



POLLING QUESTION

WHAT IS YOUR BIGGEST CHALLENGE TO DIGITIZING?



VAN METER



smart

SOLUTIONS SUMMIT

LET'S GET DIGITAL

Karl Schmidt, Information Solutions Architect, Van Meter



smart

SOLUTIONS SUMMIT

1. WHY DIGITIZE

People and Processes

2. GREAT USE CASES

For Digitization

3. BEST PRACTICES

In Digitizing

WORKFORCE CHALLENGES

**THE WORKFORCE IS SHRINKING.
EXPERIENCE IS EXITING.**

2.7M

**BABY BOOMERS
WILL RETIRE**

2M

**JOB'S ARE EXPECTED
TO GO UNFILLED**

Source: Deloitte analysis based on data from U.S. Bureau of Labor Statistics and Gallup survey.

PRODUCTIVITY GOALS

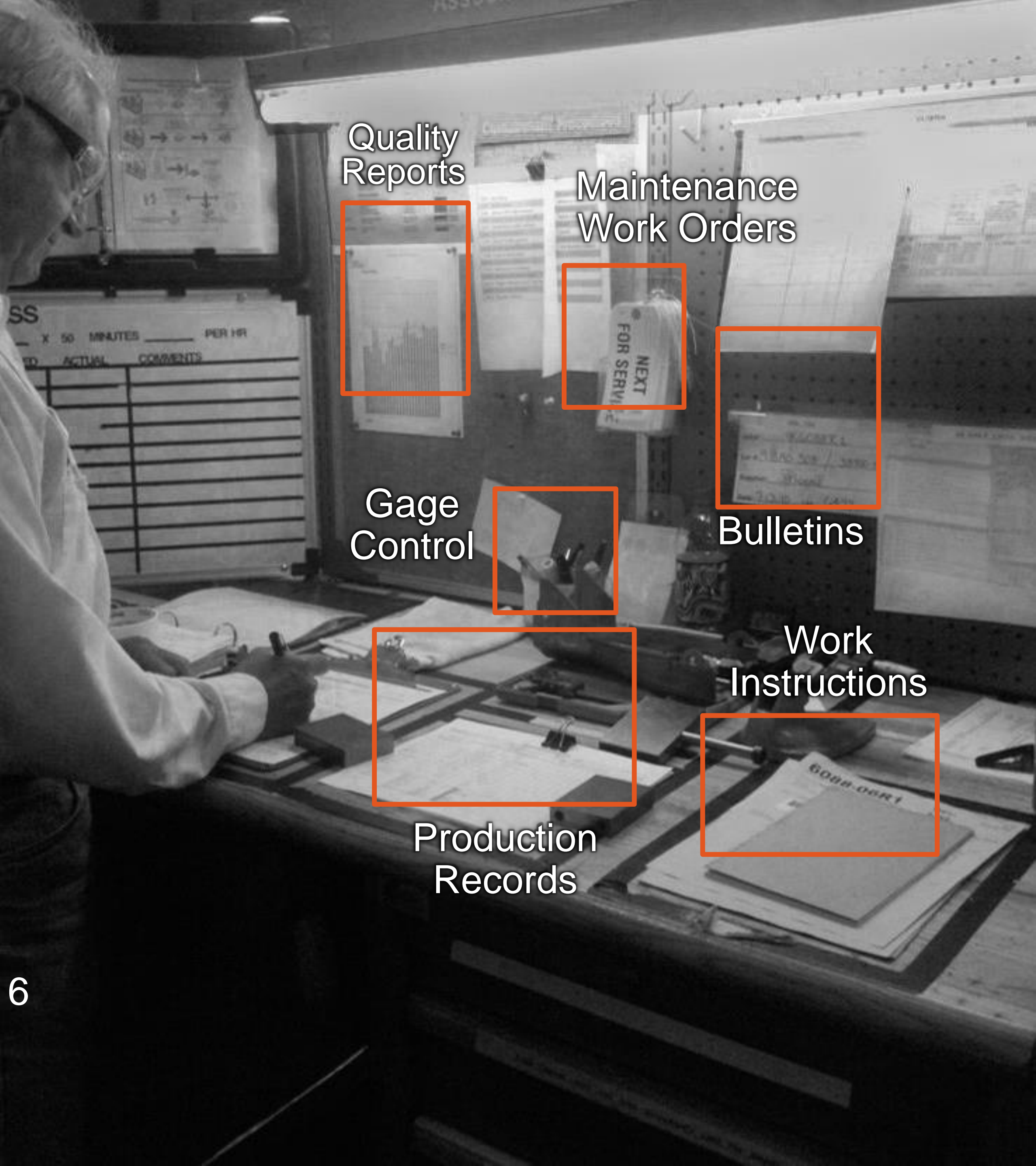


INCREASED CAPACITY

Added growth goals each year.

PRODUCTIVITY GOALS

Driving out cost to be more competitive and to boost profitability.



PAPER ≠ CONTROL

Manual data entry leads to errors which are costly and disruptive.

Real-time control requires real-time data.

Finding an answer in paper is like finding a needle in a haystack.

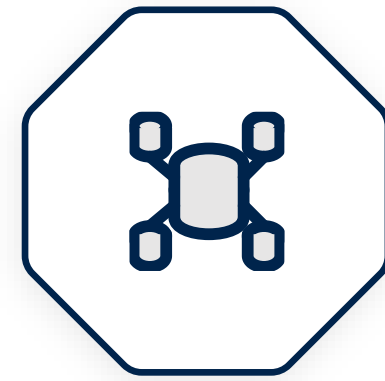
BARRIERS

TO MAXIMIZING THE VALUE OF YOUR DATA



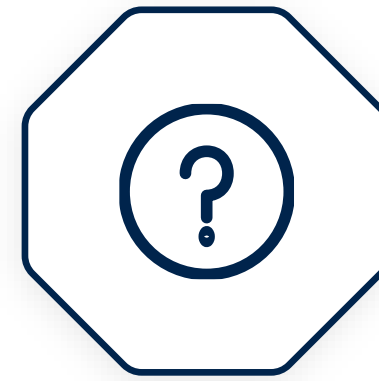
Point Solutions

Don't make it easier
to solve the next
problem.



