Predix Manufacturing Execution Systems

Reach manufacturing excellence through IIoT insights and intelligence

PREDIX

Becoming a digital industrial manufacturing company

You're tasked with meeting production targets while keeping costs and risk under control. It's up to you to find the capacity needed to produce what the market wants, when it wants it, and at increasingly higher quality—even when it means quickly changing lines and entire facilities over to new products.

Products can be conceived, developed, and sold over the Internet in a matter of weeks or days, meaning your organization is probably already competing on your ability to manufacture to order.

You currently rely on the expertise of your people to achieve production targets. But long-term attrition of operational "know-how" as your people with intimate equipment knowledge exit the workforce is inevitable.

You have automated select activities, primarily by purchasing point-product solutions. But production data is all too often gathered manually and isolated in siloed systems and different formats. As a result, you may lack the comprehensive visibility into equipment, people, processes, and materials that would afford you the flexibility to make the goods people want to buy today.

Business challenges

- **It's difficult to start and stay ahead** when no two facilities are the same, and you lack a common system for gathering and analyzing data

- **Your current systems don't provide the visibility you need to take the right actions** when separate systems for inventory, production, downtime, and quality all relay data manually, slowing the process and introducing the potential for human errors

- **Your plants can't keep pace with customer demands** without advanced warning of changing preferences derived from sophisticated analysis of all available data and agility to leverage those insights

What if you could...

- Start with the foundation already complete by immediately deploying the most advanced digital industrial applications available?

- Use this foundation to immediately begin delivering actionable insights to the right people at the right time—giving your people all the information they need to quickly optimize production?

- Use these digital industrial applications to adapt facilities with the agility to continuously change to meet customer demands?

Predix Manufacturing Execution Systems

Predix Manufacturing Execution Systems (Predix MES) is a suite of solutions that can transform your manufacturing business through insights and intelligence powered by data integration, the Industrial Internet of Things (IIoT), machine learning, and predictive analytics. By bringing together the digital world with the physical world of manufacturing, Predix MES can deliver holistic performance management for today's connected enterprise.

Predix MES provides the tools to successfully transition to a digitally driven model:

- Track data across plants, equipment, materials, and people

- Specify metrics to track across all your equipment

- Create custom views within role-specific dashboards

- Create the necessary visibility to quickly generate a new bill of materials, reroute components, change equipment schedules, and re-assign employees appropriately

- Monitor production and catch deviations and make adjustments to avoid wasted materials

- Understand your operations better with traceability across the entire scope of the production process

- Leverage innovation best practices

Learn more about the benefits and outcomes you can realize with Predix MES.

