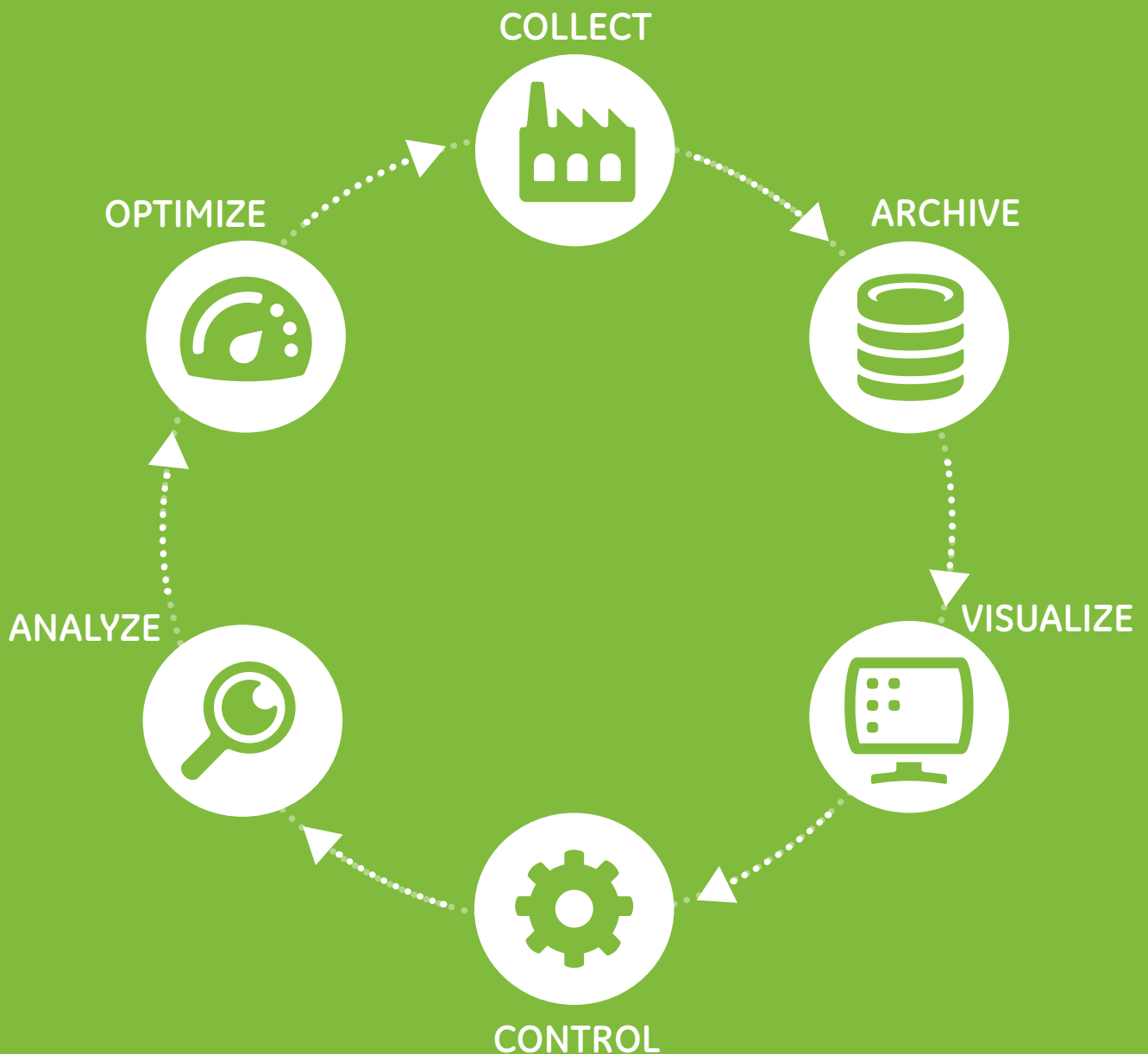# Proficy*
Automation
Software

Enabling Real-time Operational Intelligence

GE

imagination at work

Close the loop on information and analytics to improve operations

COLLECT

ARCHIVE

VISUALIZE

CONTROL

ANALYZE

OPTIMIZE

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.

GE's Proficy automation software combines a proven industrial platform with mobile and analytic technologies to deliver Real-time Operational Intelligence (RtOI).

Information you can act on

RtOI empowers you to intelligently transform vast amounts of operational data into actionable information – accessible anywhere, anytime – on PCs as well as tablets and smartphones.

With RtOI, 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 RtOI 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.