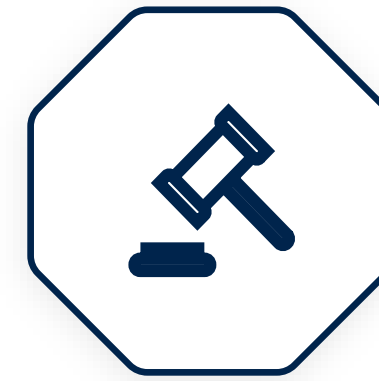
Data in Silos

Difficulty to use
in combination.



Data Lacks Context

Challenge to
understand and
use data.



Data Isn't Trusted

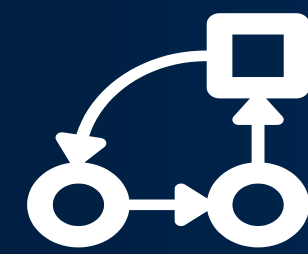
No owner and
governance yields
untrusted insights.



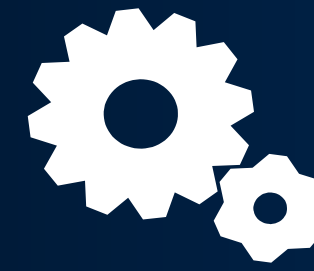
Difficulty Scaling

Onerous and time
consuming.

Digital Transformation Lead
OT Data Scientist - Analytics
Continuous Improvement
CapEx Managers



IT Enterprise
ERP



Design
R&D

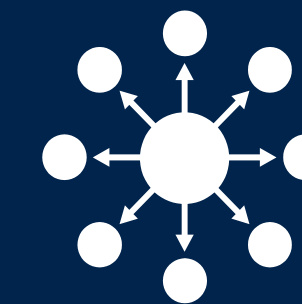
External Customers



Maintenance
Reliability
Asset Management
Instrumentation
OT Risk Management



Customer Service
Material Planning/Purchasing
Supply Channel
E - Fulfillment



Factory Automation
Process Control
OT Network Support



Environment Health
& Safety



Leadership



Manufacturing Engineers
Scheduling
Process Engineers



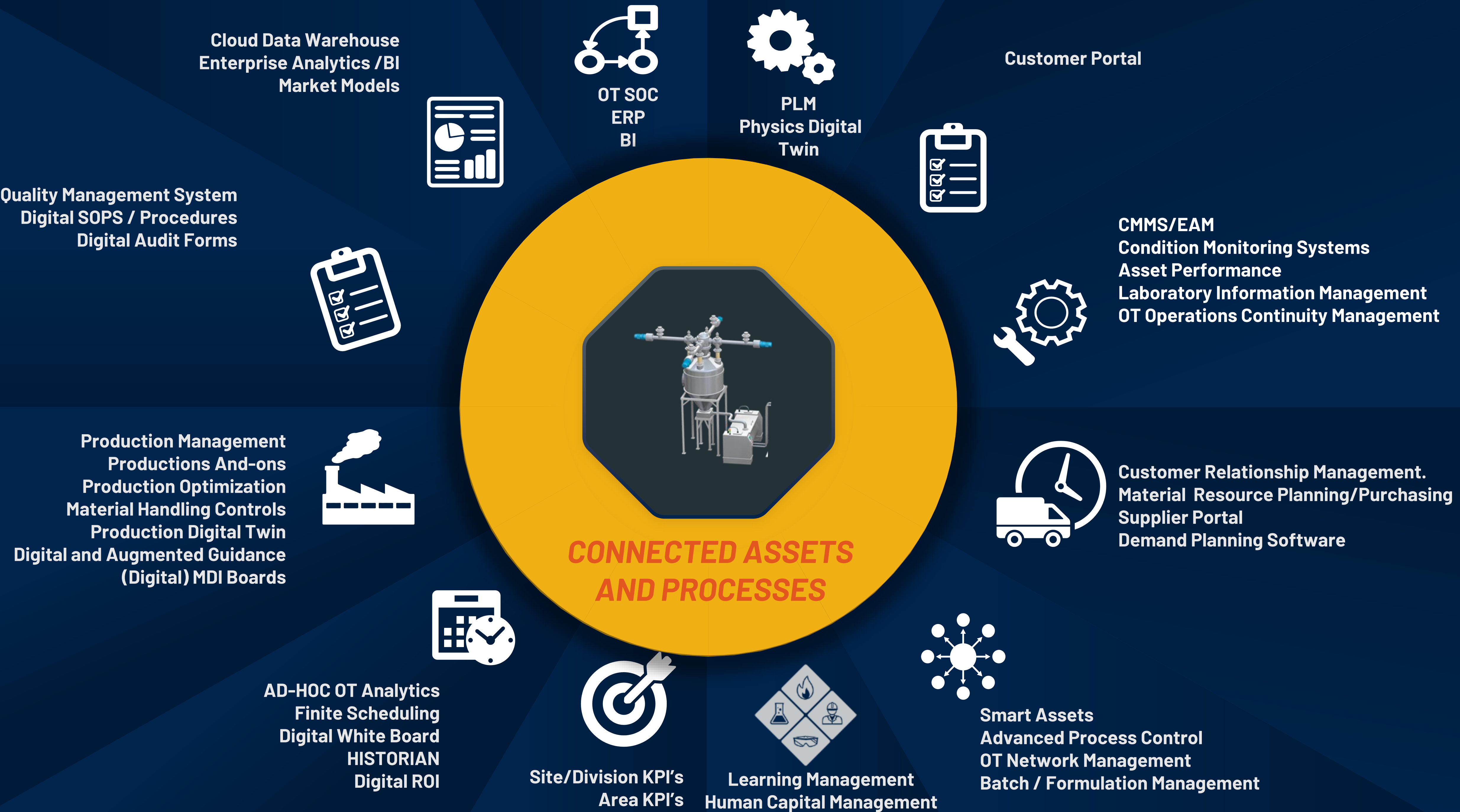
Production Management
Production Supervisor
Front Line Team Member



