



# Proficy Manufacturing Data Cloud from GE Digital

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

## Drive optimization by efficiently collecting & organizing enterprise manufacturing data

Today, manufacturers are using less than 5% of captured data for optimizing manufacturing operations. With Proficy Manufacturing Data Cloud (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.

Proficy MDC helps you overcome the nonavailability 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 cloud as a central location, significantly reducing on-prem 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-prem execution optimized with powerful cloud-based storage and analysis.

### Outcomes

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

## 01 Organize enterprise manufacturing data

Achieve a consistent way to capture and organize enterprise manufacturing data across multiple sites and multiple data sources, facilitating reporting and optimizing related to TPM and lean metrics.

Overcome problems with fragmented, highly normalized data requiring MES functional knowledge and expertise. MDC aggregates data for global and business-level KPIs and problem-specific metrics. You can drill down to raw events, variables/sensor values, alarms, and more.

In addition to a query-able backup in the cloud, you can enable the data Purge process in Proficy Plant Applications and increase system performance and reduce TCO. MDC users have achieved a significant 12-16x improvement in performance and up to 75% reduction in TCO.

## 02 Improve global enterprise reporting

With MDC, you can achieve homogenized, high integrity manufacturing data for reporting. You can organize the data for problem-specific metrics and KPIs to meet your business needs.

MDC also supports demand-oriented expansion of data and metrics, accommodating variability in configurations and overlapping boundaries that exist between MES, PLM, ERP, and other related data sets.

Furthermore, leverage GE's proven experience in cloud-based, enterprise-wide data management and reporting - based on 100+ sites.



Access Proficy MDC data models using REST API / OData – for one single connector to shop floor manufacturing data.

## 03 Drive data-driven manufacturing analytics

Provide a foundation for analytics and optimization, meeting your organization's needs for increasing data volumes and broadly extendable contexts across multiple data sources.

With Proficy MDC, you can not only clean and curate data but also create problem-specific data sets that you can query.

Discover how P&G has employed GE's Manufacturing Data Cloud for an on-prem / cloud approach that improves performance, reduces costs, and provides a foundation for analytics and optimization. [Watch video.](#)

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|---|---|---|---|---|---|
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| A single source of truth for data   | Increased visibility on enterprise performance  | Replicate best-in-class practices across sites, fleet, enterprise                     | Cloud-based analytics   | Cost reduction & performance improvement  | Increased security  |

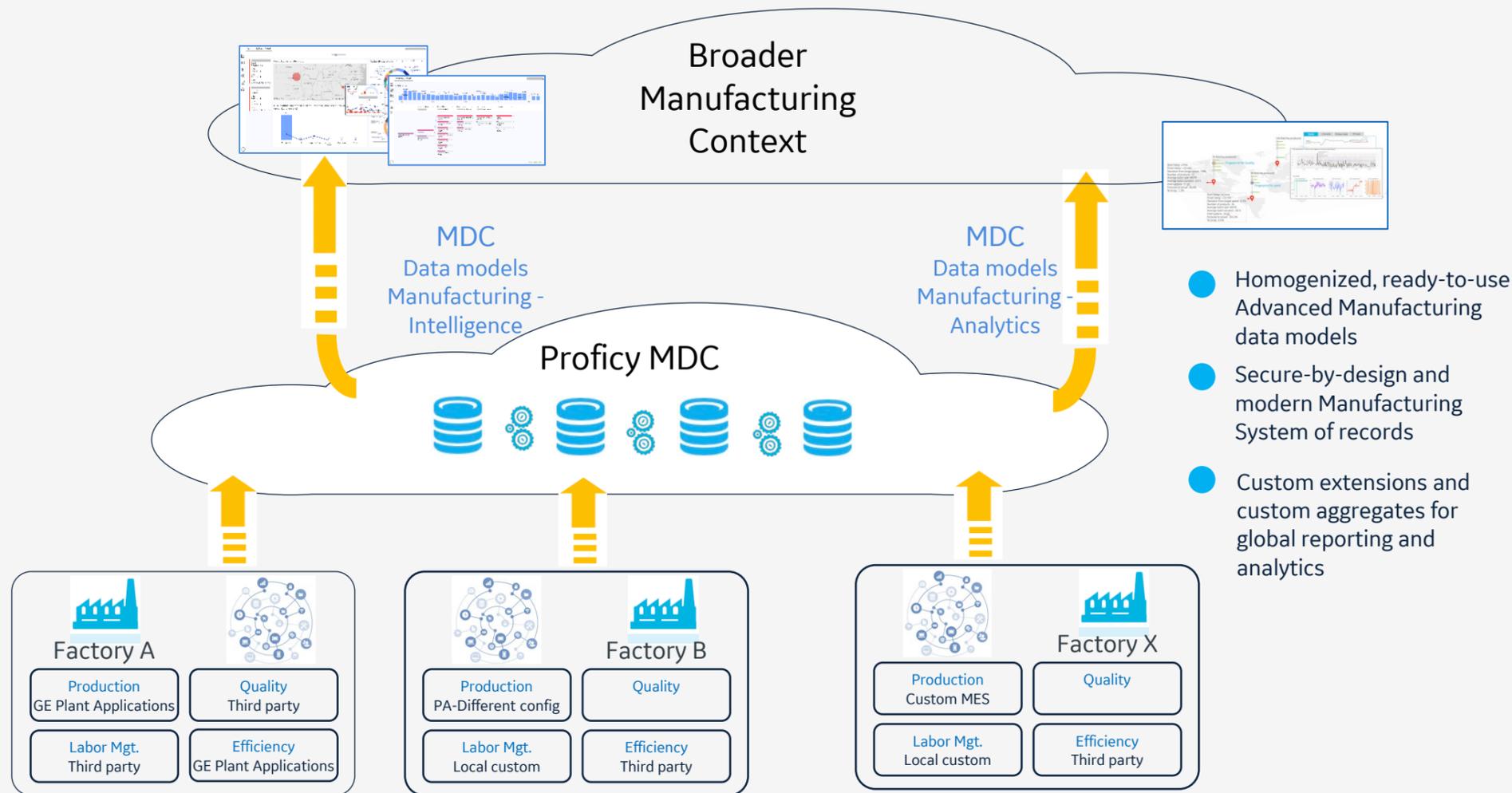
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## Example Architecture: A single source of truth for manufacturing data

