From Data Chaos to Business Impact

Solving manufacturing's data variety challenge with AI and the Plant Digital Twin

Sight Machine is used by Global 500 companies to make better, faster decisions about their operations.

Our Digital Manufacturing Platform, purpose-built for discrete and process manufacturing, harnesses artificial intelligence, machine learning and advanced analytics, continuously transforming enormous quantities of production data into actionable insight - to address key challenges in quality and productivity throughout the enterprise. Welcome to a new level of insight and action.

The Challenge in Manufacturing

Get business value from production data

Enterprise manufacturers are investing heavily in digital technology - and paradoxically, most of these initiatives are failing. Why? Because the data is not useful.

The problem hinges on a unique aspect of manufacturing data: its extraordinary variety. Consider a single shop floor where there is no single source of data, but rather thousands. Each piece of automation includes hundreds of sensors, each emitting data in different forms multiple times per second. There are controls systems and software throughout: PLCs, DCS, MES, Historians, SCADA, Windows Shares Files, and ERP. To further complicate matters, physical-world inputs are erratic, error-prone, and subject to a myriad of variables. Making sense of this data is an entirely different kind of challenge.

Manufacturers continue to invest in tools to enable analytics. However, they typically don't give decision-makers the integrated end-to-end view of production they need. Sight Machine is the only product that refines this data in real-time into useful information.

Traditional Analytics	Sight Machine Analytics
Siloed data (Historians, ERP, quality, assets)	Integrated Data
Raw, time series data	Data with context and meaning
Data accessible to specialist	Data accessible by everyone
Reactive, historical views of data	Real-time; proactive monitoring and action

From Data Chaos to Business Impact

Sight Machine's Data First approach creates digital twins that represent any manufacturing machine, line, facility, supplier, part, batch, and process.

Our AI data pipeline automates the process of blending and transforming streaming data into fundamental units of analysis that are purpose-built for manufacturing.

This unique approach combines edge and cloud automation and management with AI for classifying, mapping, and transforming data, together with unified data models that are configurable for every manufacturing environment.

Quality

- Reduce scrap
- Increase first-pass yield
- Control process with strict tolerances
- Set up process alerts
- Eliminate non-conformance to specs

Productivity

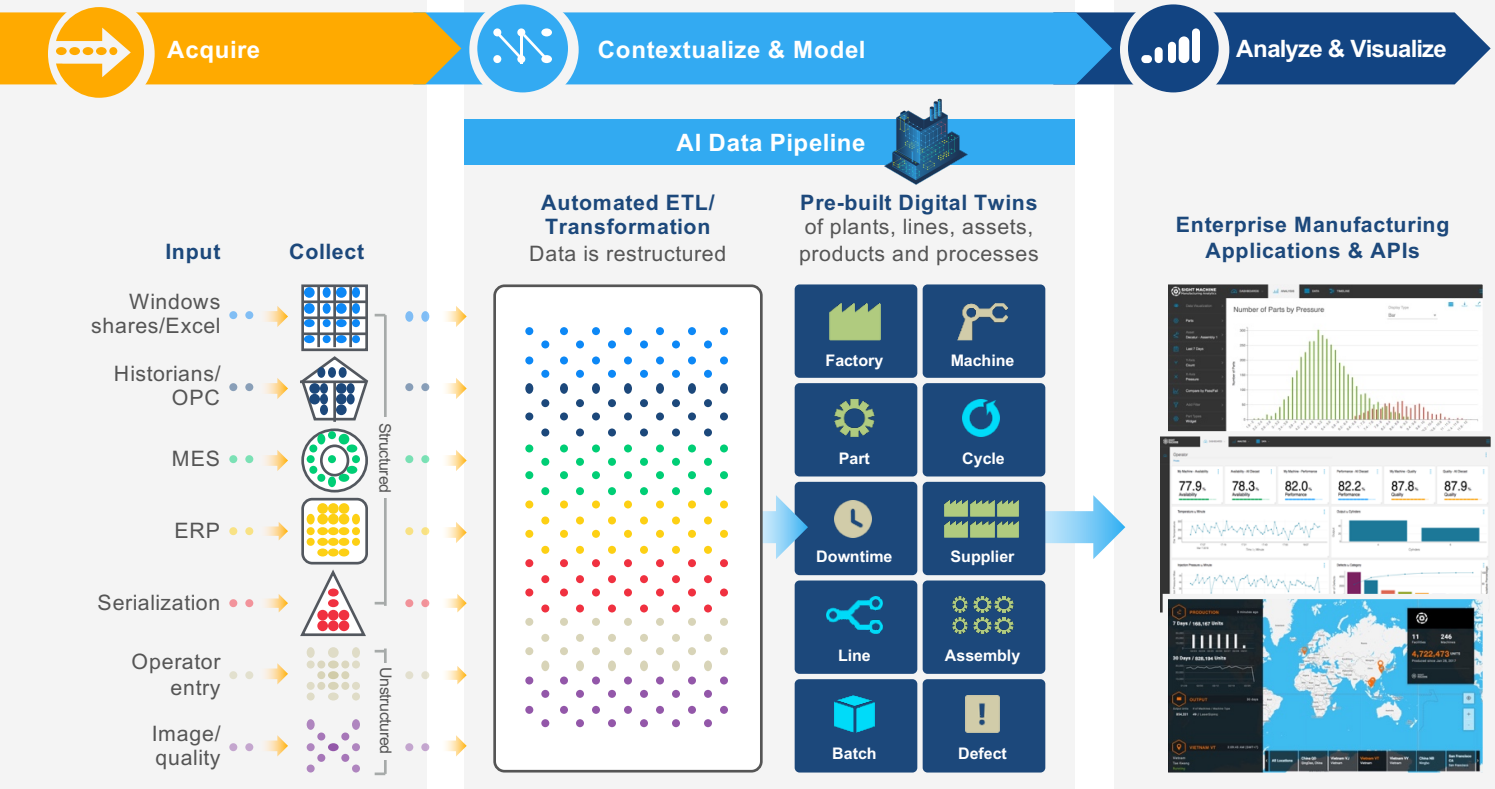
- Drive continuous process improvement
- Analyze process, part and quality data to find root causes
- Predict asset failure
- Reduce downtime
- Increase capacity utilization

