



# Optimize Processes and Production with Real-Time Operational Data

Consumer demand for more product variety is creating a need for more frequent new product introductions. The challenge of moving from R&D testing into manufacturing operations often results in significant initial waste as operations are tuned to meet quality, sustainability, and throughput metrics. These and other challenges create opportunities for manufacturers to sharpen their competitive edge with data and AI.

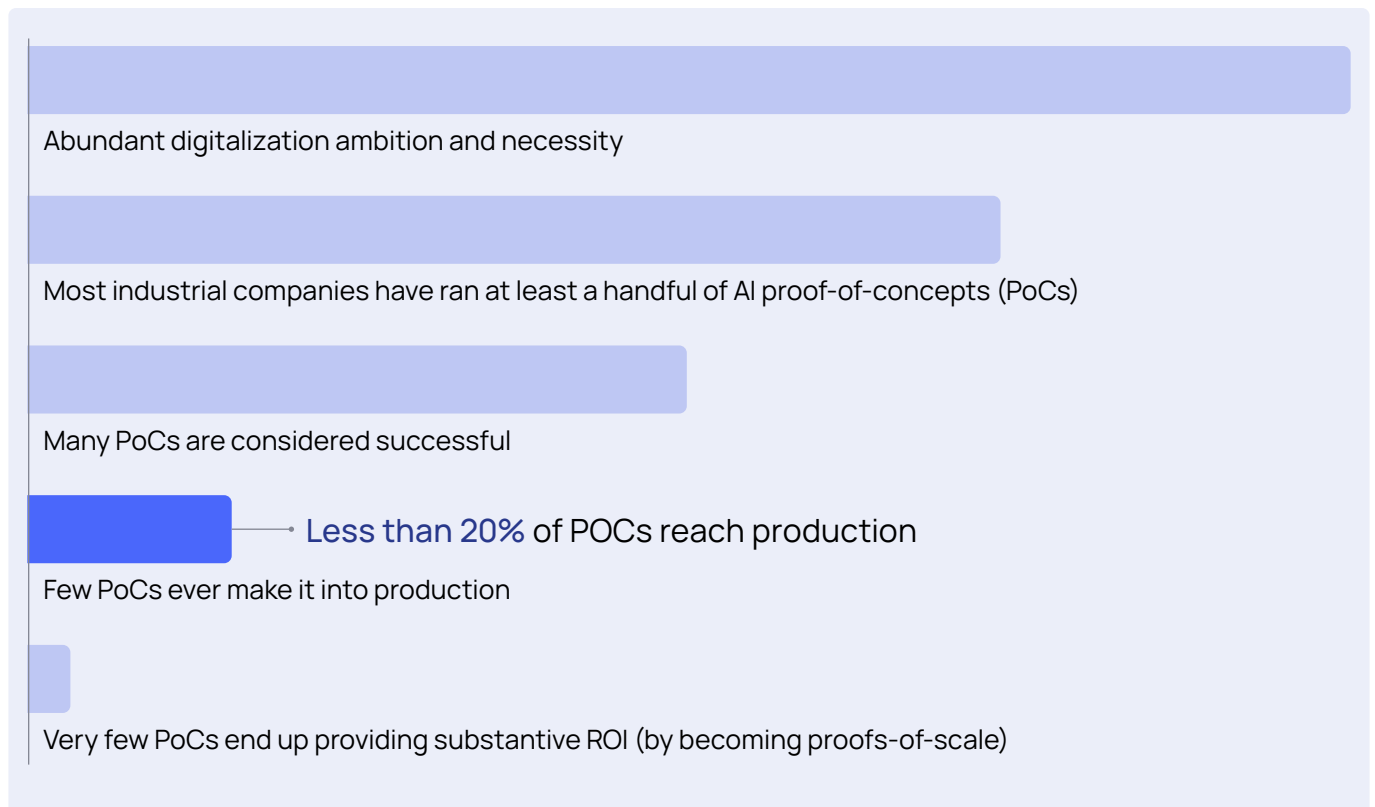
Despite the trillion-dollar value potential in Industry 4.0, few digital initiatives have produced results in the manufacturing industry:

Unlocking this value will require a new approach to data management that focuses on optimization across disciplines and breaking down organizational and data silos.

