

Transforming manufacturing operations with Microsoft Dynamics 365

WHITEPAPER

How to unify
planning, production,
and service with AI
and Copilot

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Introduction

Overview of digital transformation in manufacturing

Manufacturing leaders continue to navigate supply chain volatility, margin pressure, talent shortages, and fragmented technology environments. Cloud platforms now enable connecting shop-floor insights with top-floor decisions in real time. Recent industry research indicates that many manufacturers have accelerated digital transformation, elevating cloud-based ERP and CRM systems to a board-level priority. Microsoft Dynamics 365, enhanced by AI and Copilot capabilities, helps unify finance, supply chain, production, field service, and customer engagement within a single, cloud-native platform.



Business challenge and opportunity

Key pressures and opportunities driving modernization

- Manufacturers continue to navigate supply chain volatility and risk—from delayed material deliveries and higher expediting costs to missed on-time-in-full (OTIF) goals.
- Organizations are adapting to workforce changes as experienced professionals retire, and newer team members expect modern, intuitive digital tools that streamline their work.
- Quality, compliance, and traceability demands are growing, and disconnected batch and lot records can slow recalls or audits.
- Margin pressure continues to mount as costs and variability increase, heightening the need for faster, data-driven control across operations.
- Legacy silos remain when multiple ERP and CRM systems require manual handoffs, delaying insight and slowing decision-making.

The key is first to connect and simplify processes and data—then apply AI and Copilot capabilities to help frontline teams make faster, more informed decisions.



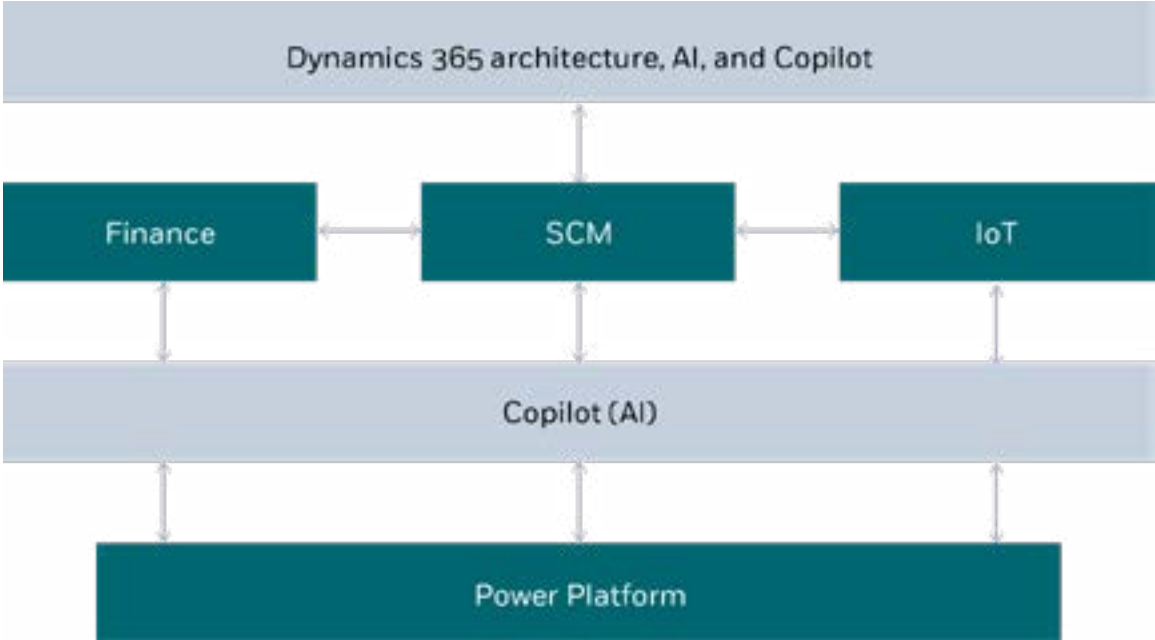
Microsoft Dynamics 365 overview



The Dynamics 365 manufacturing architecture brings together key business applications, AI capabilities, and low-code tooling in a connected, cloud-based model. Finance, Supply Chain Management, and IoT workloads exchange data through a shared Dynamics 365 layer, supported by AI and Copilot features that provide guidance and natural language interactions across these processes. Underneath, Microsoft Power Platform offers low-code tools that help extend, automate, and analyze these workloads in a controlled way, giving manufacturers room to evolve their solutions while maintaining continuity for core operations.

