

A person in a blue suit is holding a tablet displaying various data charts and graphs. The background is a blurred industrial setting with robotic arms and sparks, suggesting a manufacturing environment. The overall image has a dark, semi-transparent overlay.

Creating Business Value from Manufacturing Data

Challenge



20% of every Euro spent in manufacturing is wasted.

- Defects
- Cycle Time
- Bottlenecks
- Unplanned Downtime
- Energy Consumption

Challenge

The answer to manufacturing's waste problem is hidden in data.

The value of data isn't the data.

Challenge

A close-up photograph of a person's hands holding a glowing lightbulb. The lightbulb is illuminated from within, revealing a complex network of glowing circuitry and fibers inside. The background is dark and out of focus, emphasizing the lightbulb as a symbol of an idea or innovation.

Value is created when:

Data is connected to create a holistic view of the manufacturing process.

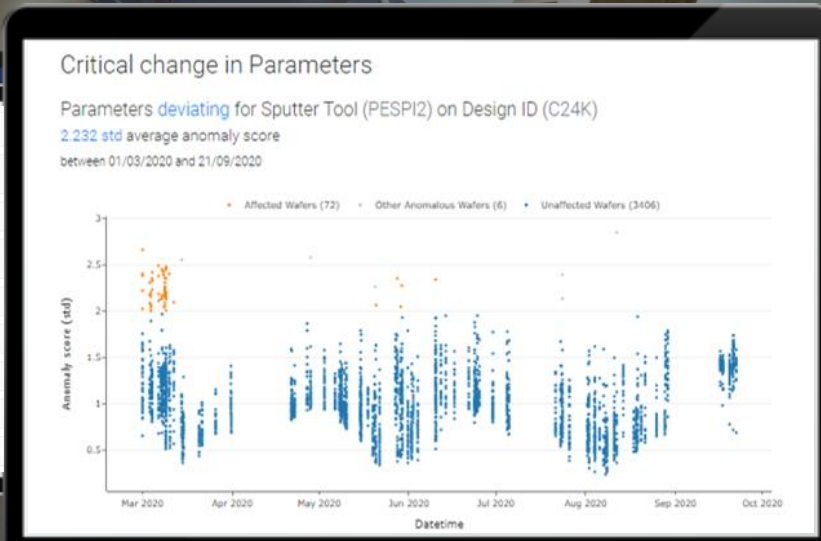
Data is transformed into actionable insights that deliver business outcomes.

Human and machine intelligence are combined to enhance performance.

Industrial Analytics Platform

uses machine learning and other forms of AI to reduce waste in manufacturing

Score	Alert
46.1	Parameters deviating for Carbon Dry-Etch Tool (L2D09A0500) on Design ID (C24K)
18.2	Parameters deviating for Dry-Etch Tool (ETM033) on Design ID (C24E)
18.1	Parameters deviating for Carbon Dry-Etch Tool (L2D09A0500) on Design ID (C24K)
14.8	Parameters deviating for Sputter Tool (PESPI6) on Design ID (C24K)
14.6	Parameters deviating for Darc2 Tool (CIVDP42) on Design ID (C24K)
13.7	Parameters deviating for Dry-Etch Tool (ETM032) on Design ID (C24H)
13.7	Parameters deviating for Darc2 Tool (CIVDP42) on Design ID (C24K)
6.4	Parameters deviating for Sputter Tool (PESPI3) on Design ID (C26E)



