

DIGITAL BUSINESS

The Time for Digital Reinvention Is Now

Manufacturers build a platform for innovation



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We've come a long way since zeros and ones were the primary defining characteristic of digital. Over the past decade, nearly every aspect of business operation has been digitized — and continues to be so. Accelerated innovation, technology viability and a focus on digital maturity have launched a new era of digital reinvention. In this new era, manufacturers can scale their digital landscape, integrate across the value chain and drive never-before realized value.

While a high tide floats all boats, the social and economic upheaval caused by the global pandemic created a low tide that illuminated clear disparities between different organizations' digital readiness.

Companies that once had multi-year digital transformation plans have realized they must expedite change. Seven in 10 executives surveyed in a recent NTT DATA and Longitude report agree, saying their organizations would have been more resilient today if they had invested more in digital technologies prior to the pandemic.¹

The research defined business "Leaders" and "Laggards," with the Leaders effectively implementing leading digital capabilities such as cloud, artificial intelligence (AI), automation, advanced analytics, mixed reality and the internet of things (IoT) to

How has the COVID-19 crisis impacted the following aspects of your business to date?¹



accelerate their vision and value creation. This positions these organizations to not only survive the pandemic but also profit and grow in the face of it. With the help of their technology portfolios and capabilities, Leaders have built resilience and agility that enables them to adapt faster than the competition at times of great uncertainty.

The silver lining

While Leaders use technology to differentiate and transform businesses, the good news for those who haven't yet done so is that it's still possible to start and achieve — or exceed — market parity. With the right vision, culture, approach, digital technology capability foundation, and adoption of agile business and technology practices, manufacturers can leapfrog to a competitive market position. According to a Chinese proverb, "the best time to plant a tree was 20 years ago. The second best time is now." In this spirit, let's begin digital reinvention now.

Digital reinvention is all about business, but the right technology backbone is critical

From a business perspective, digital reinvention should focus on enabling enterprise-wide business value creation. This could include rethinking a variety of functions, from supply chain and quality control to customer management, logistics and compliance.



Opportunities for value creation are everywhere:

- **Enhanced customer experience:** Manufacturers are discovering new and creative ways to sense and serve changing customer demand with greater agility.
- **Optimized operations:** Connecting, optimizing and fortifying manufacturing operations, supply chain and other business operations is key to maintaining a resilient value chain.
- **Next-generation business models:** It's vital to capitalize on additional revenue streams enabled through newer digital business models to stay competitive and grow.
- **Digital workplace culture:** Enabling a digitally savvy workforce and culture is also becoming one of the keystone capabilities of any organization aspiring to digital reinvention.

Because business is dynamic, digital reinvention should deliver sustainable value that can adapt and grow with the business. This isn't one and done. It's a journey toward continuous competitiveness and differentiation. And it's critical that the foundation on which your business relies is built atop an agile and flexible digital technology capability model.

Achieving such a model requires having the right mix of technology components, such as cloud, analytics, AI, IoT, augmented reality, digital twins, intelligent workflows and process orchestration. It's also important to choose a platform that can fully underpin this digital capability model like Amazon Web Services (AWS).

A digital platform can help aggregate

A digital platform can help aggregate and assess data quickly and efficiently, allowing the business to speed feedback loops — and gain a competitive advantage with each iteration. It can support quick velocity, enabling the business to react quickly to changing market demands. And it can provide the structure for digital initiatives, giving the business the flexibility to enact a wide variety of

innovations, such as improving production line efficiency through IoT-based predictive maintenance.

Though the Leaders in our survey don't cite a particular technology that helps them unlock additional market value, they do demonstrate the importance of maturity when using a suite of advanced technologies.

