GE VERNOVA

PROFICY® SOFTWARE & SERVICES

HMI/SCADA SOFTWARE

Enable Connected Workers with Operations Intelligence & AI-Based Analytics

- Native HTML5
- Advanced alarm management
- Data & applications model
- Centralized configuration & management
- Embedded historian and analytics
- Proven iFIX and CIMPLICITY HMI/SCADA














20,000 CUSTOMERS USE GE VERNOVA SOFTWARE IN THOUSANDS OF PLANTS AROUND THE WORLD.

- 30+ years of HMI/SCADA innovation & reliability
- Industry Leading Partner Ecosystem
- Thousands of systems integrators around the world

CLOUD READY

aws Azure

GE Vernova and our software are known for serving the world's largest companies including:

- 92% of the world's top oil & gas companies
- 90% of the top food & beverage companies
- 90% of the top metal products manufacturers
- 90% of the top pharmaceutical companies
- 81% of the top automotive companies
- 80% of the top consumer goods companies
- One-third of the world's major metros including water / wastewater processing
- 75% of the top aerospace companies
- And more across nearly every industrial segment

ACTUAL CUSTOMER RESULTS FROM PROFICY SOFTWARE

$5 million annual savings

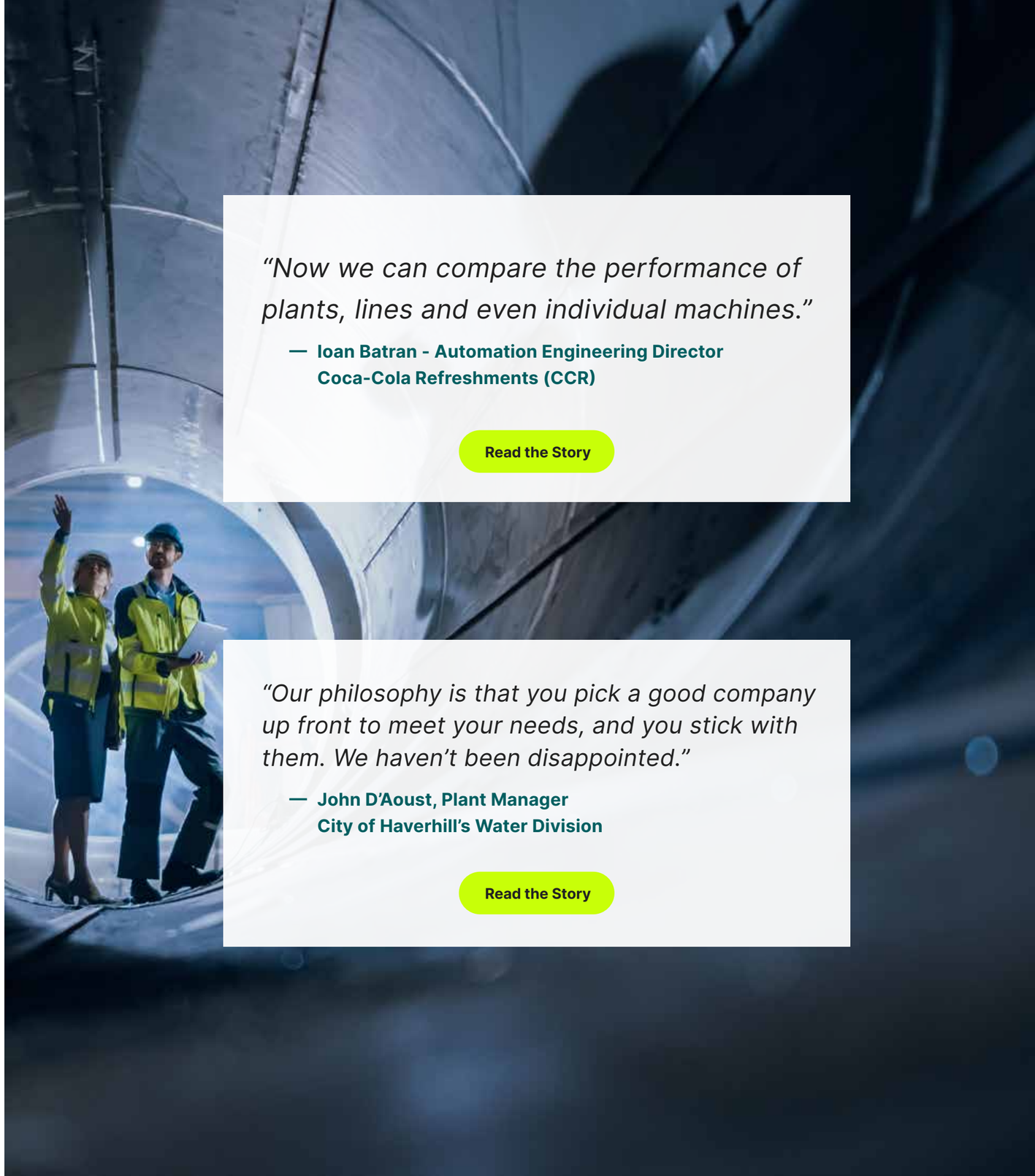
70% increase in operator productivity

25% reduction in plant downtime

40% decrease in waste

25% reduction in defects

45% less energy costs



“Now we can compare the performance of plants, lines and even individual machines.”

— **Ioan Batran - Automation Engineering Director Coca-Cola Refreshments (CCR)**

Read the Story

“Our philosophy is that you pick a good company up front to meet your needs, and you stick with them. We haven’t been disappointed.”

— **John D’Aoust, Plant Manager City of Haverhill’s Water Division**

Read the Story

CLOSE THE LOOP ON INFORMATION AND ANALYTICS TO IMPROVE OPERATIONS

SCADA with analytics and templates out of the box:

- Alarm Pattern Recognition
- PID Loop Tuning
- Sensor Health



ACCELERATE DIGITAL TRANSFORMATION WITH SCADA INNOVATION

Modern SCADA with embedded historian and analytics? Check!

CONSOLIDATION

Consolidate data from heterogeneous sources **– no data gap**

- *Shop floor (automation) systems*
- *LIMS systems*
- *ERP data (Financial, production, etc.)*
- *Manual Data Input*
- *Barcode, QR*
- *Files*

BREAK INFORMATION SILOS

CONTEXTUALIZATION

Put data in context & provide a structure/model

- *Use the S88/S95 models (Equipment hierarchy, Object Models)*
- *Batch/Lot/Serial*
- *Materials, Grade*
- *Storage Tanks, Bins*

BUILDING A DATA MODEL IS KEY

ANALYSIS & ANALYTICS

Analyze data across sources & across sites and report on it

- *Real-time quality monitoring*
- *Condition-based quality alerts*
- *Process analytics using AI/ML*
- *Analyze data across sources, for ex. across production sites (centerlining)*
- *Ad-hoc reporting*

MAKE INFORMED DECISIONS

VISUALIZATION & CONTROL

A “single pane of glass” with KPIs & all relevant information, anywhere, any time and enable actions.