Customer Benefits



-80%

Time & Cost-to-Insights



-30%

Waste



+20%

Efficiency

**We transform the way
analytics are built and
consumed**

How it Works

operational in less than one month

AUGMENT

Make the most of your data



Machine Learning
to connect, process
and understand
your data

AUTOMATE

Eliminate need for an inhouse team



Machine Learning
to generate,
operationalize and
manage AI
models

SHARE

Put your knowledge to work



Human-in-the-Loop
AI to combine
domain knowledge
and machine
intelligence

ACT

Fact-based decision making



Machine Learning
to generate
contextual
insights and real-
time notifications

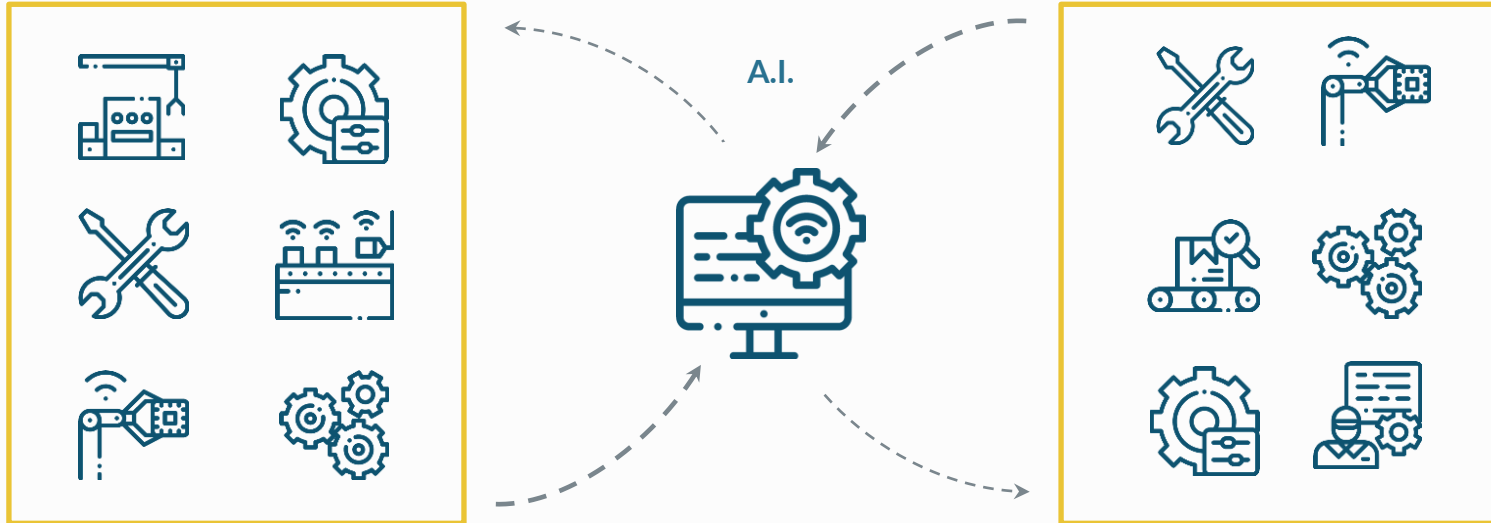


Augment

Connects and prepares data across systems to create a holistic view of the manufacturing process and eliminate silos

