



Intelligence with impact

Gen AI. Make it matter for
manufacturing, logistics,
energy and utilities.



Your practical guide to engineering gen AI for impact

Generative AI isn't new to manufacturing, logistics, energy and utilities (MLEU)—it has been put to work automating and optimizing processes for years. More recently, however, technological advancements have unlocked new possibilities in flexibility, efficiency and innovation.

The challenge, therefore, is that while many organizations are ready to embrace the new technology, they remain stuck between pilot fatigue and scale paralysis.

What they're missing is the expertise and strategy to move from experimentation to meaningful impact at scale. **What they need is an expert partner who can help them achieve their goals with enterprise-grade gen AI.**

Cognizant, in partnership with Microsoft, can help you overcome the stumbling blocks associated with turning gen AI ideation into execution. Together, we bring the expertise, engineering capabilities and secure cloud foundations you need to make your investment—and ambitions—mean more for your people, their roles and their work-life balance.

This practical guide is your starting point for making real change possible. Read on to explore the three key areas where gen AI can have the biggest impact.

76%

of businesses plan to use gen AI for new revenue streams*

77%

of users say once they used Microsoft Copilot they didn't want to give it up*

\$47.5 million

average enterprise investment in gen AI in 2024*

*Based on research conducted by Cognizant into industry and business leaders, 2024

Make gen AI matter For your culture For your operations For your workflows With the right partner

Chapter one

Make it matter for your culture

How to foster a gen AI mindset.

Gen AI: The culture catalyst

Gen AI goes beyond being a useful tool. It's the catalyst for a shift in mindset that can impact every corner of your organization. It allows you to reimagine the way your people work. It's intelligence—with impact.

AI agents and engineers can be trusted teammates, working tirelessly to process complex data, optimize critical processes and lighten workloads. All of which frees up your team to develop away from the monotony of manual tasks—while giving them more time to connect with family and friends.

The way to do this is by establishing a people-led, AI-enhanced culture that starts with gen AI pilots for specific use cases, which gradually roll out to the wider business through training modules, gen AI champions, and consistent communications.

Reimagining work, safeguarding change

In MLEU in particular, a gen AI mindset must also be paired with governance that makes adoption safe and purposeful. That means building in safety checks for operational tech, maintaining a human review process for critical tasks, defining clear model release rules and extensively training your workforce. This way, every innovation can be grounded in structured, responsible adoption.

“At Cognizant, we’re not just suppliers. We’re true partners in every sense. The road to scaling gen AI isn’t just about the tech. It’s about exploring and learning together. Pioneering new techniques. And bringing the whole organization along for the journey.”

Sean Heshmat, Head of AI&A, Cognizant

The key to an AI-enhanced culture

A great first step to creating a culture of innovation is adopting Microsoft Copilot. Guided by Cognizant's comprehensive implementation approach, we'll give your teams the freedom to explore the solution—plus the recognition they deserve for pushing boundaries and challenging norms. Here are our eight stepping stones to success.

Learn more about
Cognizant services
for Microsoft Copilot

01

Lay foundations

Work with Cognizant to identify the best use cases for Copilot proof-of-concept projects.

02

Incentivize innovation

Encourage teams to plan, pitch and pilot gen AI programs—and reward the results.

03

Embrace gamification

Engage developers with coding challenges, hackathons and friendly competitions.

04

Set boundaries

Lay out a comprehensive AI policy that your teams understand and engage with.

05

Partner up

Enhance your expertise with practitioner sessions from Cognizant, Microsoft and other partners.

06

Celebrate success

Reward and recognize gen AI champions and encourage others to pioneer new processes.

07

Create a multichannel communication plan

Connect with plant and field operations using manager toolkits, on-site signage and leader-led stories.

08

Drive advocacy

Create an evangelism program with executive role models, frontline champions and channel-specific content.

