



Assuring the Enterprise in the Digital Era – Manufacturing

Digital transformation (DX) trends and new business models in the data-centric economy



Knowing what's happening on the network is important; knowing why it's happening is the new commercial imperative for the digital enterprise.

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Digital transformation is changing the game

The world of business is undergoing a seismic shift in business process and customer experience brought on by the rapid evolution of technology and connectivity. As the forces of change continue to accelerate and enterprise agility becomes more software-centric and unified, today's forward-thinking businesses need to recognize a simple, universal truth: digital transformation (DX) is leading the charge toward the future.

Based on this truth, NETSCOUT® sought to identify market insights on the business challenges involved in DX. Hence, in March 2017, NETSCOUT commissioned Vanson Bourne, an independent global research firm, to research DX readiness and its immediate impact on global businesses.

Vanson Bourne surveyed 400 IT and business decision makers in the U.S., UK, Germany, and France on the challenges they face, their preparedness, market position and what they hope to achieve. The survey looked at the attitudes held towards the pace of digital change across several key industries, including the manufacturing sector.

While 'going digital' is a major undertaking, assuring the delivery of business services that are always available and always working is what bonds the customer to the organization over time.

Faced with escalating levels of interconnectivity and service inter-dependencies that now exist, the priority for the digitally transforming manufacturing company is to leverage information in order to gain insight into service delivery, operations and business performance. Clearly, organizations are aware of the need for DX. **Almost eight in ten (79%) survey respondents believe that DX is an urgent requirement for their organization.**

The majority of executives polled also stated that their organization measures ROI on technological/IT investments. More than half measured ROI by looking at operational efficiency, customer experience, security benefits, and financial returns. Eight in ten organizations that measure ROI on technological/IT investments such as mobility, artificial intelligence/robotics, and machine learning expect that cloud solutions, and IT security would have a positive ROI.

Streamlining and transforming manufacturing operations

Tasked with the responsibility of managing global demand with facilities spread around the world, the manufacturing sector has a long history of leveraging technological innovation in every corner of operations. With the increasing pace of change in the connected world, the **manufacturing and production sector is under more pressure to ensure new products reach the market as fast as possible, with 63% of sector respondents in our research citing this as an impact.** For most large-scale manufacturers, with vastly complex processes and deeply integrated supply chains, DX is enabling them to more easily adapt to changing business requirements while evolving the inter-connectivity between people, machines and products as never before.

In mass production environments, volume is everything. The mantra is 'build, sell, ship, bill.' Finished goods in most high-production environments can't be stored, so any system disruption can prove costly. And with most global manufacturers having plants world-wide, any disruption to IT systems and services could impact the value chain, from order processing, production lines, shipping, to accounts receivable. For this reason, manufacturers are always looking at technological advances to streamline and transform operations.

Machine-to-machine (M2M) communications and automation technologies have existed in the industrial sector for some time, but the wide-reaching adoption of industrial Internet of Things (IIoT) is being viewed as a game changer for enhancing operational efficiency and scaling up automation processes. Incorporating machine learning and big data technology, IIoT improves

the actionable data provided by the myriad of sensors able to capture and communicate data, in most cases more consistently and accurately than the human equivalent. **IoT is clearly a big part of DX in this sector with 82% of research respondents identifying it as either completely essential or very important to their organization's DX strategy.**

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Despite its early adoption within an industry that was behind its development, IoT also has the potential to dramatically expand IT complexity within heavily data-driven, industrial environments. This makes service assurance even more important for ensuring that companies can pinpoint the root cause of performance degradations anywhere along the service delivery path and quickly resolve any threats. Any disruption in a highly connected production environment, where there is no 'off button,' can result in a stoppage or slow production cycle, costing the business both time and money.

Manufacturers have long recognized the importance of applying the latest technologies and best design practices to manage operations and services, such as evolving automation processes or improving productivity and maintaining closer control of the supply chain. New possibilities now exist with IoT that can streamline and automate operations, utilizing analytics which drive global initiatives and hybrid cloud that supports CRM, ERP and other services.