- *Deliver information to the right stakeholders for fast action*
- *Create visual summaries (ad-hoc) of data to alert decision makers*
- *Call attention to the most important information of the moment*

INCREASE SITUATIONAL AWARENESS

INFORMATION BROADCAST

Seamless transfer & Information - to / from the plant floor & enterprise systems

- *Close the loop on analytics for improvement*
- *Automatically transfer & receive information (to/from the plant floor, to/from the enterprise systems)*

ENSURE INTEROPERABILITY

LEVEL UP WITH ENTERPRISE-SCALE AUTOMATION

Consolidate SCADA Systems for a Connected Enterprise

How many SCADA systems are you maintaining across your enterprise? What are the costs and risks associated with your automation software? Consolidate SCADA systems across your enterprise to:

Decrease your costs and risk from multiple SCADA systems – less hardware, license costs, OS maintenance, and cloud resources

Maximize SCADA system security and minimize SCADA attacks

Enable remote operators, plant managers, and centralized experts with enterprise SCADA

Achieve better OT operational visibility and insights

Modernize and standardize for higher ROI

Future proof with cloud SCADA, scalability, remote operations, and mobility while meeting the needs of edge manufacturing

GO BIG with GE Vernova's SCADA Innovation

- Ability to consolidate operations across sites – **central control towers**
- **Centralized Management for ease of deployment and maintenance**
- SCADA is evolving to aggregation of OT and IT data for high level applications (MES, Analytics, and more)
- **A common view & user experience** regardless of OT layer
- Enable hybrid **Edge to Cloud** deployments
- Support standards such as **OPC UA, MQTT and Python** to aggregate data and alarms from many subsystems
- SCADA solutions that **scale to well over 500,000** points on a single server and over 400,000 on a redundant pair of servers in many diverse applications

How Big?

Check out one of our major metro customers!

- 1,500,000 monitored I/O points
- 80% faster anomalies detection
- Millions of riders every day
- One of the world's largest and busiest subway systems

"I go to [GE Vernova] for what I need, and it happens."

— General Superintendent of Signals

Major Metro

LIFECYCLE MANAGEMENT OF HMI/SCADA SOFTWARE

Centralized Configuration, Data Management, Deployment, and Visualization

Visualization:
iFIX & CIMPLICITY HMI/SCADA
Proficy Operations Hub



Centralized Management
Configuration Hub

Model

Software License Management

Configuration Change Management (future)

Security



SSO



OUTCOMES

- Save time
- Reduce costs
- Simplify updates
- Support IoT
- Improve security

Software/Patch Updates

Project Configuration/Deployment

PUT THE RIGHT INFORMATION IN THE RIGHT HANDS.

Availability of data isn’t a problem in industry. The problem is filtering out a lot of noise to find the data you need, getting it into the right hands and determining the right course of action.

Our HMI/SCADA Software combines a proven industrial platform with mobile and analytic technologies to deliver real-time operational intelligence, modern web-based dashboards, and actionable enterprise-wide visibility.

Information you can act on

Empower connected workers by intelligently transforming vast amounts of operational data into actionable information – accessible anywhere, anytime – on PCs as well as tablets and smartphones.

With Proficy automation software, going mobile doesn’t mean replicating your plant systems on a handheld. Instead, you can drive the right information to the appropriate device in an intelligent way, based on real-time events, personnel role, and location.

Changing what’s possible for industry

Just as mobile devices and real-time information have changed our personal lives, mobility and modern HMI/SCADA innovation are improving our industrial world.

Now, operators no longer have to watch screens while sitting in a control room. Instead, the right operator can receive the right information and instructions at the right time and place – with one device.

Optimize and improve

Additionally, you can monitor critical KPIs through analysis dashboards, anywhere, anytime, to optimize and improve operations. Query historical data and determine the trends to better control your processes and drive best practices.

Make better decisions faster

That means the right knowledge and actions to improve your operations, reduce risk and increase competitive advantage in our connected world.



THE RIGHT INFORMATION = THE RIGHT RESULTS

Turn vast amounts of raw data into simple, actionable knowledge. By integrating directly with your existing systems and workflow, all assets can perform better, all workers can share more information in context, and all levels of your organization can get more done, for more ROI.



Right Time. Get critical information at super speed, so you can take action immediately. Operators respond faster, implementation takes less time and issues are resolved before problems arise.

Right Person and Place. Provide information to users based on their location, role and equipment asset location — enabling the right action and faster response.

Right Decisions. Every worker with information in context means better decision making, across all roles. You can prioritize alarms by type, type of equipment, identified relations and more, so operators can take the proper steps — like driving effective actions for regulatory compliance.

Right Perspective. Get a live view of the current status and history of your entire system, from a variety of perspectives. Compare the trend history and performance of similar equipment within a system or across a whole fleet.

Right Connections. Communicate to existing third party software / hardware. Collect data and transmit it from one source to thousands of sources.

Right Results. Put the right information in the right hands to improve efficiency and productivity while facilitating collaboration — and ultimately impacting ROI.



TURN DATA INTO ACTIONABLE KNOWLEDGE







1.

Collect data from existing systems

2.

Transform the data with structure and context

3.

Send information and instructions to drive the right actions, based on people's locations and roles

TECHNOLOGY FOR A CONNECTED WORLD

Native HTML5

- Less installation and maintenance effort
- Easier mobility
- Responsive design
- Added value with modern web functionality
- Secure by design
- Rich information where and when you need it on the device of your choice

Operations Data and Applications Model

Drive agility, flexibility, and transformation by:

- Democratizing data
- Centralizing and standardizing configuration
- Enabling contextual OT visualization

Our enterprise-wide data and applications model can accelerate deployments, decrease maintenance, support optimization, and empower plants.

Navigation in Context

Proficy software maps disconnected data from underlying plant systems and applies an equipment model for structured navigation and context. Users can easily and intuitively understand information associated with equipment –without needing to see various sources of data. Instead, the data becomes actionable information in a physical world.

Flexible UI – on a Wide Range of Devices

- Native HTML5 HMI - responsive web UI
- Single designer for all OT visualization
- Containerized with scripting support

Centralized Deployment/License Management

- Server-based licensing
- Central deployment of HMI/SCADA capabilities including licenses
- Project versioned Disaster Recovery Service
- Central registration of application nodes
- Tag pooling across the system

Enhanced Redundancy

- Uptime for the most critical applications
- Project updates without downtime

Advanced Analytics and Alarming

Send the alarms that matter, when they matter, to the right person. With proactive analysis, you can even drive predictive intelligent alarming, reducing errors and catastrophic events.

- Containerized
- Systems of OT: OPC UA & MQTT alarm consumption
- ML-based pattern recognition
- Enhanced alarm shelving
- Flexible alarm distribution
- Multiple event managers

Secure by Design

Proficy leverages standards such as OPC UA, digital certificates, and Web tokens, which means you can deploy with confidence. Based on GE Vernova's Red Team Penetration testing, Proficy further reduces security risks with ACL permissions on files, shared memory and registry settings; awareness of install updates when upgrading through automatic prompts; and many other security-related capabilities. Additionally, rely on GE Vernova's Secure Deployment Guides for best practice recommendations.

Open and Layered, Standards Based

Proficy software delivers a standards-based open ecosystem for superior interoperability and the foundation for IoT including an MQTT5 client. Our software supports MQTT, OPC UA, cloud, ISA 18.2, ISA 101, and more.

- Reduced communications configuration
- Secure-by-design connectivity
- Reliability and redundancy
- Structure in your application
- Multi-platform
- Ability to use legacy systems
- Ease of connectivity reduces costs

GE Vernova's HMI/SCADA Software can aggregate data from a variety of HMI/SCADA, historian and real-time systems using our open interfaces. Combine data from your mixed-vendor environment, use the modeling tools to organize information in a logical manner, and make it available to your mobile workforce with ease.