Establishing a gen AI center of excellence (CoE)

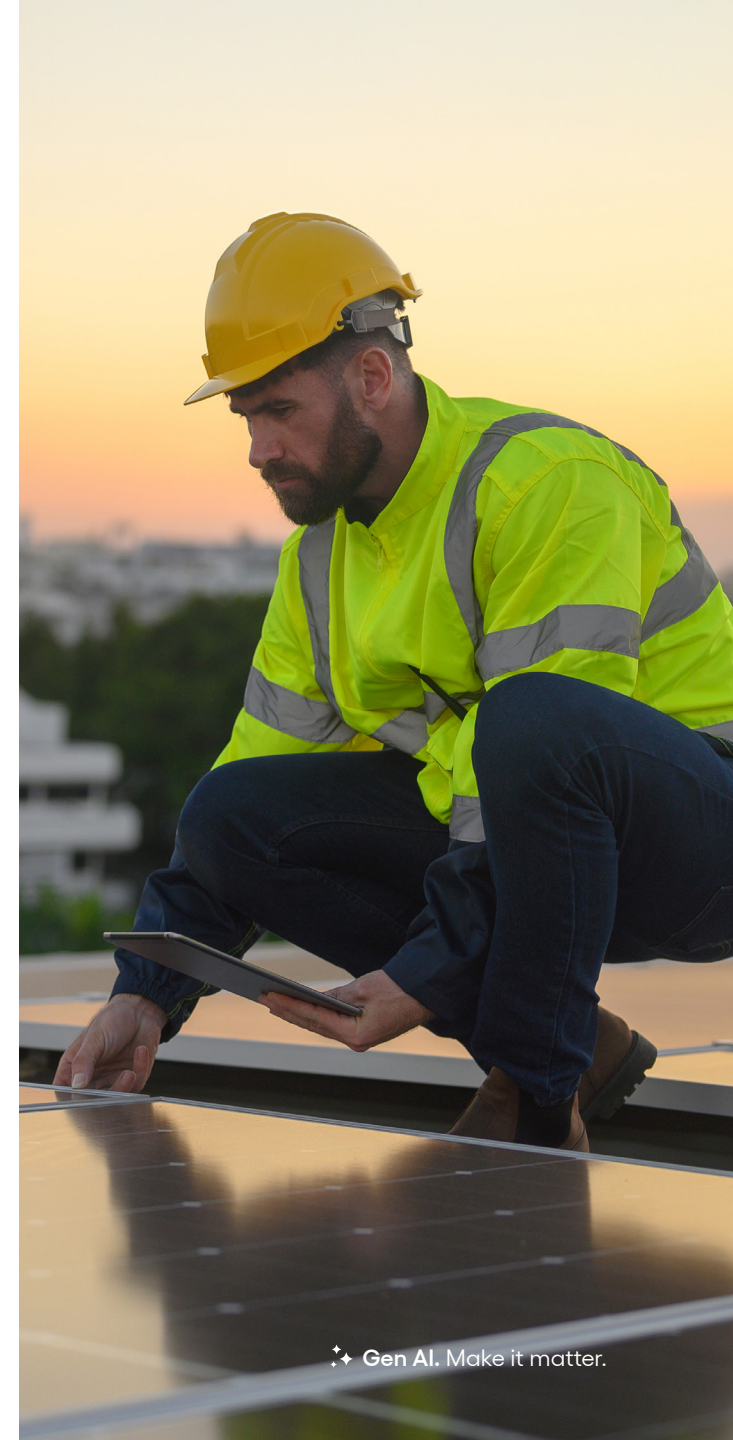
To get more value from gen AI, MLEU organizations need to look beyond isolated projects. They need a structured way to scale and measure impact. Creating a dedicated gen AI CoE provides that foundation, and might include:

- A plant liaison network to connect sites and keep adoption grounded in real operations
- A use-case intake system to evaluate and prioritize opportunities
- A dedicated team to build and refine AI agents
- A process for tracking production benefits like Overall Equipment Effectiveness, scrap reduction and downtime, with progress shared in quarterly showcases
- Gen AI champions ready to support your people to harness gen AI in a way that is meaningful to each individual



Innovation for the people

10 days. 40 countries. 53,199 Cognizant associates. One hackathon. Our Vibe Coding event saw participants describe their intent for a new project and have gen AI turn it into working software. 30,601 working prototypes later, we now hold the GUINNESS WORLD RECORDS™ title for the world's largest online generative AI hackathon.