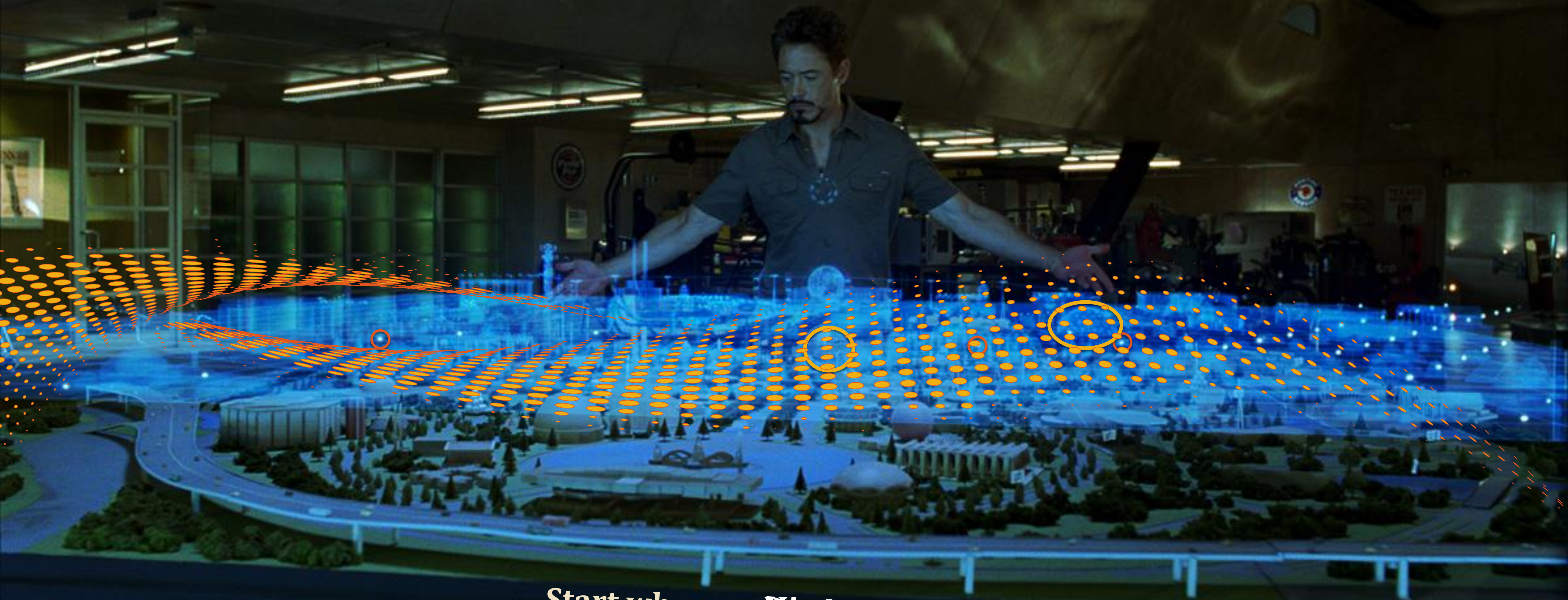
Quality Assurance
Laboratory/Metallurgical
Lean 6 Sigma Black Belt Lead

**THE RIGHT INFORMATION
FOR YOUR TEAMS**





UTOPIA



Start where you can impact the most value

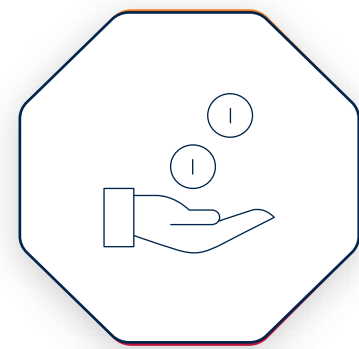
Distinction



WHAT SHOULD BE A PART OF YOUR DATA STRATEGY?

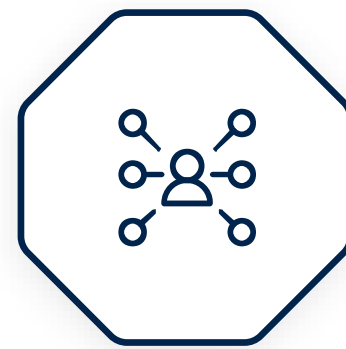
DATA STRATEGY

Be strategic and intentional with use cases that drive value.



Impact to Business

What **uses cases** will drive your Business and North Stars.
Which **use cases** drive the quick ROI & productivity gains



Context to Stakeholders and Processes

Easy consumption allowing for data to be **meaningful** in the **relevant** business context



Useful

Single source of information with full traceability.