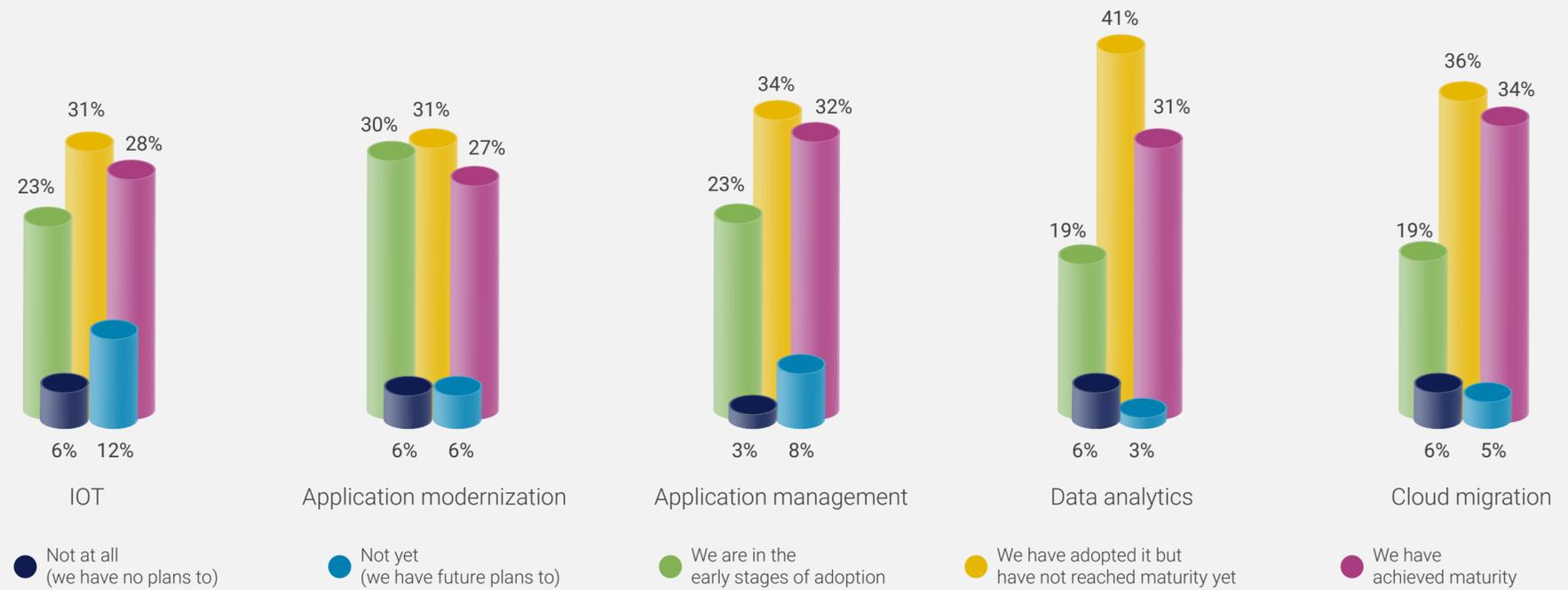


For example, **92%** of Leaders report maturity in data analytics while **94%** say they've achieved it in both IT support and cybersecurity. Laggards agree that maturity in these areas is key, but they've only achieved that level **19%**, **45%** and **35%** of the time, respectively.¹ In general, firms with wider technology adoption drive business transformation and revenue growth faster than others.

Leapfrog to reinvention

For manufacturers looking to leapfrog the competition and create a structure that enables the business to effectively compete today – and well into the future – the good news is that digital innovation isn't like the rungs of a ladder. Manufacturers can identify their end goal and work directly toward it. In the NTT DATA survey, manufacturers identified several areas where they seek to grow maturity. A platform for innovation allows these organizations to directly target, extend and expand to emerging areas such as IoT, AI, machine learning (ML) and automation.¹

To what extent have manufacturers implemented each of the following as part of their digital transformation plans?¹



If an employee has a great idea today, how long would it take to start working on that idea? How long would it take a minimally viable product to move through to production? For many organizations, it's in the order of months. The competition won't sit around and wait. If you don't have a technology platform agile enough to support the digital reinvention goals of the business, start building one today.²

Grow the top line



Manufacturers pursuing a path of digital reinvention can accelerate top-line growth by leveraging digital technologies to enhance the effectiveness of digital sales channels, attract and retain more customers, and grow loyalty and lifetime value.

When the business needs to move fast, IT leadership must quickly align technology resources to meet corporate goals and ensure capabilities can flex and scale as needed. And, when the organization has an idea, it must have a digital platform that allows it to act — swiftly if necessary.³

A digital platform empowers IT leaders to:

- Help the business bring new ideas to market faster
- Deliver more quickly and in smaller increments
- Increase time for innovation with automated self-service provisioning that frees IT resources and speeds development
- Pursue greenfield opportunities, such as pairing sensor data collection with AWS and data analytics for real-time insights

These capabilities also help manufacturers experiment faster. Experimentation drives the innovations that help manufacturers remain relevant to customers. Experiments need not be big; small tests that facilitate learning and improvement can be just as useful, because any step that takes the business forward in its digital reinvention efforts is valuable.