Chapter two

Make it matter for your operations

How gen AI is powering predictive maintenance and more.



Turning gen AI from problem-solver to trusted partner

Gen AI turns downtime on its head—and not just in a “do this, find that” way that only works half the time. In a way that positions gen AI as a valuable teammate that analyzes data to identify patterns and anomalies, compare results against benchmarks and optimize maintenance schedules.

And when every person across every team can use these capabilities to predict and prevent disruption, you’ll quickly notice the increased uptime and decreased repair costs.

Building the right data foundations

Gen AI is only as effective as the data it’s built on. We’ll help you gather, organize, clean and store your data so that your AI solutions operate smoothly and reliably.

We’ll equip you with the tools you need to customize and enhance your data. These include supervised fine tuning sets, reinforcement learning from human feedback and adversarial/red team data.



Predict outages before they cost you

Here's a quick look at how predictive maintenance works...

01

Equipment sensors **detect** vibrations and changes in temperature, pressure and current.

02

Gen AI continuously monitors sensor output, comparing real-time and historical data to identify minute deviations from standard operating **patterns**.

03

Using performance data, gen AI **predicts** the likelihood of equipment failure and estimates the remaining useful life of components.

04

If a failure is predicted, the system recommends specific maintenance **actions** such as part replacement or preventative repairs.

...and how you can reimagine operational stability with gen AI



Reduce downtime

Predict failures before they occur to proactively schedule maintenance and minimize disruption.



Extend equipment life

Continuously monitor component health to improve overall performance and increase longevity.



Lower costs

Reduce unnecessary maintenance costs and avoid minor issues spiraling into hefty repair bills.



Security without compromise

AI-powered threat detection, built-in safeguards and a compliance-first design keep your data secure and operations resilient—so you can embrace AI with confidence.

Reimagine resource allocation

In MLEU, our relationship with “the machines” has often been based around issuing simple commands. Gen AI changes that dynamic—transforming technology from a passive tool into a trusted partner with shared context.

The result is not only greater efficiency, but processes that improve the working environment and deliver value in ways that really matter to your business and people.



Analyze labor requirements and employee performance to optimize staffing and increase productivity and job satisfaction.



Identify energy consumption patterns and spot areas where you can reduce costs and lower your environmental impact.



Optimize transportation routes, warehouse locations and supplier networks to reduce costs and improve delivery times.

“Machines should not be made as powerful as humans to replace humans. Machines should be made as powerful to amplify the potential of humans.”

Ravi Kumar S, CEO, Cognizant

Chapter three

Make it matter for your workflows

How to get it right first time, every time.



Time saved, value gained

The true value of gen AI lies in its ability to improve the lives of our employees. With AI models taking care of monotonous, time-consuming tasks, employees are freed up to focus on more enriching work, safe in the knowledge that they'll be able to clock out on time.

In this way, every manual job that's handed off to gen AI isn't only an efficiency gain. It's the removal of a burden, giving your teams space to contribute where it truly matters.

Key areas of impact

01

Data collection and analysis

Built on Microsoft Azure with OpenAI, our solutions analyze your data and process maps—or create new ones from scratch. Gen AI breaks down complex workflows into individual tasks, identifying repetitive elements that could benefit from automation.

02

Task classification

Tasks are categorized by frequency, duration and complexity to highlight similarities and opportunities for consolidation.

03

Automation potential assessment

Gen AI assesses the feasibility of automating all identified tasks, evaluating the potential cost savings and productivity gains against any perceived risks and obstacles.

04

Task prioritization

Tasks are prioritized based on the operational impact and potential ROI.

Build trust through user-centric change

In MLEU, it's especially important that any gen AI adoption program is designed with users' best interests in mind.