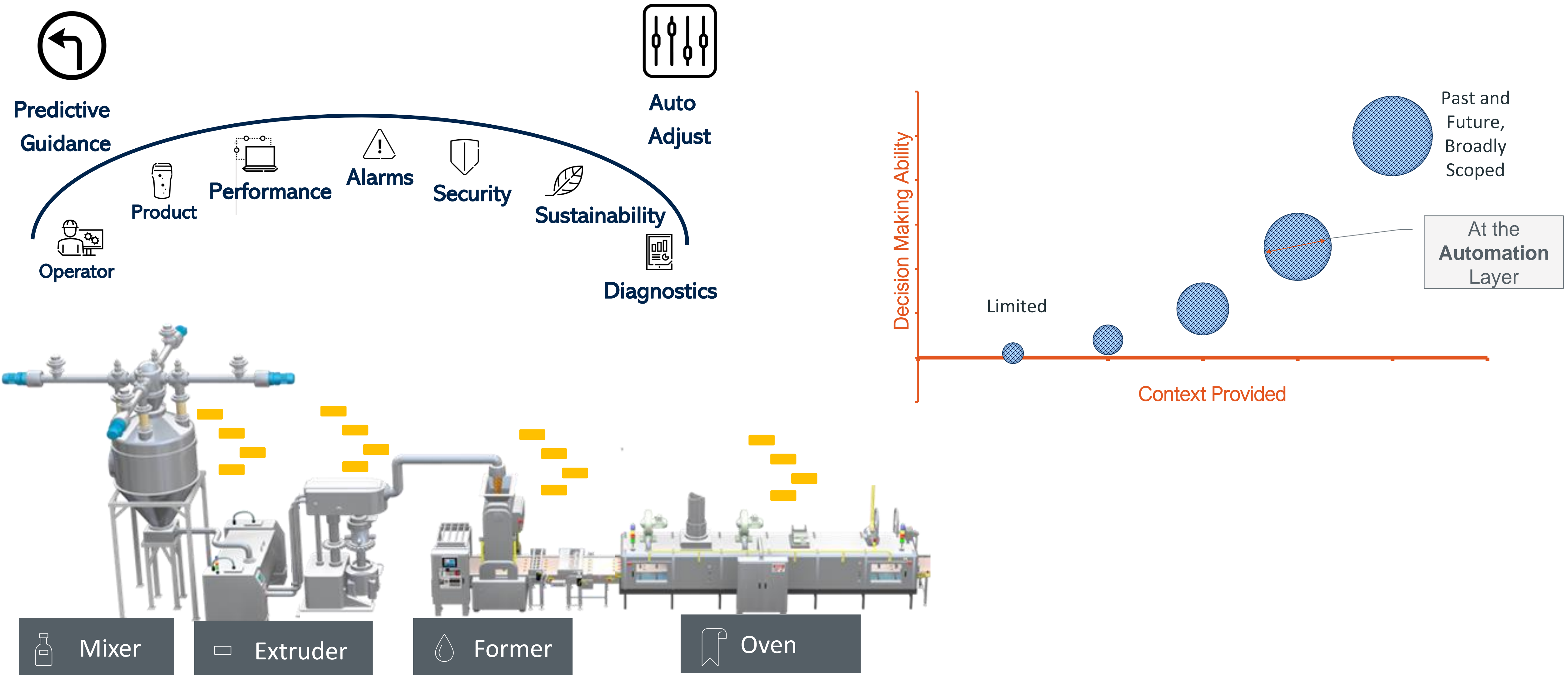


Valuable

Real-time visualization and advanced analytics applications deployed at scale that drive **optimal decision-making** and autonomous closed-loop actions.

CONTEXT AT THE SOURCE

Leverage and develop common information models.



DIGITAL THREAD

Transforming operations at world class manufacturing organizations.



Reduction in
unplanned downtime



Decrease in
operating costs



Increase in
production output

CONNECT PEOPLE AND SYSTEMS

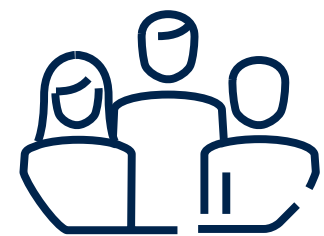
With the right insights.



Analytical models



Insights



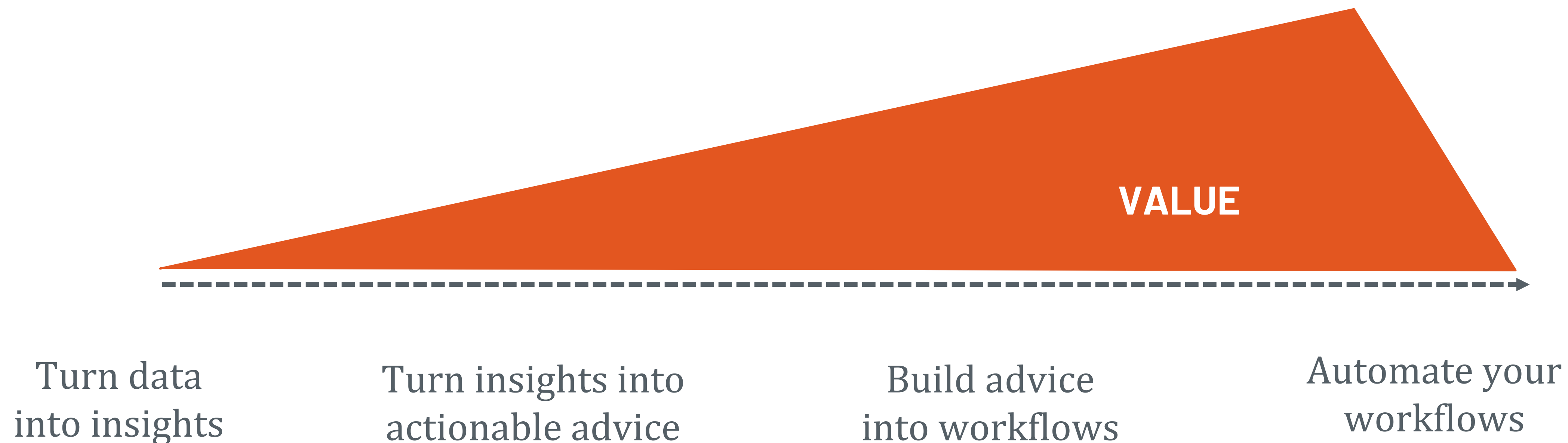
People



Systems

DIGITIZATION VALUE CONTINUUM

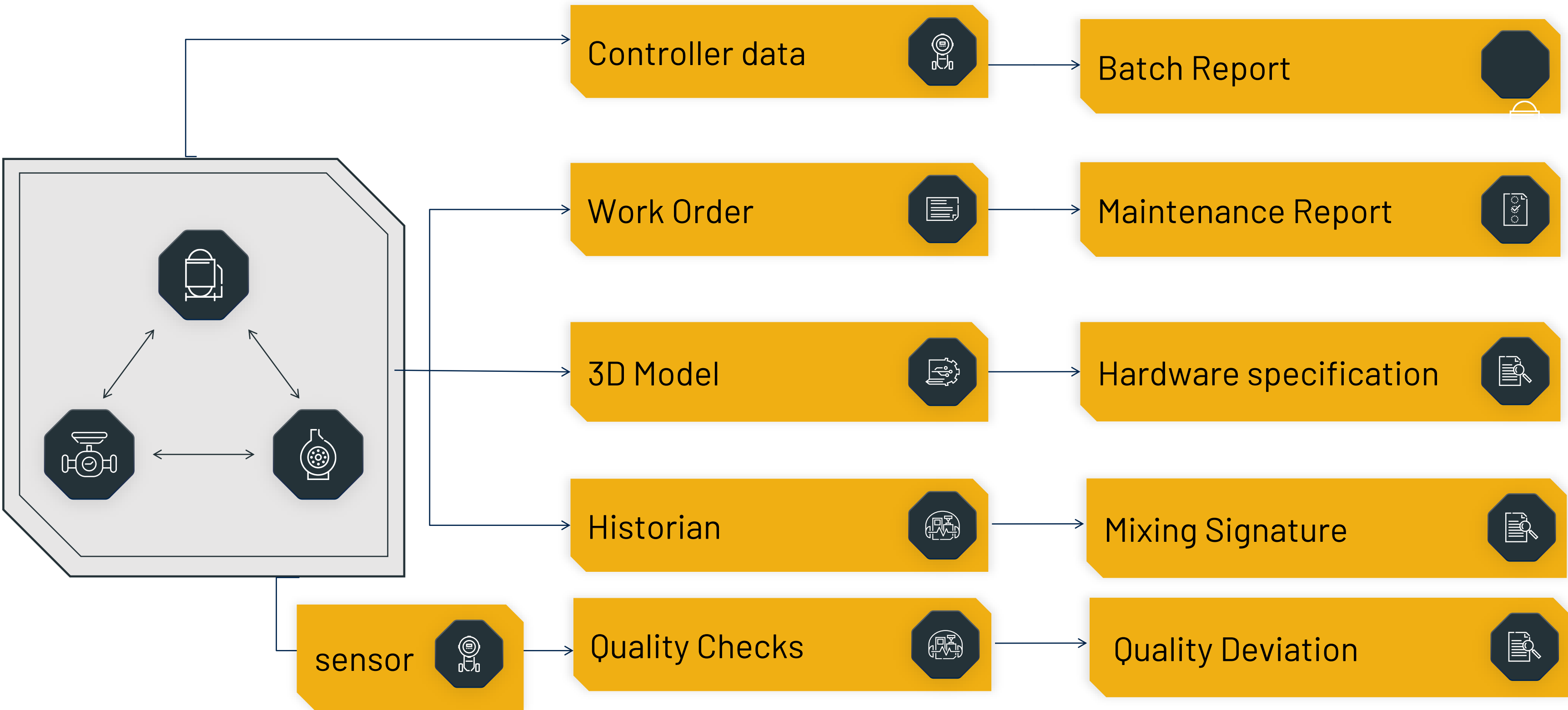
Creating greater value with data driven operations.



