



# Transform Manufacturing with DXC and AWS





# Introduction

Innovating, improving customer outcomes, and optimizing manufacturing processes are top of mind for C-level decision-makers. Accomplishing these objectives is increasingly found in the cloud. By utilizing purpose-built DXC Technology and Amazon Web Services (AWS) joint solutions and services like SPARK IoT, Data Driven Development (D3), and machine learning operations (MLOps), manufacturers across the globe can harness the benefits to automate, scale, streamline processes, and improve operations, all while reducing costs.

## SPARK IoT

As technology evolves, fast-paced innovation is backed by artificial intelligence (AI), ML, neural networks, deep learning, quantum computing, and SaaS solutions, including SAP. IoT solutions like AWS IoT cloud services—optimized with edge computing, private LTE, and 5G—are the leading technology platforms. SPARK IoT is designed to improve manufacturing, with IoT compute, machine learning, and analytics platforms and services.

## Data Driven Development (D3)

D3 is a powerful data platform designed to support smart product development and improve visibility of operations across supply chains for manufacturing enterprises. With D3, organizations can easily collect, store, and analyze data from a variety of sources, providing actionable insights that can inform decision-making and drive operational efficiency. The platform enables seamless interoperability of data across functions, improves cross-functional collaboration, and streamlines the product development process. By leveraging the power of D3, manufacturers can gain a competitive edge by optimizing their operations, reducing costs, and improving customer satisfaction.

Discover how DXC and AWS collaborate with customers to spearhead digital transformation with solutions that enable dynamic responses to market opportunities, optimize supply chain management, and leverage machine learning and artificial intelligence to move products from proof of concept into production quickly:

## MLOps

MLOps helps teams deploy machine learning and artificial intelligence into production environments so that solutions can be quickly, easily, and intelligently moved from prototype to production. It also provides an engineered platform with structure automation to lifecycle management. Experience a software and business process framework that supports ML development, testing, release, deployment, operations maintenance, and integration with enterprise applications and business processes.

**DXC and AWS can help you achieve your modernization goals for manufacturing through emerging technologies that drive business outcomes at scale. We deliver the right combination of strategic planning, security expertise, and purpose-built solutions that put you on the path to innovation.**

# Why DXC and AWS for manufacturing?

As manufacturers transition from on-premises deployments to the cloud, they face ongoing challenges in integrating new solutions with existing IT systems and practices.

## DXC Technology and AWS: Better Together

Together, DXC and AWS deliver purpose-built solutions that help manufacturers drive innovation while creating new process efficiencies. AWS's agility, scale, and cost optimization combined with DXC's industry expertise and ability to modernize and transform systems and processes, enable manufacturers to optimize technology. Teaming up to deliver IT migration, application transformation, and business innovation to global enterprise clients, DXC and AWS provide the innovation, security, and cost savings to modernize your applications and infrastructure while remaining competitive.

As an AWS Premier Consulting Partner, DXC helps you discover, migrate, modernize, and manage application workloads on the AWS Cloud, allowing you to take full advantage of the latest AWS innovations to create a mature cloud environment that meets your business goals.

1. [Fortune Business Insights, Smart Manufacturing Market. Report ID: FBI103594](#)



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The global smart manufacturing market is expected to grow from **USD 277.81 billion in 2022** to **USD 658.41 billion in 2029<sup>1</sup>**.





# Enabling industry 4.0 with IoT innovation in the cloud

IoT-enabled processes use smart technology with end-to-end audits to guide decision-makers across the supply chain manage and reduce utility and emissions usage, minimize the carbon footprint in distribution and industrial processes, and optimize raw materials utilization.

## Challenge

Global manufacturers continuously seek opportunities to reduce production disruptions and increase efficiencies, but they face several challenges, including:

- Changing consumer behavior favoring convenience over brand loyalty
- Supply chain constraints like material shortages, higher supply costs, and delivery delays
- Mitigating the impact of environmental and social factors on product development and delivery
- Driving cost efficiencies and economies of scale across production and distribution

To capture customer loyalty, manufacturers must embrace emerging technologies with the power to transform their business. In fact, [20% of consumers stated they would pay a premium for products tailored to their unique needs<sup>2</sup>](#).

## Solution

SPARK IoT applications rely on the cloud for processing, analytics, storage, and ML. This powerful solution operates where data is generated, delivering intelligent real-time responsiveness to reduce the amount of data transferred.

## Benefits and results

DXC and AWS help manufacturers optimize product development, manufacturing, supply chain, marketing, and distribution with IoT compute, ML, and analysis platforms and services.