Unified platform connecting finance, supply chain, and operations

- **Dynamics 365 Finance** brings together general ledger, accounts payable and accounts receivable, budgeting, and project management capabilities. It supports multi-entity consolidation and updates production costs in real time.
- **Dynamics 365 Supply Chain Management** unifies procurement, production, logistics, warehousing, and asset management. It strengthens planning and visibility through signals from Azure IoT.
- **Dynamics 365 Sales and Customer Service** connects the lead-to-cash cycle and case management processes while offering a 360-degree view of customer interactions.
- **Dynamics 365 Field Service** enables intelligent scheduling, IoT-driven maintenance, and proactive service delivery.
- **AI and Copilot** features enable natural-language queries—for example, asking “Show suppliers with late deliveries”—to support demand forecasting and surface quality insights from sensor data.
- **Microsoft Power Platform** provides low-code tools, automated workflows, and embedded analytics to streamline end-to-end processes.



Dynamics 365 architecture connecting core modules, AI, and Power Platform.



UST solution approach

How UST ensures smoother delivery and faster value realization



VALUE DISCOVERY

Methodically aligns business pain points with Microsoft Dynamics 365 capabilities and identifies the three to five KPIs that matter most—for example, overall equipment effectiveness (OEE), forecast accuracy, and on-time delivery.



PILOT-TO-SCALE EXECUTION

Validates value in a single plant or product line, then expands in structured waves across additional sites, regions, or functions.



DATA FOUNDATION AND GOVERNANCE

Initiatives harmonize items, bills of materials (BOMs), and vendor records; establish master-data stewardship; and apply quality gates that strengthen the reliability of analytics.



COPILOT ADOPTION PLANNING

Provides role-based guidance so planners, supervisors, and technicians can use natural-language prompts to complete work faster and with greater accuracy.



INTEGRATION BLUEPRINTS

Define coexistence with MES, PLM, and EDI systems and connect Azure IoT telemetry with Dynamics 365 to enable predictive maintenance and quality insights.



CHANGE-MANAGEMENT PROGRAMS

Combine role-based training, empowered “power users,” and on-the-floor enablement tools such as Dynamics 365 Guides.



AN OUTCOMES OFFICE

Tracks KPI progress weekly in Microsoft Power BI, ensuring that improvements remain visible and sustained after go-live.

UST applies deep domain expertise in manufacturing and repeatable rollout patterns to help organizations achieve measurable impact early and continuously.

Implementation and deployment considerations

Essential factors for a successful Dynamics 365 rollout

- Executive alignment connects the transformation roadmap to strategic objectives such as reducing lead time and downtime—and begins with a focused, high-impact pilot.
- Data strategy standardizes codes, bills of materials (BOMs), and vendor records early in the process and establishes a cross-functional data council to ensure consistency and accountability.
- Change management emphasizes transparent communication, role-based training, and the use of Mixed Reality tools such as Dynamics 365 Guides and Copilot to accelerate adoption and learning.
- Partner ecosystem selection favors collaboration with experienced partners such as UST, whose deep manufacturing expertise and Microsoft solution accelerators enable smooth integration.
- Continuous improvement measures performance through KPIs such as Overall Equipment Effectiveness (OEE), scrap rate, On-Time In-Full (OTIF), forecast accuracy, inventory turns, time to close, and first-time fix—and refines processes continuously based on insights.



Industry-specific insights and use cases

Examples of Microsoft Dynamics 365 impact across sectors

AUTOMOTIVE

Microsoft Dynamics 365 streamlines engineering-change management and maintains end-to-end traceability across complex bills of materials (BOMs), helping manufacturers respond quickly to recalls and model updates. It also connects IoT telemetry with maintenance workflows to reduce downtime and keep production lines running. Dynamics 365 Guides further shortens ramp-up time for operators on the line.