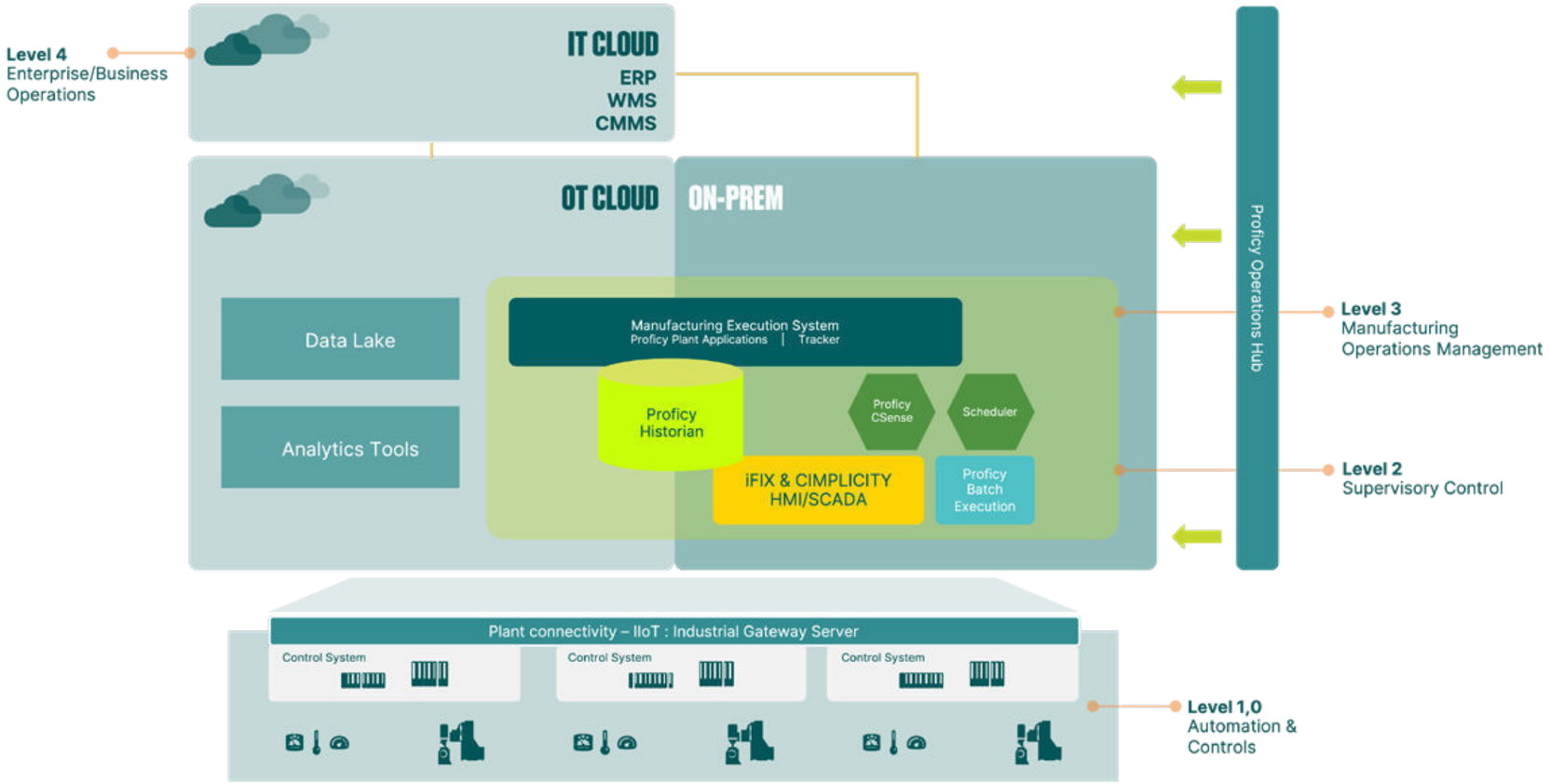
MAKE THE CONNECTION

Drive digital transformation across machines, data, insights, people

Our automation software is easy to implement and easy to use. Start seeing the advantages of Proficy Software within hours – for actionable knowledge, anywhere anytime.



PROFICY® FROM THE PLANT FLOOR TO CLOUD



PROFICY SOFTWARE FAMILY

GE VERNOVA

HMI / SCADA



iFIX and CIMPLICITY: Drive smarter operator decisions with model-based high-performance HMI for faster response and development.

Precisely monitor, control, and visualize every aspect of your operations for intelligent control across your entire enterprise.

MORE INFO GET TRIAL

Industrial Data Management



Proficy Historian: Collect, archive and distribute large volumes of industrial time-series and A&E data for on-premise and cloud storage and analysis.

Proficy Historian Essentials included with iFIX and CIMPLICITY - or upgrade to Standard or Enterprise for IoT-fueled industrial data management.

MORE INFO GET TRIAL

Remote / Mobile Operations & Control



Proficy Operations Hub: Access your HMI/ SCADA screens and remote operations on site or in the field using a modern, centralized environment that enables rapidly building industrial applications for web-based intelligence.

MORE INFO GET TRIAL

Advanced Analytics



Proficy CSense: Put your industrial data to work with analytics software that improves asset and process performance by utilizing Process Digital Twins.

Analytics starter pack included with iFIX and CIMPLICITY.

MORE INFO GET TRIAL

Manufacturing Execution Systems

Proficy Smart Factory MES: Enable lean manufacturing through on-premise, cloud, or hybrid MES software solutions.

MORE INFO



Advanced Reporting

Dream Report: Create reports tailored to your needs, including regulatory reporting, and view your facility's most pertinent data.

MORE INFO



iFIX HMI/SCADA

Improve productivity and process control with new generation iFIX featuring native HTML5 and MQTT

Modern, industrial-strength HMI/SCADA for connected workers

With just a glance, operators should be able to recognize which information requires their attention and what action needs to be taken. They need to know quickly what problems have arisen and how they can be addressed efficiently. You can enable connected workers with proven and innovative iFIX HMI/SCADA. Used by thousands of industrial organizations around the world, iFIX is part of the Proficy family and delivers faster time to insight and greater efficiency for your operations while speeding time-to-value for system integrators.

Explore our new generation iFIX featuring centralized project configuration and deployment, MQTT, native HTML5 with Proficy Operations Hub, and much more.

Outcomes

- Reduce development and deployment time and costs with native HTML5, Object Orientation and a unified configuration environment – including the ability to automatically create iFIX and Proficy Historian tags
- Speed operator response with modern screens, centralized visualization and ISA 18.2 alarm management
- Reduce troubleshooting time with higher situational awareness, using High Performance HMI layouts and context-driven navigation based on a model structure
- Improve output for OEMs, system Integrators and end users with flexibility and extensibility – easy-to-create, repeatable projects
- Minimize maintenance time and costs with Web-based configuration
- Provide real-time data feeds to your supply chain through secure-by-design, standards-based communications
- Ensure highest reliable uptime with native SCADA redundancy

01 Speed development with native HTML5, Object Orientation & centralized configuration

iFIX's Object Orientation in a centralized Web-based configuration environment allows users to quickly connect to structured data sources like PLCs; browse the PLC asset hierarchy as well as other IGS and OPC UA data sources; create objects, model templates such as tanks and pumps, instances of objects, and PDB tags; use a modern Web-based structured database manager; and visualize iFIX pictures and graphical objects in model context. You can significantly reduce configuration by automatically creating tags in iFIX and Proficy Historian.

