

Cognizant



# Build the Modern Factory with Industrial IoT

Cognizant Connected Factories accelerates the build of a modern IT/OT foundation, advancing your factories to the next level of operational excellence.





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# Growing pressures accelerate change

In a highly competitive world subject to unanticipated challenges such as COVID-19, operational excellence is the only way to drive and sustain value for your customers, employees and shareholders. It begins with a new mindset, shifting from traditional operations thinking to an understanding of industrial operations as a digitally enabled competitive capability. At the center of that capability is converged data intelligence. Converged data intelligence enables greater control over your operations, flipping your operational model from rigid and reactive to agile and proactive.

To make manufacturing more efficient and profitable while reducing the cost of goods sold, organizations need a holistic approach to build a mission-critical IoT data and intelligence foundation that gets the job done at performance scale while helping to ensure the health and well-being of their workers.

## Industrial IoT enables a vast array of data sources, including enterprise data and operational data from sensors to interconnect machines, systems and devices so you can continuously:



Improve real-time visibility and control of production equipment and systems.



Create a unified edge/cloud platform that removes data siloes.



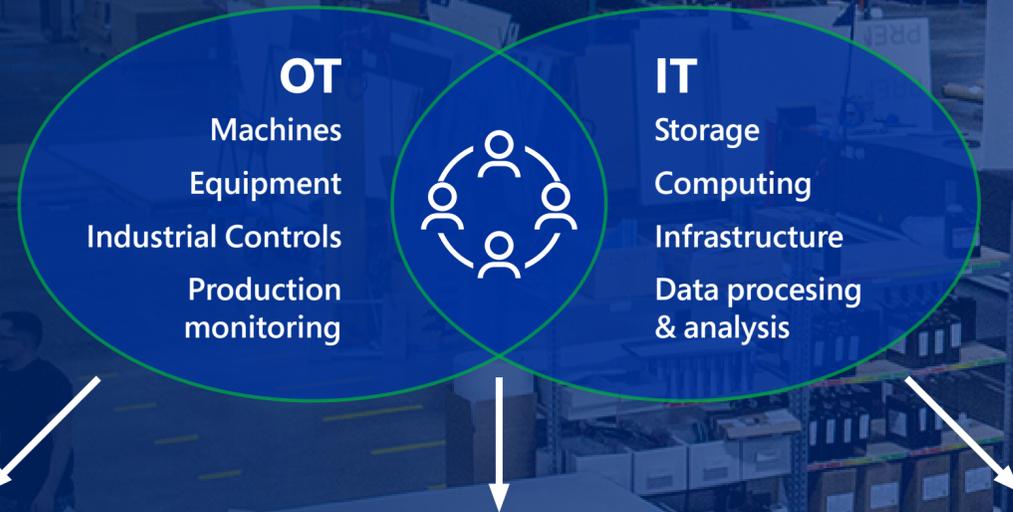
Perform robust analytics on data from equipment and IT and OT systems for proactive decisioning.



Automate manufacturing, supply chain and energy processes and workloads.



# What's standing between you and operational excellence?



## Plant Operations

- Paper-based operations
- Downtime impacts production
- A mix of old and new machines
- Maintenance costs and inefficient schedules
- Slow monolithic production

## Business Leadership

- COVID safe and healthy workplace
- Too many operational variables
- Pressure to do more with less resources
- Cultural resistance
- Absence of ROI measurement systems

## Enterprise IT

- Lack of OT expertise and access
- Aging legacy systems and processes
- Digital first competition
- High IT support costs
- Disparate systems, assets, and data silos

Thanks to today's cloud IoT innovations, manufacturers are achieving operational excellence by:



**Reimagining** the relationship between their products, customers and assets.



**Focusing** on reprioritizing which problems to solve.



**Accelerating** digital capabilities to break down IT/OT silos.



**Automating** critical processes and achieving improved flexibility.



**Engineering** agility to make improvements across multi-site locations quicker.



**Leveraging** cloud analytics to inform improved operational efficiencies.

# Introducing Cognizant Connected Factories

Cognizant Connected Factories offers manufacturers a comprehensive approach to achieving operational excellence. Our Asset Performance Excellence (APEX) framework jumpstarts the design of an integrated IT and OT data intelligence model that brings physical and digital workloads together for a Connected Factories blueprint.

Because Connected Factories leverages the power of Azure, data is secure and protected from the production floor to the edge to the cloud.