In the book “Good to Great: Why Some Companies Make the Leap...And Others Don’t,” author Jim Collins explores at

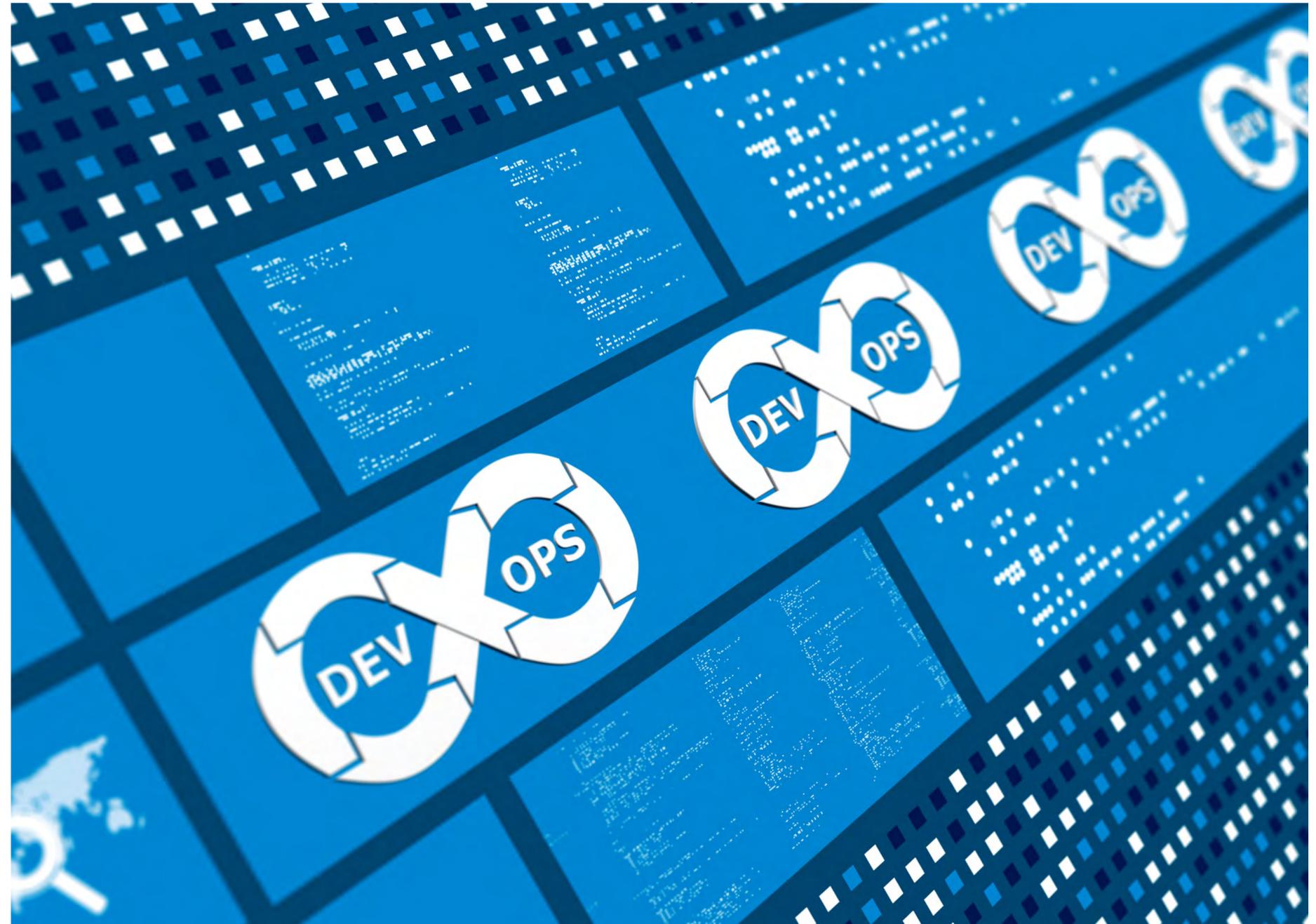
length how small iterations create a flywheel effect where momentum derived from small iterations grows to create competitive advantage.⁴ The point at which the flywheel’s weight starts working to a team’s advantage isn’t the result of a single turn of the wheel. Similarly, it’s the consistent application of learning through experimentation that grows competitive advantage.

Such experimentation can reveal opportunities for new business models and revenue prospects. For example, servitization introduces a new business model that moves manufacturers away from a traditional product model to a solution-focused model that delivers desired outcomes. When paired with IoT, this model can help manufacturers unlock vast amounts of data to offer insights not only related to predictive maintenance but also into customer use patterns. These insights can fuel additional experimentation and lead to new product development.