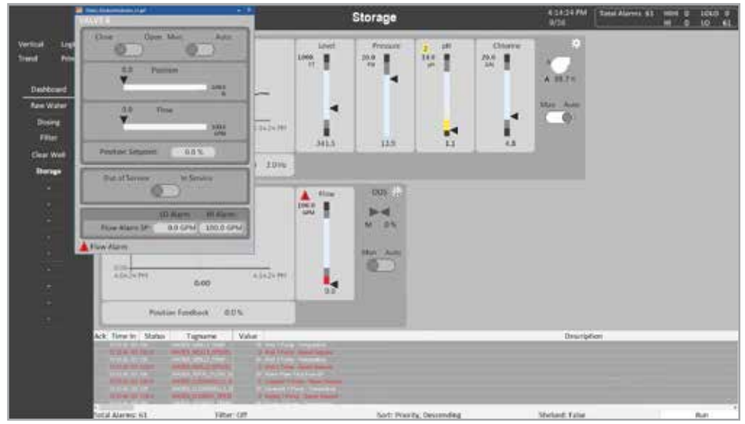
Access and manage the data from all of your iFIX nodes across your network from a single Web browser instance, using secure-by-design digital certificates and ensuring trust between the Web client and SCADA servers. Multiple HMI/SCADA developers can work simultaneously on the same project from a Web browser anywhere on the network. Audit logs and visualization clues track changes to help ensure compliance to your highest corporate standards.

02 Leverage templates for process industries and High Performance out of the box

To help engineers quickly create the right user experience, iFIX provides modern sample systems (Water/Wastewater, Food & Beverage, Pharmaceuticals, Chemicals, Power) as well as predefined objects and templates designed using High Performance HMI concepts. Take advantage of rich, ISA standards-based capabilities such as High Performance Dynamos, alarm shelving, and model-based visualization that decrease development time and costs while improving operator response for higher uptime and quality.

03 Achieve visualization where you need it, anywhere, anytime

Thanks to our wide range of HTML5-compatible clients such as Proficy Webspace and Proficy Operations Hub, iFIX screens can be used to deliver information anywhere, anytime, on a desktop, tablet, or smartphone – regardless of the form factor.



Designed for today's connected worker, iFIX improves operator decision making and speeds the right response.

More Info

Get Trial

> *"What we like about iFIX is that there is a large user base, and we feel very confident that it's a product that will be around for a long time. We enjoy [GE Vernova's] commitment to the product and all their improvements."*
>
> **— Nicholas Buono, IT Manager, Southeast Morris County Municipal Utilities Authority**

CIMPLICITY HMI/SCADA

Precisely monitor and control your enterprise operations with native HTML5 and centralized, remote & mobile innovation

Enable centralized, remote and mobile operations to increase efficiency and uptime

As a proven automation platform, CIMPLICITY HMI/SCADA provides true client/server visualization and control – from single machines to plant locations spanning the world – helping you manage your operations and improve decision-making.

Based on decades of research and development and part of the Proficy family, CIMPLICITY is the HMI/SCADA of choice for the world's largest manufacturers and utilities. For applications of all sizes, CIMPLICITY can help deliver easier development, faster response, reduced costs, and increased profitability.

Explore our new generation CIMPLICITY featuring centralized project configuration and deployment, cloud compatibility, MQTT, native HTML5 with Proficy Operations Hub, and more.

Outcomes

- Speed problem detection and response across your entire enterprise with modern dashboards, KPIs, and sophisticated alarm management
- Reduce time-to-value with Rapid Application Development tools including native HTML5, Configuration Hub, cloud, and object-oriented design
- Improve decision-making with richer information in context, supported by modeled data, web-based visualization, and OT systems consolidation
- Reduce threat of cyber attacks with certificate-based communications and secure configuration guidance
- Minimize maintenance time and costs with zero deployment clients
- Take advantage of superior design flexibility for consumption of third-party HMTL5 content, cloud architectures, and enterprise scalability
- Drive efficiencies in your development across the Proficy portfolio with a common model, installer, and security

01 Increase efficiency with dashboards, mobility & sophisticated alarming

CIMPLICITY changes the HMI experience to enable decision support for the user. The overall HMI layout is designed to provide users with the most informed, personalized view of the problem or task at hand – for faster response and fewer errors. Additionally, sophisticated alarm management and escalation capabilities can assist operators to see and act on the alarms that matter, improving efficiency and reducing risk.

02 Drive faster time-to-value with native HTML5, cloud & centralized configuration

Deploy solutions faster with powerful tools including common installer, model, and security as well as our Configuration Hub – across SCADA, historian, and visualization. Leverage our native HTML5 graphics designer, high availability for 24/7 uptime, and enterprise capabilities including cloud architectures. Also, easily combine CIMPLICITY with other OT and IT systems. Use CIMPLICITY's object-oriented design for easy repeatability and faster time-to-value through modeled context. You can use classes and objects to build a structured database quickly. Modeling capabilities in CIMPLICITY allow you to create templated applications for repeatable assets, further speeding configuration.

03 Improve connectivity, security & reliability across your entire operations

With OPC UA Server support for modeled data, CIMPLICITY helps you aggregate systems for a single connection to your SCADA and consolidated views. Additionally, CIMPLICITY's Global Discovery Server reduces threats from cyber attacks with overall certificate-based communication. Robust coding practices and secure deployment guidance (ISO 27001) make CIMPLICITY the SCADA of choice to help meet the most demanding security requirements.



With thousands of installations, CIMPLICITY offers trusted performance, reliability, one of the richest HMI/SCADA feature sets, and edge-to-cloud innovation from GE Vernova.

More Info

Get Trial

"Playback is the 100% bonus. Event diagnostics and response time decreased by at least 80%."

Calvin Forde, General Superintendent of Signals
New York City Transit Authority, 7th busiest subway in the world
1,500,000-point CIMPLICITY enterprise SCADA system
Read the story

PROFICY OPERATIONS HUB

Modern, centralized OT visualization with no-code configuration, native HTML5 & remote access

Enable OT business intelligence, centralized visualization/configuration & digitized processes

Looking to quickly analyze production data for an issue you saw? Need to extend Operations visibility to non-OT personnel? Tired of wasting money on siloed and fit-for-purpose interfaces?

Proficy Operations Hub is a centralized environment to rapidly build industrial applications (data connectivity, aggregation and visualization), enabling improved plant operations through comprehensive, contextual information that's easier to analyze and act upon independently of location.

With Proficy Operations Hub and HTML5 technology, teams across all levels in an organization can increase operational efficiency and make better decisions based on real-time and historical plant-wide application data, including historian, HMI/SCADA, MES, analytics, and third party. Users can monitor, control, provide data entry, and perform analysis all through Proficy Operations Hub.

