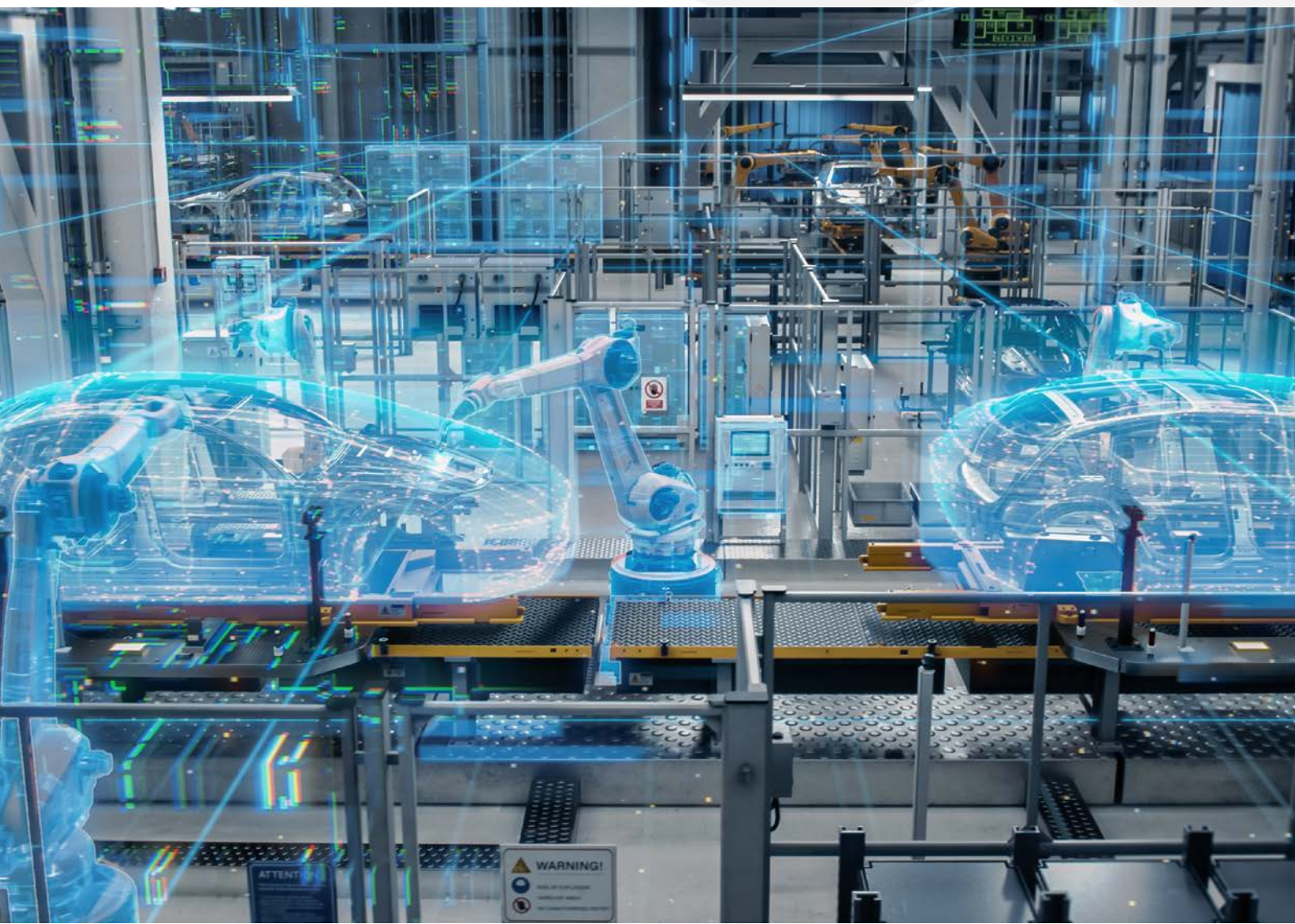


Evolving manufacturing with generative AI: Unlocking innovation, efficiency, and resilience

How manufacturers can harness generative and conversational AI to drive operational excellence, accelerate innovation, and build a future-ready business



How generative AI is shaping the future of manufacturing amid global challenges

The manufacturing sector is at a pivotal moment. Global supply chain disruptions, labor shortages, rising ESG expectations, and relentless competitive pressure are forcing manufacturers to rethink traditional approaches. While efficiency, cost control, and product quality remain essential, Industry 4.0 and the rise of smart technologies have made customer, employee, and partner experiences equally critical.

AI is no longer a distant promise—recent studies project that AI in manufacturing could generate up to \$3.8 trillion in economic value annually,¹ reshaping how industrial production is conceived and executed. As technology investments now account for 30 percent² of manufacturers' operating budgets, with cloud, GenAI, and 5G delivering the greatest ROI, the sector is rapidly modernizing to stay competitive and resilient.