WATCH VIDEO
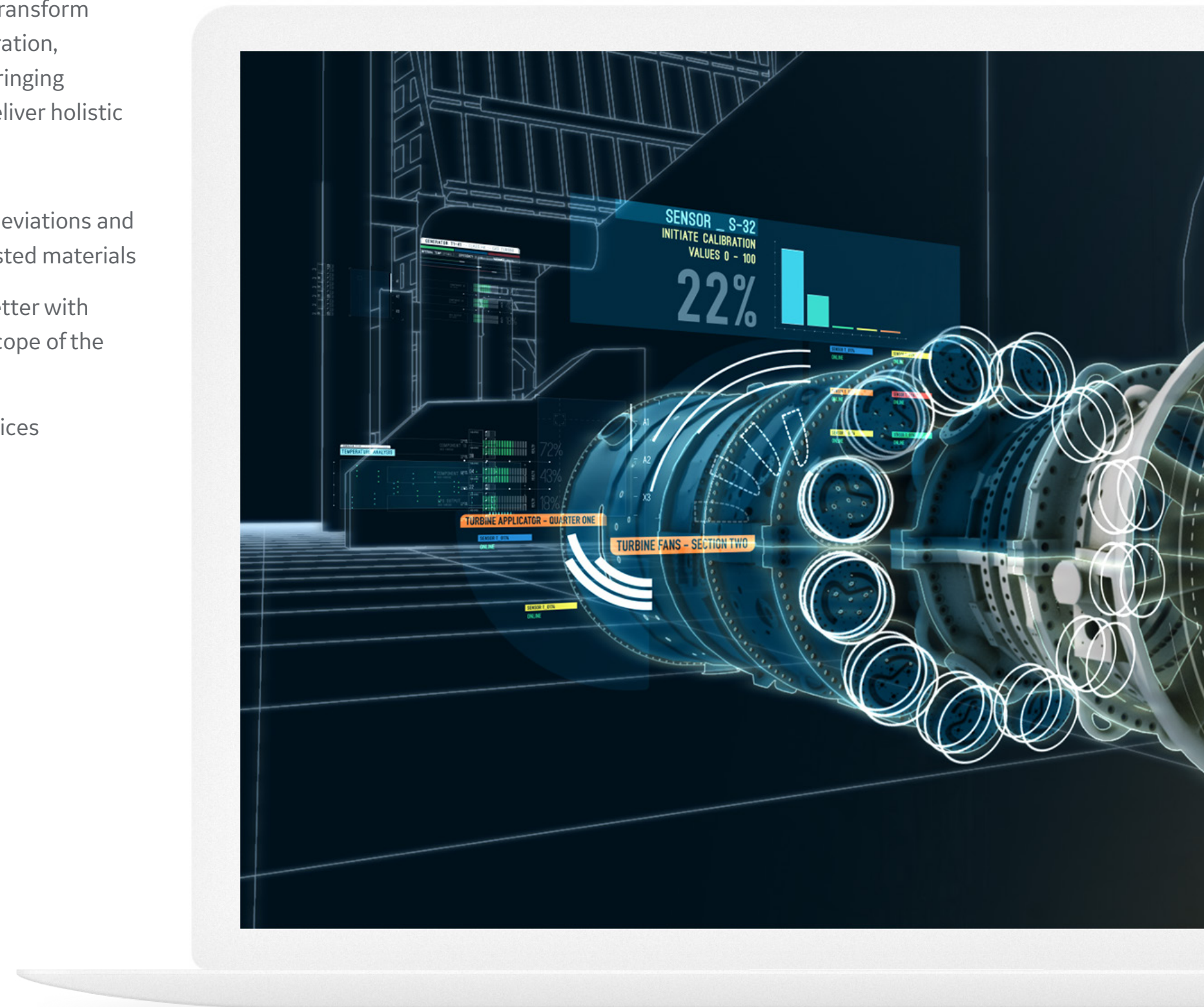
Unlock unprecedented efficiency and manufacturing optimization
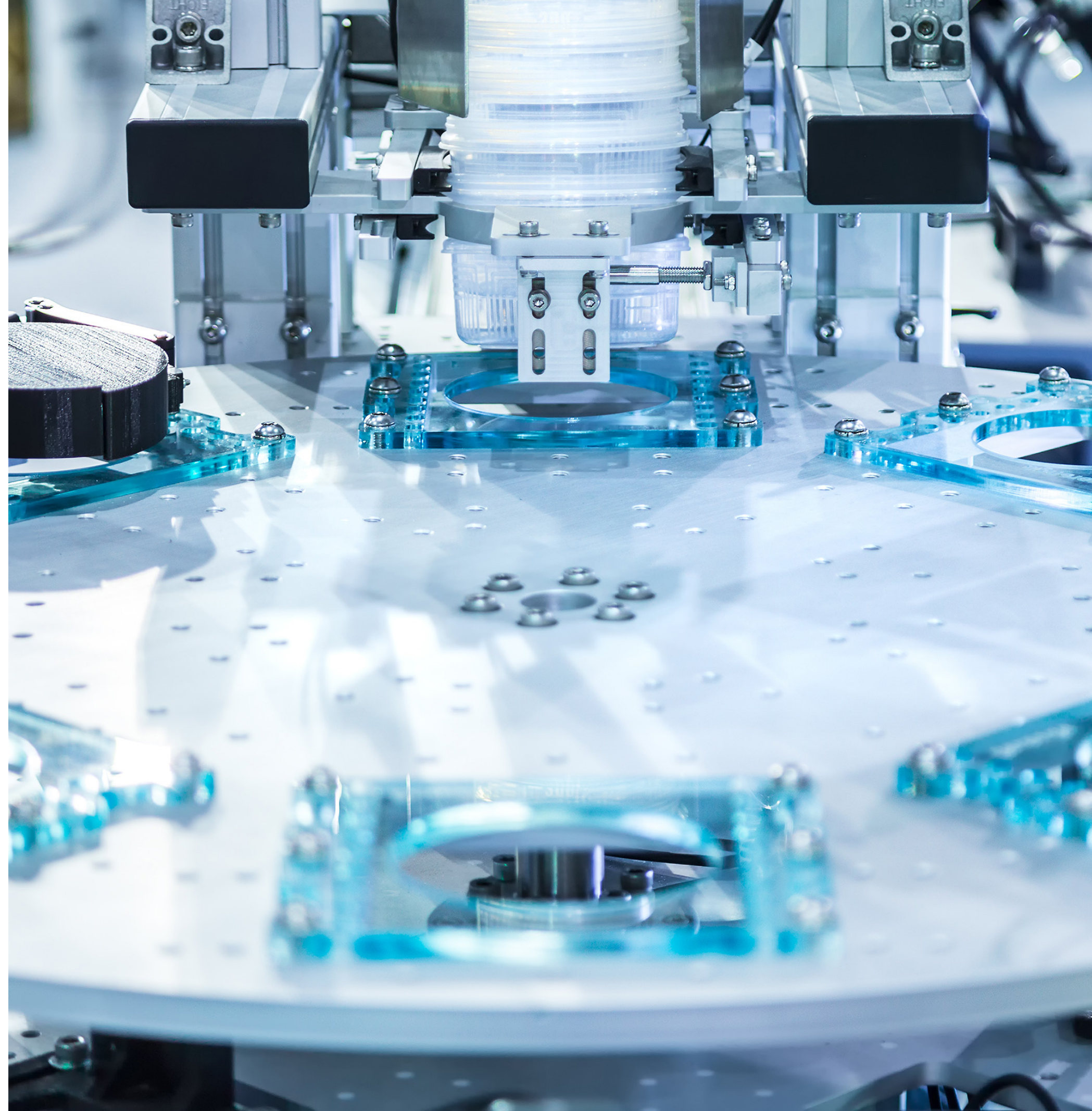
Reduce costs

