



Do what matters

Avanade **Manufacturing Copilot**

On Microsoft Cloud for Manufacturing

Enable factory workers with insights, recommendations and 'ask-the-expert' capabilities, unlocked by OT-IT data insights





Manufacturers face a major data challenge

70%

of manufacturers struggle to make operational data accessible for analysis

1%

of generated data is currently being accessed and used to inform decisions

Source: [Bureau of Labor Statistics](#)

OT-IT data integration challenges are preventing manufacturers from realizing the benefits of Industry 4.0 at scale

Key OT-IT data challenges

Extensive variability of data across many data silos

Factory systems



Materials
Mgmt



CMMS



MES



Quality



Historian

Automation and process control systems



Sensors



PLCs



DCS



SCADA



OPC

Enterprise systems



PLM



MDM



ERP



SCM

Wide range of data
types, protocols,
and producers

Unknown meaning
of data complicates
use in analysis

**Continually
shifting** data
environment and
pipelines

High frequency
real-time data
creates challenges

Lack of scaling
with a machine per
machine approach

**Building one use case at time can work around the challenges.
But it's slow, expensive, and doesn't scale.**

How can you overcome these challenges to realize the huge benefits of AI for production operations?

Key AI opportunities



Production scheduling: Meet customer demand and minimize costs and changeover times



Quality control: Visual inspection systems for automated defect detection and troubleshooting



Process control: Detect process anomalies and when machinery calibrations drift and applies fixes to optimize quality, yield or throughput



Predictive maintenance: Predict equipment failures and schedules maintenance to minimize downtime and maximize machine utilization



Production optimization and waste reduction: Identify inefficiencies and recommend changes to minimize waste, increase efficiency, and optimize energy and water usage



Worker efficiency: Enable any employee to interact with data in their daily tasks and provide an always-on 'ask-the-expert' experience to drive excellence