At the same time, workforce challenges are acute: 89 percent of manufacturers report labor shortages are hurting efficiency, and more than half are prioritizing digital transformation to address these gaps and unlock new value streams.³



¹ BytePlus, [AI research for manufacturing in 2025: A comprehensive outlook](#), 2025

² Deloitte, [2025 Manufacturing Industry Outlook](#), 2024

³ Quickbase, [Manufacturing in 2025: What's Coming Down the Line?](#), 2025

Manufacturers have advanced in automation and analytics adoption but face challenges like siloed data, legacy systems, and manual processes that hinder scaling digital transformation. [Deloitte's Smart Manufacturing Survey](#) highlights increased investments in smart systems, analytics, and cybersecurity, with workforce upskilling as a key enabler. AI and ML revolutionize operations through predictive analytics and real-time decision-making, while IIoT connects devices for continuous monitoring. Generative AI accelerates product design, and AI-powered predictive maintenance predicts failures with up to 92 percent accuracy.⁴ Conversational AI enhances communication and supply chain optimization. Scaling these benefits requires secure, cloud-native infrastructure and trusted AI partnerships.

AI-powered predictive maintenance solutions can predict equipment failures with up to 92% accuracy, while generative AI reduces product development cycles from months to days, delivering a step-change in manufacturing agility and competitiveness.⁵

Building the future of manufacturing with generative and conversational AI

OpenText envisions a transformative manufacturing ecosystem where generative and conversational AI are deeply integrated across all facets of the value chain—from product design and operations to supply chain management and regulatory compliance. Our cloud-native, AI-ready platforms empower manufacturers to harness the full potential of advanced AI technologies, driving innovation, efficiency, and resilience in an increasingly complex and competitive landscape.

By accelerating product and process innovation, manufacturers can automate design optimization, explore vast solution spaces, and significantly reduce time-to-market. This enables rapid prototyping and iterative improvements that respond swiftly to evolving market demands.

Asset reliability is enhanced through AI-powered predictive maintenance and real-time anomaly detection, minimizing unplanned downtime and extending equipment lifespan. These capabilities allow manufacturers to proactively address potential failures before they impact production.

Supply chain performance is optimized by leveraging generative AI-driven insights to automate demand forecasting, inventory management, and supplier collaboration. This results in more agile, responsive supply chains that can adapt to disruptions and changing customer needs.

⁴ BytePlus, [AI research for manufacturing in 2025: A comprehensive outlook](#), 2025

⁵ Ibid



OpenText also streamlines ESG and compliance reporting by synthesizing data from across the manufacturing ecosystem and automating complex regulatory submissions, helping organizations meet stringent environmental and governance standards efficiently.

Workforce empowerment is a key pillar of our vision. Conversational AI assistants enable natural language interactions, automating routine tasks and facilitating continuous learning and collaboration among employees. This not only boosts productivity but also enhances job satisfaction and operational agility.

Finally, OpenText prioritizes data privacy and security through private AI deployments, robust access controls, and adherence to global data regulations, ensuring that sensitive manufacturing data remains protected while enabling innovation.

Driving business value with AI in manufacturing

Implementing a generative and conversational AI strategy enables manufacturers to:

- Increase productivity and innovation by automating complex tasks, accelerating decision-making, and freeing teams to focus on high-value work.
- Reduce operational costs and downtime by proactively identifying issues, optimizing maintenance schedules, and streamlining supply chain processes.
- Improve product quality and sustainability through data-driven insights, rapid design iteration, and automated ESG reporting.
- Enhance workforce engagement and agility by providing intuitive, AI-powered tools that support collaboration, upskilling, and safer workplaces.
- Strengthen business resilience by enabling real-time adaptation to market shifts, supply chain disruptions, and regulatory changes.

These outcomes help manufacturers achieve their business goals, maintain a competitive edge, and build a foundation for long-term growth.

Charting your path to AI-driven manufacturing transformation

Embarking on a generative AI journey in manufacturing requires a thoughtful, collaborative approach to ensure maximum value and long-term success. OpenText recommends the following steps to accelerate your transformation and unlock the benefits of AI-powered innovation:

- **Introductory meeting:** Engage with your OpenText Account Director and key business and IT leaders to align on your unique generative AI priorities, challenges, and strategic objectives.



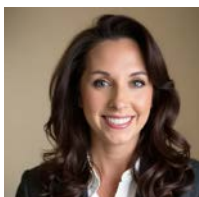
- Joint roadmap exchange: Participate in a collaborative workshop with stakeholders from operations, engineering, supply chain, and IT to identify high-impact opportunities and co-create a tailored transformation roadmap.
- Business value consulting workshop: Assess your current digital maturity and quantify the business impact of potential AI-driven solutions, ensuring your investment delivers measurable results.

By following these steps, manufacturers can build a solid foundation for AI adoption, accelerate time-to-value, and drive sustainable growth in an increasingly competitive landscape.

Why OpenText is the trusted partner for generative AI in manufacturing

OpenText is a global leader in secure, cloud-native information management and [AI innovation](#). We offer deep manufacturing expertise and a proven track record of helping organizations transform with advanced analytics, automation, and AI. Our platforms are designed for privacy, scalability, and rapid deployment—[empowering manufacturers](#) to unify data, unlock insights, and drive operational excellence with confidence in a fast-changing world.

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