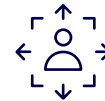
That means considering how to:

- Redesign roles with safety and ergonomics at the center
- Involve unions and works councils early in the change process
- Maintain human safety checks for critical tasks
- Regularly survey staff to understand impact and gather feedback

Cognizant can help you create user-centric change. Together, we can work towards a future where gen AI tools like Microsoft Copilot can enhance trust, strengthen relationships and make every interaction more meaningful.

Putting gen AI into practice

Through continuous machine learning, our solutions not only take tasks off your people's hands—they work behind the scenes to optimize and improve operations wherever possible.



Keep your people safe

Spot faulty components, analyze workstation ergonomics and predict equipment failures to reduce the risk of accidents and injury.



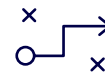
Improve processes

Analyze process data to identify areas for improvement for more consistent, efficient operations.



Reduce labor costs

Keep track of workload patterns and predict labor needs to optimize staffing levels without compromising productivity.



Streamline work

Use AI to reliably automate tasks, giving teams more time to focus on delivering process excellence and greater productivity.

Turn data into delivery advantage with gen AI

Gen AI analyzes pools of data to predict demand, identify pressure points and mitigate delays before they happen. This lets you optimize resources, reduce disruption and make every hour of your people's time count.



Enhance visibility

Improve inventory management and transportation routing to reduce lead times and operational cost.



Drive sustainability

Analyze vast datasets to identify inefficiencies and improve production processes.



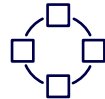
Delight your customers

Speed up response and delivery times, mitigate delays and manage expectations to improve customer satisfaction.



Reduce costs

Optimizing transport routes reduces fuel consumption, vehicle wear and tear and environmental footprint.



Keep things moving

Proactively analyze your supply chain to identify bottlenecks, and see where working with alternative suppliers might help.



Optimize resource utilization

Use real-time data and predictive models to allocate labor, materials and machinery for optimal utilization.

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Why Cognizant?

Gen AI. Make it matter with Cognizant.

Generate success with the right partner

The best way to get your teams on board with AI is with a partner that knows AI and gets to know your people. Cognizant is that partner, having worked with some of the world's leading companies to deliver intelligence with impact.

Case studies

A global rail leader achieves 25% increase in quality and efficiency with Microsoft Azure AI.