**Single source of truth:** Manage all assets across locations from a single platform and a single view



**Reduced TCO:** Reduce maintenance costs



**Real-time visibility:** Enhanced business agility thanks to better visibility into operational performance of equipment, systems and workers



**Increased collaboration:** Achieve operational and organizational excellence



**Faster decision-making:** Anytime, anywhere access to data through multiple devices



**Data security:** Take advantage of multi-layered security across physical datacenters, infrastructure and operations



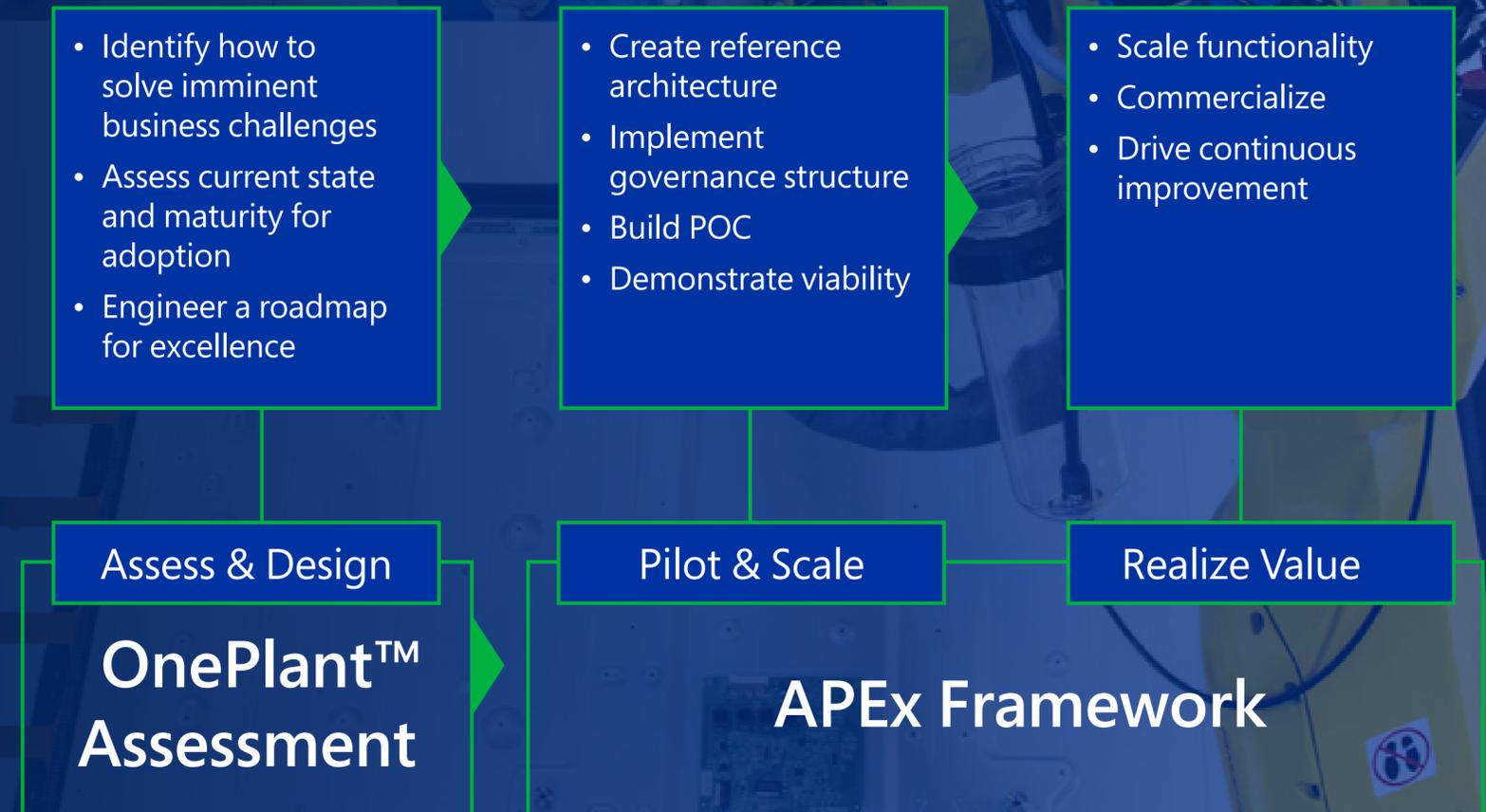
**Improved efficiency in operations:** Optimized asset availability, reliability and performance while reducing cycle time

# Getting to value faster with a robust integration of cloud and edge components

Cognizant's vast experience integrating IT and OT data and turning that data into intelligence means your journey to the cloud will be supported by industry-proven experts. Thanks to our OnePlant assessment tool, the timeline for implementation is expedited and completely customized for your business.

Once your assessment is complete, the APEx platform provides a framework for creating a highly customizable IoT solution that: Ingests data from sensors at the edge; sends it to the cloud for aggregation, accumulation and processing; and makes it available via dashboards and visualizations so stakeholders can drive better decision-making.

## Cognizant Connected Factories solution



# Driving business value through optimized factory operations

Cognizant's proven expertise working with Fortune 500 operations from the ground floor up, robust tools and frameworks built on Microsoft can help you build new capabilities faster in a secure, cost-efficient and pragmatic way.