Visibility

- Access info in real-time
- Measure and improve OEE
- Monitor regulatory info, birth certificate, track and trace
- Compare metrics across plants
- Measure and trend productivity and quality

A New Approach

Sight Machine solves this challenge with its unique Data First approach, a technology that brings together the most recent advances in computing, software design, and edge and cloud delivery



Acquire

Sight Machine's platform ingests all production data — whether from automation and controls sources, sensors, MES, traceability and quality systems, ERP, historians, and data lakes — across every process and every industry.

Contextualize & Model

To manage the extraordinary variety of manufacturing data, Sight Machine's patented ETL engine – the AI Data Pipeline, takes disparate, raw streaming data points and blends them into manufacturing-specific context. Once configured for a manufacturer's unique streams and sources of data, the pipeline continuously joins and processes data into pre-built digital twins or data models that represent any manufacturing machine, line, facility, supplier, part, or batch.

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Analyze & Visualize

Role based tools for visualizing and analyzing your digital twin data. Out of the box exploratory data analysis applications, statistical process control tools, and built-in notifications enable you to perform proactive production management.

Sight Machine Includes

Streaming Data Integration Pipeline

The only scalable product for integrating streaming manufacturing data

- ✓ **Digital Twins:** Pre-built manufacturing data models, standardized and interoperable across your enterprise
- ✓ **AI Data Pipeline:** The industry's only AI-powered data pipeline that stream transforms any existing manufacturing data including machine, quality, and system data to feed your digital twins
- ✓ **Self service model configuration and compute tools:** Allowing customers and partners to customize models and add new data sources
- ✓ **Standardized APIs** to connect contextualized data and models to Sight Machine applications and other systems

Data acquisition through FactoryTX

The first enterprise-grade industrial data acquisition solution optimized for manufacturing

- ✓ **Hardware and software options** for acquiring industrial data on the factory floor or in the cloud. Supports the most common industrial standards
- ✓ **Remote device management tools:** Centralized manageability of multifacility production data ingestion
- ✓ **Network management:** Manages network reliability challenges of disparate facilities. Remediates bandwidth limitation typical to plants

Extensible Manufacturing Applications

A toolkit for accessing and analyzing modeled data of every machine, line, part and batch

- ✓ **Software Development Toolkit:** Quickly create customized analytics and applications leveraging Sight Machine's data platform including: predictive maintenance, root cause analysis, and bottleneck analysis

Manufacturing Applications

Off-the-shelf applications that leverage the streaming data integration pipeline and digital twins