Typical benefits



5-10% increase in production volume



3-5% increase in Quality

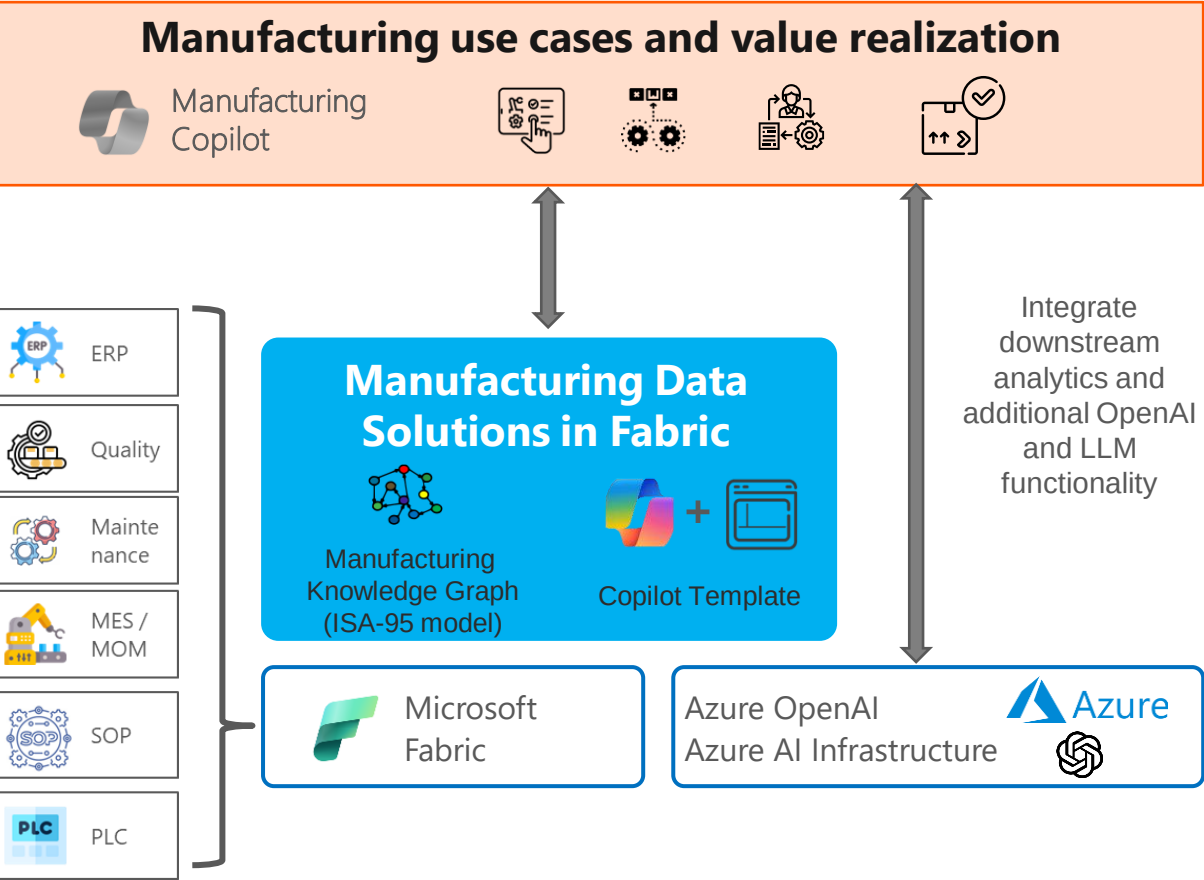


10-20% reduction in operational costs



20-25% reduction in high risk events

Avanade Manufacturing copilot on Microsoft Cloud for Manufacturing



Manufacturing copilot experiences

Copilot experiences for specific personas and use case clusters (e.g. production planning, maintenance or quality) to enable factory workers and create business value, leveraging (Gen)AI at scale

(Gen)AI readiness services for production operations

Services to enable and accelerate the identification of the right value levers, assess your AI readiness maturity and support successful value realization and transformation with manufacturing copilot and MDS

Microsoft copilot template for factory operations on Azure AI

Accelerate issue resolution and improve productivity by democratizing data-driven decision making with natural language querying of your unified IT-OT data estate

Microsoft Manufacturing Data Solutions in Fabric (MDS)

Maximize the value of factory data and uncover operational insights for production optimization by creating a unified IT-OT data estate, based on ISA-95, and get your manufacturing data ready for AI

Manufacturing ecosystem integration for a unified IT-OT data estate

Accelerate data integration, mapping and contextualization – utilizing Fabric connectors and ISV solutions – to create the unified IT-OT data estate in MDS. Customize your definitions, relationships, entities.

Early pilot project success with Avanade Manufacturing copilot



Use case: Shift reporting – reduce production waste

Persona: Waste Manager in a factory

- Summarize production output and issues from the last shift into an easy-to-use report
- Highlight waste reduction and quality intervention and improvement possibilities

SCHAEFFLER

Use case: Machine operator support – report on machine performance

Persona: Machine Operators in a factory

- Simplify the retrieval of condition-based machinery data on the shop floor
- Provide contextualized analysis giving insights on machinery performance and the effects of changes on the schedule.

BRIDGESTONE

Use case: Production loss reduction by digital root cause analysis

Personas: Maintenance Supervisor, Manufacturing Engineering in a factory

- Identify the cause of rate loss (decrease in production speed or ability of equipment to operate due to equipment malfunctions, suboptimal equipment set-up, mechanical wear and tear, or inefficient production processes) to boost OEE (Overall Equipment Effectiveness) and yields

**Other smart
manufacturing clients**

MARS

Use cases built on top of an
advanced digital twin program

Avanade Microsoft copilot can accelerate the reinvention of production operations and integrated supply chains



