



# Predix Essentials from GE Digital

## A complete solution for industrial data monitoring and event management

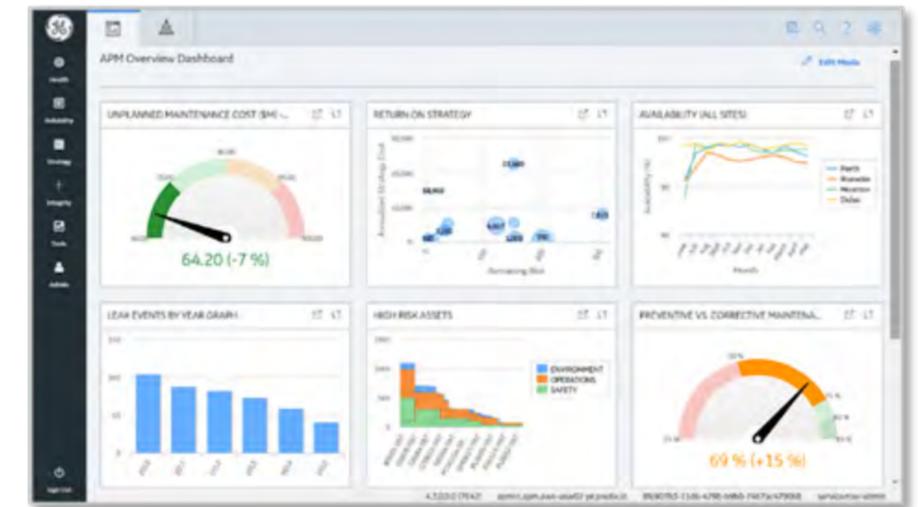
Asset monitoring and event management is the cornerstone of industrial digital transformation and the first step most companies will take in harnessing the power of cloud-based IIoT. Centralizing asset and OT data, applying analytics, then visualizing and acting on the results opens the door to reduced downtime, lower maintenance costs, and many other concrete benefits.

Predix Essentials is a complete solution for industrial data monitoring and event management, combining asset connectivity, edge-to-cloud analytics processing, and a feature-rich user console. Predix Essentials brings you the power of Predix Platform, packaged and pre-configured for typical IIoT use cases. No software or application development required.