MES, ERP, IoT, Quality Assurance

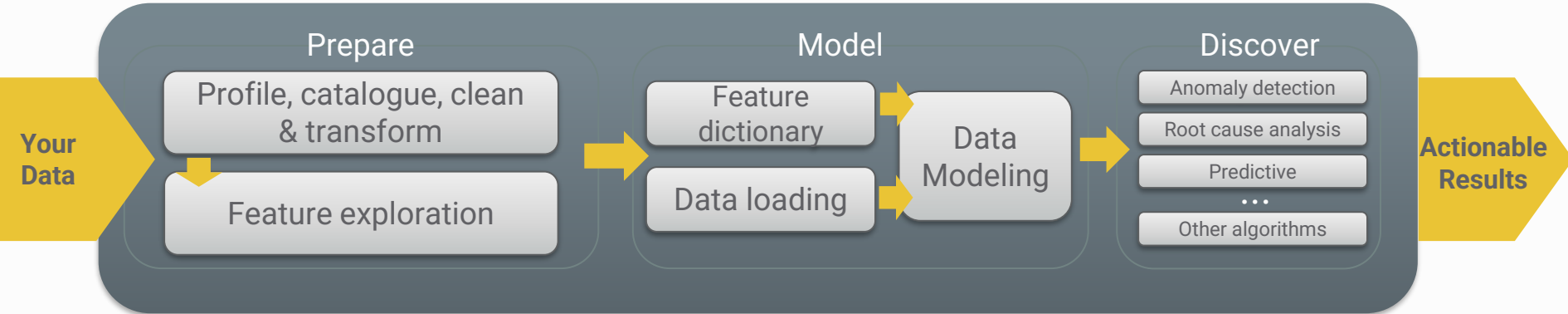
BI





Automate

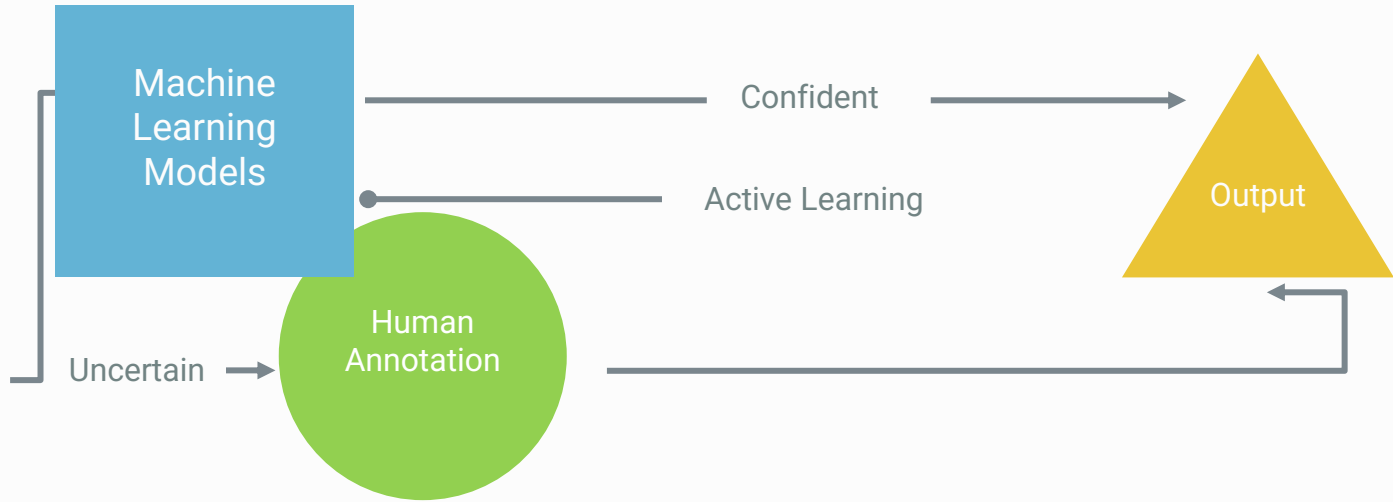
Transformation of data into insights, eliminating the need for an in-house team





Share

Human-in-The-Loop AI to learn from shop floor engineers, create a continuous feedback loop and increase confidence and performance





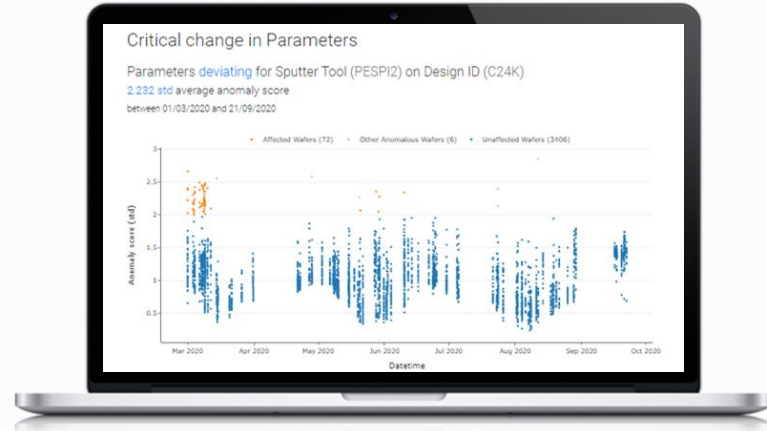
Act

Combines numbers and narrative into actionable insights so you can take fact-based decisions and know what to fix first