Out-of-the-Box or Build-Your-Own Industrial Apps such as:

- Monitor & Control
- Dashboards & KPIs
- Analysis
- Reporting
- Digital Andon
- Sustainability Metrics

Outcomes

- Improve collaboration and continuous improvement programs with a cross-business, easily accessible digital operations hub
- Rapid, no/low code development of Web-based displays for operations
- Faster response and better decision-making with centralized visualization, digitized processes, data analysis in context, and task lists
- Decreased costs and time-to-market for creating Web-based operations applications using HTML5 technology
- Lower maintenance costs with centralized Web applications
- Information anywhere, any time with responsive design

01 Accelerate development with code-free configuration and native HTML5

Proficy Operations Hub allows both developers and non-developers to quickly assemble displays through a comprehensive library of widgets and arrange them to provide responsive operator visualization. You can easily define data sources and entities for connected devices and create queries to access and transform data into actionable information for operations. Drag-and-drop design allows for simple placement and configuration of visualization components on the display, then dragging the query or data source onto the component quickly enables the data connections.

02 Deliver contextual, actionable information with a cross-business digital operations hub

Proficy Operations Hub shares information across frontline workers, empowering them with knowledge. The software enhances accessibility across roles and locations, providing critical information including trends for improved response and real-time task lists.

03 Information at your fingertips

Responsive design and native HTML5 technology allow you to build the application, so information is readily available on PC displays, tablets, and mobile phones, allowing access to information and insights into your operations from anywhere, anytime.

04 Save time with zero deployment clients, centralized management & standards

Leveraging Web technology and open standards such as OPC UA for interoperability, Proficy Operations Hub reduces deployment and maintenance time. The true native Web clients do not require any client installation. Deploying and maintaining have never been easier.



More Info

Get Trial

"Proficy Operations Hub accelerated time to value as we developed and delivered an expanded remote and local monitoring and control solution for ENGIE, a major energy company serving millions of customers."

— Sven Simons, Manager,
Industrial IT Business Unit, Control & Protection Automation nv

PROFICY HISTORIAN

Powerful industrial time-series and A&E data collection for on-premise and cloud-based storage & analysis

Historian Essentials Included with iFIX and CIMPLICITY HMI/SCADA

Proficy Historian is an analyst-recommended historian software solution that collects your industrial time-series and Alarms & Events (A&E) data needed to analyze asset and process performance, so you can drive greater business value.

The emergence of cloud-based Industrial Internet of Things (IIoT) and big data solutions has spurred continued investment in our historian. With decades of experience and tens of thousands of successful customer installations around the world, Proficy Historian changes the way companies perform and compete by making data useful.

The new generation Proficy Historian increases analysis capabilities of today's connected worker, improves enterprise scalability, and enhances deployment flexibility and centralized management.

Outcomes

- Achieve fast time to value with simple installation and easy-to-use web clients with integrated tag searching and drag-and drop features
- Secure-by-design data collection and storage
- Small, powerful footprint, scaling from small applications to hundreds of users and 100 million data points / tags
- Take advantage of data analysis in asset model context with the time-saving trend analysis card
- Support high availability with data redundancy
- Leverage continuous and highly scalable data read and write functionality
- Central management of remote data collectors to reduce maintenance costs and downtime

01 Achieve data analysis in context for optimization & continuous improvement

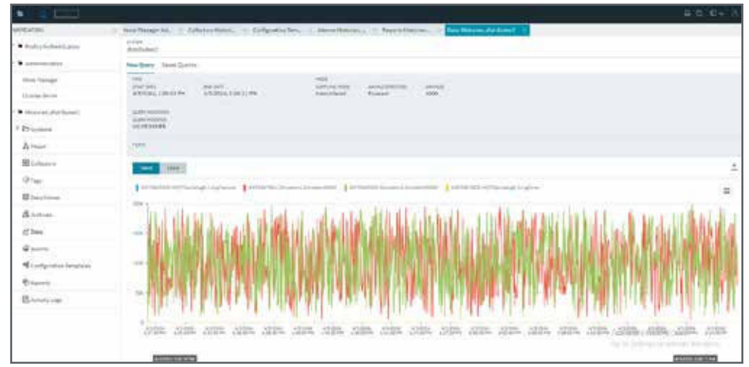
With Proficy Historian, users can analyze data in context via Proficy Operations Hub and the Historian Analysis run-time application, which are available for license at no additional cost with Proficy Historian Standard and Enterprise versions. Users receive data aggregation across multiple sources or historians, ability to define an asset model including tag mapping, and advanced trend analysis. Proficy Historian also includes an Excel Add-In for Proficy Operations Hub, enabling users to query historical data based on the asset model.

02 Improve data security & enable enterprise-wide industrial data management

With data security as our highest priority, Proficy Historian offers common and shared User Account Authentication (UAA). Integrated with LDAP, this feature eases security, allowing users to choose the common UAA deployed by other products in their application. Additionally, for enterprise-wide deployments, Proficy Historian features a model for cross-enterprise data access, scalability to 100 million tags, and the world's only cloud-native historian innovation.

03 Simplification, ease of use, reduced costs

Proficy Historian installs in minutes and offers a small footprint yet scales to support hundreds of users across an enterprise. This OT data solution significantly simplifies Historian management and saves time with an HTML5-based administrator. Additionally, Proficy Historian has the easiest Remote Collector Management on the market with industry-leading centralized administration. Increasing ease of use and value across the Proficy portfolio, Proficy Historian features model integration with our HMI/SCADA and Proficy Operations Hub.



04 Faster configuration and easy connectivity for IoT applications

Connect to your machine data with an existing collector or build your own using our SDK. Proficy Historian supports MQTT end points and enhanced hybrid on-prem/cloud and full cloud data models with the ability to select data, frequency, and rate of change, all while leveraging our rich data aggregation and collection capabilities. Collectors can send data to your local Historian or to cloud-based Azure, AWS, Google, and more. Furthermore, Proficy Historian includes an optionally installed OPC UA server, password and certificate-based security, and more.

More Info

Get Trial

"No longer is there a default choice in historians. If Proficy Historian is not on your short list, it certainly should be."

— LNS Research

PROFICY CSENSE

Optimize with 5-in-1 analytics capabilities in closed-loop solution

Proficy CSense uses AI and machine learning to enable process engineers to combine data across industrial data sources and rapidly identify problems, discover root causes, predict future performance, and automate actions to continuously improve quality, utilization, productivity, and delivery of operations.

Engineers and data scientists can analyze, monitor, predict, simulate, and optimize and control setpoints in real time through Proficy CSense.

Additionally, Proficy CSense provides the capabilities to mine insight from historical data and rapidly develop, test, and deploy simple calculations, predictive analytics, and optimization and control solutions to reduce variability and improve operations.

Outcomes

- Optimize quickly with analytics starter pack for SCADA customers (Alarm Pattern Recognition, PID Loop Tuning, Sensor Health)
- Deploy cloud-based or on-prem analytics that improve asset and process throughput, yield, quality, efficiency, and WAGES by significant margins
- Monitor and optimize health and performance of base-layer PID control loops
- Validate and clean raw sensor data at the source to ensure integrity of downstream systems
- Combine, clean & format siloed data across the production value chain into curated datasets for use in analytics
- Mine new insight from industrial data to maximize return on assets and optimize processes
- Use data to troubleshoot causes of asset and process performance issues rapidly
- Increase productivity with visual analytics in a thin client

01 Mine new insight from data

Proficy CSense's Troubleshooter enables engineers to rapidly troubleshoot continuous, discrete, or batch manufacturing process performance by mining insight from available sensor and production data.

02 Leverage modern analytics visualization for faster response

Take advantage of modern, thin-client visualization with the included Proficy Operations Hub app: Process+ Control Loop Monitoring. For comprehensive PID control loop performance monitoring, this Web UI puts high-performance analytics at your fingertips, where and when you need it.

