



# Building the bedrock of agile manufacturing

How a common data foundation helps manufacturers unlock insights and accelerate transformation

Start here 



# Digital manufacturing remains core to transformation



More than 90 percent of manufacturers are using—or plan to implement—digital technology to streamline production. This wave of digital investment is expected to drive the global smart manufacturing market, up from \$277.81 billion in 2022 to \$658.41 billion in 2029<sup>1</sup>. The first step: organizing massive volumes of data.

In this e-book, we'll discuss how Sight Machine and Microsoft are partnering to help manufacturers unlock insights from plant data to accelerate and scale transformation.

**53%**

of manufacturers will invest in BI data and analytics—second only to cybersecurity<sup>2</sup>

1. [Smart Manufacturing Market to register CAGR worth 13.1% during 2022-2029; Fortune Business Insights](#)

2. [Gartner report Predicts 2022 for Manufacturing Digital Transformation](#)

# Making your plant OT data useful and impactful

Manufacturing plants can generate up to 1 petabyte of data per day—but typically less than 1 percent is evaluated and used.

Working with plant data poses challenges that working with other business data does not, due to the volume of unstructured data, disparate systems and velocity of data.

By first structuring your OT data in a common data foundation to make it useful, the technologies below can help you bring it to life and drive operational impact.

**70%**  
of manufacturers struggle to make operational data accessible for analysis

Source: [IDC Planscape: Data-driven operations, May 2022](#)



## Industrial Internet of Things (IIoT)

Collects manufacturing data from sensors, instruments, and devices



## Edge and cloud-based computing

Helps securely connect and manage all people, assets, processes, and systems



## Artificial Intelligence and Machine Learning

Automates complex tasks and uses data to make decisions faster



## Advanced analytics

Provides visibility and actionable insights into all aspects of production



## Digital twins

Creates a digital replica of assets, lines, and factories for visualization & modeling



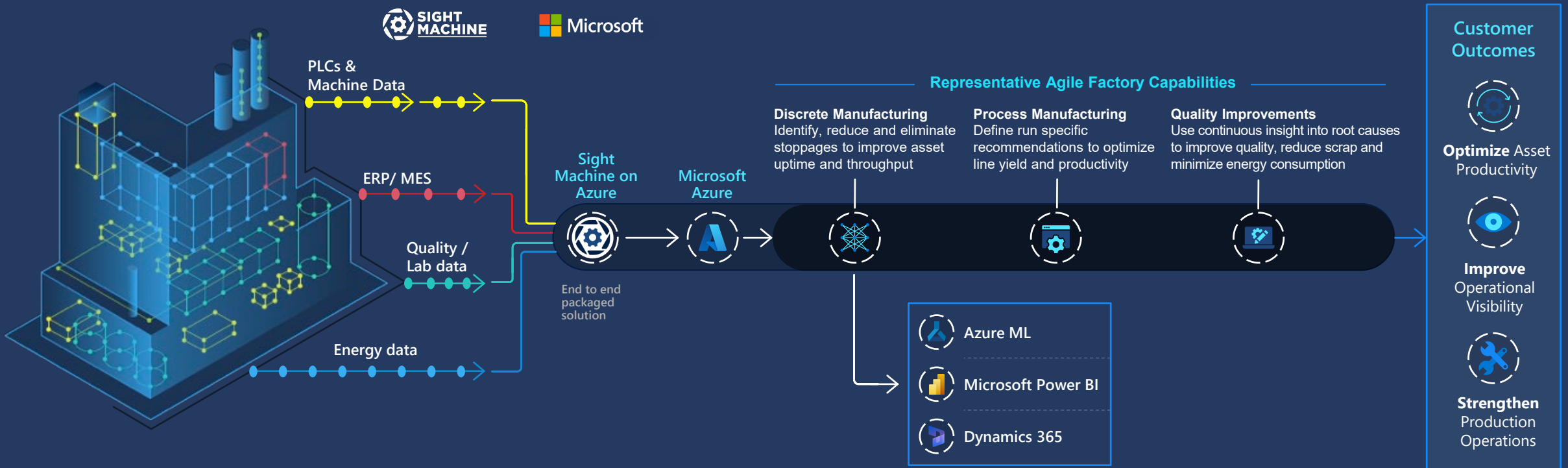
## Virtual or augmented reality

Provides digital simulations of a product or environment with accompanying data and information

# Transform plant data into insights using a common data foundation

Sight Machine on Microsoft Azure helps manufacturers improve profitability, productivity, and sustainability by continuously streaming and analyzing all plant data from across the enterprise. By creating a common data foundation for operations and analysis, you can unlock insights that optimize asset and line productivity, improve operational visibility, and control, and strengthen production operations (i.e., improve efficiency and quality and reduce waste).