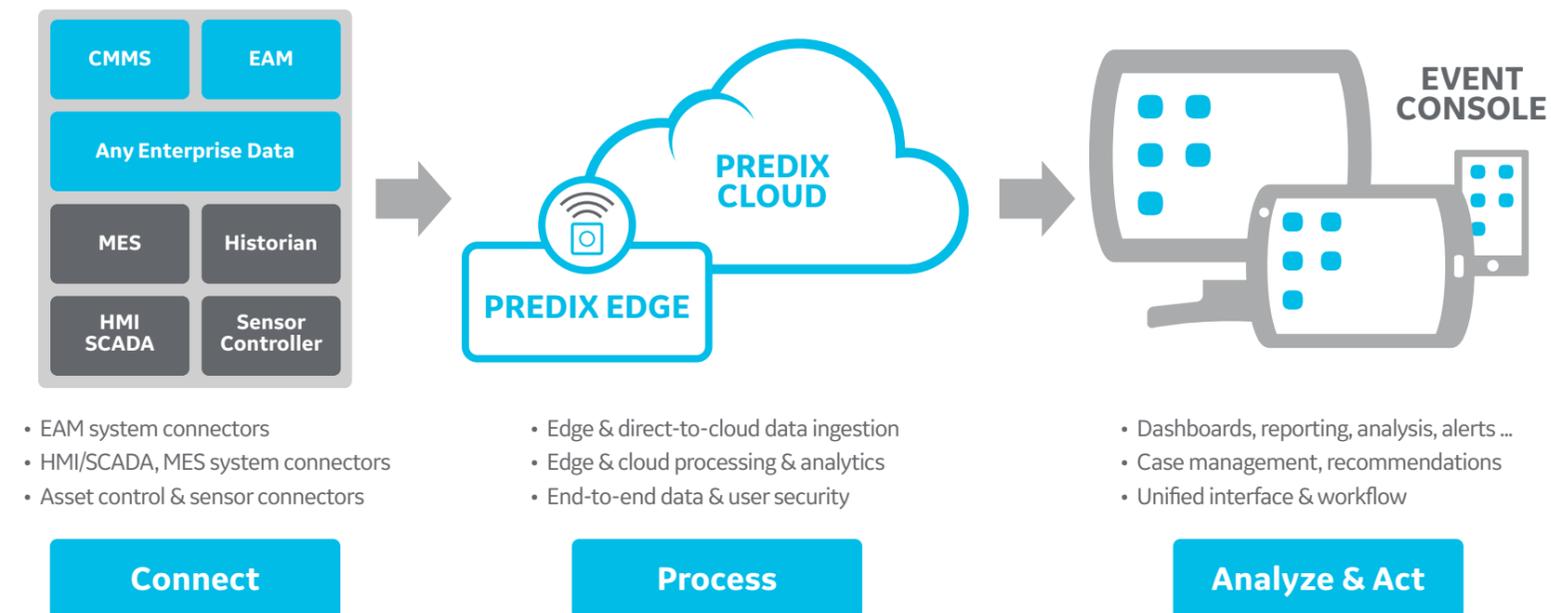
### Benefits

The rich connectivity, processing, and Event Console features of Predix Essentials enable a host of uses across any industry. Whether you're directly connecting assets or augmenting current investments in MES or HMI/SCADA systems, Predix Essentials delivers centralized visibility, augmented analytics, and analysis capabilities for monitoring, exception handling, and decisioning. Typical use cases include:

- Centralized asset and process visibility
- Condition-based monitoring
- Remote HMI monitoring and support
- Cross-plant dashboards
- OEM fleet monitoring and service



Predix Essentials Event Console



The built-in Event Console provides visualization, analysis incident management, and more without the need to develop custom software or applications. Operational users can monitor industrial data and assets, analyze anomalies and alerts, and manage cases through resolution using a unified work environment. Executives and analysts can use the unified data views and tools for supervision, reporting and decisioning.



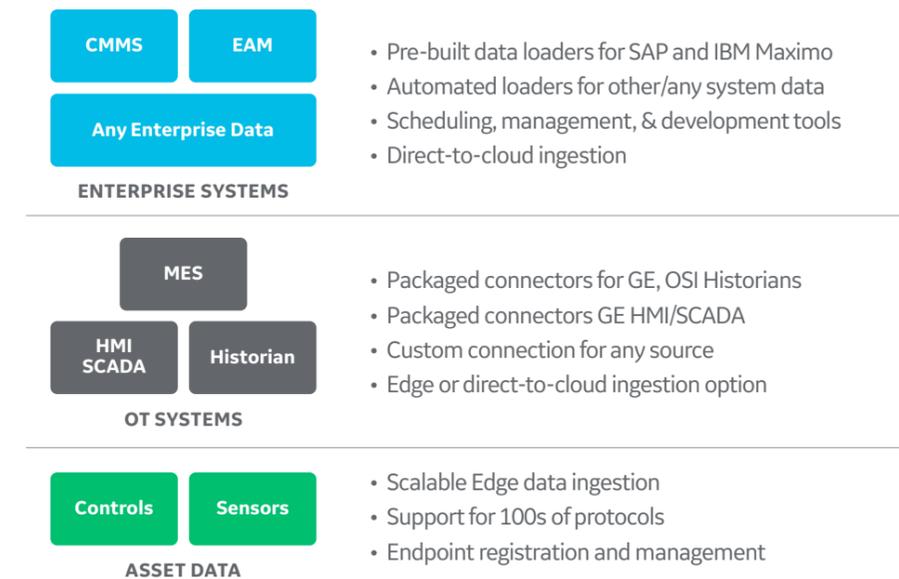


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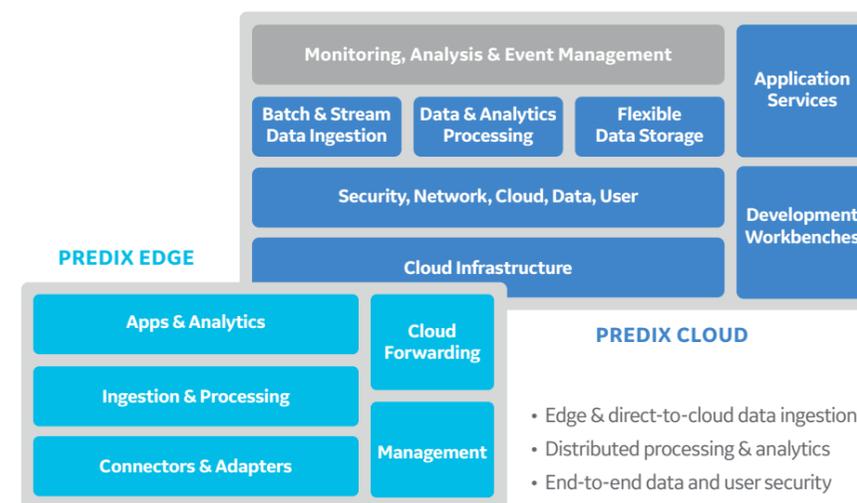
### Connectivity and data collection

Predix Essentials can collect data from common data sources, using a variety of secure connection and forwarding methods. The data can then be viewed, analyzed, and more using the Event Console.