Rank insights based on impact

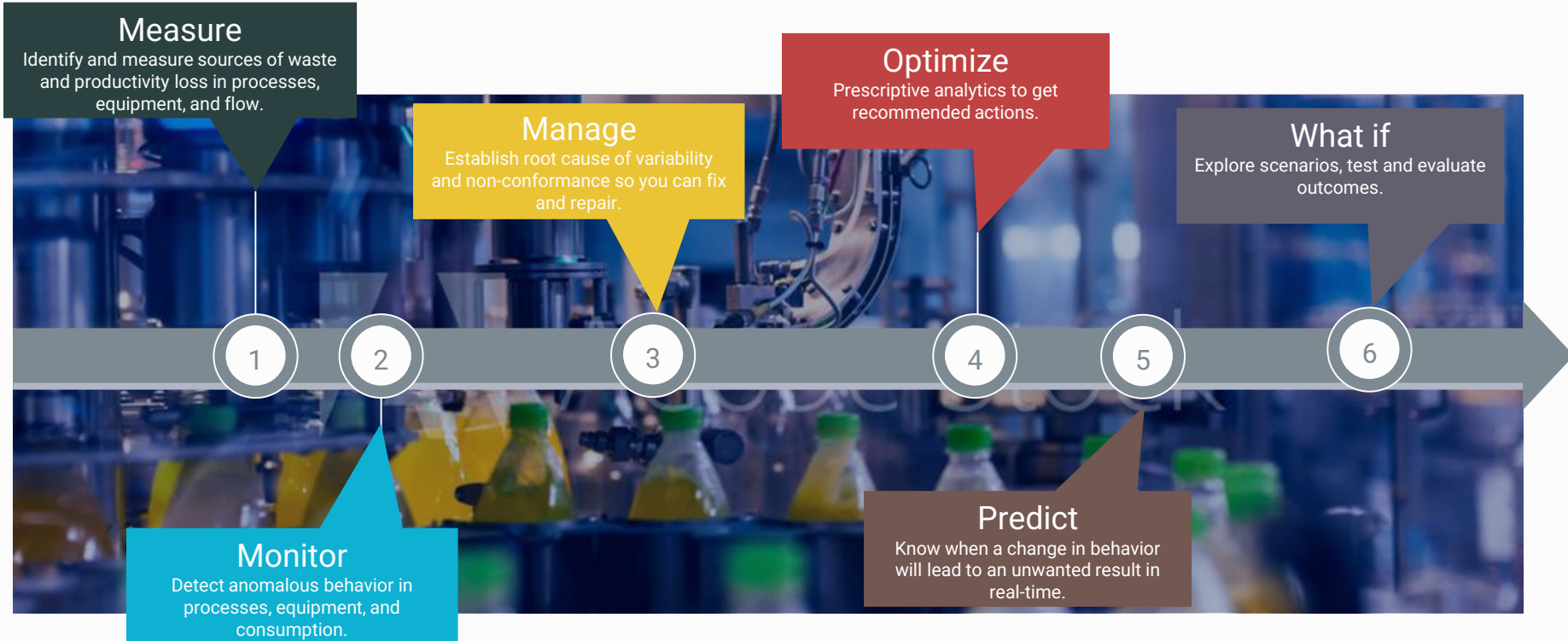
Date	Score	Alert	Change
08/02/2021	46.1	Parameters deviating for Carbon Dry-Etch Tool (L2D0940500) on Design ID (C24K)	2.353 std
08/02/2021	18.2	Parameters deviating for Dry-Etch Tool (ETMD33) on Design ID (C26E)	1.918 std
08/02/2021	18.1	Parameters deviating for Carbon Dry-Etch Tool (L2D0940500) on Design ID (C24N)	2.7 std
08/02/2021	14.6	Parameters deviating for Sputter Tool (PESP16) on Design ID (C24K)	3.305 std
08/02/2021	14.6	Parameters deviating for Darc2 Tool (DVDP42) on Design ID (C24N)	1.925 std
08/02/2021	13.7	Parameters deviating for Dry-Etch Tool (ETMD32) on Design ID (C24N)	1.99 std
08/02/2021	13.7	Parameters deviating for Darc2 Tool (DVDP42) on Design ID (C24K)	6.048 std
08/02/2021	6.4	Parameters deviating for Sputter Tool (PESP33) on Design ID (C26E)	2.369 std

Easy-to-understand stories that facilitate action



**Our analytics modules match the
manufacturer's data and
analytics maturity to ensure they
maximize value at each stage**

Transformational value at each stage



Use Case: Manufacturing Efficiency

Measure

Identify and measure sources of waste and productivity loss in processes, equipment, and flow.

A manufacturer of hydraulic cartridge valves identifies the sources of variability and understands the impact of variability on production.

1



Use Case: Process Monitoring



2

An OEM monitors machine state paths to detect developing bottlenecks.

Monitor

Detect anomalous behavior in processes, equipment, and consumption.



Use Case: Root Cause Analysis

Manage

Establish root cause of variability and non-conformance so you can fix and repair.

A plastics manufacturer finds the root cause of a spike in energy consumption in real-time.