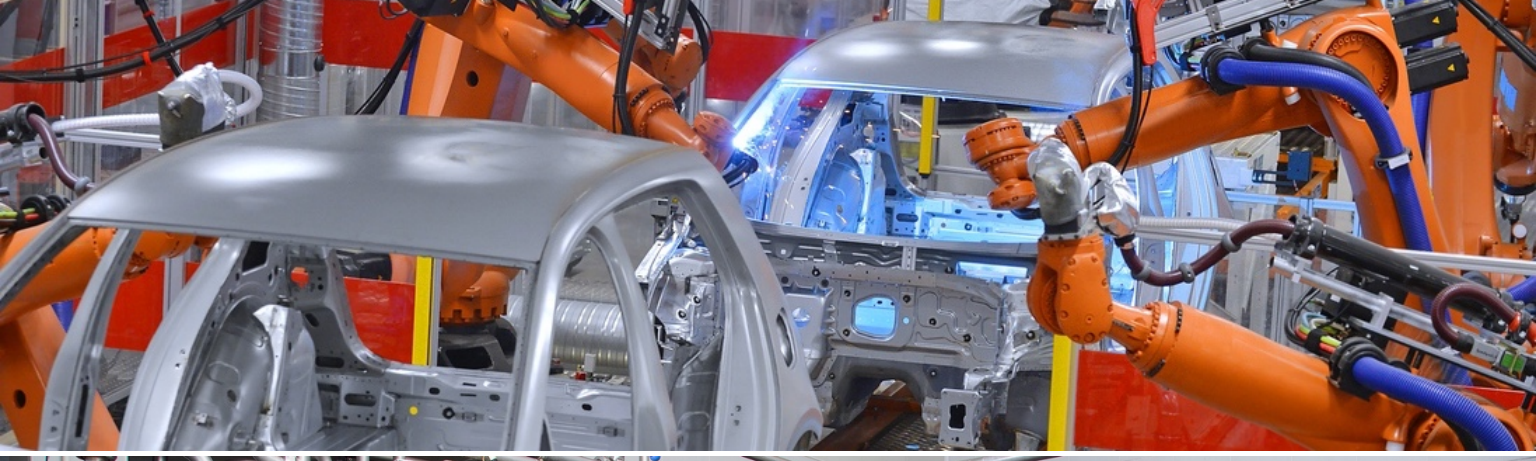
Visualization Tools

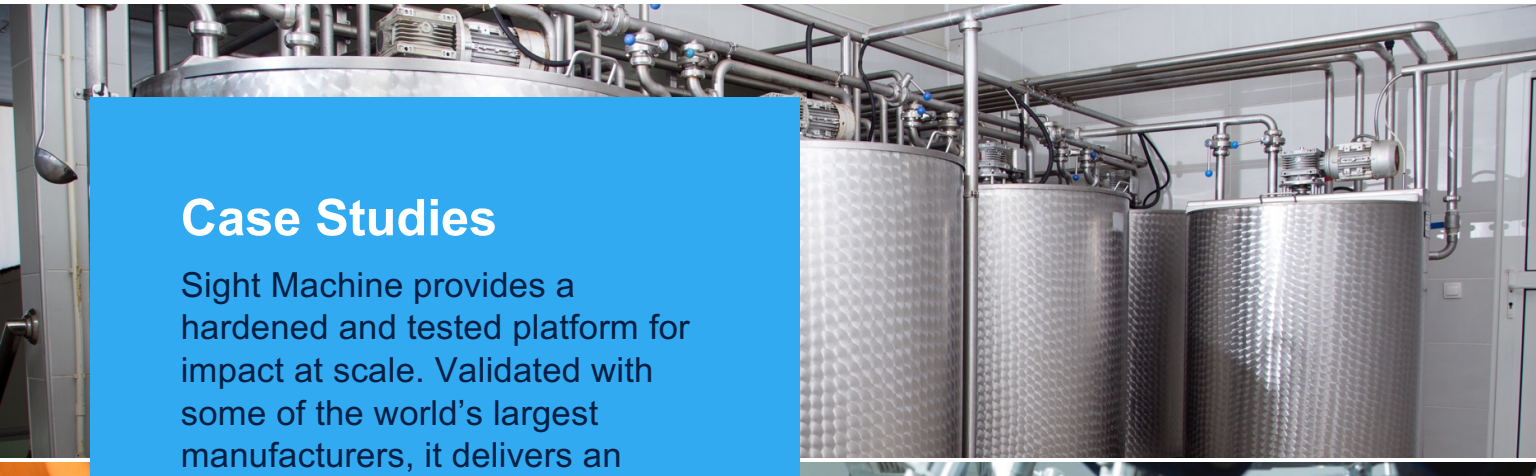
- ✓ **OEE Monitoring:** Dashboards for managing availability, quality, and output for machine, line, and facility performance
- ✓ **Charting & Dashboard Builder:** Build visualizations for operators, process engineers and production managers

