments and markets.



STRATEGY

TECHNOLOGY

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.

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

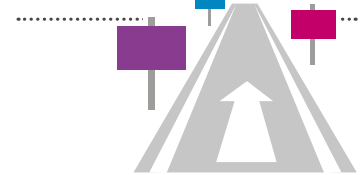
As the number of connected endpoints grows exponentially, massive amounts of data will be produced:

- 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.

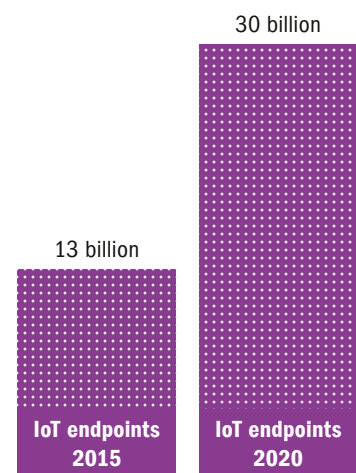
All this will drive the need for more enterprise systems to deploy, manage, and make use of IoT, as well as the necessity to establish standards for interoperability and connectivity. From an infrastructure perspective, traffic will shift from the center of the network outward to inward from the edge, 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



In **5 years**, there will be **7 times** more IoT data than there is today



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.

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.

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.



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.

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 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.

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.

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

CUBIC LEVERAGES IoT BY...

dynamically routing the technicians with the right skills to the most urgent tasks in a matter of seconds.

SYSMEX LEVERAGES IoT BY...

changing its service model by assisting technicians using its equipment.

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 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.

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 is incorporating the IoT infrastructure into IFS Applications to collect data from devices and sensors and trigger actions in the system to empower organizations to be more agile, make smarter business decisions, and automate processes in a new and transformative way.

SMOOTHER RIDES IN OSLO WITH DIGITAL TRANSFORMATION

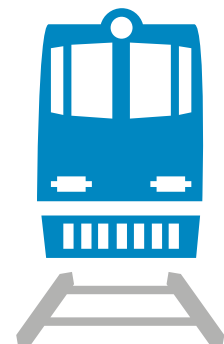
An example of how this works is seen at Sporveien. Oslo, Norway-based Sporveien operates the track and maintains the stock of the Oslo Metro and Oslo Tramway, as well as owning eight operating subsidiaries.

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 worked with Sporveien as an early adopter of the IFS IoT initiative. Sporveien wanted to use the approach to focus on an issue it was having with train doors.

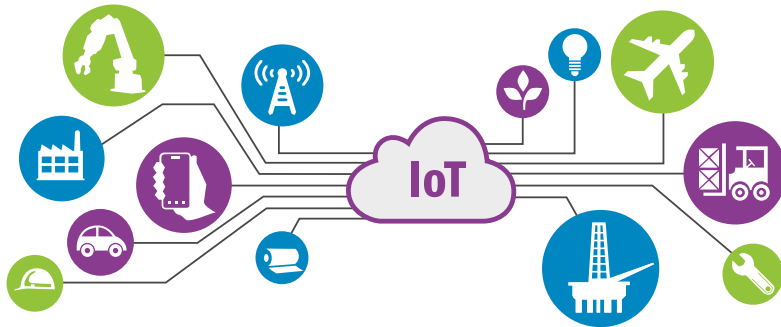
When a door doesn't work and becomes jammed, it's a big issue for Sporveien. An open door prevents a train from moving, and when a train cannot leave a station, the next train is also delayed. Accordingly, a problem with a single door can cascade into a delay for many trains, creating issues for thousands of riders. Beyond being a safety and scheduling hazard, the door-impaired train is no longer operational and has to be moved into a maintenance area for service. All of this affects train schedules.

Each door housing uses a rail with bearings on which the door slides. The bearings need lubrication and can wear. Research into the problem determined that the speed at which a door closes slows down gradually prior to the point at which it becomes stuck open—a discovery that led to the creation of an application to monitor and automate maintenance proactively moving forward.

After the pilot phase, Sporveien will be able to predict failures with a higher degree of accuracy—and prevent them from disrupting operations. Instead of having a door fail and set off a chain of disruptive events, an early warning system executes service before failure. The result is maximum system uptime—and 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



EARLY ADOPTER OF THE IoT INITIATIVE:

Sporveinen, operates the track and maintains the stock of the Oslo Metro and Oslo Tramway, as well as owning eight operating subsidiaries.



Maximum system uptime

Satisfied customers



FORBES SURVEY SAYS:

88% of companies said they were undergoing digital transformation efforts.

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.

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.

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, Sysmex and Sporveien, 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; Sporveien by using IoT to keep operations running smoothly and customers satisfied. 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). IFS brings customers in targeted sectors closer to their business, helps them be more agile and enables them to profit from change. IFS is a public company (XSTO: IFS) that was founded in 1983 and currently has over 2,800 employees. IFS supports 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

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IFS ENTERPRISE SERVICE MANAGEMENT™ HELPS AUTO WINDSCREENS INCREASE EFFICIENCY AND CUSTOMER SATISFACTION WITH A SINGLE ENTERPRISE SOFTWARE PLATFORM

For multiple industry award winner Auto Windscreens, a leading UK-based automotive glass company, customer satisfaction is more than just a value-add—it's the very foundation for business success. The company's goal is to provide a level of service that ensures that every single customer is entirely satisfied. IFS Enterprise Service Management™ is helping achieve this goal.