Aggregating multiple plants, multiple MES solutions and other software



## Features

- Secure-by-design and reliable way to ingest data into a central cloud location
- Capture all Proficiency Plant Applications data for cloud storage
- Automated ingestion of incremental data
- Edge monitoring, remote configuration, and deployment
- Conversion to S95-based hierarchical, contextual and aggregate Manufacturing Data Model
- Hierarchy 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: product and production data including alarms
- Access through REST API / OData end points
- Exposes slack to reduce data volumes – in some cases by more than 45% with a 20% related performance improvement
- Faster query speeds for analytics and reporting due to scalable compute and storage options on cloud
- Proven value creation journey including:
  - Onboarding, validation and acceptance
  - Start purging on-prem databases
  - Work on standardizing configurations and data mgmt.
  - Quick Start to Analytics – pilot production implementations
  - Sample sites and apps to migrate to hybrid cloud apps
  - Scale analytics to multiple assets across the enterprise
  - Enterprise-wide implementation of hybrid cloud data strategy

Proficiency Manufacturing Data Cloud collects, cleans, curates and contextualizes manufacturing data into well organized domain-specific and homogenized manufacturing data models following the S95 standards for global reporting and enterprise-wide analytics. You can access these data models using REST API / OData – providing one single connector (or a single version of truth) to shop floor manufacturing data.

Increase the value derived from your manufacturing data while speeding operational data queries / reports and reducing cold data storage costs with Proficiency MDC.

[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.

### [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 experienced global Automation partners can implement a collaborative, multi-generational program that marries your existing investments to the right enhancements and technology.

### [Education Services](#)

We specialize in education services to ensure that you're fully leveraging our solutions 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.

### [Security Services](#)

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

## Related Products for Your Digital Transformation Journey

GE Digital's Proficiency suite helps you precisely monitor, control, and visualize every aspect of your operations, enabling operators to make the best decisions faster. Transforming your business requires foundational innovations that lay the groundwork for future success.



### [Proficiency Operations Hub](#)

Aggregate and visualize contextual and situational information for industrial applications – supporting rapid application development and rich displays for faster operational response & better decision making



### [Proficiency Orchestration Hub](#)

Increase throughput with accurate manufacturing product data across the enterprise, helping companies overcome supply chain issues and meeting changing customer demands.



### [iFIX](#)

Gain visibility into your operations and secure agility for smarter decision making that drives results with industry-leading HMI/SCADA used around the world.



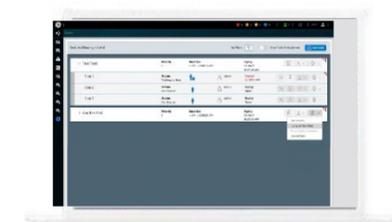
### [Proficiency Historian](#)

Optimize asset and plant performance through time-series and A&E industrial data collection and aggregation. Improve decision-making with advanced trend analysis.



### [CIMPLICITY](#)

Drive real-time visibility for smart operators with true client-server based visualization and control with proven HMI/SCADA used by the largest industrial organizations



### [Proficiency Workflow](#)

Guide operators with dynamic, interactive electronic work instructions and eSOPs for more consistent operations and optimized processes.

#### 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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