The sector is increasingly adopting software-defined architecture, especially when it comes to leveraging virtualization and consolidating data centers in multiple locations that manage everything from inventory, shipping, billing, and scheduling. The software-defined data center (SDDC) is especially suited for service innovation and deploying applications faster – all while reducing operating expenses. In spite of these DX benefits, SDDC also introduces additional layers of IT complexity which result in new service assurance challenges. The IT organization is tasked with not only accelerating data center migration to virtualized infrastructures, but implementing it with confidence and without compromising the end-user or customer experience.

With IT systems and services encompassing everything from order processing, production line automation, shipping, supply chain logistics and accounts to CRM, CAD/CAM design and even DNS availability – crucial for maintaining web-based apps – the IT organization must have end-to-end visibility with rapid and clear insights to triage performance issues and assure service delivery. When that happens, the manufacturer can consistently maintain high levels of productivity, lower costs, reduce time to delivery, and gain the operational agility to match supply with demand.

Supporting the burgeoning growth of IoT: NETSCOUT's nGeniusONE® Service Assurance platform ensures the interoperability of IoT platforms, protocols, applications and services with real-time insights into device, network and cloud behavior. Our best-in-class service triage approach gives early warning to configuration, timing and latency issues, which translates into fewer user complaints and faster problem solving.

The rapid pace of change

Although DX is a journey some organizations have already begun, many have yet to start. To be competitive and keep up with the connected world of digital business, forward-thinking enterprises should consider discarding the 'old' mindset in order to realize new digital approaches in customer engagement and business growth. Fueled by the exponential growth in mobile devices, high speed broadband, 4G, and connected 'things,' our increasingly interconnected world is going to place ever larger demands on the data-driven business.

Harnessing intelligence from the data or smart data within this digital landscape is therefore paramount. It will enable the transformation needed for staying ahead of the unfolding trends

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and disruptions that face many businesses. Nearly six in ten (59%) research respondents agree that the pace of digital change is accelerating uncontrollably and as organizations strive to meet ever higher customer expectations and stave off competition, digital transformation strategies will help many define a new business future.

Turning data into actionable smart data: In order to support DX initiatives, manufacturers need business analytics powered by smart data that is well-structured, contextual, available in real time, and based on end-to-end pervasive visibility across the entire organization. Since every action and transaction traverses the operation through traffic flows, a.k.a. wire-data, it is the best source of information to glean actionable insight from in this digitally connected world.

NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology generates smart data based on software-centric pervasive instrumentation of traffic flows that are collected and processed at the source – from physical and virtual (SDN/NFV) infrastructure on-premises, SDDC, and hybrid cloud environments - to produce service contextual metadata in real time. This allows IT to gain critical insights into service delivery, business operations, and other vital business performance indicators.

About NETSCOUT

Today's corporate enterprise is a rich and complex array of applications, services, software, and hardware. Your business and reputation rely on the "Always On" availability of these systems and services. At NETSCOUT, we are in the business of keeping all those discrete pieces running in harmony and without interruption.

As a leading technology provider, we are delivering next-generation business assurance solutions. We know traffic data is the singular source of truth when it comes to dealing with resource constraints, disparate tools, IT silos, outdated processes, network complexity, and exponential data growth. NETSCOUT's nGeniusONE® Service Assurance platform with Adaptive Service Intelligence (ASI) technology enables top-down service management and traffic-based intelligence across complex, converged IT environments. With our platform, you gain essential visibility into the relationships and interrelated nature of the entire IT environment to effectively triage service issues.

ASI technology continuously monitors the service delivery environment to identify performance issues and provides insight into network-based security threats, helping teams to quickly resolve issues that can cause business disruptions or impact user experience. ASI is at the core of everything we do, from the nGeniusONE Service Assurance platform to our security assurance solutions; Arbor Advanced DDoS and Advanced Threat solutions. Application assurance is key to transforming the data center, and with the introduction of software appliances, ASI technology allows deeper visibility into the interactions of the different components of modern applications. This is the case whether they run in the data center or in multi-cloud environments, and this service intelligence is also the basis for building and discovering new insights into operations, including security and system planning.

In an increasingly complex, vulnerable and connected world, our service assurance and security assurance solutions, with smart data technology, enables top-down service management and traffic-based intelligence across complex, converged IT environments, providing extraordinary performance, service quality and operational excellence. With NETSCOUT, you gain the confidence to operate, innovate and compete at the highest level.

Contact us to learn more: <https://www.netscout.com/company/contact-us>



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