



Predix Operations Performance Management

Reduce waste, improve yields, and increase revenue and margins by optimizing the performance and throughput of your lines, plants, and enterprise



Reduce waste to meet your operational financial goals

If you're like most industrial companies, you're being tasked with increasing revenue and margins. But, at the same time, you're facing obstacles that make this a major challenge: an unpredictable global economy, stiff competition, inefficient operational processes, tight budgets, aging assets, retiring workforces, and much more.

So, how do you reduce waste to meet your financial goals?

Many industrial companies in leading markets—manufacturing, mining, power, healthcare, and others—are realizing that they need to re-evaluate existing business operations and seek smarter, more efficient modes of operation that increase yields and improve productivity. While the exact challenges and solutions vary, the path to transformation is similar: improved operational performance and waste reduction by leveraging digital technologies to gain real-time operational insights across the value chain.

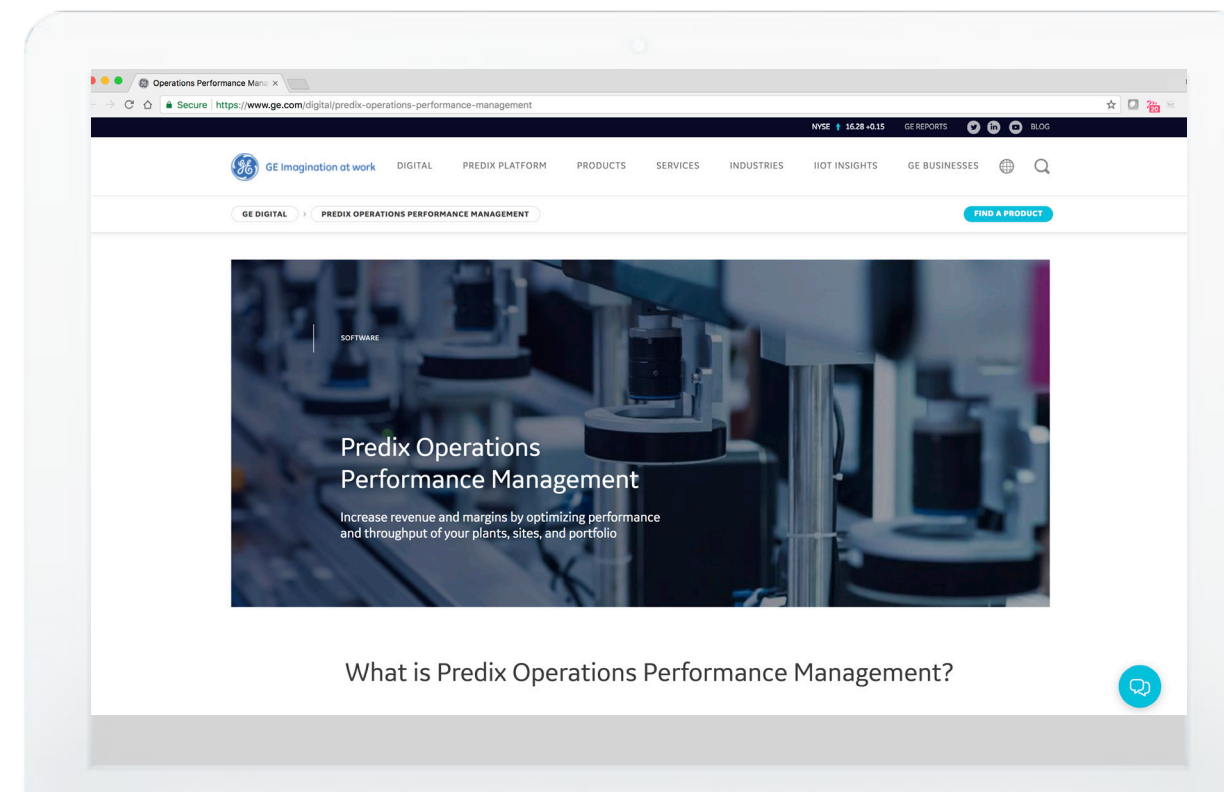


Predix Operations Performance Management

Predix Operations Performance Management (Predix OPM) is a complete control-to-cloud optimization solution. Predix OPM optimizes the performance and throughput of your lines and plants at the process level, reducing waste and cost while optimizing yield, quality, and efficiency.

Predix OPM provides operational insights that enable operational decision-making so you can rapidly respond to changing conditions. It provides accurate, clear, and complete situational awareness to help you plan effectively maximizing outcomes. And, it enables access to critical production and operations data—anytime, anywhere.