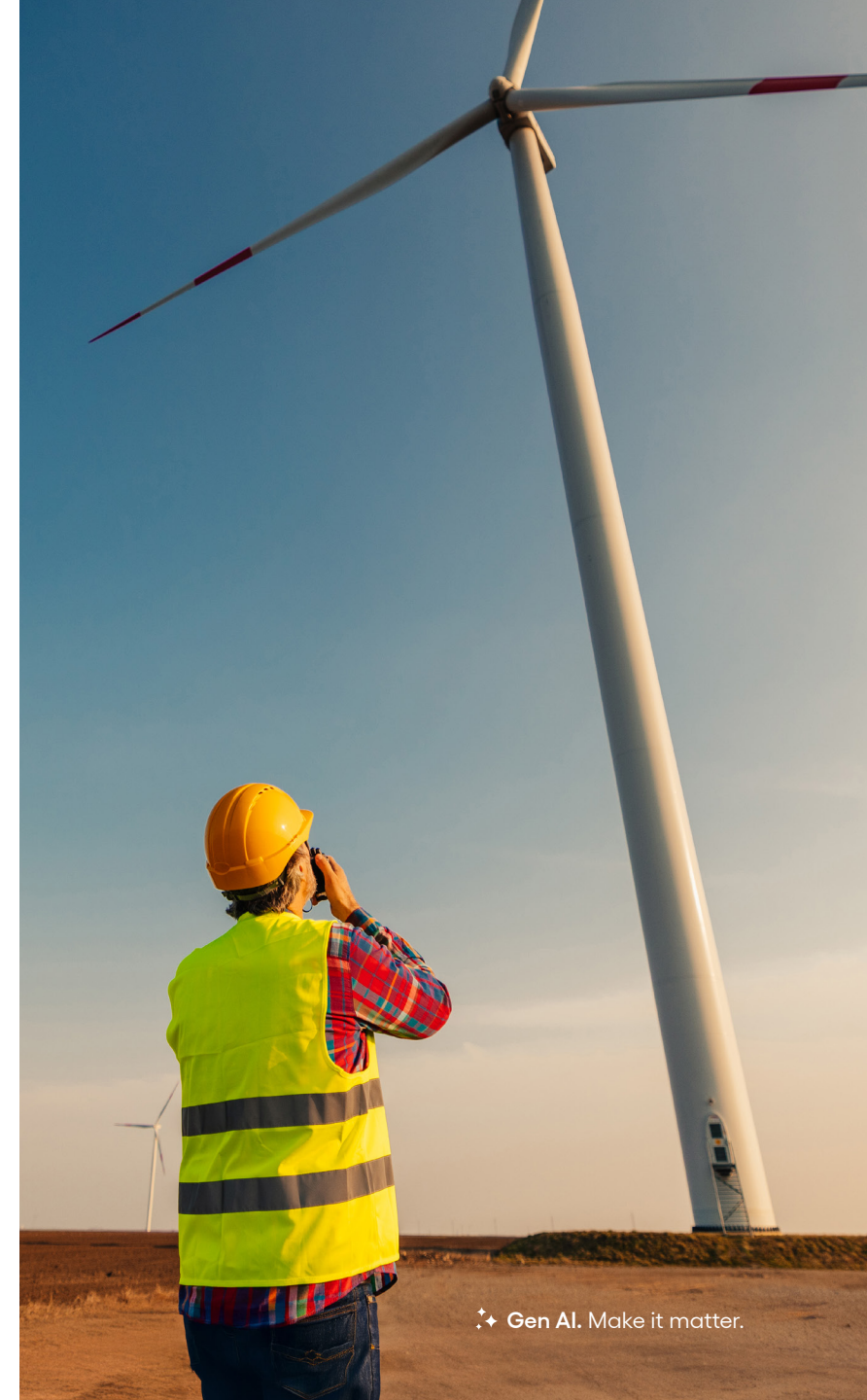
Rolls-Royce saves millions in cost avoidance with Microsoft Cloud for Manufacturing.

We don't just support your people to use AI—we help you use AI to support your sustainability efforts. This includes analyzing data to identify waste, optimize resources and standardize processes.

Gen AI gives you the potential for greater impact across all areas. Whether it's for your people, for compliance or for sustainability, Cognizant helps you realize that potential.



We're also the first IT services provider to achieve ISO 42001:2023 certification—the world's first AI management system standard—meaning you're in safe hands.



Create meaningful change with the right partner

Cognizant works as an extension of your team. Recognized as an Emerging Leader in the Gartner® Emerging Market Quadrant for Generative AI Consulting and Implementation Services*, we bring proven expertise in digital transformation to drive sustained growth through continual innovation—delivered securely and with impact.

Through our partnership with Microsoft, we offer proven frameworks that help you make gen AI matter. From early experiments to full-scale enterprise systems, we design solutions that protect your data, empower your people and ensure AI delivers real value.

Together, we help you turn ambition into outcomes—making gen AI a purposeful tool for progress, not just another piece of technology.

Where operational gains meet human impact

01

Taking care of your team

We'll help you roll out strategic reskilling and upskilling programs at pace and scale.

02

Creating a culture of innovation

Use our experience to nurture an open culture of gen AI experimentation and recognition.

03

Making methodical moves

Our teams will work with you to identify use cases, launch pilot initiatives and scale gen AI throughout your business.

04

Putting your gains to good use

Together, we'll help you further integrate gen AI to benefit your employees, customers and communities.

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If you're ready to take the next step into gen AI reality, or want to talk through its many possibilities, get in touch with the experts at:

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Discover our case studies and research on maximizing your impact with gen AI here.

These expert insights have been brought to you by:
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✦ Gen AI. Make it matter.