DATA CONTEXTUALIZATION



Contextualization is the process of establishing meaningful relationships between data sources and types to traverse and find data through a digital representation of the relationships that exist in the physical world.





USE CASES

PRODUCTION DATA

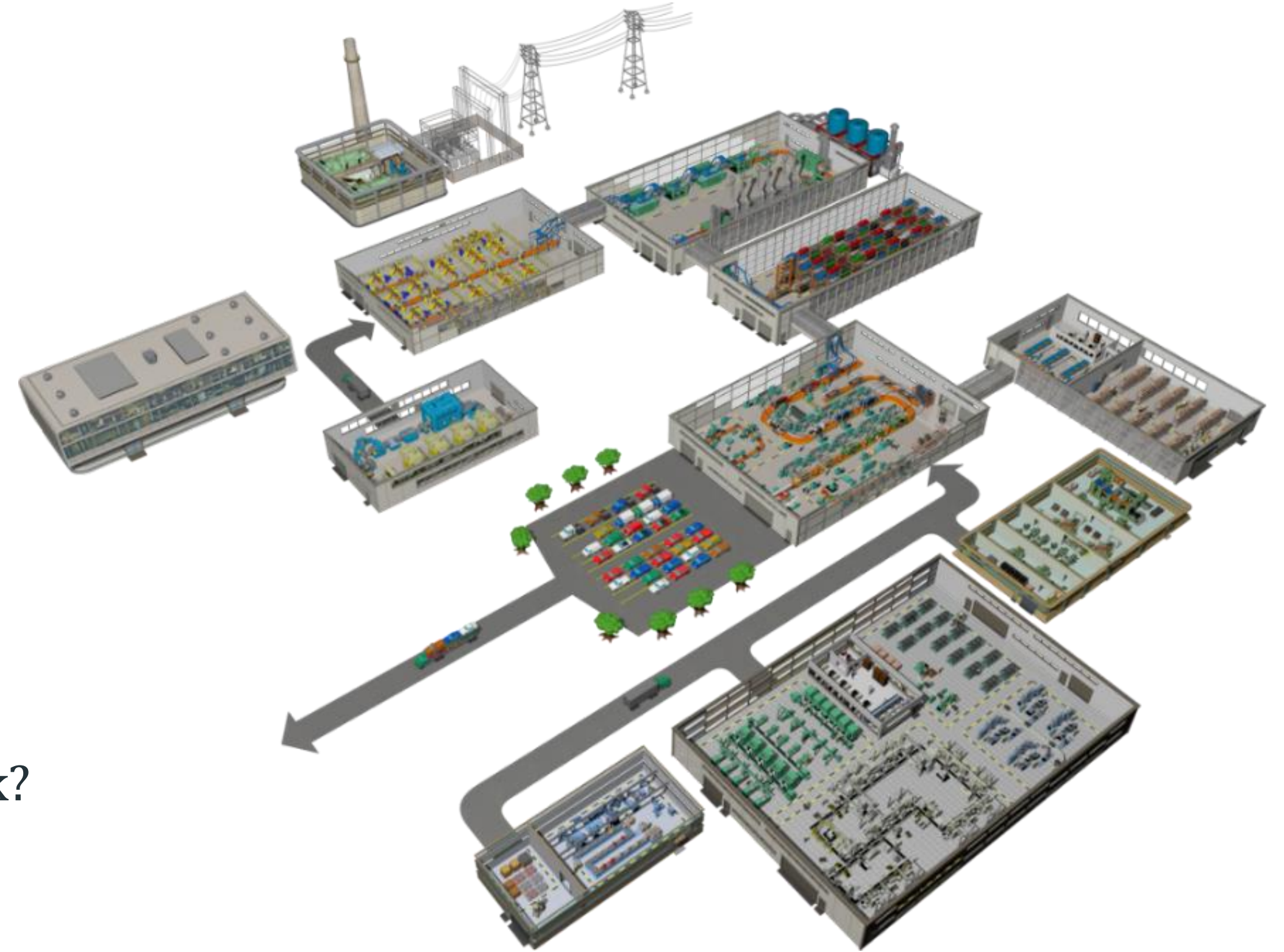
INFORMATION IN THE RIGHT FORM AND FOR THE RIGHT PEOPLE

Why is production 10% slower than other plants?