Managers can view real-time KPIs, based on their physical location, without having to navigate through screens. The system can also filter alarms and send intelligent notifications to the closest technician for faster response and resolution.
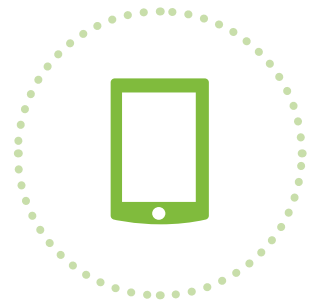
Intelligence in real time

With Real-time Operational Intelligence, you can always understand the true health of your operations and focus on the things that matter the most. You can automatically lead teams to the right action with advanced alarming based on knowledge across systems and complex production relationships – simplified through basic analytics. You can increase asset uptime by being proactive and avoid issues before they even occur.

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

GE's Real-time Operational Intelligence (RtOI) solutions 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 truly critical information in real time, 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 Proficy software components (like Proficy HMI/SCADA – iFIX*, Proficy HMI/SCADA – CIMPLICITY* or Proficy Historian) and to 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

Connected People = Smarter Teams, Faster Response

Real-time Operational Intelligence (RtOI) for Managers

- Get digestible analytics – across your team
- One system from the C-suite to the plant floor
- Be mobile in hours
- Real-time insight for operations and reporting
- Business-wide operational KPIs in one interface
- Manage Bring Your Own Device (BYOD)
- Achieve faster response to out-of-spec events

RtOI for Operators

- Get the data you need from your SCADA, PLCs and other systems, in an organized way, on one mobile device or PC
- Instantly check the status of an asset next to you, without having to navigate through screens
- Take the right action on critical alarms – filter the noise
- Get the freedom to leave the control room – and still have an eye on status

RtOI for Technicians

- View real-time KPIs and maintenance instructions – instantly, based on your proximity to equipment
- Remotely respond to data alerts and alarms – for faster and easier troubleshooting
- Take notes and collaborate with team members, document action and share information via pictures, KPI data and messages
- Send alarms to the closest technician
- Access instructions – wherever you are

Actual Customer Results

$5 million annual savings

70% increase in operator productivity

25% reduction in plant downtime

40% decrease in waste

Actual Customer Results

50% decrease in training time and costs

25% reduction in defects

45% less energy costs

Technology for a Connected World

Structure and Context to Data. 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.
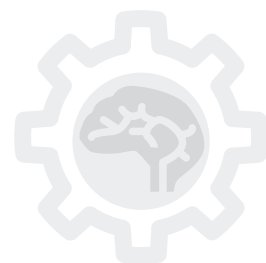
Geo-Intelligence. GE's patented geo-intelligence technology allows you to assign a geo-location to an asset – along with its related data from underlying plant systems. Now, the mobile device can tell that an operator is standing next to a particular piece of equipment and what equipment is within an adjustable radius. By knowing the location of assets and people at work, Proficy can send alarms to the closest technician for faster response.

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. The GE analytics toolkit allows easy development of predictive models – or take advantage of pre-designed models for common analytics from GE and partners.

Secure by Design. Encryption technologies and secure-by-design implementations have advanced to minimize risk and help maintain system confidentiality, integrity and availability. With Proficy, you can consider how to deliver information in a staged fashion, how to limit control, and how to expose data for accessing information, anytime, anywhere.

Seamless Access to Plant Systems. To lead a user to action, the Proficy solutions for Real-time Operational Intelligence (RtOI) deliver seamless transitions between a mobile device and back to underlying systems such as SCADA, building management, work process management, or other software. If an operator receives a critical alarm, the mobile device guides the user back to the right application to take action.

Open and Layered. Proficy 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.

Proficy Automation Software
Enabling Real-time Operational Intelligence (RtOI)

Proficy HMI/SCADA – iFIX and CIMPLICITY

GE's industry-leading HMI/SCADA software provides a window into your total operations cycle and enables faster, better intelligent control and visibility. It offers a robust SCADA engine, a rich set of connectivity options, open architecture and a highly scalable and distributed networking model.

Proficy Historian

Collect, archive, and distribute data at extremely high speed. This powerful software quickly provides the granularity of data you need to analyze and solve intense process application problems. Built specifically for process data acquisition and presentation, Proficy Historian delivers meaningful context to vast amounts of raw data from across your operations.

Proficy Workflow

GE's Work Process Management software provides interactive, step-by-step instructions to make every operator an expert. Guide workers through tasks to reduce variation in performance – and get the right action, every time. Capture the knowledge of your best operators before they retire, using an easy admin tool to digitize work processes.