03 Enhance engineering productivity

Visual drag-and-drop analytics accelerate time to value and reduce dependence on data scientists and programmers. Online demos and the Proficy CSense interactive training course enable rapid mastery of the software with easy-to-follow demonstrations and guided simulations.

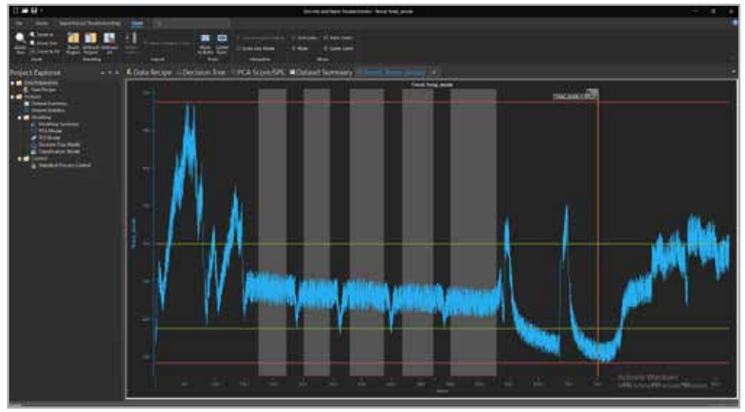
04 Improve production throughput, yield, quality, efficiency, and WAGES

Proficy CSense's Architect enables engineers to rapidly develop analytic solutions that can help improve production throughput, yield, quality, efficiency, and Water/Air/Gas/Electricity/Steam (WAGES) use with significant margin.

A comprehensive development environment provides visual analytic building blocks. This allows users to build and test calculations, predictive analytics, and real-time optimization and control. Solutions are enhanced with real-time and historical data sources and drag-and-drop access to rich functional libraries.

For greatest efficiency, you can save solutions as reusable templates for easy deployment to similar assets or process units and deploy into production using Proficy CSense's Runtime Manager.

ANALYTICS AND TEMPLATES INCLUDED WITH iFIX AND CIMPLICITY



More Info

Get Trial

"Some systems are just too complex and have too many variables for operators to run optimally. That's when we need the help of dedicated advanced-control intelligence that can deal with the complexities of our unique problems."

— Tim Spandiel, Manager
Impala Platinum's Base Metals Refinery

DREAM REPORT FOR PROFICY

Powerful reporting and dashboards to improve performance and meet operational goals

The reports and dashboards you need – anywhere, anytime

Built on modern technologies by Ocean Data Systems, Dream Report for Proficy® is a real-time report and dashboard generator with an easy, configurable user interface. Dream Report offers direct connectivity to the Proficy software suite, so you can leverage your automation data to generate the reports and dashboards you need to make the best operational decisions.

This powerful reporting software accesses open and proprietary archives and databases to generate professional reports by schedule, on event, or manually—then publishes and distributes the reports. The solution delivers web-based reports and dashboard management over the Intranet or Internet via an integrated web portal, enabling you to access generated reports, create new reports, and build web-based interactive dynamic dashboards in minutes.

Outcomes

- Make better, faster decisions with automated reports and dashboards for real-time operational intelligence
- Access the information you need anywhere, anytime
- Improve performance, efficiency, and maintenance reporting to support your business goals
- Generate reports on a schedule, by event, or manually
- Create richer reports and dashboards more easily and cost effectively – without programming or IT skills
- Gain valuable insights with drill-down reporting functionality and data analysis
- Enable faster regulatory reporting with flexible report generation and distribution, and ease compliance with eSignature

01 Easy, fast reports and dashboards without a single line of code

An intuitive and easy interface enables fast project development and maintenance with low engineering costs. You can develop reports and dashboards without a single line of code. A secure-by-design web portal enables access anywhere and anytime.

02 Powerful report and dashboard management tools

With built-in user management, you can define who has access to what by individual or by groups, and integrate with Microsoft Windows® user management. Dream Report also offers version management, audit trail, and electronic signature for demanding applications such as 21 CFR Part 11. It supports standardized report templates.

03 Data extraction and analysis with query and statistics in a composable view

Dream Report provides a user-friendly object library that can query data, perform statistics, and format results, delivering the information you need quickly and easily. It can display data in multiple formats, such as tables, bars, pies, and charts, so you can tailor the view. Dream Report also has an intuitive graphical editor, and you can create and save best-in-class reports as templates.

04 Report and dashboard generation and distribution

With Dream Report, you can generate reports manually and automatically. In automatic mode, it can execute on event and on schedule, as needed. Furthermore, you can automatically print, email, store, and publish reports through an HTML5 browser-based user portal. Access your data from anywhere at anytime.



05 Reports and dashboards at your fingertips

- Alarm reports
- An excellent solution for ISA 18.2
- Audit trail reports
- Batch reports
- Building Management Systems reports
- Compliance reports
- Efficiency reports
- Energy audits
- Electronic flow measurement
- Federal regulatory reports
- Laboratory information systems
- Production reports
- Quality reports
- SPC reports
- Standard Operating Procedures (SOP) reports
- Water/Wastewater
- And more

More Info

"Dream Report makes reporting very easy. All capabilities are out of the box, and it gets the job done."

— Mark Weston, Computer Engineer, Carollo

PROFICY BATCH EXECUTION

Consistent manufacturing control without complex programming

Help assure that your products are being manufactured correctly

Proficy Batch Execution is a powerful and feature-rich batch automation solution. The software provides a straightforward application development environment, empowering process owners to quickly and efficiently deploy batch automation, regardless of the underlying equipment.

The solution includes data collection, robust batch management, clear process visualization, and powerful supervisory control capabilities—enabling a complete batch solution for life sciences, food and beverage, consumer goods and specialty chemical industries.

Outcomes

- Reduce waste and increase product quality
- Increase efficiency and reduce costs
- Enable fast deployment with lower total costof ownership
- Automation reduces human error
- Achieve maximum flexibility in a multi-product multi-batch environment



01 Powerful and easy recipes

Write, schedule and execute recipes that have sequence variations and compose drastically different recipes without having to modify PLC code. Based on the S88 model with the concept of classes, you can build recipes to run on any units within a class and gain greater agility.

02 Smarter and faster development

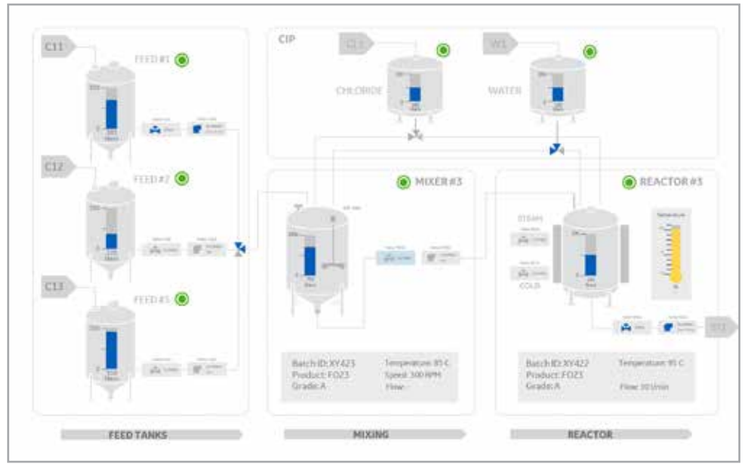
The software solution delivers a fast, simple, and effective batch development platform, which allows you to model your plant floor equipment, add equipment paths, equipment priority and status, and create and manage reusable recipe components.