ELECTRONICS AND HIGH TECH

By combining advanced planning with Azure IoT insights, Microsoft Dynamics 365 supports multi-tier sourcing and short product lifecycles to sustain throughput and manage supply risk. AI and Copilot features strengthen demand planning and provide natural-language insights, while quality analytics from sensor data help teams resolve issues before they spread across product variants.

FOOD AND BEVERAGE

Using recipe and batch controls, Microsoft Dynamics 365 enables process manufacturing to protect perishable inventory and support rapid, compliant recalls when needed. Integrated IoT and Microsoft Dynamics 365 Field Service capabilities help manufacturers monitor critical assets and schedule maintenance proactively to preserve product quality and maximize uptime.

PHARMACEUTICALS

Microsoft Dynamics 365 helps manufacturers comply with 21 CFR Part 11 through electronic signatures, rigorous batch tracking, and embedded quality checkpoints—strengthening audit readiness and recall execution. These capabilities create a controlled, compliant workflow from production through release, reducing risk while accelerating analysis and documentation.

MANUFACTURING*

It supports project-based manufacturing, variant management, hazardous-material tracking, trade-promotion compliance, and just-in-time material replenishment across complex operations. Microsoft Dynamics 365 coexists seamlessly with MES, PLM, and EDI systems through a clear integration blueprint and incorporates shop-floor telemetry into planning. Copilot provides role-based guidance that helps teams work faster and more accurately.

* **Manufacturing includes:** Aerospace and defence, industrial manufacturing and engineering, textiles, chemicals, consumer packaged goods, and packaging.

Business outcomes and ROI benchmarks

Evidence of measurable gains and efficiency improvements

- G&J Pepsi-Cola Bottlers reported eliminating a \$9 million annual shortfall, achieving a \$30 million return on investment within 3 years, and improving distribution performance by 15 percent after implementing Microsoft Dynamics 365 solutions.
- Golden State Foods implemented Dynamics 365 Finance and Dynamics 365 Supply Chain Management to enhance operational efficiency and visibility. The company reported reducing its annual inventory-carrying costs by approximately 1.5 million dollars after deployment.
- Bel Fuse transitioned from heavily customized Oracle applications to Microsoft Dynamics 365, integrating manufacturing execution (MES) systems to enhance visibility and efficiency. The company reported reducing its IT operating costs by approximately two million dollars annually.

Measurable ROI benchmarks*

According to a Forrester Total Economic Impact™ (TEI) study commissioned by Microsoft, organizations that implemented Microsoft Dynamics 365 achieved an average ROI of 301 percent over three years and annual benefits of approximately 20.6 million dollars in mid-to-large enterprises.

- Predictive, IoT- and AI-enabled maintenance **can help reduce unplanned downtime by up to 85 percent.**
- Streamlined workflows and decision support **have been shown to improve production-team productivity by about 15 percent.**
- Microsoft Power Platform and AI agents **can automate up to 27 percent more processes**, helping reduce errors and accelerate cycle times.
- Finance automation **typically shortens the month-end close by around 30 percent**, while improved forecasting and visibility **can deliver roughly 20 percent productivity gains** across the supply chain.

* Source:

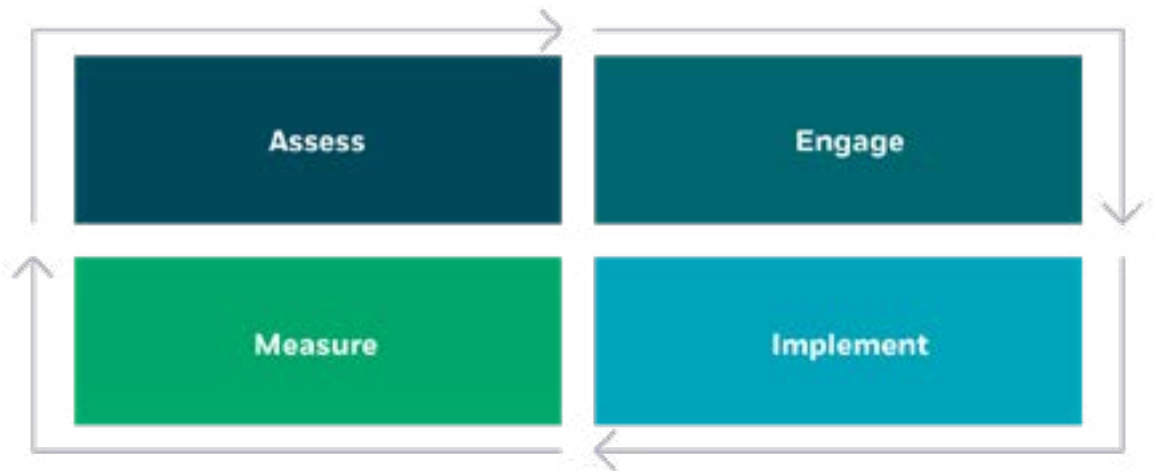
[The Total Economic Impact™ of Microsoft Dynamics 365 ERP and CRM Applications](#), a Forrester Consulting study commissioned by Microsoft. (* Results are based on aggregated modelling; actual outcomes will vary by organization.)

Conclusion and next steps

Key takeaways

Once data is unified and workflows are automated, organizations can realize high ROI and faster payback. Manufacturers strengthen their competitive position through shorter lead times, reduced downtime, and improved after-sales service. The platform continues to evolve—AI, Copilot, IoT, and analytics advance without disruptive upgrades.

How UST helps you get started with Dynamics 365



BEGIN WITH AN OUTCOME-FOCUSED ASSESSMENT

UST's Dynamics 365 consultants review your current ERP, CRM, and line-of-business systems, cloud readiness, legacy applications, ongoing projects, and new workload opportunities – then outline a clear, prioritized path to help you move toward Dynamics 365.

CO-CREATE A PRACTICAL ROADMAP AND PILOT

Through discovery workshops and solution design sessions, UST translates your business goals into a phased Dynamics 365 roadmap and pilot. We align the right mix of Finance, Supply Chain, Sales, Service, and Power Platform capabilities to your objectives, timelines, and investment priorities.

BUILD AND INTEGRATE A STRONG PLATFORM FOUNDATION

UST's platform and surround-services teams implement and configure Dynamics 365, migrate and clean data, integrate with existing systems, and complete thorough testing – helping you start with an environment designed for long-term reliability and growth.

SET UP ONGOING SUPPORT AND CONTINUOUS IMPROVEMENT

From the beginning, UST establishes support, monitoring, and enhancement processes. With AMS, training, DevOps, and adoption planning, your users gain timely guidance while your system evolves at a pace that supports day-to-day operations.

SCALE CONFIDENTLY ACROSS THE BUSINESS

Once the initial rollout is running smoothly, UST helps you expand Dynamics 365 across more business units, regions, and workloads. We use proven templates, governance, and best practices so you can scale with clarity and control.

Schedule a strategy session



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References

1. “G&J Pepsi discovers untapped potential with Dynamics 365” – Microsoft customer story.
2. “Golden State Foods modernizes manufacturing and operations with Dynamics 365” – Microsoft customer story.
3. “Manufacturer unifies data and gains agility in finance and supply-chain operations” – Microsoft customer story.
4. The total economic impact™ of Microsoft Dynamics 365 ERP.



Together, we build for boundless impact

Since 1999, UST has worked side by side with the world's best companies to make a powerful impact through transformation. Powered by technology, inspired by people, and led by our purpose, we partner with our clients from design to operation. Our digital solutions, proprietary platforms, engineering, R&D, products, and innovation ecosystem turn core challenges into impactful, disruptive solutions. With deep industry knowledge and a future-ready mindset, we infuse expertise, innovation, and agility into our clients' organizations—delivering measurable value and positive lasting change for them, their customers, and communities around the world. Together, with 30,000+ employees in 30+ countries, we build for boundless impact—touching billions of lives in the process.

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