Predix Manufacturing Data Cloud from GE Digital

Consolidate and transform manufacturing data across plants for cloud storage, analysis, and analytics

Today, manufacturers are losing the value of 70% of collected manufacturing data. With Predix Manufacturing Data Cloud (Predix MDC) from GE Digital, 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 format for cross-plant storage, analysis, and analytics.

Predix MDC helps you overcome the non-availability of critical data from across plants in the larger manufacturing context for industrial data science and can speed process

implementation up to 50%. Manufacturers gain a secure-by-design and reliable way to ingest data in near real time into the Predix cloud as a central location, significantly reducing on-premise storage and maintenance costs.

Transform your enterprise-wide data into S95-based enterprise data sets, enabling a hybrid manufacturing cloud approach for reliable, real-time on-premise execution optimized with powerful cloud-based storage and analytics.

ASSET DATA		ERP DATA		MFG DATA
Real time feed of sensor data, measurements, etc.	**+**	Financial impact of the manufacturing process	**+**	Real time feed of manufacturing execution events

Predix Manufacturing Data Cloud (MDC) enables the consolidation of three data sets required for process optimization and analytical applications.

Outcomes

- Increase the value derived from your digital investments with global visibility
- Improve operations with a consolidated data model for enterprise-wide dashboarding, manufacturing big data analytics, and connection to other cloud-based solutions such as Predix APM
- Easy and faster access to enterprise-wide data and cross-site analytics
- Decrease the on-premises database footprint for faster, more predictable on-premise performance and lower IT/infrastructure and maintenance costs
- Accelerate manufacturing data queries and reports on operational data (hot data) with faster performance
- Lower risk with secure-by-design cloud technology

01 Transform and consolidate manufacturing data globally

Predix MDC provides a reliable way to ingest manufacturing data into the Predix Platform Cloud and transform it into a usable format with an S95-based contextual and aggregate data model. The transformed data models are accessible through easy-to-use and quick-response APIs. You can collect data across several facilities or sites for decision science, enterprise visibility, and comparisons across product lines and geographical locations.

02 Reduce storage costs and speed on-premise queries

By separating the storage of your historic and static data (cold data) from your required operational data (hot data), you can achieve two significant benefits. First, cold data storage costs and maintenance decrease with cloud server technology. Second, queries and reports on the hot data through an on-premise server are faster, helping to boost your operations agility.

03 Boost operations with cloud-based, self-serve analysis

Predix MDC integrates data from multiple systems, creating an enterprise data set for reporting and analysis. You can make site-to-site, machine-to-machine, line-to-line, and other comparisons across your organization. Predix MDC can move the data collected (both raw and contextual) to data lakes to pool data into a single location, making it easy and fast to create a context for manufacturing analytics and improve your operations.

04 Improve security with proven cloud technology

Predix MDC ensures that your data is stored and managed in a secure-by-design way. Specifically built for manufacturing, the solution is fully managed with 24/7 monitoring.

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Features

- Secure-by-design and reliable way to ingest data into a central location (Predix Platform Cloud)

- Capture all Plant Applications data for cloud storage

- Automated ingestion of incremental data (no human intervention)

- Edge monitoring, remote configuration, and deployment

- Conversion to S95-based hierarchical, contextual and aggregate Manufacturing Data Model

- Access through REST API end points

Note: Predix Manufacturing Data Cloud does not provide a user interface, visualization, analytics, or reporting tools. The REST APIs can be used as a data source for any third-party application that supports REST API as a data source.