Double winner at the British Insurance Awards in 2014—the Customer Care and Service Supplier of the Year awards—Auto Windscreens sets its sights on being the best in its business so that the disruption and inconvenience to customers' lives resulting from repairs and replacements are kept to a minimum.

IFS ENTERPRISE SERVICE MANAGEMENT STOOD OUT

In 2010, Auto Windscreens identified a need to review its operational software solutions. The system in place at the time was not offering the support that was required, so the company looked at what was available on the market seeking a possible alternative. Auto Windscreens sought a single enterprise applications platform that could be easily implemented into their contact center. “Not only did we want to better schedule our technicians, but we also wanted to put the same application into the hands of our technicians.” says Adrian Egley, Applications Support Team Leader for Auto Windscreens. “We wanted to be the first company in our sector to have technicians with a mobile device in their hands. That would make a difference to our business and customers.”

Egley thinks that IFS Enterprise Service Management really stands out. “It is the one application that enables us to service the customer from end-to-end, whether that be call-taking, stock revision, warehousing or dispatching work to technicians,” he says. “It is the one application where we can bring all those components together and deliver excellent service to the customer. It gives us the ability to control and implement processes to be able to take Auto Windscreens forward.”

Within IFS Enterprise Service Management, Auto Windscreens uses IFS Field Service Management for the efficient management of customer service, parts within the supply chain, and invoicing; and IFS Mobile Workforce Management for the optimal scheduling of technicians to customer locations to make the windscreen repairs and replacements.

QUICK UPTAKE, IMMEDIATE BENEFITS

Uptake among the staff at the busy contact center has been fast and very positive. Implementing the new solution, with a dedicated call flow for each agent, is a “real

ABOUT AUTO WINDSCREENS

Auto Windscreens is a leading automotive glass company in the United Kingdom specializing in windscreen repair and replacement. Auto Windscreens is headquartered in Chesterfield, Derbyshire, and works predominantly with insurers, brokers and fleet management customers. It is one of the largest windscreen replacement operations in the UK, with a mobile fleet of trained technicians and a 24/7 Chesterfield-based customer service contact center. Auto Windscreens is owned by Trifords Ltd.



©Photo Auto Windscreens

game changer”, Egley enthuses. “It gives our agents the ability to control the call with the customer, get the right level of detail and, in the end, to be able to schedule an appointment that our customers are happy with. It means that it’s now much easier to schedule technicians to get to the right place at the right time.”

Moreover, since implementing IFS Enterprise Service Management™, invoicing has become almost real-time. Our technicians have handheld devices, which means they are connected to the main system and can complete tasks at the roadside rather than waiting to get back to the office. “One of the key benefits for Auto Windscreens is that invoicing, which was taking two to three days, is now actually being done within the hour. Our insurance and fleet customers get much more immediate information,” says Egley. “The technicians are really positive as well about this change because they are ‘flying through their work’, as Egley puts it, and completing jobs in a much more timely manner.

Another key impact of implementing IFS’s mobile solution is that service calls to the IT service desk have reduced by 75% month on month, and uptime for the application has been around 99% for the past 12 months.

“We’re definitely a more agile organization,” says Egley. “We no longer hold any stock within our Service Supply points. We are servicing the customers when they need the stock and we get it delivered on time. Our customer satisfaction results are actually showing this as well.”

FLEXIBLE APPLICATION ENABLES BUSINESS AGILITY

One of the major advantages of implementing IFS Enterprise Service Management is that it really gives Auto Windscreens ample control to be able to modify the application, to change screen layouts, drive system processes and deliver a quick turnaround of changes to its customers, which its business users really appreciate.

IFS Enterprise Service Management has enabled Auto Windscreens to be more dynamic with the changes it delivers back to the business as well. Egley explains, “A great example is our Sales Director, who wanted some changes made—process building—and we turned that around in three days, from testing and building to delivery into a production environment. In his previous role, he said something similar, using another system, took him three months to get implemented.”

Over the last five years of using IFS Enterprise Service Management, business intelligence has really come into play too. “It’s a really user-friendly system and my team can easily extract data and then present it back to the business in a meaningful way to be able to drive efficiencies, drive processes and understand when to make changes.”

IFS—PART OF AUTO WINDSCREENS’ FUTURE PLANS

Auto Windscreens is a very forward-thinking company and believes that IFS Enterprise Service Management will continue to enable it to grow and implement its visions over the next five years. “To underpin the strategic decisions made five years ago, it was key that we got the right software in place,” Egley says. “With IFS Field Service Management, IFS Mobile Workforce Management and the mobile applications provided by IFS, we know we’ve made the right decision.”

Egley is also pleased with the way IFS has collaborated with Auto Windscreens, taking the time to understand its business needs. “When we want to change something in the system, IFS respond quickly and take time to really understand what we want to achieve, we then work closely together to make improvements and move our business forward,” he says. “Today we’re receiving great customer feedback on review websites and through our social media channels, and we finished in the Times Top 100 best companies to work for. So we’ve got great customer satisfaction and great employee satisfaction as well.”

BENEFITS

- Swifter invoicing—now taking minutes instead of days
- Reliable enterprise software—99% uptime
- Calls to Service Desk reduced by 75% thanks to mobile access to application
- Easier access to business intelligence data
- Faster, more accurate scheduling
- Greater customer satisfaction
- User-friendly application that enable faster employee uptake



It was the one application that would enable us to service the customer from end-to-end, whether call-taking, stock revision, warehousing or dispatching work to technicians.

Adrian Egley, Applications Support Team Leader, Auto Windscreens



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