By aligning resources, energy, and efficiency management your manufacturing operations can reduce inventory, identify costly production gaps, lower energy and utility waste, and gain insight into throughput and critical processes.
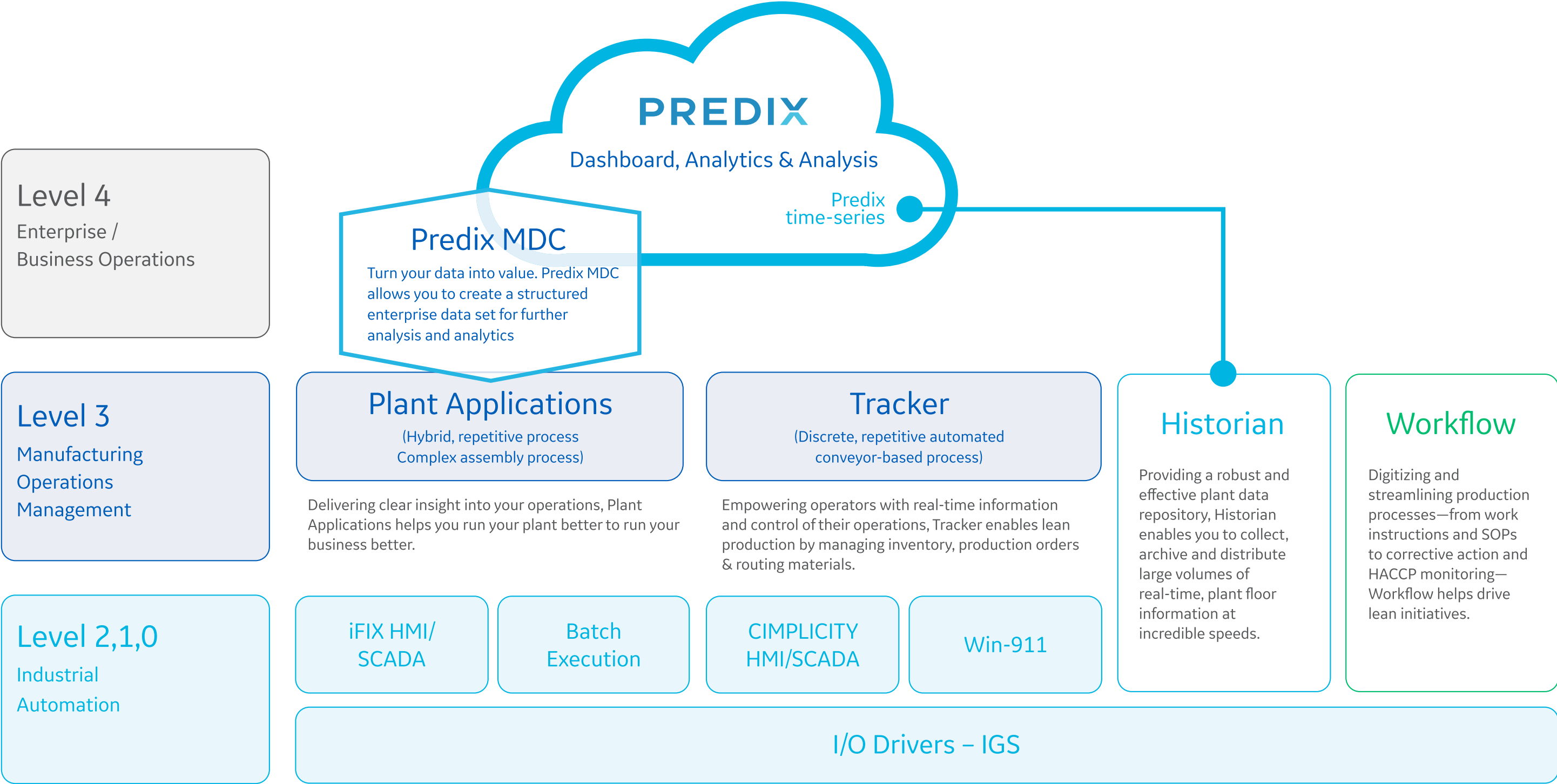
Improve quality