03 Improved security and compliance

Proficy Batch Execution delivers point-of-entry verification through Electronic Signatures in the active controls and Recipe/Equipment editors—supporting 21 CFR Part 11 compliance by enabling equipment and recipe auditing and version control. It also centralizes the storage location for e-records with encrypted store-and-forward technology that automatically provides a runtime and configuration audit trail.

04 Open layered solution

Proficy Batch Execution seamlessly integrates with any OPC-compliant HMI/ SCADA, MES/ERP, PLC-based or DCS system, allowing OPC browsing to establish connection and automatic creation of tags, incorporating alarm and control changes.



05 Operator views and controls

Batch visualization can be incorporated into your HMI/SCADA Screens. Procedures can be seen in a Sequential Function Chart (SFC), table, event journal. Work Instruction provides the operator with a sequence of steps to properly execute a batch. Campaign Manager allows for automatic scheduling of batches.

Operators can use a web client such as Proficy Operations Hub to interact with Proficy Batch Execution.

More Info

"When it came to the point of implementation, we were pretty confident that it would work first time – and it did. The Batch Execution System worked properly right from outset."

— Chris Barlow, Technical Director, Astec Solutions, Reckitt Benckiser optimization

iFIX PRODUCTIVITY TOOLS

iFIX Productivity Tools are a suite of enhancements for iFIX that help lower the cost of ownership, improve usability, and make operations easier, faster, and more robust.

iFIX Productivity Tools is included with an Acceleration Plan contract at no additional cost.

Key improvements

- Intuitive navigation tools, easily configured, and maintained without scripting
- Enhanced picture interaction with pan-and-zoom controls, multi-monitor support, and multiple picture support on a single monitor
- Consistent equipment control interface with operator dialog for all device types—without programming
- Universal equipment information containers found in tab displays
- Improved alarm management functionality, including; enhanced acknowledgement, alarm shelving, alarm list, and alarm disable and reporting, as well as dynamic alarm limit setting and reporting
- Detailed and permanent event recording and reporting
- High visibility warning indicators and operator notes system for safer operations

Giving iFIX users the best possible work environment is just the beginning. Productivity Tools deliver bankable benefits for the business. Outcomes include:lower total cost of ownership, ease of use, safer operations, improved operational intelligence, and longer life for your iFIX system.



Enhancements made easy and cost effective

Improving your existing iFIX system is easy with iFIX Productivity Tools, designed for fast and convenient updates.

Upgrade tools and installation wizards allow you to quickly apply new Productivity Tools functionality to your current iFIX system in just a few hours.

Best of all, iFIX Productivity Tools are included with Acceleration Plan support maintenance, so there are no additional costs to upgrade.

Productivity Tools can be easily applied to upgrade existing iFIX systems.

More Info

INDUSTRIAL GATEWAY SERVER

Enable reliable connections to your devices for control, data acquisition, and visualization

Robust, flexible connectivity

Industrial Gateway Server (IGS) is a powerful full-featured connectivity solution that's robust, reliable, and easy to use. IGS is packed with the latest and greatest industry standard protocols, which enable communication to thousands of mixed vendor devices and instruments.

With IGS, you have a comprehensive connectivity solution for Proficy HMI/SCADA, MES, and intelligence applications, as well as third-party solutions.

IGS delivers a basic set of core drivers with an optional premium set that delivers additional specific niche drivers.

Outcomes

- Easily connect to Proficy software and third-party solutions
- Improve reliability with robust connectivity
- Save time with an enhanced interface that enables you to connect quickly
- Leverage control and security with powerful administration tools
- Enhance flexibility with basic drivers and premium options
- Achieve seamless communication with your installed base of equipment and systems
- Ease use with English, German, Japanese, and Simplified Chinese language support

More Info

HMI/SCADA WITH iPOWER

Electric utility SCADA made easy

HMI/SCADA with iPower helps improve utilities operations and protect life and property.

To help electric utilities of all sizes quickly and easily install and configure SCADA capabilities, GE Vernova offers both HMI/SCADA solutions, iFIX and CIMPLICITY, with iPower—a powerful software solution designed for electricity control room operations. iPower provides real-time data collection, database management, dynamic data display, and secure operator supervisory control. As a result, you can achieve safer operations and efficient network management.

iPower is an open, standards-based SCADA solution that's easy to use and easy to own. It is also scalable from substation automation systems to complex computer networks in larger utility control rooms. With its intuitive operations and simplified maintenance, GE Vernova's HMI/SCADA with iPower enables you to focus on core operational tasks for a sustainable advantage.

Outcomes

- Safer and secure-by-design electrical operations
- Easy to learn and easy to use
- Enhanced operator decision making
- Increased productivity and accountability
- Lower total cost of ownership
- Greater operator acceptance
- Reduced deployment, configuration and training time
- Improved operations efficiency

iPower is a proven, reliable HMI/SCADA, deployed across a wide range of industries in more than 40 countries.

01 Substation automation / substation management

Acts as a substation gateway or onsite substation management interface.

02 Electric utility control room SCADA

HMI/SCADA solution for electricity utilities. Full supervisory control and data acquisition over electrical smart devices and equipment.

03 Energy management for large energy users

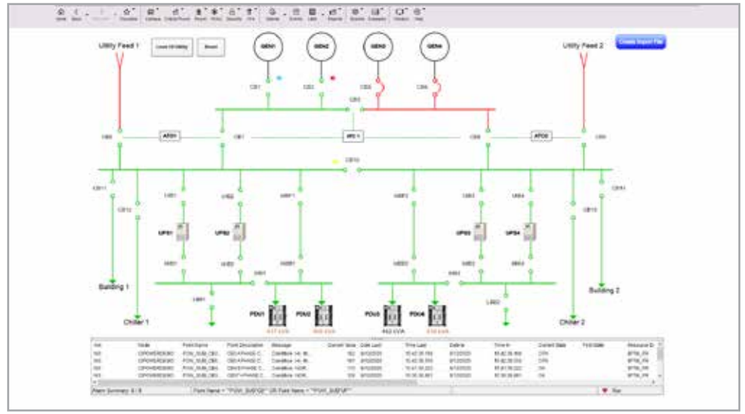
Power monitoring and distribution control for heavy power utilization environments.

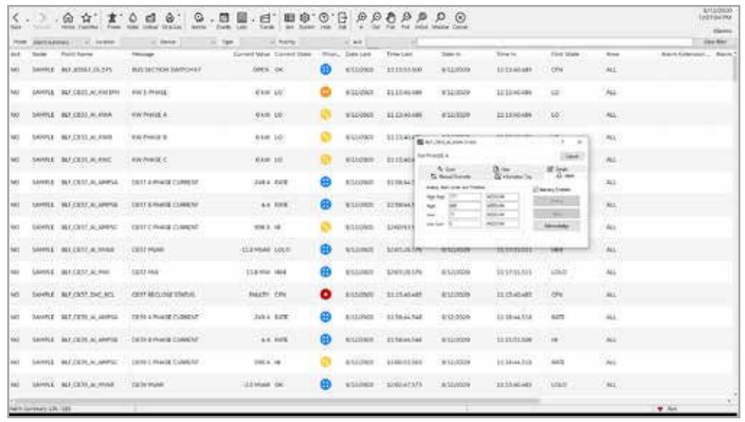
04 Operations and management of critical energy delivery

Power monitoring, backup power automation, and critical power delivery management for power dependent/high availability environments.