Analytics Workbench

- ✓ **Data Discovery Toolkit:** Exploratory data analysis applications built on Sight Machine's data models
- ✓ **Statistical Process Control (SPC):** Monitor process stability and determine when parameters go out of control to ensure quality and stability of your processes

Alerting & System Workflow: *Sight Machine Action Builder* enables you to define conditional triggers occurring in your production data and generate visualizations and notifications enabling proactive operations management





Case Studies

Sight Machine provides a hardened and tested platform for impact at scale. Validated with some of the world's largest manufacturers, it delivers an unprecedented understanding of the end-to-end manufacturing process.

CASE STUDY

IMPROVED QUALITY: TRACK & TRACE OF PARTS AND COMPONENTS

Automotive manufacturer improves quality with track and trace capability

Profile

- Automotive
- Powertrain

Company overview

- $100+ Billion revenue
- Over 30 process engineers at each facility preparing data each day

Problem

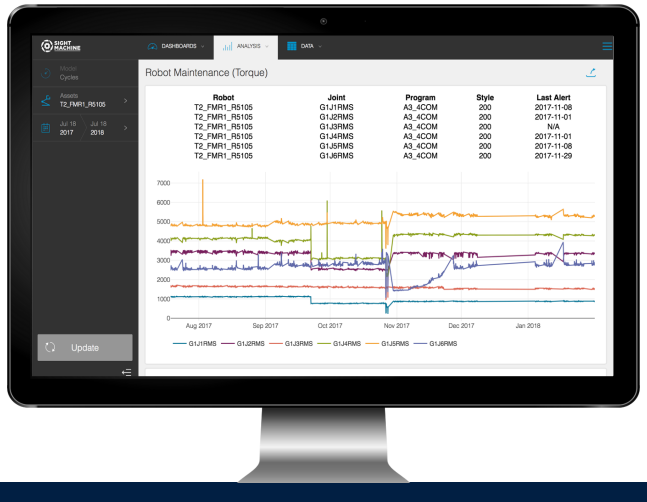
Auto manufacturer had difficulty addressing quality issues due to inefficient data analysis process

Solution

Sight Machine integrated process and part data enabling process engineers to investigate relationships between machine sensor and quality data as parts travel through the production line. The platform allows the team to correlate machine data from good and bad parts to identify causes of quality issues

Benefits

- Initial plant identified impact: $1.25 million savings from automating manual data aggregation and analysis; Currently scaling across plants



CASE STUDY

INCREASED OUTPUT:
PROCESS MONITORING
AND OPTIMIZATION

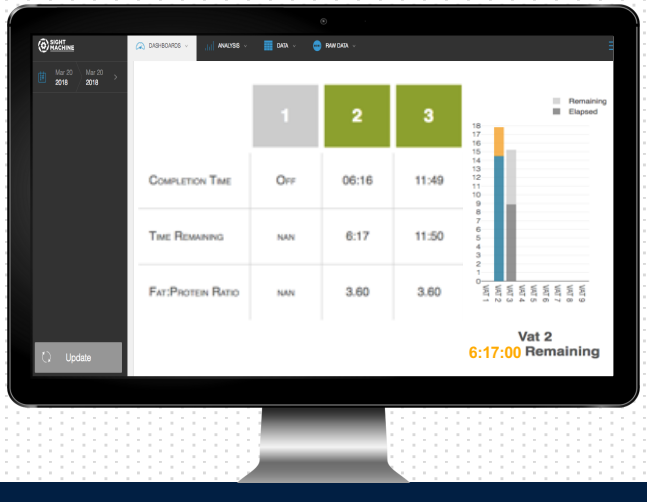
Dairy processor increases output through process monitoring and optimization

Profile

- Food & Beverage
- Process production: Cookers, fermenters, separators, presses

Company overview

- +$13B Multinational dairy processor



Problem

Dairy producer looking to increase production by optimizing efficiency across multiple processes

Solution

Sight Machine created a digital twin of the production line that enabled end-to-end traceability of each batch. The platform allowed the manufacturer to increase output by optimizing production for the entire line vs individual processes