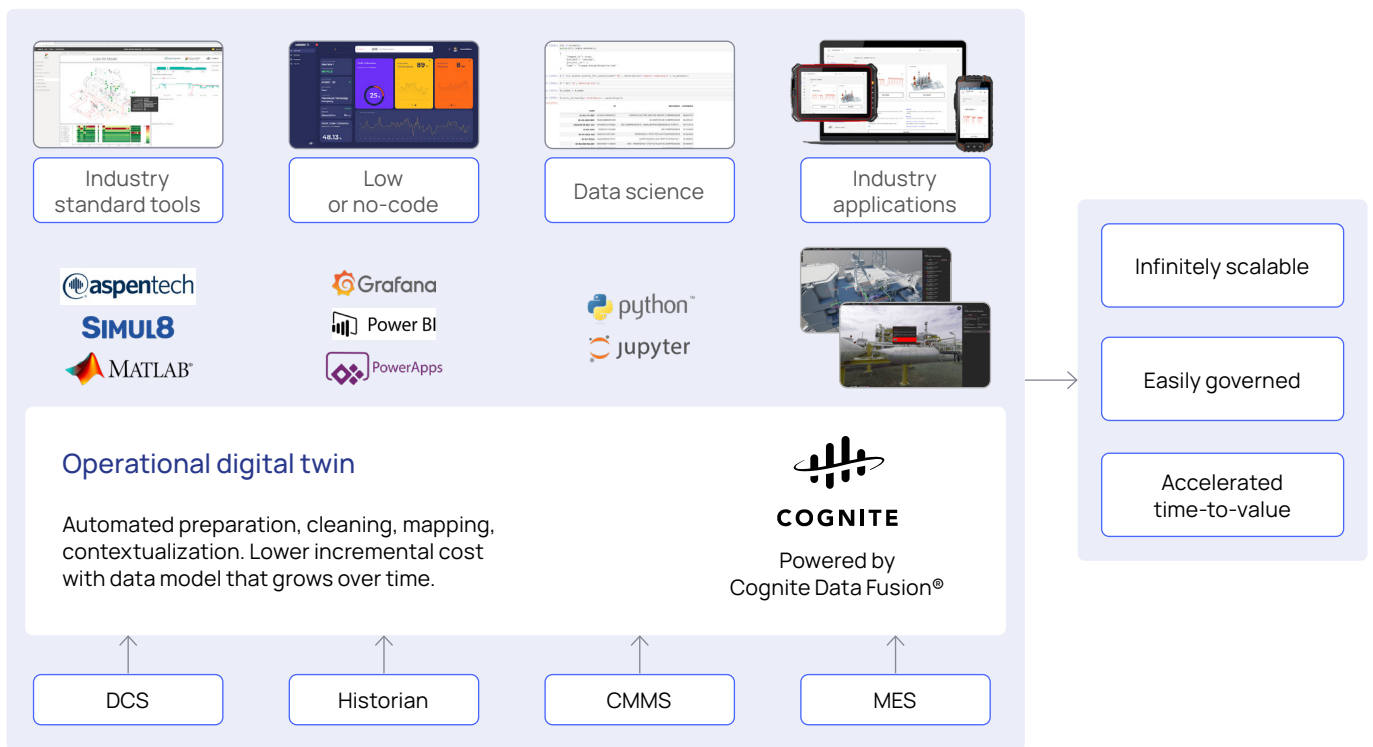
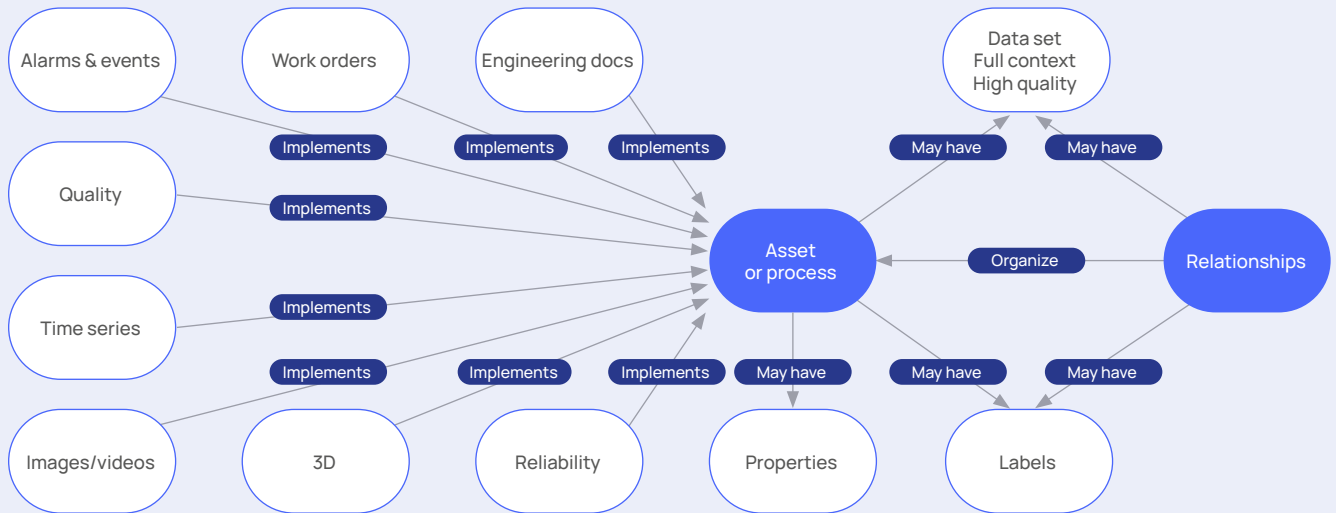
With Industrial DataOps, manufacturers can use data and AI to create tailored decision-making solutions to integrate R&D, product, and operations.