**20%**

lower cost of quality

Cost savings can be reinvested in digital initiatives to drive growth



**45%**

improved labor productivity

Operational efficiencies drive faster execution and accuracy



**35%**

reduction in planned equipment downtime

Factory resilience improved with production uptime



**20%**

reduced maintenance costs

Significant gains in the ability to meet production demands



**ROI**

in 12 months

See ROI within 12 months as efficiencies and innovation drive operational results

# \$100M+ cost savings for large-scale manufacturer

## The challenge:

A Fortune 1000 industrial manufacturer with multiple commercial and consumer brands wanted to streamline and consolidate data capture from production equipment and assembly lines to improve insight into manufacturing processes and optimize them, but it had various data-gathering protocols across its many facilities.

## The approach:

Our client recognized it had an opportunity to create value by moving from simple efficiency improvements to an Industry 4.0 IoT platform that promoted connectivity and digital visualization. Objectives included improved accuracy in order fulfillment, lower production error rates, reduced energy costs and improved safety and compliance.

## The solution:

### Design

1. Integrated cloud platform gathers and analyzes information from disparate factories so resources can be more efficiently allocated
2. Production assets are evaluated for readiness to equip with state-of-the-art technology applications

### Deploy

1. Operational nerve center using Azure IoT is implemented at four plants in 12 weeks to prove value
2. Rolled out solutions globally without disrupting business, creating a network of plants that can respond to real-time decisions

### Measure

1. Platform provides OEE data on asset availability and runtime, configuration and customization, scheduling, throughput and quality output, downtime and maintenance needs
2. Real-time notifications and web-based user interfaces alert remote experts

## The results:



APEx accelerated the implementation of the production-scale Industrial IoT platform to connect 100+ facilities and thousands of machines and production lines



\$100+ million in cost savings and profitability gains forecast over a five-year period



Dashboards monitor asset performance, yielding insights for intelligent decision-making



Developed an Industry 4.0 reference architecture with tools and templates for OEE, software and best practices

# An industrial equipment manufacturer deploys a data-driven system for improved performance

## The challenge:

Our client wanted to become a more data-driven company, with rapid feedback loops and continuous improvement. They needed to transform their multiple product lines of standalone factory machinery into a unified connected product system. The solution would need to integrate data from their equipment, operations and enterprise systems to deliver business outcomes—including asset management, predictive maintenance and yield optimization.

## The solution:

- We developed a data collection strategy at the edge. With multiple product lines, sensors, PLCs and protocols in use and no gateway or data management tools in place, we designed a flexible, unified approach for rapidly connecting legacy and future machines to the cloud.
- We then built a production-quality solution fast. They needed to connect their machines at the edge to the cloud, integrate with several other systems, and have web and mobile applications available for their teams and customers before their competition did.

## The results:

-  Data from the field enables rapid iteration on improvements to equipment, increased uptime and lower service costs.
-  The new, customizable system runs in an Azure environment, so their IT department can maintain control over their entire solution.
-  Data from connected customer machines of usage patterns provides sales an upsell opportunity with automated alerts to increase profits by upgrading to higher capacity equipment.

# The Cognizant + Microsoft equation

The Cognizant + Microsoft partnership is driven by a common goal: to work together with customers and solve their most complex technical, business, and organizational challenges, while supercharging their manufacturing operations and processes. We bring together the strengths of both worlds—Cognizant’s rich history and strength in engineering and industrial IoT services, solution accelerators to speed time to value, and global delivery model, complemented with Azure’s efficient, secure, low-cost cloud computing strength.

Cognizant brings new levels of relevance to large, established organizations through the strategic application of the latest technologies. When working with a new customer, Cognizant leverages OnePlant to perform a fast but thorough assessment of the customer’s equipment and operational model to see where small, technology-enabled adjustments can bring big returns. The efficiency of this assessment can alleviate common customer concerns by providing a transparent view of gaps to opportunity, investment costs, implementation timelines, along with a prioritization of use case applications to demonstrate proof of value within as little as 12-weeks.



## Cognizant

Provides a rare combination of Enterprise IT, Operational Technology expertise, integration strategy, partner ecosystem, and digital capabilities to extend customer value from Azure and legacy systems and assets across 1 or 100+ factories.

## Microsoft

Provides the cloud building blocks to securely connect, monitor, authenticate and aggregate data for monitoring and machine learning

# Cognizant

Get started today with a fast, accurate OnePlant assessment of your digital transformation needs

Learn more about Cognizant and Azure ▶

Contact the Cognizant sales team ▶

Cognizant recognized as an “IoT Leader” across industry



**IDC Worldwide Leader -MarketScape: Business & Industrial IoT Engineering + Managed Services 2020**  
“Cognizant’s strengths: Tools and methodologies, strategy to build new competencies to address customers.”



**Member of a global co-innovation alliance solving critical manufacturing challenges with digital**



**MSUS Partner of the Year for Intelligent Cloud-IoT, 2019**