3

Use Case: Prescriptive Analytics



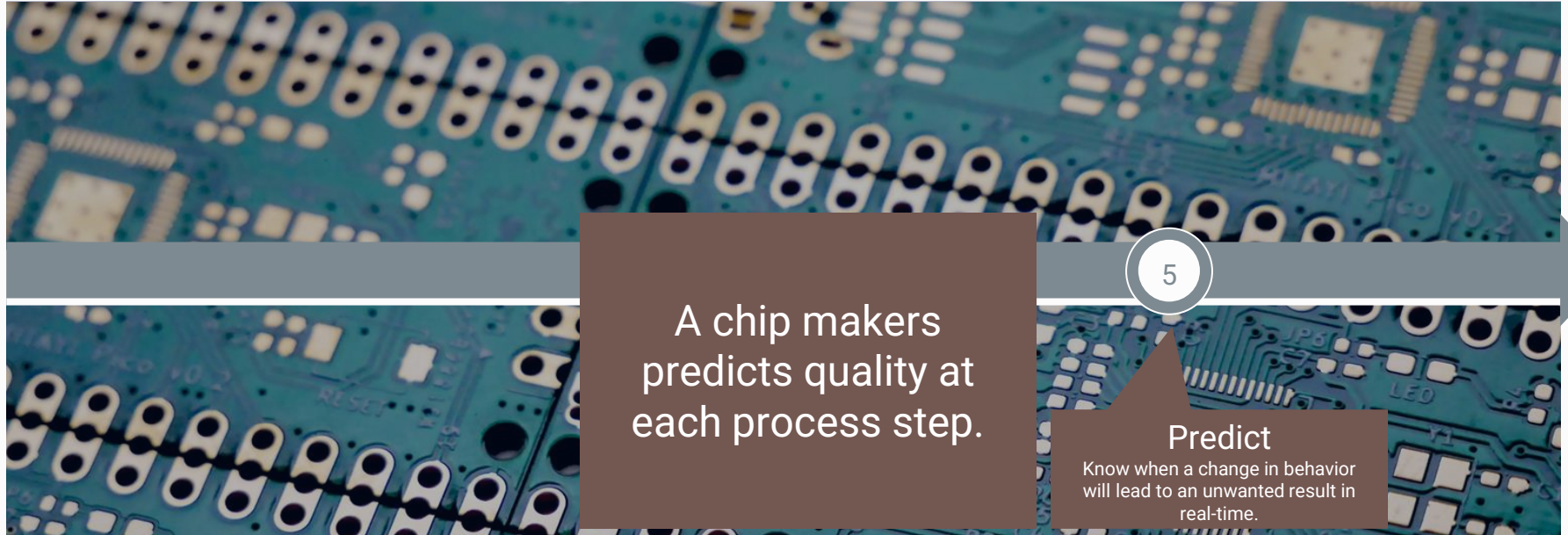
Optimize

Prescriptive analytics to get recommended actions.

A food processing company determines the optimal operating range to prevent losses.

4

Use Case: Predictive Quality



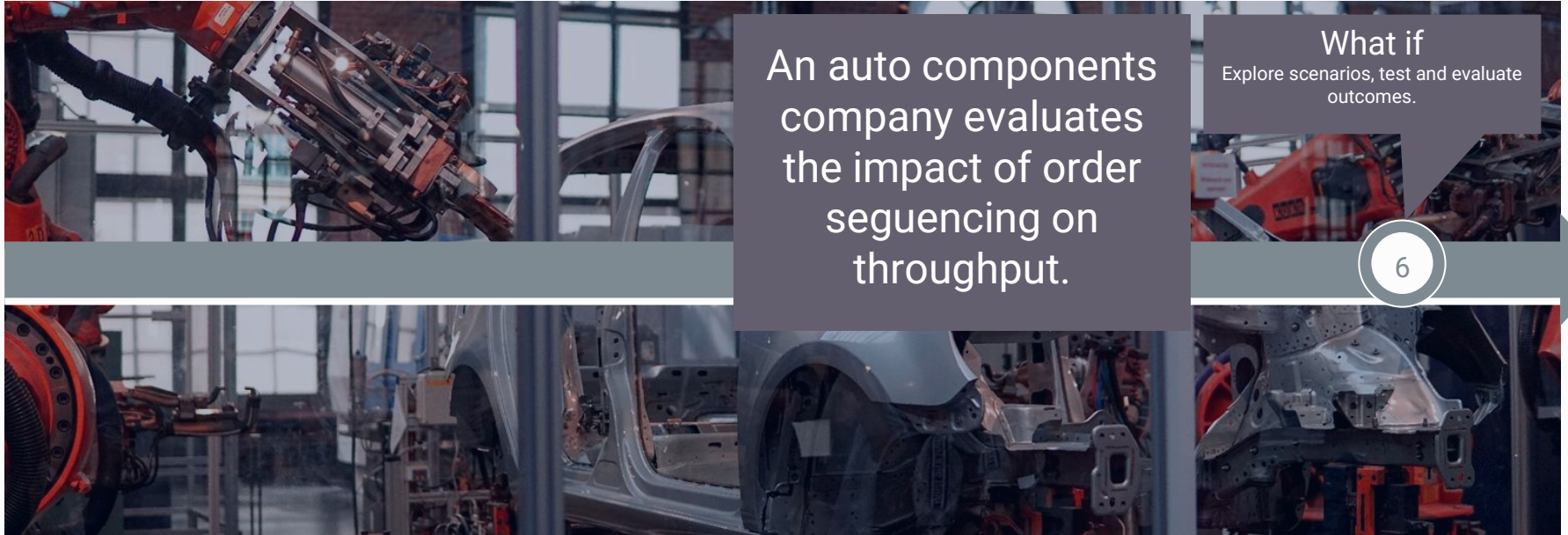
A chip maker predicts quality at each process step.