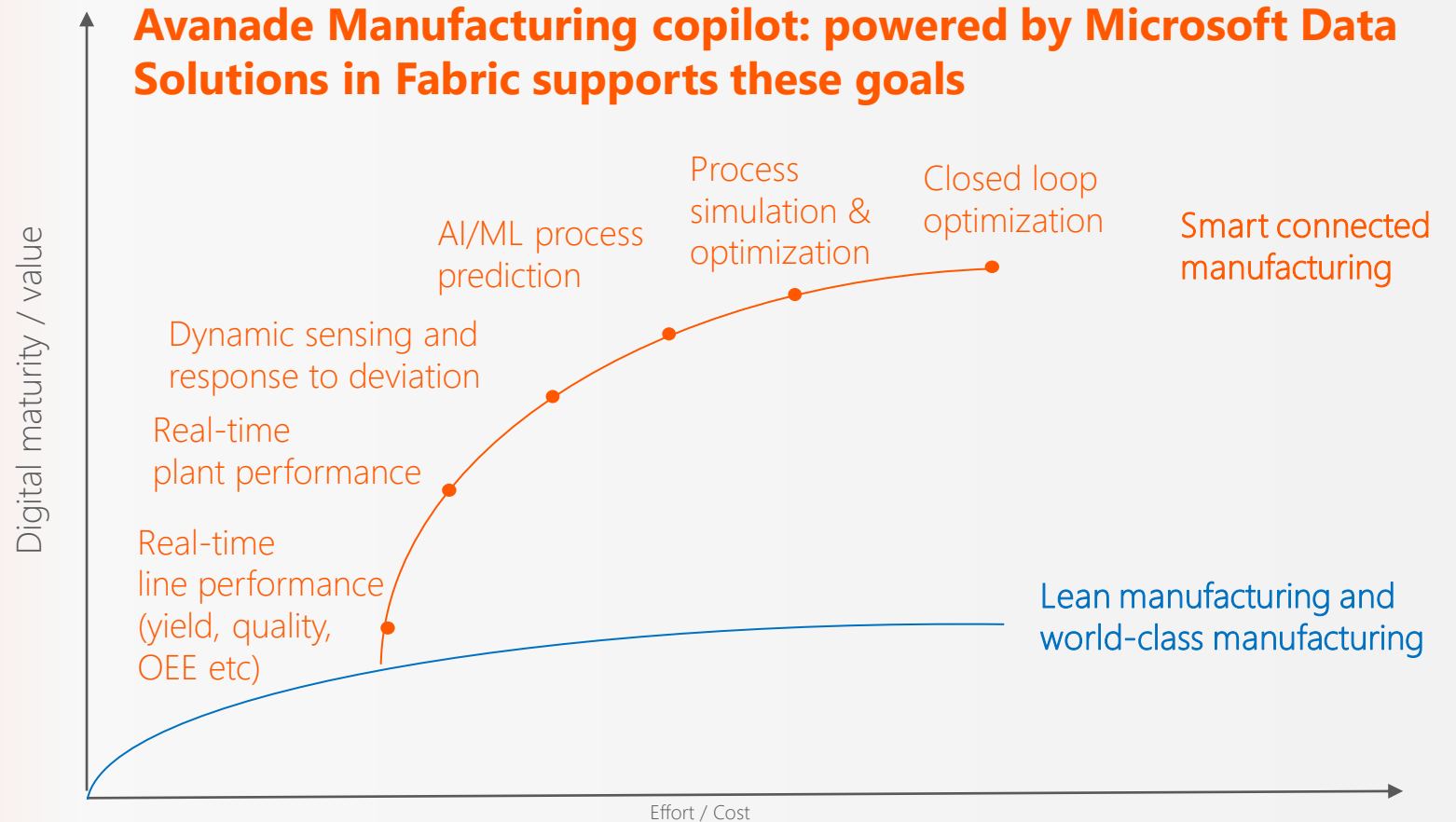
Impact of lean and manufacturing excellence programs is starting to plateau



Digitalization enables even the highest-performing companies to boost their performance



Creating data platforms, infrastructure, and processes that turn rich data into real performance improvement is the key challenge



Why partner with Avanade and Microsoft?

We're powered by a unique partnership



Winner, Microsoft Manufacturing ~ Partner of the Year (2022)



1,000+ Manufacturing clients worldwide



50% Of the world's largest manufacturers are our clients



3,500 Manufacturing-focused professionals

Value

- + Partnership:**
Avanade is a joint venture between Accenture and Microsoft (20+ years)
- + Industry scale:**
Bring industry depth and breadth to differentiate the transformation journey
- + Scale, capability & compatibility:**
Ability to drive and deliver value creation through the Microsoft ecosystem

Let's get started

The journey begins with a conversation. Connect with us to schedule a discussion of your unique situation. Together, we can identify use cases valuable to your firm, and chart a course forward to value and increased security for your organization. To get started, contact:

MicrosoftOfferings@avanade.com



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