### Edge-to-cloud processing

Predix Essentials is based on Predix Platform and provides a secure and scalable foundation for your evolving IIoT needs. Core Predix Platform capabilities are included with Predix Essentials, while others are available as additional services.



### Event Console

The rich user capabilities enable utilization from engineers to executives, including remote experts, operators and supervisors, safety and compliance teams, executive management, and customer self-service.



### Key Capabilities

- Dashboards reporting
- Alerts, metrics, KPIs
- Visualization analysis
- Criticality analysis
- HMI visualizations alarms
- Recommendations
- Case management
- Policy management

For monitoring and event management, Predix Essentials provides a complete end-to-end workflow. Operators and supervisors can:

#### Monitor

View assets, operational data, metrics, and KPIs via customizable dashboards

#### Detect

Get alerts from thresholds, business rules, and machine learning analytics

#### Analyze

Visualize and analyze data for ad-hoc investigation and root cause analysis

#### Respond

Recommend and assign actions, create cases, and track through resolution





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Definition	
<b>Asset and Data Connectivity</b>	<p>This capability allows for the secure collection, local processing, and cloud forwarding of data from assets and other IT/OT sources. The capability may require Predix Edge, Historian, or other GE products/options sold separately. It includes tools for administration and to automate the ingestion, tagging, indexing, modeling, and mapping of disparate data into a canonical model.</p> <p>Data types supported include: 1. Asset data: time-series, alarms, event data from Historian, HMI/SCADA, sensors &amp; devices; 2. Plant data: operations, alerts, KPI data from MES, SCADA; 3. Enterprise data from EAM/CMMS; 4. Other sources may require custom services</p>
<b>Edge-to-Cloud Data and Analytics Processing</b>	<p>Predix Platform supports distributed processing that spans the cloud, on-premises, and the edge. Predix Edge supports local data processing, filtering, container-based applications, and machine learning analytics, as well as data forwarding to Predix Cloud. Predix Cloud provides large-scale data ingestion, analytics processing, storage and application services to support customer applications and GE Applications such as APM.</p>
<b>Dashboards, Visualization, Analysis and Reporting</b>	<p>The Essentials Event Console provides a rich set of features for monitoring and event management. Data analysis and visualization provides capabilities to query across different data types/sources and present the data in visual forms and reports. Users have the ability to perform basic ad-hoc data analysis and visualizations across data types, and to create calculated properties, expressions, and KPIs. It also enables creation of configurable dashboard and visualization using out-of-the-box templates and widgets.</p>
<b>Thresholds and Alerts</b>	<p>Thresholds and alerts allows anomaly detection by letting users create simple thresholds on collected / calculated metrics to trigger alerts that can be processed in the Event Console. Alert conditions can be defined via the Policy Manager function. Thresholds and alerts supports both continuous surveillance of streaming data as well as discrete or periodic surveillance via manually entered data or data uploads. Alerts can also be triggered by customer-developed analytics executing on streaming data or at scheduled intervals.</p>
<b>HMI Visualizations and Alarms</b>	<p>The Event Console supports HMI Mimics visualizations with continuous tag readings and alarm notification. The visualizations can be used individually, or mashed with other data in dashboards. The underlying time-series data can be used by other capabilities including visualization, analysis and alerts. Includes tools for creating Mimics and data tagging.</p>
<b>Case and Recommendation Management</b>	<p>Case and recommendation management allows experts to record interaction and information about an issue over the lifecycle of mitigating it. Case functions include expert interpretation and collaboration around an integrated set of evidence. Recommendation management enables users to centrally manage all of the recommendations that have been derived from analysis and to generate EAM requests(SAP, Maximo) or FSM requests (ServiceMax) to correct conditions.</p>

## Extending Predix Essentials via APaaS APIs

Predix Essentials offers API access to the core services on which the Event Console is built. You can use these APIs to create extensions and custom applications that leverage these core services. Service APIs include: Time-series data, asset data, alerts, and meta-SQL query for any Essentials data.

## Expansion to Predix APM or Predix OPM applications

Predix Asset Performance Management (Predix APM) and Predix Operations Performance Management (Predix OPM) are based on Predix Essentials. Expansion is easy because Predix Essentials data is automatically available and the Event Console functions are integrated into the application user experience.

About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

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