Capture robust quality data and related traceability information while, at the same time, performing analysis on process-oriented data and product-oriented data, and classifying materials as non-conforming, out-of-spec, or related to recalls.

Speed production

Improve on-time delivery performance and respond optimally and with agility to late stage changes, gain up-to-date visibility of all work-in-progress orders, get more successful new product instructions (NPIs), and shorten design-to-delivery cycles.

Predix Manufacturing Execution Systems includes the following solutions

PREDIX

Dashboard, Analytics & Analysis

Predix time-series

Predix MDC

Turn your data into value. Predix MDC allows you to create a structured enterprise data set for further analysis and analytics

Level 4

Enterprise / Business Operations

Level 3

Manufacturing Operations Management

Plant Applications

(Hybrid, repetitive process Complex assembly process)

Delivering clear insight into your operations, Plant Applications helps you run your plant better to run your business better.

Tracker

(Discrete, repetitive automated conveyor-based process)

Empowering operators with real-time information and control of their operations, Tracker enables lean production by managing inventory, production orders & routing materials.

Historian

Providing a robust and effective plant data repository, Historian enables you to collect, archive and distribute large volumes of real-time, plant floor information at incredible speeds.

Workflow

Digitizing and streamlining production processes—from work instructions and SOPs to corrective action and HACCP monitoring—Workflow helps drive lean initiatives.