Predix OPM is deployed where it can be most effective, on-premises and in the cloud, on Predix Cloud and Predix Edge platforms. By bringing together critical operational and business data, Predix OPM delivers industrial-scale analytics to quickly identify problems, creating opportunities to reduce waste and drive better operational decisions and outcomes.



Benefits of Predix Operations Performance Management

Predix OPM continuously monitors your operational processes using intelligent process models, referred to as 'Process Digital Twins', to leverage machine learning and artificial intelligence (ML/AI) to quickly uncover process anomalies and variability. And best of all, Predix OPM continues to learn, adapt, and evolve, leading to continuous process improvement and optimization. Predix OPM enables dynamic performance management—delivering increased yields while reducing waste.

Benefits of Predix Operations Performance Management:

- Manage process variability resulting in better material and asset utilization and improved margins
- Reduce waste through equipment and process optimization
- Leverages output projection and price curves to project cost, revenue, and margin to ensure targets are met
- Follow process improvement methodologies such as Kaizen, 6 Sigma and Lean to perform root-cause-analysis OPM analytics
- Faster time-to-value through an out-of-the box KPI catalog of complex performance and financial KPI calculations, including revenue, process efficiency, and process performance.
- Use local process optimizations as best practices to implement and manage enterprise wide in multi-plant, multi-site organizations



Real customer results:

10%

increase in throughput
at a refinery

10%

reduction in plant
startup fuel usage

2.5%

reduction in power
consumption

3-4%

increase in plant
production capacity

3.3%

increase in material
processing efficiency



Predix Operations Performance Management Solution Map



Operational Intelligence

Increase efficiency with Real-time operations performance Visibility & Insights across the enterprise

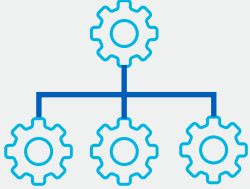
- Process KPI Tracking
- Process Troubleshooter
- Pre-built Analytics
- Control Loop Performance Monitoring



Forecasting and What-If Analysis

Scenario analysis and planning supports decision making to execute the best operational outcomes across the value chain

- Process Digital Twins
- KPI Forecasting
- KPI What-If Analysis



Production and Process Optimization

Optimize operations across your value chain, balancing revenue, costs, and emissions for your sites and fleet

- Guided Decision Support KPI Optimizers
- Closed Loop Automated Edge KPI Optimizers

- Edge-to-Cloud Connectivity
- Data Ingestion
- Visualization, Dashboards, Analysis
- Asset Models

Predix Essentials Foundation Layer

- Drag-drop Rules Engine
- Event Management Tools & Workflow:
 - Policies, Alerts, Criticality, Cases, Actions
- Application & Analytics Runtimes



Operational Intelligence

Operational Intelligence, one of the three OPM modules, helps customers increase operating efficiencies by monitoring and identifying anomalies and deviations in business KPIs. This is enabled by access to real-time data and process-performance indicators, standard enterprise-wide metrics. Real-time visibility to operations issues, like out of spec control loop performance, enables process engineers to quickly identify and address emerging issues while they're still small, maximizing production and profits.

Further, Operational Intelligence enables and supports cross site collaboration in developing best practices, for example line-to-line and plant-to-plant benchmarking, referred to as center lining.

With elements deployed both on premises and in the Cloud, a key capability of OPM Operational Intelligence is Process Troubleshooter which provides Process Engineers with an interactive tool enabling them to pull in and analyze material and process information to determine the root cause and quickly determine remediation and corrective actions.