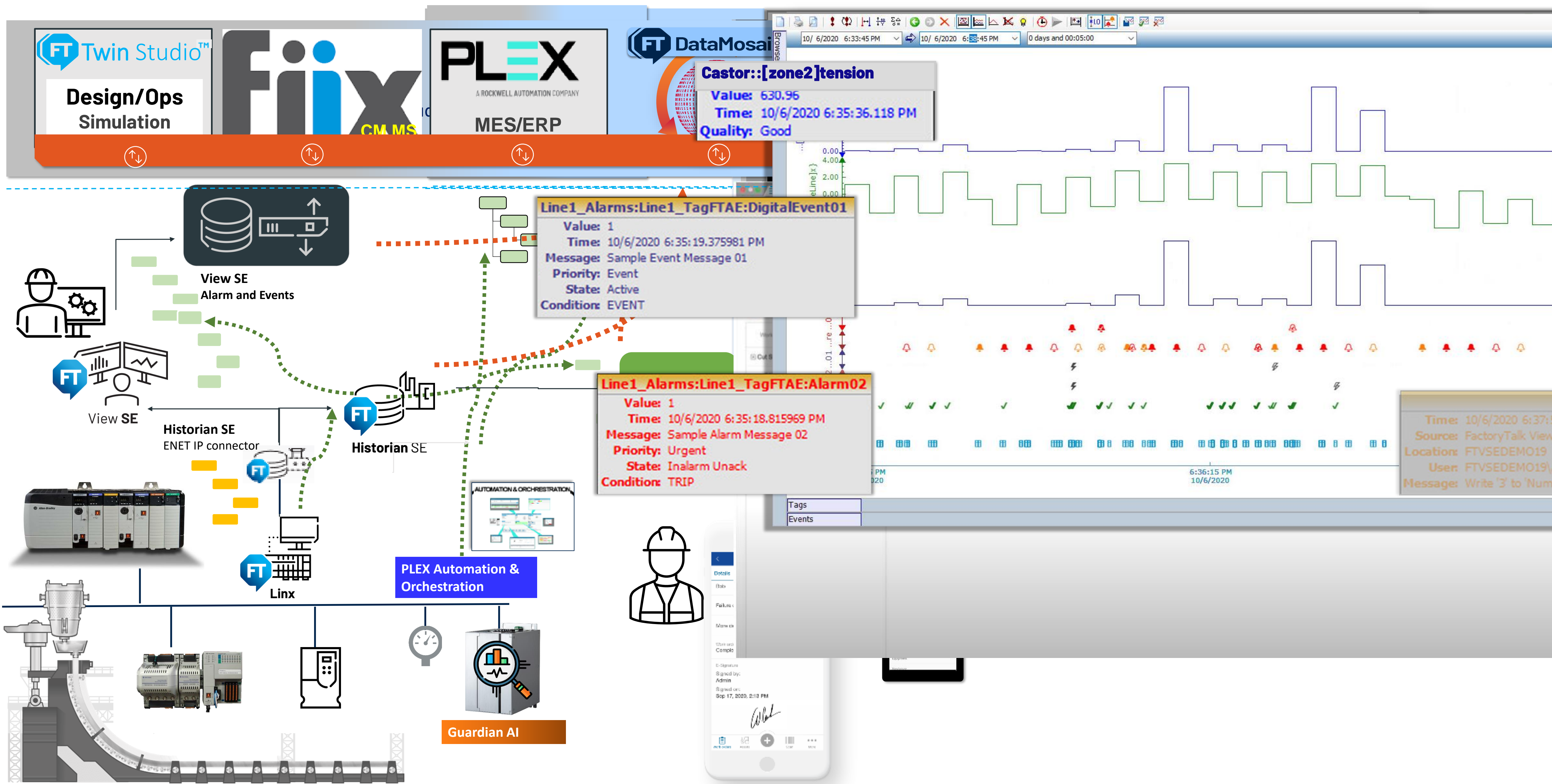
Why does second shift keep outperforming third shift?

What's causing the quality issue on the production line?

How will the tire shipment delay affect production next week?



LEVERAGING CONTECT TO DRIVE PRODUCTIVITY

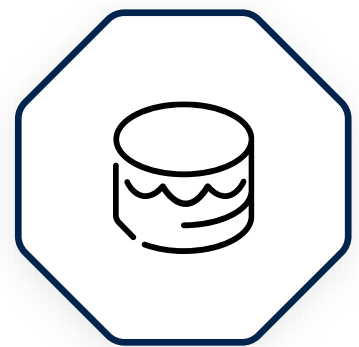




BEST PRACTICES

YOU HAVE DATA: NOW WHAT?

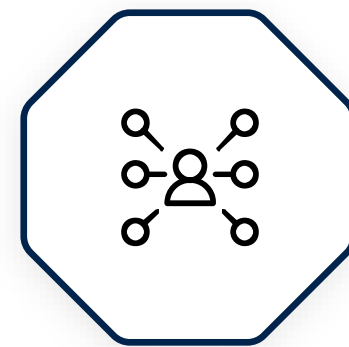
PUTTING YOUR DATA TO WORK



Available

Standard connectivity to IT/OT/ET data from industrial data sources at scale.

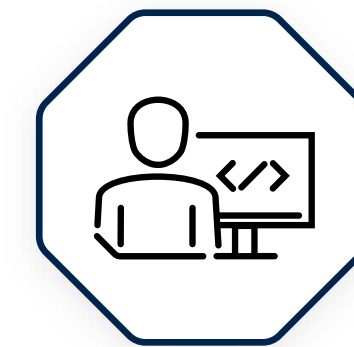
Improve organizational productivity with all relevant data already in one place.



Meaningful

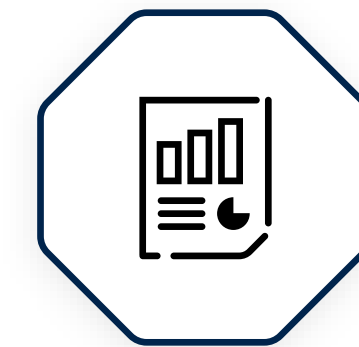
1. Contextualized for your stakeholders and easy to consume by your applications.

2. AI-supported **data contextualization**



Useful

Easy to search single source of information with full traceability for **unparalleled self-service data discovery, orchestration and solution development.**



Valuable

Real-time visualization and advanced analytics applications deployed at scale that drive **optimal decision-making and autonomous closed-loop actions**