## Solve the manufacturing data problem with Cognite Data Fusion®, the leading Industrial DataOps platform

Cognite Data Fusion® makes manufacturing data available, usable, and valuable. It breaks down data silos by connecting IT, OT, and engineering data from your ERP, LIMS, MES, SCM, IoT, and more—to build an industrial knowledge graph, giving you instant access to historical, real-time, and simulated data and scenarios.



## Industrial knowledge graph



With contextualized data in Cognite Data Fusion®, you'll harvest more real-time insights, build more opportunities, and create data-driven value across the supply chain.

Cognite Data Fusion® fits into and complements your existing digital ecosystem, giving you the building blocks to innovate, empower your experts, and get high-quality products that are designed for sustainability to market faster.

## Cognite Data Fusion® key differentiators

Collect, integrate, access  
Contextualize and understand  
Develop and deploy  
Monitor and govern  
Scale

Automatic IT/OT/ET data contextualization  
Data governance and lineage  
Data security and compliance  
3D and unstructured data  
Open framework and toolboxes  
Hybrid AI  
Real-time data access  
Performance and scale

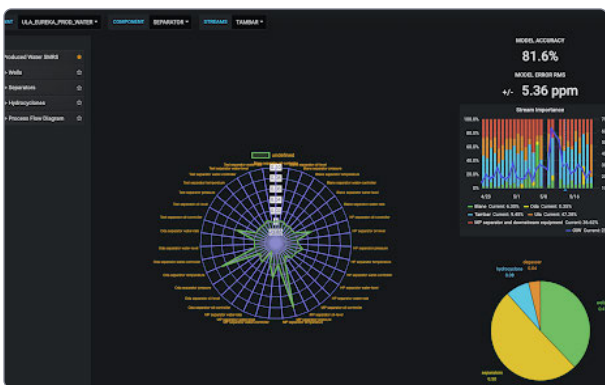
## Anticipate, identify, and correct critical-to-quality parameters with a process and production optimization framework

Cognite Data Fusion® offers a managed, automated, and intelligent way to collect and contextualize industrial IT, OT, and engineering data. This enables you to shift from a retrospective view of outcomes to a proactive approach to optimize product, processes, and production based on real-time data.

With solutions that integrate R&D, process, and plant engineering and operations, you can anticipate, identify, and correct critical-to-quality (CTQ) parameters before they affect the bottom line.

## Shift left, get it right the first time

Use both data-driven and hybrid AI models to predict the outcomes of processes and get your products to market faster with high quality and low costs. A digital twin of the system supports the identification of control parameters to optimize the bill of process to reach target KPIs for quality, sustainability, and waste reduction.



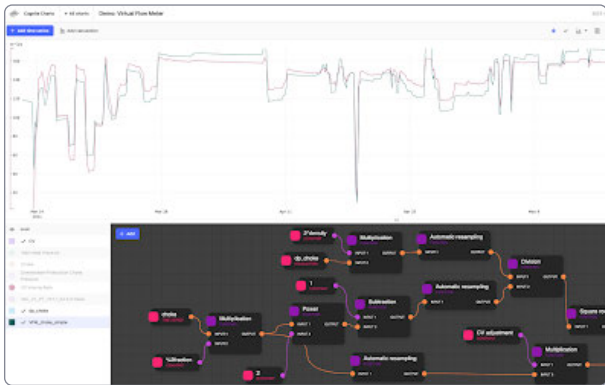
## Sustainability by design

Design your products and process by taking emissions, energy, and resource consumption into account from the start. For example, collect descriptive information to understand how your organization is using energy, and then use this information to modify your production schedules and optimize energy consumption.



## Traceability

Create a digital representation of the physical product life cycle to track your products and materials through your value network and eliminate inefficiencies. Track the product quality from raw material into final products and move from reacting to quality issues to predicting them, enabling operations to make process adjustments in real-time.



## Recipe optimization

Combine lab and operational data with physics-based simulations to generate new insights—for example tools that analyze performance when introducing a new recipe. The contextualized data from the LIMS, batch systems, and in-line and online quality inspection tools provide real-time insights to operators to arrive at setpoints that can produce a “golden batch” by reducing costly and time-consuming pilots and prototypes.



➤ GET STARTED TODAY AND REALIZE VALUE BY THE END OF THE NEXT QUARTER →