5

Predict

Know when a change in behavior will lead to an unwanted result in real-time.

Use Case: Sensitivity Analysis



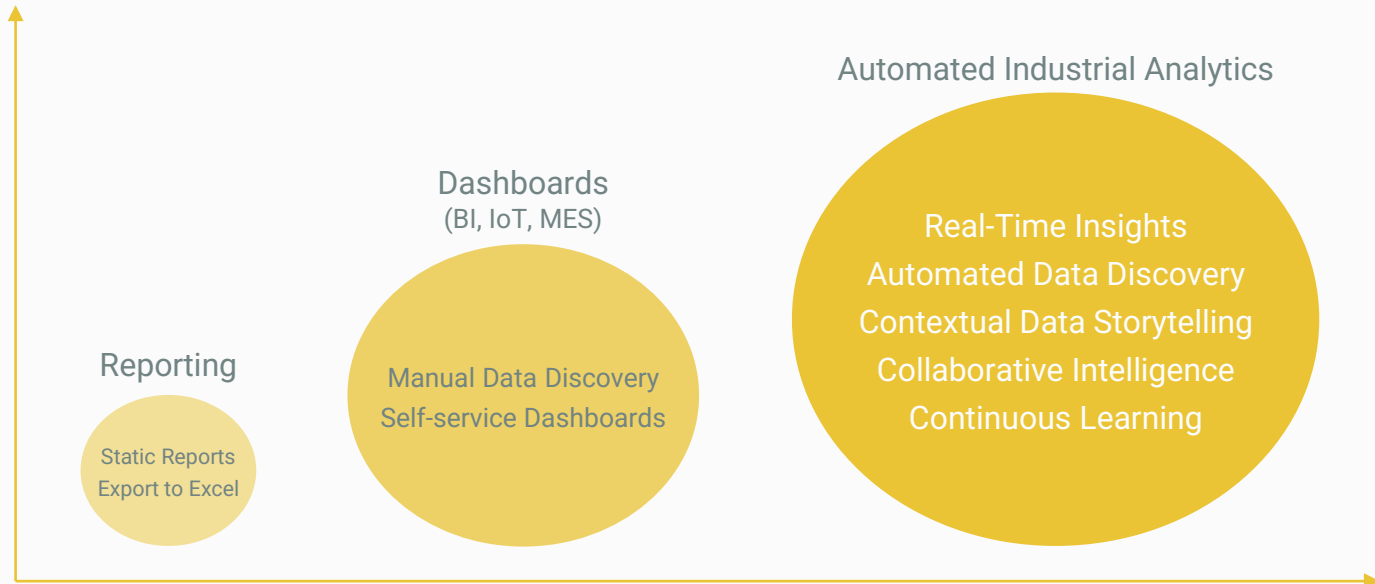
An auto components company evaluates the impact of order sequencing on throughput.

What if

Explore scenarios, test and evaluate outcomes.

6

Tap into the value of your data



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