PRIORITIZE **RAPID BUSINESS VALUE** FROM THE START



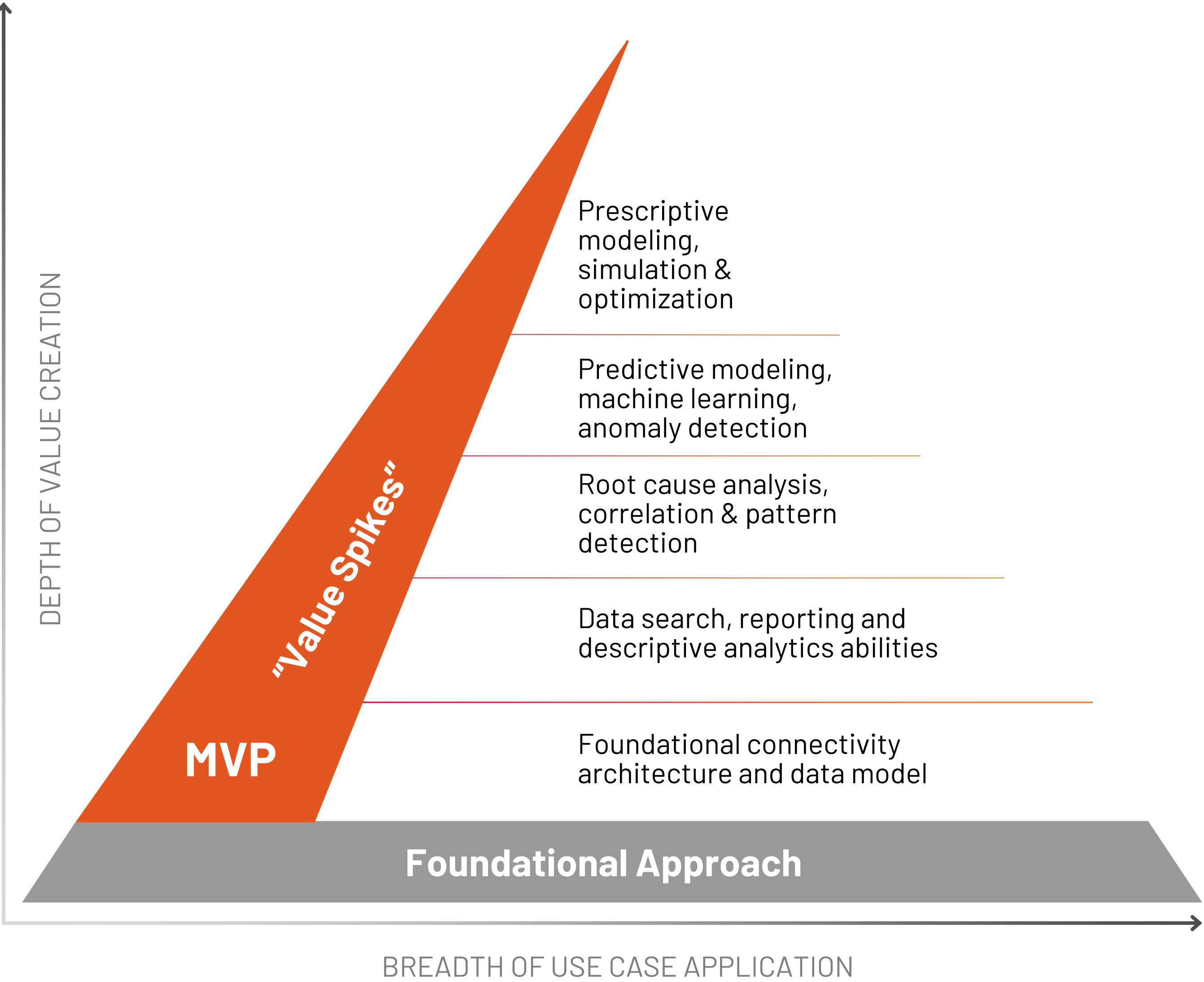
FOUNDATIONAL: PRIORITIZE CAPABILITIES

Generalized across use cases
Focus on foundational capabilities
Scale first, then add value



MVP: PRIORITIZE RESULTS

Focused on priority use case(s)
Deploy a full stack of capabilities
Add value first, then scale



DRIVING AI-ENHANCED ANALYTICS



Explore

Analyze data and form initial hypothesis

By analyzing the process data captured during previous runs, we form an early hypothesis as to **which variables** are most **highly correlated** with **product quality**.



Explain

Extract features and measure their association to goals

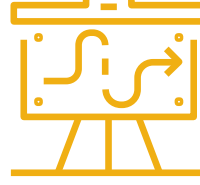
Work closely with process control engineers to confirm the findings in the exploration stage and collect additional insights into the process



Predict

Train, evaluate, and refine models to maximize predictive accuracy

Based on the current process parameters and **quality measurements is the product likely** to be out of tolerance?



Prescribe

Build an optimization model

If we're expecting a bad batch, what are **the optimal process setpoint adjustments** to correct this proactively?