The Sight Machine platform is purpose built for manufacturing, and optimized on Azure, providing a single integrated solution for cloud and data-driven digital transformation. You can now empower key stakeholders—anytime, anywhere — to rapidly translate actionable insights into enhanced production performance at the speed and scale you need.



# Connect, transform, and analyze all plant data

With Sight Machine and Azure, you can more securely connect, transform, and analyze your manufacturing data to improve visibility and gain true insight into production across the enterprise and broader value chain.



## CONNECT

**Collect, unify, and label all data sources related to production**

Connect all OT data sources to the cloud more securely by ingesting and automatically tagging plant data from across the enterprise



## TRANSFORM

**Convert real-time, streaming data into a structured data foundation**

Stream all plant data through a pipeline to create standardized data schema and a common data foundation for operations and analysis



## ANALYZE, VISUALIZE, AND OPTIMIZE

**Benchmark, monitor, and improve manufacturing productivity**

Use a suite of manufacturing analytics applications and tools (e.g., Digital Twins) and advanced technologies (e.g., AI) to identify and deliver actionable insights and optimize production performance at the machine, line, factory, and enterprise levels

# Achieve rapid results and optimize operations at scale

Sight Machine and Microsoft can help you improve productivity and reduce manufacturing waste, contributing to both your financial and sustainability goals

## Unlock hidden insights

Unlock more data than ever and achieve actionable insights faster with Sight Machine and Microsoft Azure

- Deliver a single, dynamic, and trusted view of production, based on data to all stakeholders, from the plant floor to executive offices
- Gain insight into how every parameter in your system is affecting quality and other KPIs (e.g., OEE) in real-time
- Benchmark, monitor and improve productivity KPIs across assets, process areas, and facilities

## Optimize manufacturing outcomes

Optimize asset and line productivity, improve operational visibility and control, and strengthen production

- Achieve rapid time to impact, turning actionable insights into outcomes within weeks, not months
- Improve visibility across assets, processes, and facilities to drive best practices and increase productivity across all sites
- Improve material use and quality while reducing waste and energy consumption per unit of production

## Scale transformation across your business and value chain

Find and resolve almost any production challenge with a cloud-based solution that scales to meet your needs

- Unlock value from hundreds of use cases across facilities with a data-first approach
- Rapidly and cost-effectively extend data foundation and analytics capabilities via Microsoft Azure
- Collaborate with suppliers and customers to extend production and supply chain efficiencies across the value chain
- Seamlessly and securely integrate Sight Machine into your existing Microsoft Azure solutions, minimizing up-front expense

# Customer stories and impact

## LEADING AUTOMOTIVE SUPPLIER



**Opportunity:** The world's largest producer of magnet wire for the electric vehicle market needed to meet increased production demands without compromising quality.

**Results:** Real-time operational visibility helped improve machine speed and throughput while confirming no impact to asset reliability or quality. Building more predictability and consistency into the production process was accompanied by AI/ML to improve productivity (OEE) by almost 15 percent in eight plants across five countries.

## GLOBAL PACKAGING MANUFACTURER



**Opportunity:** An award-winning packaging manufacturer for achievements in digital manufacturing wanted to empower employees to identify process variabilities and inefficiencies and surface opportunities for line yield improvements and downtime reductions.

**Results:** A common data foundation was used across hundreds of use cases and various production processes to provide real-time OEE visibility across facilities. Line yield improvements across seven plants have resulted in a 10x ROI, with plans for expansion to more than 20 facilities in the future.

## GLOBAL FOOD PRODUCER



**Opportunity:** A global food manufacturer targeted enhanced operational visibility to improve run times, product quality, and energy use.

**Results:** Actionable insights derived from a common data foundation can now be used to unlock production efficiencies, quality improvements, and reductions in waste and energy consumption per unit of production. Use cases have expanded beyond initial product focus to include various production lines across several facilities, with a playbook for system-wide rollout.

# Make data-driven decisions the core of your operations

- › Build a single, trusted data foundation for operations and analysis across all plants
- › Empower your workforce, in real time with insights to improve and optimize production
- › Use production information to transform the operations and sustainability of your enterprise and broader supply chain





**Get started today**

[www.sightmachine.com](http://www.sightmachine.com)