Speeding experimentation and innovation at Toyota Research Institute

The Infrastructure Engineering team at the Toyota Research Institute (TRI) supports researchers and engineers by making it easier for them to use the power of the cloud in a secure, automated and reliable fashion while not slowing them down. Working with NTT DATA consultants, TRI implemented DevOps methods, processes and automation to reduce tactical, yet manual IT operations activities.

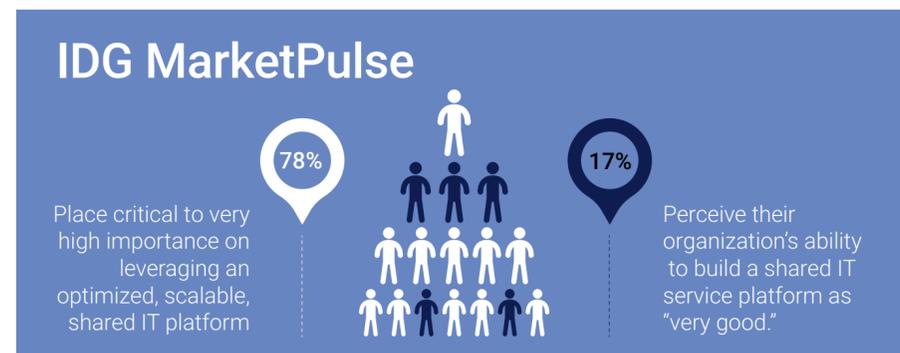
Researchers and engineers now use a self-service portal to provision the AWS assets they need to test new ideas, improving their productivity as they don't need to wait for the infrastructure team to spin up resources anymore. Having a secure cloud sandbox environment enables researchers to try new ideas, fail fast, destroy the sandbox if needed and start over, which helps them innovate at velocity and at scale.⁵



Manage the bottom line

Optimizing costs and realizing economies of scale help a business remain competitive. IT leaders agree that a strong platform is critical to navigate today's volatile, uncertain and ambiguous environment. However, not every organization has a clear path to achieving this goal.

According to a new IDG MarketPulse survey on behalf of NTT DATA, 78% of manufacturing respondents place critical to very high importance on leveraging an optimized, scalable, shared IT service platform.⁶ Yet, only 17% perceive their organization's ability to build a shared IT service platform as "very good."



Digital platforms help businesses meet revenue objectives by:

- Autoscaling resources, which conserves resources when not in use while still scaling to meet customer demand
- Reducing cycle times, thus growing the availability of human resources for additional projects
- Cutting waste from technology delivery pipelines
- Securing the business from vulnerabilities, data loss and other costly outcomes through automated failover, upgrades and compliance

Digital reinvention can contribute to an improved bottom line beyond IT, too. Important operational metrics, such as safety, quality and delivery performance, can be positively impacted by digital reinvention. For example, a smart factory may allow manufacturers to collect, assess and visualize the plant floor, helping increase plant safety. Similarly, by collecting data from multiple sources into a data lake, manufacturers can apply AI and ML to identify potential issues that adversely affect quality.

Keep pace with an experienced partner

Whether they need help catching up, keeping up or getting ahead of evolving customer and distributor expectations, more organizations find they can reinvent faster with the help of an experienced partner. Indeed, IDG's survey finds that more than one-third of IT service delivery needs today are handled by an external party, and a majority of respondents expect this to increase due to added pressure to fast-track reinvention.⁶

What was once a year or two away is now a business imperative that must be addressed immediately. Third-party resources with planning, implementation and management experience are a natural fit to expedite digital transformation plans.