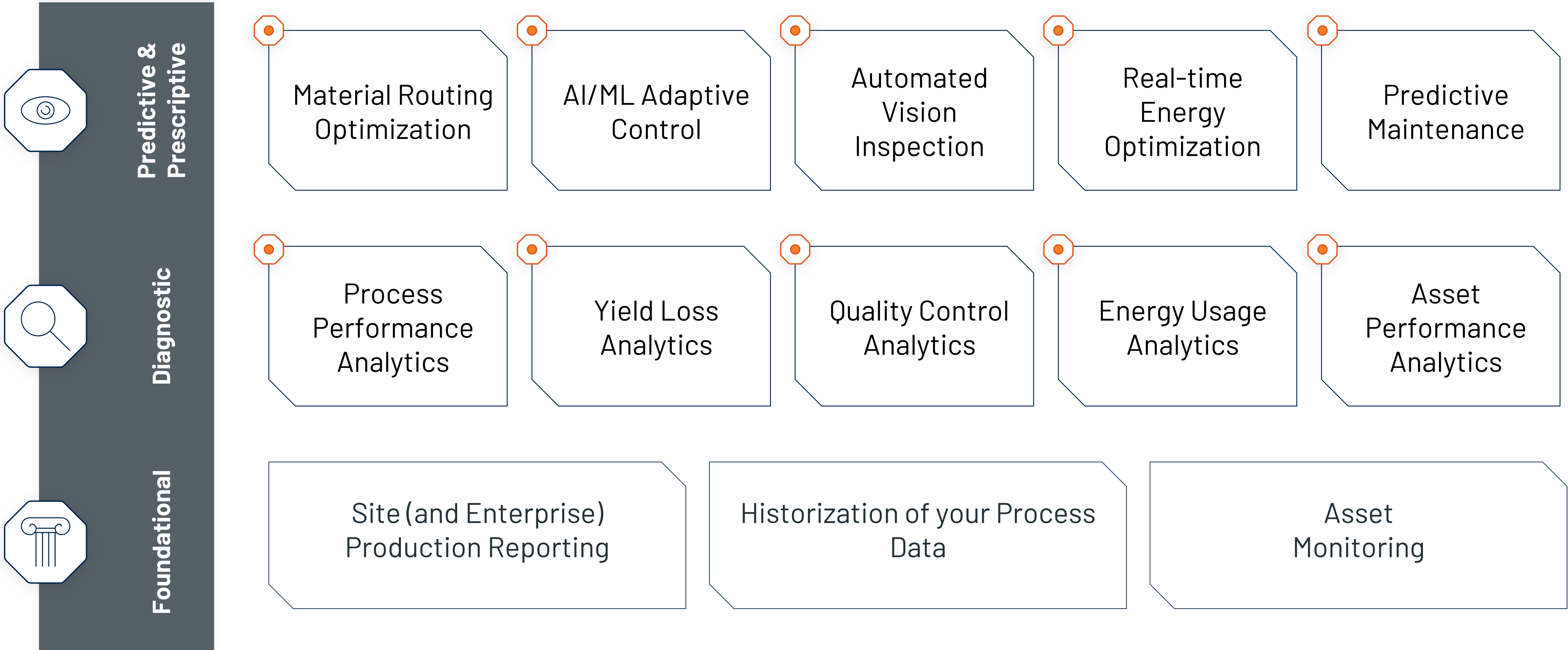


Automate

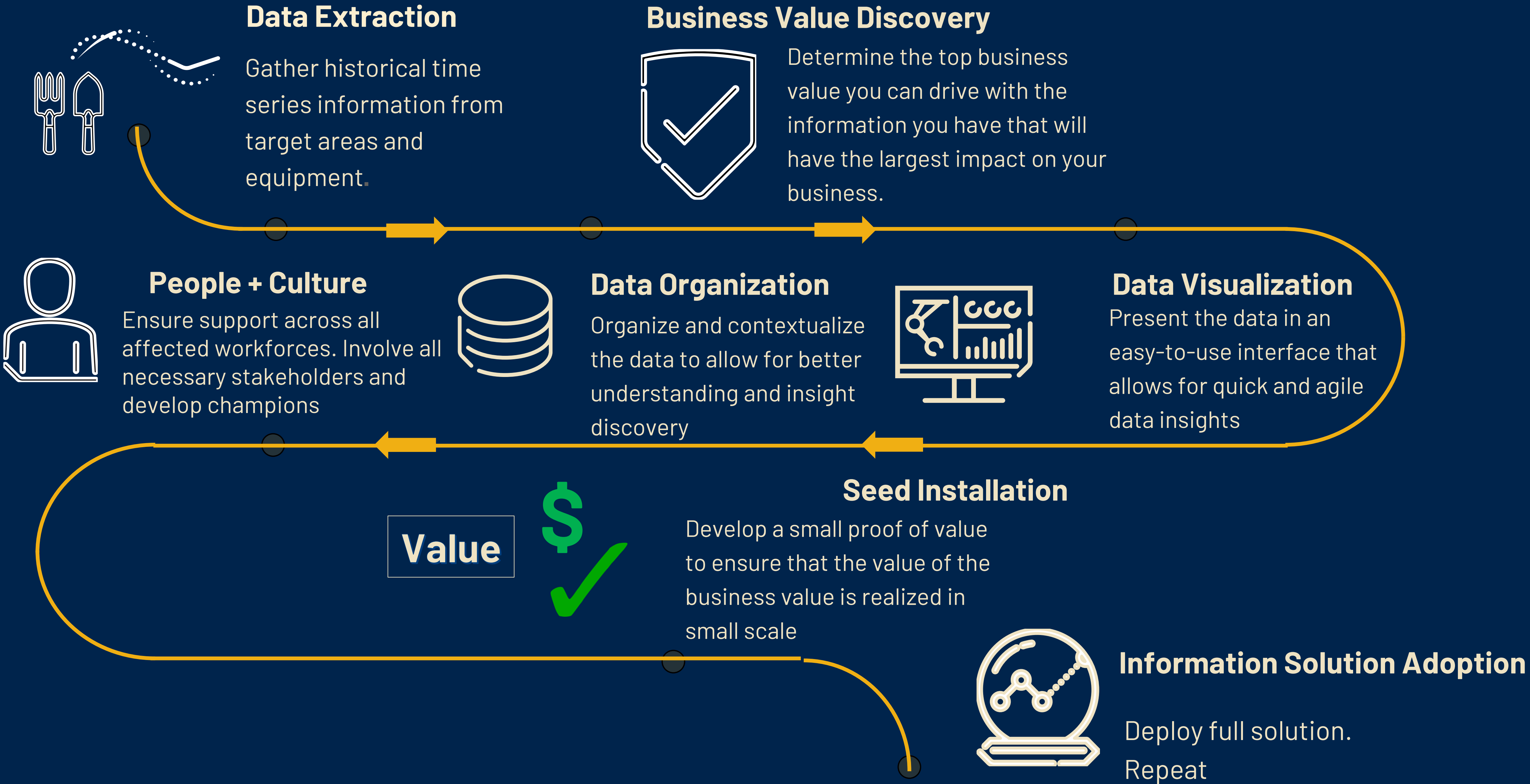
Integrate close-loop control automation

The process can run with **minimal operator intervention**, while producing the best quality product

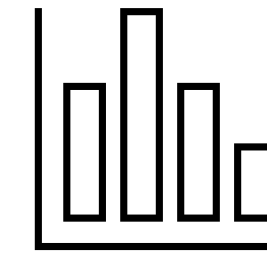
SCALING HIGH-VALUE APPLICATIONS



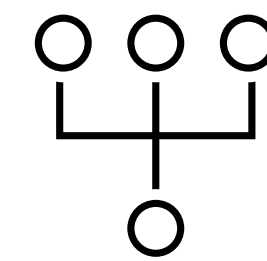
THE DIGITIZATION/ANALYTICS TIMELINE



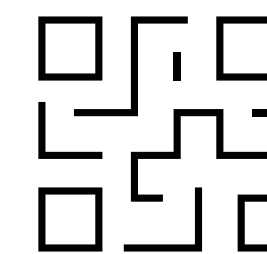
MAKE DATA WORKING CAPITAL



Actionable insight to your stakeholders.



Autonomous orchestration of your processes.



Enabling optimization and innovation.

The background image shows two men in a factory setting. They are wearing white hard hats and work shirts. One man is pointing at a tablet held by the other. The background is filled with industrial equipment and shelving units, typical of a manufacturing environment. The entire image has a dark blue overlay.

SMART MANUFACTURING **LEVERAGE YOUR DATA**

Van Meter has the **expertise to develop a strategy** that will improve plant floor **productivity, reliability, and quality** by accessing real-time metrics to make smarter business decisions.

Getting started is the **toughest step.**

WE CAN HELP.



QUESTIONS?



THANK YOU!



KARL SCHMIDT

Information Solutions Architect, Van Meter