Quick Start for Industrial Advanced Analytics from GE Digital

Leverage expert Professional Services to accelerate industrial analytics for continuous improvement

70% of companies know they need to implement industrial analytics but aren't sure where to start. GE Digital can accelerate your analytics initiative.

Every industrial organization knows that it's imperative to move ahead at light speed with analytics. Consequently, new analytics startups and consulting companies are showing up every week.

But, at GE Digital, industrial analytics isn't buzz hiding risky, unproven software and newbie "experts." Our Professional Services team has implemented analytics solutions for more than 15 years, serving customers around the world across a diverse set of industries. If you're ready to use analytics to drive optimization, our Quick Start for Industrial Advanced Analytics can deliver faster results and provide a foundation for continuous improvement.

The Quick Start for Industrial Advanced Analytics enables your process engineers in AI and machine learning to speed problem detection, reduce variability, and optimize equipment and processes.

With the Quick Start for Industrial Advanced Analytics, you can leverage GE Digital's Professional Services team to deploy our proven Proficy CSense and gain a path for root cause analysis, early warning monitoring, predictive and proactive actions, process Digital Twin simulations, and process setpoint control and optimization.

Take the opportunity to work with our experts, then you'll also be ready for handoff and well-grounded success with industrial analytics.

Outcomes

- Quickly transform from traditional data analysis to AI- and machine learning-enabled analytics
- Drive expert implementation of analytics to automate actions and improve quality, utilization, productivity, and delivery of operations
- Leverage GE Digital's experienced Professional Services to enable process engineers with self-serve analytics, without needing to be data scientists
- Turn raw data into real-time insights for improvement
- Speed time to value with proven analytics consulting and implementation

01 Transition from traditional analysis such as trending to powerful industrial analytics

Advanced analytics can unlock the hidden potential within your data to significantly improve operations in a way that simple trending or traditional analytics cannot. GE Digital can help you develop behavioral models to identify abnormal conditions that might indicate:

- Problems such as faulty or inefficient uses of assets or systems
- Causes for variation in production rate or quality based on external factors or equipment
- Root causes that could be resolved using advanced process control

Modelling the behavior of existing processes can enable new awareness and drive predictive behaviors for improvement in quality, maintenance, and production planning.

02 Take your existing SCADA or MES to the next level with advanced analytics

Already have iFIX, CIMPLICITY, Proficy Plant Applications, or Proficy Historian? We're experts at extending your SCADA and MES to enable real-time process analytics, taking your system to the next level.

03 Improve operations by advancing from a reactive model to predictive

With the data that's already available, your teams do not need to be in a constant state of reactivity. The Quick Start for Industrial Advanced Analytics will help jumpstart a predictive model with your teams using Proficy CSense to achieve better control over variability.

As an example, to improve quality, you can automatically import process-relevant data from various sources and apply AI/ML models to predict quality before and during production runs and not after their completion – improving quality and reducing waste and costs.

With GE Digital's Professional Services team and the Quick Start for Industrial Advanced Analytics featuring Proficy CSense, you can optimize with powerful analytics capabilities in a proven solution, delivered by experts for the fastest return.

Success with GE Digital's Professional Services

Your trusted partner for full deployment of your GE Digital products, resulting in better outcomes, reduced risks, and higher customer satisfaction – proven and supported around the world..

- **1,300,000+** Deployment hours
- **Thousands** of Deployments
- **1,000+** Years of MES experience
- **94%** On-time MES delivery

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Features and Framework

The Quick Start for Industrial Advanced Analytics provides a bundled offering of product license and implementation expertise to:

- Identify a pilot unit and a well-defined problem statement related to one KPI that has been negatively impacted and potentially resolved via process data analysis in combination with AI and machine learning (for example, negative impact of adjustable process parameters on product quality)

- Analyze the historical trends (offline data) of the selected process to identify root causes and accelerate continuous improvement

- Define process control limits that represent good operating conditions

- Monitor the selected process, so early warnings are raised if the process is deviating from the defined control limits

- Build a predictive model that captures process behavior, so, for example, the quality of what is currently being produced can be accurately predicted without always waiting for the result of laboratory testing in order to promptly identify and apply effective countermeasures

Services Deliverables

On-Site Workshop

- Site survey questionnaire

- Site readiness assessment (3 days)

- Selection of 1 production unit with high process variability and definition of problem statement to be solved through the advanced capabilities of Proficy CSense

- Identification of data sources to load offline data (last 6 months) to Proficy CSense

- On-site workshop report

Product Installation and User Enablement

- Proficy CSense production installation and connection to data source

- Training for process engineer

Process Analysis

- Load offline process data into Proficy CSense

- Combine and prepare data to effectively analyze the process to be optimized

- Identify root causes of process variability

Process Monitoring

- Definition of Control Limits

- Fingerprinting of the process during normal and abnormal operations

- Simulate generation of Early Warning Alarms in case of process deviation relying on historical offline data

Process Prediction

- Build predictive model that captures process behavior

- Run what-if analysis to evaluate the impact of adjustable parameters to process variations

Benefit Realization Assessment

- Assessment of the benefit realization from the implementation of the offline advanced analytics model

Assumptions

- The advanced analytics model in Proficy CSense will be fed with historical data (offline). The offline historical data set will be provided by the customer in a time-series format.

- Proficy CSense will access data from the following types of data sources: Microsoft SQL Server Database (offline), text files (csv), time-series database of local Process Historian (compatible with CSense)

- Maximum of 3 data sources

Software Requirements

One of the following OS:

- Microsoft Windows Server 2016 or later (x86 and x64)

- Microsoft Windows 8.1 or later (x86 and x64)

Other Software Requirements (See online documentation for full list):

- Microsoft .NET 4.7.x

- Optional: Microsoft SQL Server 2014 SP2 or later (SQL Express editions are also supported, although not recommended for production environments)

Hardware Requirements

- 2GB available hard drivespace minimum. 20GB recommended for Troubleshooter and Runtime. 40GB recommended for Developer

- 8GB RAM for Troubleshooter (16GB recommended). 16GB RAM for Runtime and Developer (32GB recommended)

- 1 core at 2 GHz or faster for Troubleshooter (2 cores recommended). 2 cores at 2 GHz or faster for Runtime and Developer (4 cores recommended)

- 1024 x 768 screen resolution (1920 x 1080 screen resolution recommended)

Proficy CSense hardware and software requirements are representative and may vary by customer deployment. Please consult the product documentation for more details.

About GE

Learn more about the advantages of working with GE Digital's Professional Services team and how you can accelerate time to value with a Quick Start solution.

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