Level 2,1,0

Industrial Automation

| iFIX HMI/ SCADA | Batch Execution | CIMPLICITY HMI/SCADA | Win-911 |

I/O Drivers – IGS

Drive results with Predix Manufacturing Execution Systems

Predix MES suite includes the following solutions:

Plant Applications

Plant Applications, a Predix MES solution, is a powerful operations management solution for process manufacturers, such as Food and Beverage (F&B) and CPG, that collects and analyzes data and helps manage highly automated fast-moving processes. It automates and integrates the information related to activities for managing production execution and optimize performance holistically, helping to balance the trade-offs between competing priorities of production operations.

Plant Applications allows you to:

Increase efficiency with customization
With a completely new UX, Plant Applications offers both operators and supervisors a personalized, modern user experience.

Reduce rework
With increased visibility into data and quality, you can reduce rework and the risk of errors, while staying current on recall information.

Turn data into value
Gain enterprise-wide visibility into your data to improve analysis and compliance, while at the same time reducing IT costs and foot print.
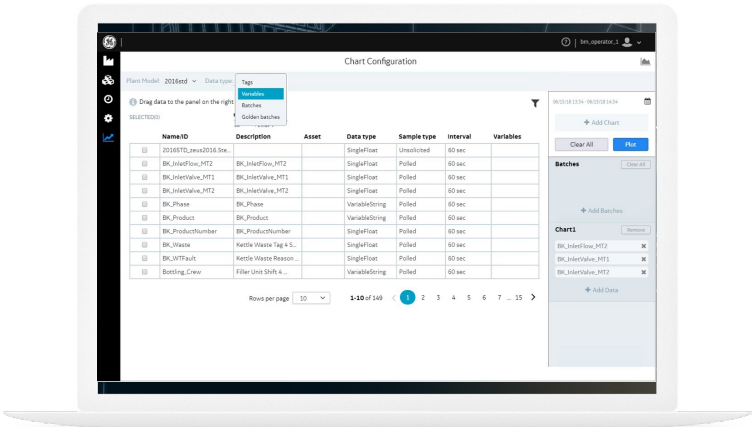
Features of Plant Applications

• Efficiency management

• Quality management

• Production management

• Batch analysis

LEARN MORE

Predix Manufacturing Data Cloud

With Predix Manufacturing Data Cloud (Predix MDC), a Predix MES solution, you can easily and quickly increase the derived value by reliably bringing enterprise-wide manufacturing data into the cloud and transforming it into a structured data set for cross-plant storage, analysis, and analytics. Predix MDC enables the consolidation of three data sets required for process optimization and analytical applications: asset data, ERP data, and manufacturing data.

Predix MDC allows you to:

Transform and consolidate data

Provides a reliable way to ingest manufacturing data into Predix Platform Cloud and transform it into a usable format with S95-based contextual and aggregated data model. The transformed data models are accessible through easy-to-use and quick-response APIs.

Reduce storage costs

Separate the storage of historic and static data (cold data) from required data (hot data) to reduce on-site storage and maintenance costs through cloud server technology. Speed on-premises queries to improve operations agility.

Boost operations with analysis

Integrates data with multiple systems, creating an enterprise data set for reporting and analysis. Move raw and contextual data to data lakes to pool data into a single location, making it easy and fast to create a context for manufacturing analytics and improve operations.

Features of Predix MDC

- Automated ingestion of enterprise-wide data

- Secure-by-design

- Edge technology

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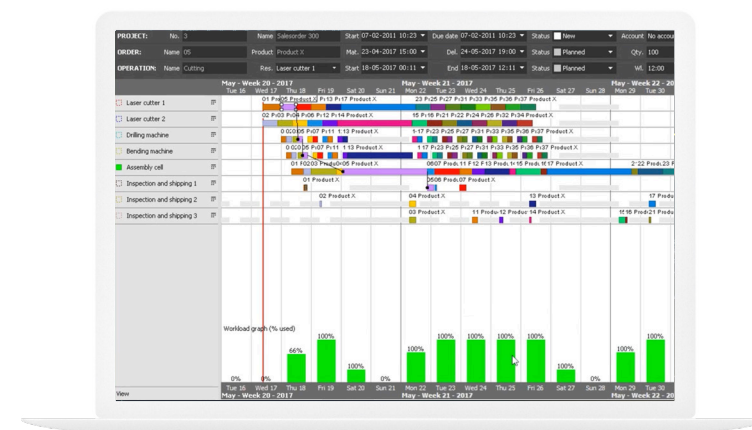
Tracker