## By using SPARK IoT, you can:






- Lower variable operation costs
- Increase production efficiency
- Minimize production disruption
- Improve safety and quality control processes

DXC and AWS have the expertise to help through the entire implementation process, from consulting and research to pilot implementations, production deployment, and support services.

**45% of consumers said they switched brands due to availability issues<sup>2</sup>.**

**Downtime disruptions can cost a lot—up to \$300,000 per hour for 9 out of 10 companies surveyed—in addition to losing customers due to production delays<sup>2</sup>.**

## Accelerators for Spark IoT

-  **Production Visibility**  
Maximize real-time visibility of production conditions, enabling faster, more informed decisions
-  **Predictive Maintenance**  
Gain visibility into machine health status across systems
-  **Quality Control**  
Leverage computer vision to detect defects during production
-  **Environmental**  
Reduce energy consumption with real-time and historical energy reports
-  **Operational Intelligence**  
Generate reports on key performance indicators to implement process improvements

[2. DXC SPARK IoT for CPG Fact Sheet](#)



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# Shaping the future of automotive with D3

Automotive manufacturers must connect millions of disparate machines and analyze enormous amounts of data to uncover insights, develop automation tools, and predict potential equipment failures or product defects.

## Challenge

The automotive industry faces massive disruption, with changing market demands propelling mobility's future. Next-gen automotive technologies such as Autonomous Driving (AD) and connected mobility are critical differentiators for mobility service providers.

## Solution

DXC ensures the seamless integration and transformation of your current processes and toolchain into scalable, data-driven development services and platforms by providing consulting, features, DevOps teams, and ready-to-use services on AWS.

AWS offers a full suite of services to support Advanced Driver Assistance Systems (ADAS) and AD development and deployment. In addition, AWS's nearly unlimited storage and compute capacity, [AWS SageMaker](#), and support for deep-learning frameworks such as [Apache MXNet](#), [TensorFlow](#), and [PyTorch](#) can accelerate algorithm training and testing and natively integrate with [DXC Robotic Drive Cloud Services on AWS](#) (DXC Robotic Drive Cloud).

## Benefits and results

DXC and AWS can help you improve on existing workloads and integrate new purpose-built solutions and services for automotive workloads. Reliable, safe vehicles that can transport passengers without any driver intervention are made possible through D3 innovations like DXC Robotic Drive Cloud Services on AWS.

With DXC Robotic Drive Cloud, you can:

- Save on implementation time (3-6 months)
- Reduce design and development effort, resulting in savings of up to \$5 million
- Lower the risk of failure by less than 70% while maintaining SOP timelines
- Optimize costs with SLA-driven AD services:
  - 30% to 40% (operations)
  - 20% to 30% (development)
- Empower developers and engineers with the technology to solve complex challenges
- Improve manufacturing operations and overall equipment effectiveness through data analytics

[3. Cloud Robotics Global Market to 2030 – Research and Markets](#)



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**The global cloud robotics<sup>3</sup> market will reach \$40.29 billion by 2030, growing 26.5% annually over 2020-2030.**

**DXC has<sup>3</sup> 5,000 domain experts for the AD backend platform.**

**Using DXC<sup>3</sup> it takes less than six months to become operational with production-grade AD. This is 18-24 months faster than OEMs can achieve alone.**



# Accelerate manufacturing capabilities with SAP on AWS

Today's manufacturing companies operate in an "always on" mode where business leaders must react rapidly to changing market conditions, consumer needs, and competing business demands. SAP is the backbone of many manufacturers' core business functions and mission-critical systems. Dedicated SAP resources are costly and rigid, making it challenging to adopt advances embedded in [AWS SAP S/4HANA](#).

## Challenge

You want to adopt the latest versions of SAP to power your modernization journey but worry about downtime, costs, and business disruptions. However, by not upgrading, you are limiting your:

- Agility to respond to changing customer and market needs
- Ability to keep operating costs low
- Scalability to idle and resume systems at will
- Freedom with fixed, multi-year contracts

## Solution

DXC PaaS for SAP on AWS provides seamless integration of SAP landscapes and swift migration to AWS while protecting your business from downtime and potential lost revenue. This consumption-based service model provides high scalability, maximum flexibility, and improved business resiliency. It also simplifies operations across the full stack—from the AWS infrastructure to the application management layer.

