



Industrial strengths. Digital speeds.

Close the smart manufacturing gap with
real-world transformation expertise



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Building your smart factory

From the nuts and bolts... to clicks and bytes

Most manufacturers have trialed AI and automation to increase efficiency and reduce costs, or explored how physical AI embeds into machines, equipment and production environments to make and execute decisions in real time.

However, many remain stuck in pilot purgatory, unable to integrate small-scale innovations across the enterprise. Despite the desire for transformation, commitment to investments and identification of use cases, outcomes fall short.

Whether due to skill shortages, lack of C-suite buy-in or geopolitical pressures, the inability to scale can lead to a gap between where your smart manufacturing is and where you want it to be.

Successful smart factories can deliver*

30-50%

reductions in machine downtime

10-30%

increases in throughput

15-30%

improvements in labor productivity

85%

more accurate forecasting

Cognizant, in partnership with Microsoft, helps you close the gap and bring your smart factory to life

The tools and solutions you need to unlock the potential of smart manufacturing and physical AI are already available.

The key is putting everything into practice in a way that's tailored to the unique needs of your business and people.

Here, we explore the practical steps to consider that can help make your vision a reality.

Mind the gap

Making your smart factory a reality



Mind the gap

Making your smart factory a reality

As a modern manufacturer, you are likely to recognize the need to transform digitally, sooner rather than later. But change can be daunting, and moving from vision to execution is not easy.

Everything from data silos to legacy systems can impede your ability to scale innovation. And, in a world where smart manufacturing solutions promise so much, it can be difficult to know where to start.

Smarter manufacturing at scale.

It's worth first fully assessing where you are as the starting point to map the smoothest, most achievable route to where you want to be. With a focus on evolution rather than revolution, you can look to unlock ROI from your past investments in parallel with embracing new technologies.

Assess all potential use cases for a mix of quick wins and long-term contenders, taking care to focus on those that are most likely to scale and stick.

Aim to make quantifiable moves with achievable targets, milestones and goals that can be measured so that success factors can be identified. Capture key learnings at every step of your journey to shape scalable, repeatable solutions aligned to both your operations and your goals.

Connected manufacturing starts with connected data.

To scale transformation, data must flow across your entire manufacturing lifecycle. By seamlessly connecting your systems and operations, Cognizant, in partnership with Microsoft, can help you turn fragmented insights into real-time decisions on the shop floor.

We're ready to meet you wherever you are

As your smart manufacturing partner, our people will work hand in hand with yours to support you along every step of your smart manufacturing journey.

Bringing deep smart manufacturing know-how to connect people, processes and technology, our team will work with you to shape a modern, scalable solution tailored to your specific needs.

Together, we can get you where you want to be

Whatever challenges you are facing in terms of data, skills and complex legacy systems, our factory-first approach built on Microsoft technology can help to transform the way you work—setting you on track to scale smart manufacturing, with speed and certainty.



Greasing the wheels of factory transformation

How to turn strategy into scalable action



Greasing the wheels of factory transformation

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When it comes to making the smart factory a reality, slow is smooth and smooth is fast. Of course, your business wants to transform as soon as possible. But getting there takes methodical, deliberate and accurate steps—grounded in connected data and real-world operations.



Close the smart manufacturing gap

Building your smart factory

01: Laying the foundations

The first step to scaling smart manufacturing is strengthening your data and operational foundations. This looks like connecting data across your manufacturing lifecycle to enable faster rollout, consistent execution and ROI that funds future growth.

Transformation efforts are scaled across sites and sustained over time.



Simplify complex tech environments without disruption



Implement the core systems and architecture needed to scale



Build a scalable foundation tailored to your maturity



Standardize your data across a unified Microsoft data platform



Close the smart manufacturing gap

Building your smart factory

02: Enabling safer, smarter, more skilled workforces

Next, you'll need to connect your frontline teams with advanced tools, guided workflows and physical AI embedded directly into day-to-day operations. Doing so will close knowledge gaps, improve safety and unlock productivity—regardless of experience level.

Once implemented, the smart factory enhances your human capability to empower, rather than replace, your people.



Improve shift handovers and continuity with connected workflows



Equip workers with tools and information embedded in their workflows—helping them do their jobs more safely and effectively



Support onboarding, reduce errors, and capture critical knowledge



Augment human roles with physical AI-powered guidance embedded in real-world tasks and environments



Building your smart factory

03: Unlocking new value through data

By weaving data across systems and functions across the entire manufacturing lifecycle, you enable contextual insights and decision support at every step.

The integration of siloed data and processes builds digital threads across the manufacturing lifecycle—from design to service.