Hardware requirements for Edge Machine

- Host OS: Ubuntu 16.04 / Redhat Enterprise Linux 7.5

- CPU : Quad Core x 2

- RAM : 8GB
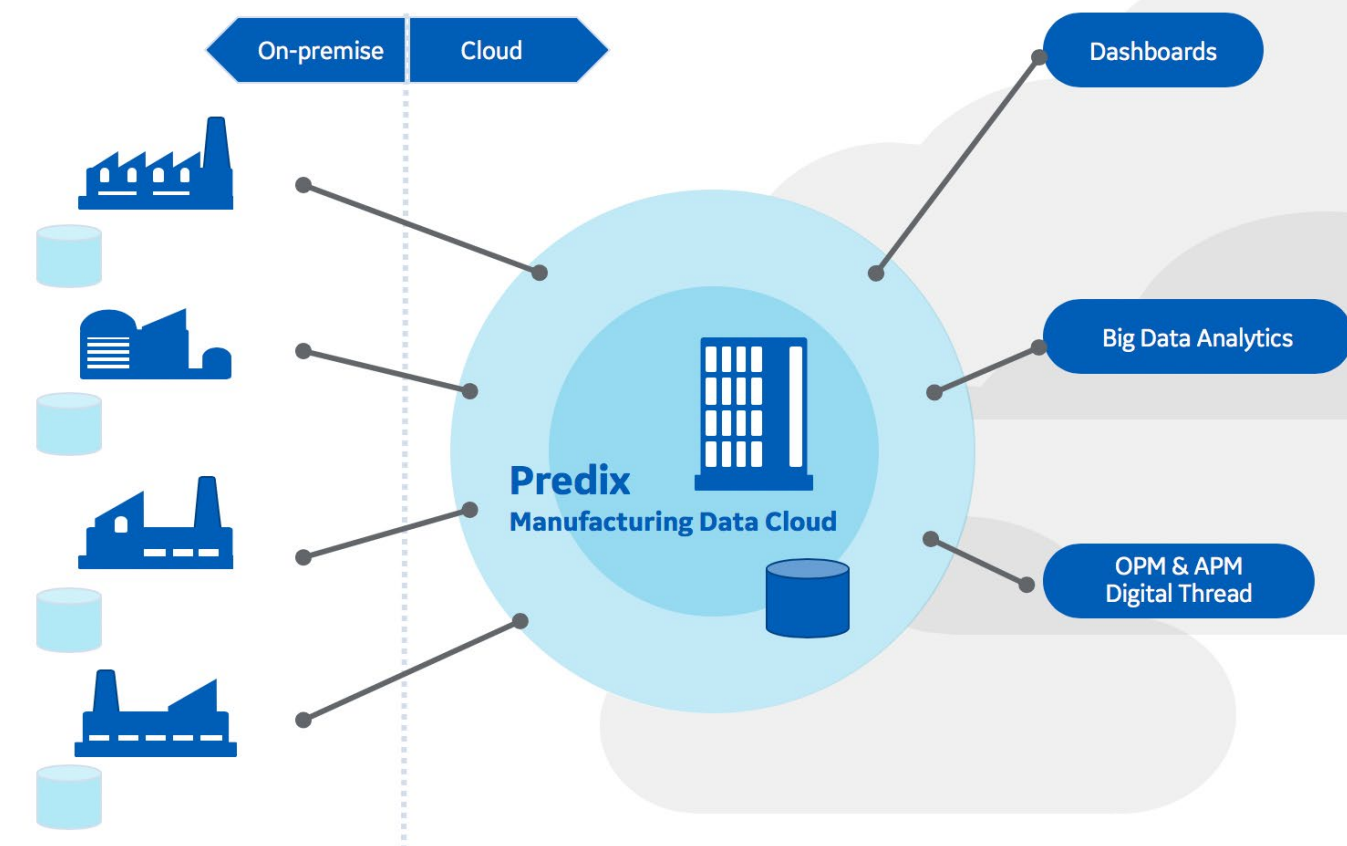
- Storage : 300 GB

Software requirements

Predix MDC is provided as an independent annual subscription and is built on Predix Platform.

Note: With the above configuration, one Edge Machine can be used to connect to multiple sites (3-6 sites). The exact number of sites would, however, depend on the peak ingestion loads.

Category	Data Model	Information Through REST API Endpoints
Hierarchy Model	Plant Model	S95-based plant model from enterprise-to-production units. The variable groups and the variable associated with the unit is also retrieved
Contextual Model	Production	Production event details
	Downtime	Downtime records
	Waste	Waste event records
	Quality / variables	Details of variables for both quality specifications and generic information along with the values

Increase the value derived from your manufacturing data while speeding operational data queries/reports and reducing cold data storage costs with Predix Manufacturing Data Cloud.

LEARN MORE

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Services

In the world of Industrial Internet of Things (IIoT), organizations are able to optimize productivity, reduce costs, and achieve operational excellence. While this is an exciting time for opportunity and growth, it can also bring on new challenges, questions, and uncertainty. No matter where you are on your IIoT journey, GE Digital has the right services offering for you.

Advisory Services We can help you plan and start your IIoT journey in a way that aligns to your specific business outcomes.

Industrial Managed Services We can help you maintain your critical machines from one of our remote locations around the world using model-based predictive-analytic technology.

Implementation Services Our team will help develop a collaborative, multi-generational plan that will marry your existing investments to the right process enhancements and technology.

Education Services We specialize in education services to ensure that you're leveraging our solutions to the fullest extent with our training and certificate programs.

Acceleration Plans Let us help by ensuring that your business continues to operate at its highest efficiency, all while mitigating risks to your investments.

Cyber Security for OT Our solutions provide industrial-grade security for a wide range of OT network and application topologies.

Related products

GE Digital's Predix Manufacturing Execution Systems suite helps digitize your manufacturing plant or factory with insights that optimize your processes.

Plant Applications →
Maximize Overall Equipment Effectiveness (OEE), improve production scheduling, and

PREDIX

Predix Platform →
Innovate and transform your business with the cloud-based operating system for the Industrial Internet, purpose-built for industry.
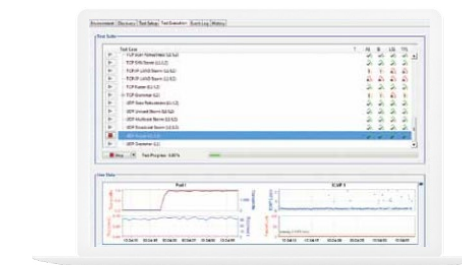
Tracker →
Accelerate time-to-market and improve just-in-sequence performance at global scale in automotive manufacturing.
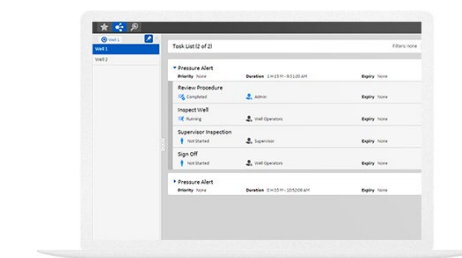
Continue your IIoT journey

Transforming your business requires innovative foundational solutions that lay the groundwork for optimized performance.

Predix Asset Performance Management →
Move from reactive to proactive maintenance to reduce unplanned downtime, minimize maintenance costs, improve efficiency, and extend asset life.
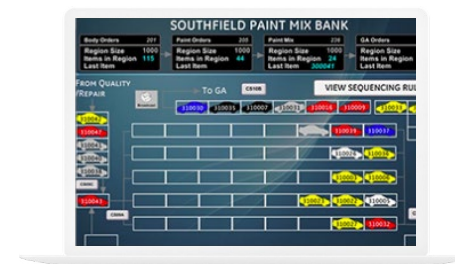
Cyber Security for OT →
Take the right actions to increase resilience, help ensure safety, and maintain availability across your operational technology (OT) environment.

Workflow →
Guide operators with dynamic, interactive electronic work instructions and eSOPs for more consistent operation.

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.