## Benefits and results

To increase business agility and maximize your SAP investment, migrating to the cloud is proven to reduce SAP infrastructure complexity and lower costs. With DXC to help you develop a secure and practical framework for migrating your SAP applications to the AWS Cloud, you can:

- Gain comprehensive security and compliance

- Take advantage of consumption-based pricing
- Utilize "always on" capabilities with application-level disaster recovery
- Accelerate your business response times from weeks and days to hours and minutes, helping you be more flexible
- Use advanced tools to make better, faster decisions
- Simplify the complexity of running infrastructure, reducing the risk of human error, and improving uptime through automation

DXC provides a full-stack, managed cloud service for SAP, including comprehensive on-demand solutions from the infrastructure layer to the application Platform-as-a-Service (PaaS) layer. With a combined 37 years of domain expertise running SAP, DXC and AWS have the SAP technical knowledge and business strategies needed to help you successfully migrate to the cloud and leverage the power of SAP.

## Savings & success rate

- Save between 58 – 69% on your SAP workloads<sup>4</sup>
- Up to cost savings of 103% ROI after three years<sup>4</sup>
- DXC migrates more than 65,000 IT workloads a year with an above-average 99.5% success rate<sup>4</sup>

<sup>4</sup> Cloud-migration opportunity: Business value grows, but missteps abound. McKinsey & Company, October 12, 2021

# Overcome the experiment-production gap with MLOps

MLOps helps customers professionalize how they do machine learning development, deployment, and operations, while ML algorithms identify patterns in data that can be used to create prediction and classification systems.

## Challenge

By utilizing ML, companies can develop robust solutions to create new processes, solutions, and workflows that positively impact operations. Since ML models are often denser, there can be a longer lead time to move them from development into production. This is known as the experiment-production gap.

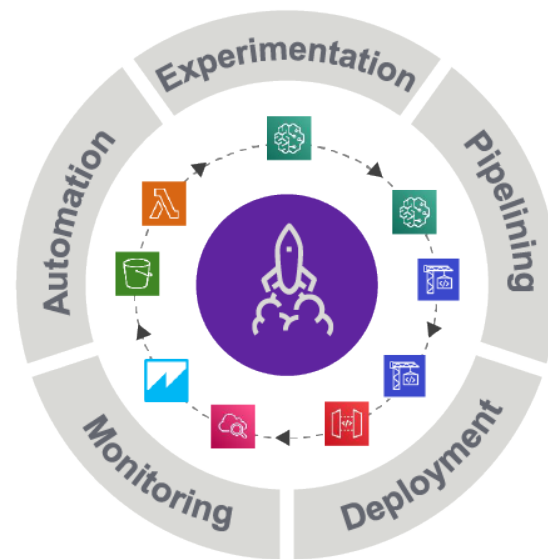
## Solution

To accelerate models into production faster, MLOps offers a set of tools, processes, and methodologies that:

- Reduce manual tasks through automation

- Monitor production in real-time to identify defects sooner
- Quickly deploy and serve models into production

DXC and AWS offer many asset-based services, including MLOps as an asset-based offering. This offering reduces customers' entry barriers and provides cost reductions and faster value realization.



## Benefits and results

This set of processes, methodologies, and tools empowers you to reduce the time spent in development with the following:

- Automation that frees teams from manual tasks
- Monitoring in near real-time model transparency
- Deployment with full continuous integration (CI)/continuous delivery (CD) for ML
- Reusable model pipeline training and evaluation
- Full flexibility that supports the preferred data science tools with experiment tracking

According to the DXC MLOps Quickstart on AWS infographic, 50% of companies take 8 to 90 days to deploy one model, with 13% taking more than 90 days and 5% taking more than a year.



# Improve efficiencies and transform supply chains with DXC and AWS

## The time is now to modernize your manufacturing operations

### AWS

- AWS leverages unmatched expertise with factory operations that drive digital transformation with leading industrial customers
- AWS has purpose-built solutions to optimize operations at industrial sites, adding to AWS's leading suite of industrial services and solutions
- AWS enables partner offerings from worldwide industry leaders and a broad suite of partner solutions addressing more industrial workloads than any other provider

### DXC

- DXC provides the scale and experience to deliver innovative solutions for cloud, applications, analytics, and more
- DXC has 10+ AWS programs and competencies, 4,000+ active AWS certifications, and has been an AWS Premier Consulting Partner for 5+ years
- DXC's experience in vertical sectors across the globe helps businesses navigate and avoid migration pitfalls

Take the first step in transforming your business and realize the benefits today.

[Learn more about DXC Practice for AWS ›](#)