Connect siloed systems to deliver full operational visibility



Lay the foundation for AI, simulation, and digital twin use cases



Enable data-driven decisions through harmonized, real-time insight



Leverage data across systems to improve visibility, traceability, and simulation capability



Close the smart manufacturing gap

Building your smart factory

04: Accelerating the shift from insight to action

With time-tested frameworks and ongoing support, you can shorten the distance between insight and execution. Embedding physical AI into systems and workflows allows you to turn insights into action, in real time, at the point where work actually happens.

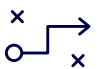
The result? Near-instantaneous resolution, fewer breakdowns and higher uptime.



Turn data into action
where it matters most



Make faster, more
intelligent decisions
based on real-time data



Reduce downtime
with predictive alerts
and smart triage



Use physical AI to shorten
the time from detection
to resolution



Industry insight:

What's delaying your smart factory?

Like many in your industry, you understand why smart manufacturing is so critical to future success. But now, the challenge lies in turning your vision into execution across all of your sites—moving from insight in the cloud to action at the edge.

This is where it pays to work with a proven transformation partner. Inevitably, there will be bumps in the road. But with the expert guidance and support of an experienced partner, you will be better placed to navigate the most common and avoidable blockers and achieve your ambition of a smart, sustainable and successful future.



Organizational resistance

Change management is slow—particularly across global businesses.



Changing culture

The ageing workforce is retiring. Their replacements change jobs every three years on average.



Data silos

Systems and standards vary across sites and between new and legacy systems.



Lack of clarity

The C-suite are cloud advocates. Plant employees focus on uptime, security and control.



ROI expectations

Smart programs are expected to self-fund or uncover cost savings for reinvestment.



Rigid solutions

A one-size-fits-all platform rarely works—transformation must flex to local realities.

Well-oiled machine learning

Forge your smart factory future with
Cognizant, in partnership with Microsoft



Well-oiled machine learning

Forge your smart factory future with Cognizant and Microsoft



As the technologies that support the smart factory continue to advance, now's the time to fully embrace the transformation opportunity.

To seize these benefits and more, the roadmap to your smart factory must be tailored to your circumstances, modular and scalable across your environments and at a pace that suits your development. Most importantly, it must meet you where you are now.

That's why we'll kick off your transformation with a thorough maturity assessment.

We'll take the time to understand your current position and capabilities across:



Data management and analytics



Performance measurement and continuous improvement



Strategy and vision



Skills and workforce



Technology and processes infrastructure

Once we have assessed your level of maturity in different areas around smart manufacturing, we'll identify opportunities, prioritize use cases and define a clear implementation roadmap.

Mapping the road to your smart factory

01

Assessment

Working together, we'll take time to understand where we can most enhance your organization, picking out use cases for proof of concept and pilot projects.

02

Workshops

We'll workshop all potential implementations, aligning plant-level priorities with your enterprise transformation goals.

03

Frameworks

We'll implement our proven smart factory frameworks and best practices to ensure your business gets the most out of legacy and future technology investments.

04

Integration

We'll prove ROI with pilot projects, gradually scaling use cases to empower your people with physical AI and tools that make sense on the shop floor.

Simple steps to smart manufacturing at scale

If these smart factory struggles sound familiar, you don't need yet another fledgling smart initiative. You need a partner that can connect the dots and execute across the last mile.

When we work together, our structured approach supports low-risk, scalable change. We start with outcomes, rather than off-the-shelf solutions, to bring your manufacturing operations together. With time-tested frameworks, phased rollouts and successful proof of concepts, we deliver measurable value not abstract achievements.

In other words, you know what you need from your smart factory—we know how to bring it to life.

Only with strong foundations, the right roadmap and ongoing support can you unlock the full value of a secure and sustainable smart factory at scale.

Cognizant, in partnership with Microsoft, applies proven IT and OT technology solutions at scale, embedded with automation, AI, data and analytics to close the gap between you and your smart manufacturing future.

Bringing proven frameworks, we'll work as one team to connect data across your operations and embed AI where it can create real-time impact.

We will work with you at every step to:

- 1 Devise a roadmap from your current level of maturity to your smart factory of the future.
- 2 Identify and test smart manufacturing solutions and change strategies from pilot to widespread adoption.
- 3 Drive and manage further integration to create a smart manufacturing culture across your business.
- 4 Provide ongoing, expert assistance to support your ambitions as new and transformational technologies emerge.

Put simply, as partners, we can make it easy
for you to step into your smart factory.

Let us show you how.

[Learn more](#)