Forecasting & What-if Analysis

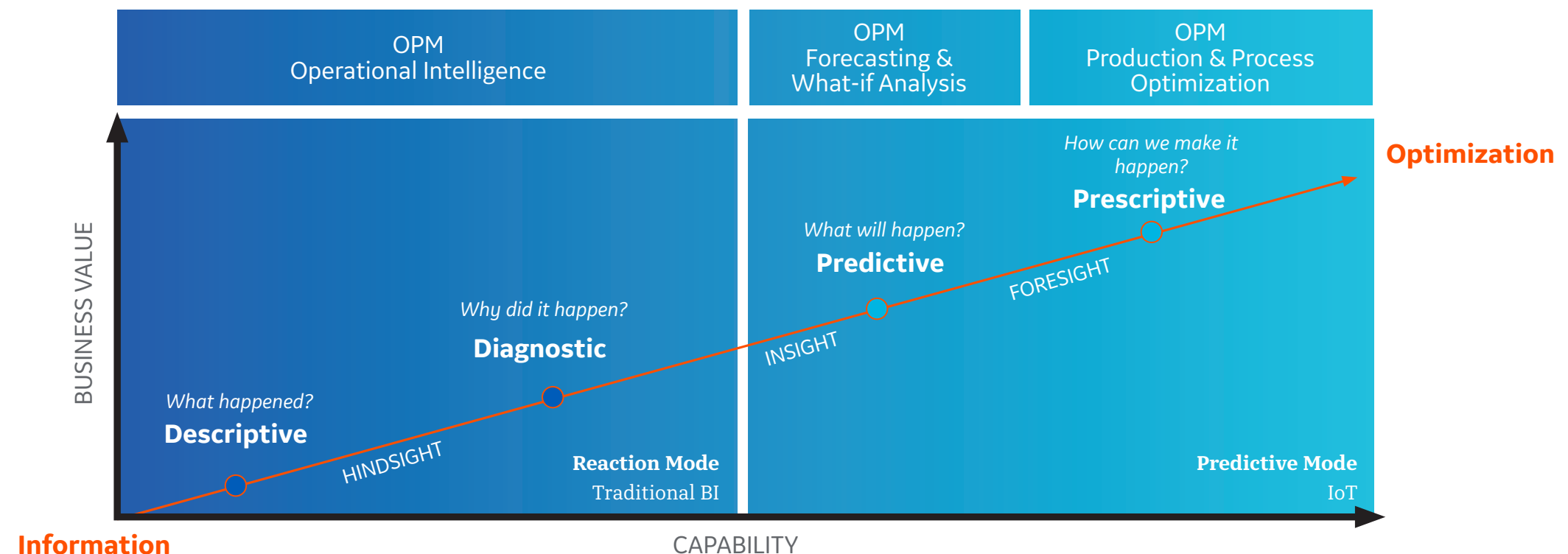
Forecasting & What-if Analysis an optional Predix OPM solution, uses scenario analysis and planning to help ensure customers are executing towards the best outcomes for their businesses. This solution utilizes sophisticated process digital twin models to support process anomaly discovery as well as to drive planning scenarios that replicate actual line, plant and site performance. Core capabilities of this solution include, what-if analysis, and forecasting. Cloud-based capabilities provide process engineers and their service teams the tools they need to identify and optimize process yield and quality improvement opportunities.

Using scenario analysis process engineers are able to evaluate the variability of materials and process equipment to assess the best settings and options to match current conditions resulting in the highest yields and product quality.

Process & Production Optimization

Process & Production Optimization, an optional Predix OPM solution, provides real-time analytics and process controls to formalize and execute process adjustments determined through anomaly detection using Operational Intelligence, or as a result of What-if Analysis. These optimizations can be sent as guidance to on-site operations staff, or automatically implemented through Cloud-to-Control programs, streamlining and assuring immediate execution.

Process & Production Optimization produces further benefits to operations at multiple sites as libraries of optimizers are developed they can be shared across sites furthering team collaboration and leveraging best practices across the enterprise.



Bringing stability to operations and boosting recovery and profitability—Lonmin

As an operations manager at a South African platinum mine, Percy French faced huge challenges over the past few years due to volatility in commodity prices. The price of platinum had dropped in half, and the value of the South African currency had fallen precipitously. To keep his mine profitable, French had to look for new ways to increase margins and production, which led to partnering with GE.

Read how Lonmin increased production by **1.5%**.

LEARN MORE

“GE products have brought stability to our operations, boosting the recovery of ore and significantly contributing to our bottom line.”

Percy French, Automation and Control Manager, Lonmin



Achieving top quartile in heat rate, along with reduced production and fuel start costs—PSEG

Faced with the challenge of providing economic and reliable power within an environment of low demand and fuel prices, PSEG needed to maintain a profitable business with existing power generation assets. The company realized the potential value of leveraging data from its plants to make more informed decisions about operations and market opportunities. So, to achieve digital industrial transformation, PSEG installed GE software to capture data from machine sensors and to apply sophisticated analytics to create insights and help make more profitable decisions.

See how PSEG integrated technology into its daily business and **gained value from it.**

[LEARN MORE](#)

“(GE’s software) provides us with visibility and insights to our KPIs and allows us to look at the actions that will improve performance at lower costs. When the plant manager talks to his trading counterpart, they are going to be talking real-time data.”

Richard Lopriore, President, PSEG Fossil



Get started with Predix Operations Performance Management today

Are you ready to optimize the performance and throughput of your plants, reducing waste while stabilizing your operations and optimizing yield, quality, and efficiency?

Learn how [Predix OPM](#) can help





About GE

GE Digital is reimagining how industrials build, operate and maintain their assets, unlocking machine data to turn valuable insights into powerful business outcomes. GE Digital's Predix portfolio – including the leading Asset Performance Management, Automation and MES applications – helps customers manage the entire asset lifecycle. Underpinned by Predix, the leading application development platform for the IIoT, GE Digital enables industrial businesses to operate faster, smarter and more efficiently.

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