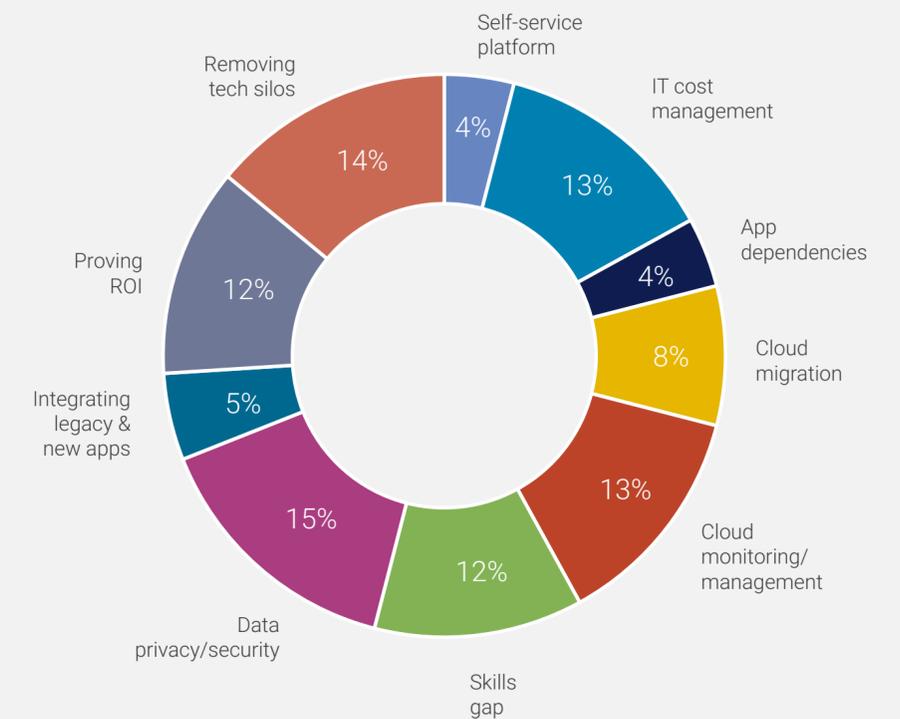
Specifically, cloud managed services benefit organizations by:

- Addressing internal skills gaps with experienced consultants
- Overcoming toolchain challenges with best practice solutions and intellectual property
- Reducing silos
- Optimizing for specific cost, operational control and security compliance
- Growing customer and partner responsiveness through enhanced scalability
- Recommending and educating around areas for continuous improvement

These areas of focus are in-line with IDG's survey respondents, who identify IT cost management, reducing silos and data security as top areas for which they're likely to seek assistance from an external partner.⁶

Ultimately, managed services help free up an organization's best resources so they can focus on strategic, business-impacting initiatives.

Which IT service delivery challenges are you likely to turn to an external partner for help with over the next 12 months?¹



Managing complex workloads

To support rapid transformation, firms need skilled talent who understand modern systems. For example, NTT DATA and Oxford Economics recently conducted a survey about the role of AI in the enterprise in which 44% of executives report that failure to implement AI will adversely affect their bottom line in the years to come.⁷ When innovative technologies like AI are coupled with AWS, they can enable true business transformation that furthers business strategy and grows market advantages.

Yet, these technologies often require even more specialized talent who understands the tools and processes to make them successful.

With NTT DATA's certified AWS-certified consultants, manufacturers have a partner that can support transformative technologies with advanced skills, using this detailed knowledge to their benefit.

Specifically, NTT DATA can help manufacturers:

- Create a foundation for Industry 4.0 digital transformation. By enabling new business models with digital platforms that are scalable, cost-effective and secure, manufacturers can rapidly set up an AWS IoT platform that empowers advanced data analytics and predictive maintenance.
- Ensure security and regulatory compliance. Manufacturers can benefit from cloud-based security by designing a framework that builds in security from the outset. This is accomplished by coding in security controls and using best practices for data privacy laws and other regulatory requirements.
- Connect data points from across the business. By combining analytics and IoT with a secure cloud infrastructure, manufacturers can collect and connect data from different data channels — gaining unique data insights, from the production floor to partner and customer experiences. A secure infrastructure for data stores enables manufacturers to analyze

information and make important data connections that accelerate customer and market insights, helping move more product to market quickly and cost effectively.

- Achieve continuous improvement with cloud brokerage as a service. Digital reinvention is synonymous with continuous improvement, and cloud brokerage as a service is a mechanism that allows manufacturers to continuously push the envelope on cloud-based digital transformation. It does so by helping them keep up with technology changes, providing continuous improvement by leveraging cloud-native and other burgeoning technologies, like AI, across clouds.

NTT DATA provides cloud brokerage services that strengthen a manufacturer's cloud position and set it up for long-term success with strategic cloud advice, aggregation, integration, and ongoing development and management services.

About NTT DATA Managed Hybrid Cloud Services

NTT DATA offers managed cloud services that help expedite digital transformation across public, private, hybrid and multi-cloud environments. When combined with our strategic advisory services, they help manufacturers achieve their business goals at the speed of market while also pursuing continuous improvement.

Our managed services combine with professional service offerings to provide:

- A tailored solution designed to help manufacturers reach their business goals through innovation
- Infrastructure designed to support mission-critical applications and data intelligence that fuels business reinvention
- Cloud-native tools and best-of-breed technologies that create business dividends that fuel further innovation and digital transformation
- Automation and industry best practices that free up a manufacturer's best resources to focus on innovation

NTT DATA consultants guide businesses to their best starting place and help them build a platform for digital reinvention.

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