Tracker, a Predix MES solution, is a comprehensive tracking and order execution management system that meets the critical needs for manufacturers. Proven in high-value, high-volume, high-variability environments, it tracks each serialized item that moves through your production process—providing detailed, continuous information to help you make the best decisions for a competitive edge.

Tracker allows you to:

Increase throughput
With Tracker, each serialized item that moves through your production or packaging process can be tracked. You get the detailed, continuous information you need to optimize your manufacturing process while managing inventory levels and locations, scheduling resources and routing materials much more effectively.

Order execution management
With Order Execution Management, Tracker helps manufacturers and suppliers understand real-time sequence requirements and handle situations that occur on the plant floor when the sequence is broken— enabling manufacturers to build right the first time. It helps facilitate a large reduction in WIP inventories along with finished goods inventories while meeting production targets

Improve inventory, production orders
Better manage inventory, production orders, and routing materials with detailed data using Tracker. It empowers your operators with real-time information and control of their operations to accommodate a variety of production flow adjustments.

Real-time flow management of jobs
Tracker provides the ability to not only track the real-time location of jobs on the production floor but can be configured to perform routing logic on the movement of jobs throughout the facility. This unique capability allows manufacturers to manage the manufacturing, routing, and delivery of multiple product components into complex product assemblies.
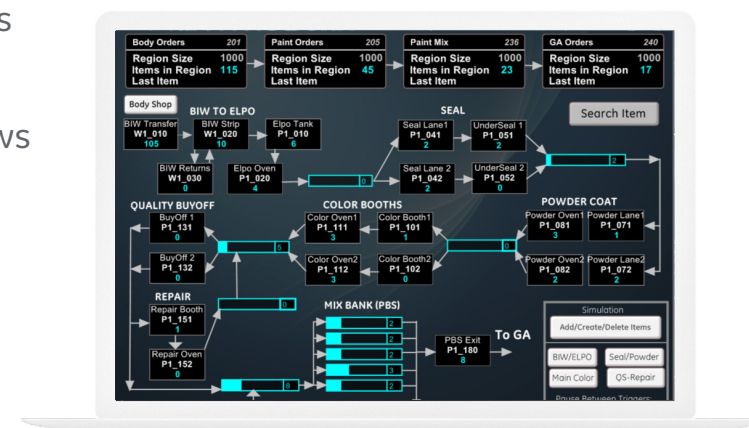
Features of Tracker

- Full featured HMI/SCADA based on CIMPLICITY

- A vast choice of visualization and control clients: thick, thin, web

- Product routing and tracking, including WIP inventory control

- Product genealogy and traceability for audit trails and regulatory compliance

- Error proofing

- Order management and broadcast management

- Sequence & substitution management

- Defect containment

- Hold management

- Facilitates build to order / build to sequence production

LEARN MORE

Discover how our customers are achieving manufacturing excellence:

WATCH MORE

Procter & Gamble delivers manufacturing excellence with GE Digital industrial applications

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Toray Plastics optimizing manufacturing operation performance with big data analytics

READ MORE

Cascades Tissue Group Achieves reliable and predictable manufacturing performance

READ MORE

Browar Warka Increases bottling line efficiency with GE Digital

Reach manufacturing excellence with Predix Manufacturing Execution Systems

Predix MES is the synthesis of more than two decades of working with the world's most recognized brands in manufacturing and our own GE plants. Our software enables you to predict, adapt, and react more quickly and efficiently than ever before. Connect design, engineering, manufacturing, supply chain, distribution, and services into one scalable, intelligent system.

**Are you ready to accelerate your digital transformation journey?
Connect with us today**

Contact Information

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