Benefits

- Initial facility impact: $300K from increased output identified
- $15 million expected enterprise-wide program impact
- Process monitoring tools enable operators to operationalize recommendations

CASE STUDY

SUPPLY CHAIN OPTIMIZATION:
VISIBILITY & BENCHMARKING

Retail apparel company achieves visibility across suppliers

Profile

- Apparel/footwear
- Laser cut/Injection Molding

Company overview

- $32 billion revenue
- 500+ contract manufacturers

Problem

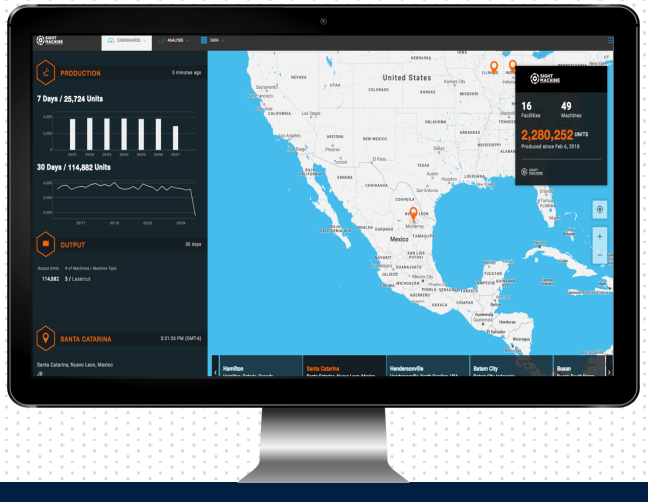
Manufacturer attempting to gain OEE visibility across a wide network of plants, including contract manufacturers, to better understand capacity constraints and eliminate the need to build/source additional manufacturing capability

Solution

Sight Machine implemented across contract manufacturer plants delivered previously unattainable visibility and improved production consistency across the supply chain

Benefits

- Identified cost savings vs manual reporting process: $1.2 million identified
- Sharing best practice operating parameters and cycle times across supply chain



CASE STUDY

INCREASE OUTPUT: PROCESS OPTIMIZATION AND ANALYSIS

Paper packaging manufacturer reduces scrap rate

Profile

- Paper/Packaging
- Continuous/Press line

Company overview

- $14 billion revenue
- 100+ plants

Problem

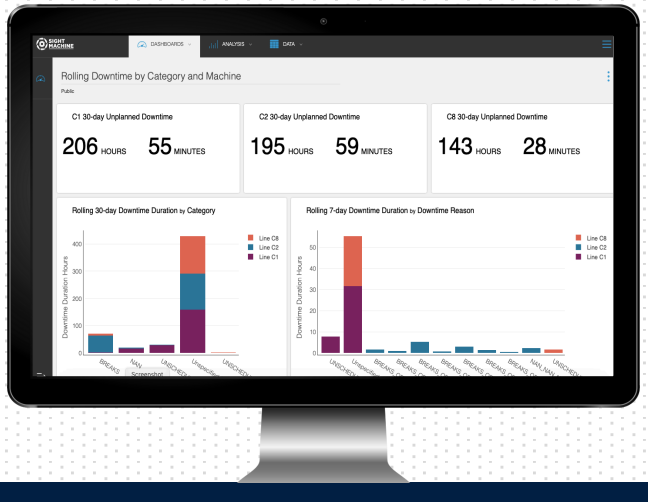
Production complexity and variances in raw materials made it difficult to optimize machine settings for various paper grades. Manual data analysis process limited ability to address scrap issues

Solution

Sight Machine integrated production and quality data to create digital twins of the production process. The platform accounted for interdependencies between processes, enabling the mill to optimize settings for the entire process vs. individual components

Benefits

- Initial identified impact: $1.5 million from yield rate increase; $1.5 million savings vs manual process
- $72 million expected enterprise-wide program impact



Coverage and Awards

Recognized as the category leader in Digital Manufacturing

RECENT AWARDS AND RECOGNITION:

2019 GLOBAL CLEANTECH 100 COMPANY
Produced by Cleantech Group

Industrial Automation and Energy Efficiency
Awarded by ABB

CB INSIGHTS
THE AI 100
2017

Everest Group RESEARCH
Top 20 IOT Trailblazers

FORTUNE
Top 50 Companies Leading the AI Revolution

Gartner
COOL VENDOR

Pharmaceutical MANUFACTURING
Allstar Innovator

NETWORKWORLD
2018 Top 10 Hot AI-Powered Startups