Key features

- Control tagging, interlocks, lockout and timeout
- Authorized changes (electronic signatures)
- Operator alarm management suite: alarm shelving, enable/disable alarms, threshold changes, and off normal display
- Real-time data communication and dynamic data display
- Enhanced lists for reporting
- Operator notes for auditing / context





More Info

"iPower offers full-featured, safe, reliable, and affordable SCADA suitable for distribution cooperatives of any size."

— Randy Poulson, VP Engineering Services, Dakota Electric Association

TRACKER - AN EXTENSTION OF CIMPLICITY

Increase throughput and accelerate time-to-market in conveyor and assembly manufacturing

Production Tracking & Order Execution Management to optimize your manufacturing process & production orders

With installations spanning the world and built on CIMPLICITY HMI/SCADA, Tracker is a comprehensive routing, tracking, and order execution management system that helps manufacturers raise productivity and cut costs by monitoring and managing the execution of production orders.

Tracker automates routing and sequencing to accelerate time to market, reduce warranty and recall exposure, and support Lean operations and building right the first time. This proven solution collects genealogy and traceability data for audit trails and regulatory compliance. Other capabilities include WIP inventory control, defect containment, hold management, substitution management, sequence management, broadcast, and more. Additionally, Tracker coordinates across the supply chain to help meet production schedules.

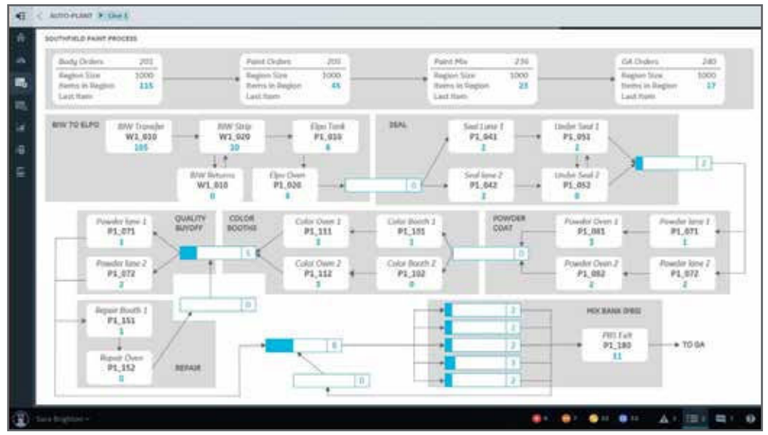
As an extension of CIMPLICITY HMI/SCADA, Tracker also enables High Performance HMI to speed operator actions. It offers secure-by-design connectivity and certificate management. Configuration is simple with modeling for repeatability and time savings.

Proven in high-value, high-volume, high-variability environments, Tracker provides detailed, continuous information to help you make the best decisions for a competitive advantage.

Outcomes

- Increase throughput with detailed, continuous information to help you make the best decisions
- Enable faster time-to-market with powerful order execution
- Reduce risk including exposure to recalls
- Drive higher productivity and lower costs
- Leverage efficient scheduling and routing of materials
- Improve production performance with the ability to manage and adapt to real-time situations on a production floor
- Achieve Lean manufacturing and build right the first time

More Info



A global standard for routing and tracking, Tracker accelerates time to market, reduces warranty and recall exposure, decreases costs, and enhances Lean manufacturing.

> *"There were mainly three criteria we considered during the selection process.*
>
> *They were high quality, cost savings, and an integrated solution.*
>
> *[The solution from GE Vernova] is quite outstanding in features and performance."*
>
> **— Mr. Lijia Yang,**
> **Electrics Control Engineer, Powertrain Shanghai GM**



Complex production = automated routing and sequencing

Tracker is ideal for high-volume, high-variability, and high-value operations

GE VERNOVA

MAINTAIN AND SUPPORT YOUR DIGITAL SOLUTIONS

“Set and forget” is not a strategy for success. To ensure your plant and enterprise solutions keep providing the highest value possible, companies need to plan for support and maintenance.

With our support Acceleration Plans, you can sustain your digital investment and keep your operations running better, every day.

ACCELERATE YOUR PATH TO ROI

Digital industrial transformation requires more than just installing new software—it requires the adoption and utilization of new tools and solutions across your enterprise.

Acceleration Plans address this need and drive outcome attainment. These plans offer a comprehensive set of service capabilities to help you maximize value from your software investments and capitalize on your digital industrial transformation. They are the next generation of Support replacing GlobalCare.

Acceleration Plans address critical product support, end-user training and education, data health, and overall organizational adoption needs.

More Info

Two plans to maximize your ROI:

Premier

A complete solution that accounts for production and operational needs with 30-minute rapid response for critical issues and outcome-based services to drive Adoption. This plan is ideal for customers who want a partner to help them scale and manage their critical operations.

Support & Maintenance

- Phone and web product support
- 30-minute rapid response time for critical issues
- 24/7 emergency support
- Complementary test upgrade kits

Education Services

- Unlimited access to online training
- Lab-modality online courses

Adoption & Outcome Services

- Account health monitoring services

Enterprise

A comprehensive plan inclusive of partnerships with adoption, support, and education services. This plan is ideal for enterprise firms of all sizes embarking on digital transformation. It’s also ideal for firms with operations across multiple sites that require optimal production and zero downtime.

Includes all the benefits of the Premier Plan plus:

Education Services

- Builder Badges
- 50+ Annual education training credits
- Personalized education dashboards and tracking services

Adoption & Outcome Services

- Dedicated Customer Success Manager
- Account health reviews
- Adoption and Outcome Services
- Education Needs assessments

Value Services

- Application Support Consulting Services
- Professional services consulting hours*
- Discounts on additional Education Credits and consulting hours

*Requires minimum annual contract commitments

About GE Vernova's Proficy® Software & Services

GE Vernova’s Proficy® Software & Services empowers teams, illuminating the path to a greener, more profitable future. Our proven industrial software accelerates innovation, enables connected workers, and operationalizes sustainability. We’re driving measurable progress for over 20,000 diverse customers around the world. The Proficy portfolio includes cloud-based and on-prem HMI/SCADA, MES, industrial data management, and analytics. Our software solves the toughest industrial challenges and is used in applications such as discrete, hybrid, and continuous manufacturing; utilities automation; metro transit; and much more. Proficy offers architecture flexibility including single machines, remote substations, and complex, distributed networks that span multiple factories and geographies.

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ABOUT GE VERNOVA'S PROFICY® SOFTWARE & SERVICES

GE Vernova's Proficy® Software & Services empowers teams, illuminating the path to a greener, more profitable future. Our proven industrial software accelerates innovation, enables connected workers, and operationalizes sustainability. We're driving measurable progress for over 20,000 diverse customers around the world. The Proficy portfolio includes cloud-based and on-prem HMI/SCADA, MES, industrial data management, and analytics. Our software solves the toughest industrial challenges and is used in applications such as discrete, hybrid, and continuous manufacturing; utilities automation; metro transit; and much more. Proficy offers architecture flexibility including single machines, remote substations, and complex, distributed networks that span multiple factories and geographies.

Explore Proficy Software & Services

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