Proficy Mobile – KPIs, Notes, Tasks

Turn vast amounts of raw data into simple, actionable knowledge, using current and proven mobile technologies to empower workers according to their role and location – in real time. Take advantage of real-time monitoring control on new generation tablets and smart phones – pushing the right information to the right person. Compatible with your existing SCADA, MES, historian and other systems.

Proficy Advanced Alarming

Intelligent alarm detection, delivery and notification for improved operator response through proactive analysis. Get to the root cause of alarms across your systems and provide prioritized alerts engineers and operators can react to the right way, right away. A fast, smart way to improve your overall alarm management.
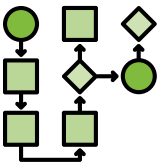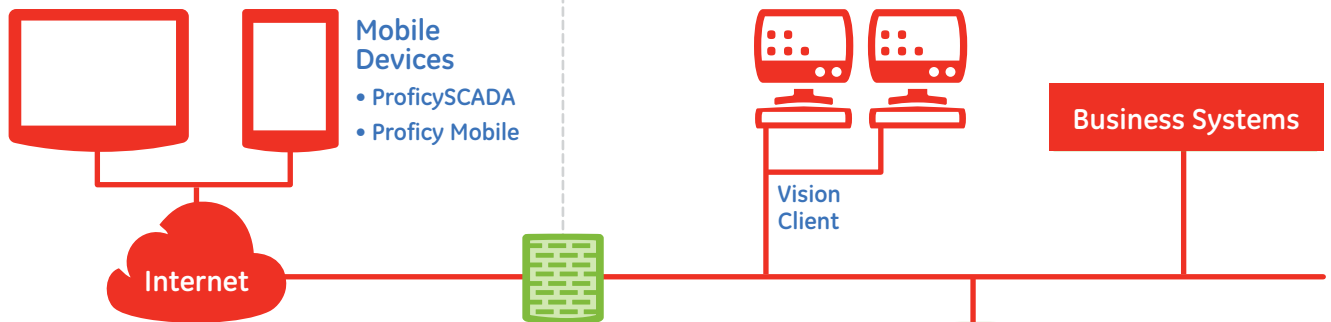
Proficy CSense

Monitor both assets and industrial processes – plus pinpoint causes of process variation to optimize performance. Analytic solution development and simulation for troubleshooting continuous, batch and discrete processes or equipment. Proficy CSense can help you determine and understand the causes of process deviation, delivering complete and integrated process performance enhancement for a given asset or collection of KPIs.

Proficy Vision

Achieve timely and relevant cross-enterprise insights with Proficy Vision. This powerful operational dashboard brings together web-based content from the Proficy portfolio and third-party web displays. One view of data from multiple systems at your fingertips – organized the way you want it, where and when you need it.

Proficy OEE

Continuously monitor, measure and improve Overall Equipment Effectiveness and other key performance indicators. Honed by GE's world-class manufacturing processes, Proficy OEE provides analysis to identify root causes and enables real-time decision-making by utilizing standard reports, ad-hoc reports and dashboards.
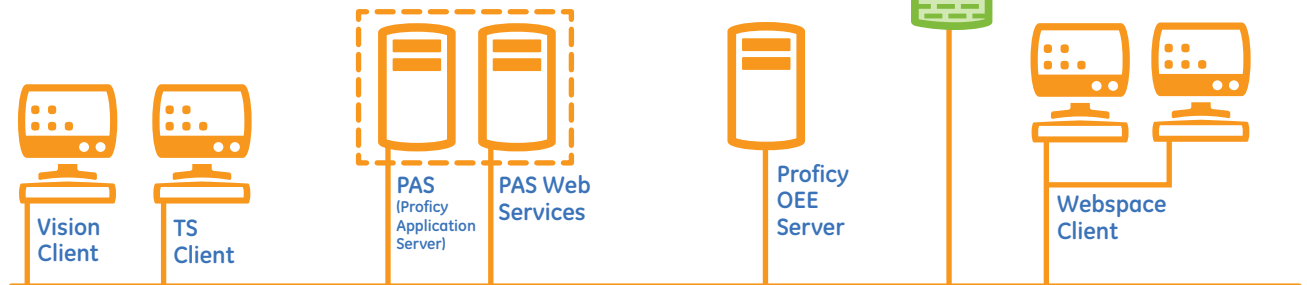
Make the Connection: Machines • Data • Insights • People

Proficy automation software is easy to implement, easy to use. Start seeing the advantages of Real-time Operational Intelligence (RtOI) within hours – for actionable knowledge, anywhere anytime.
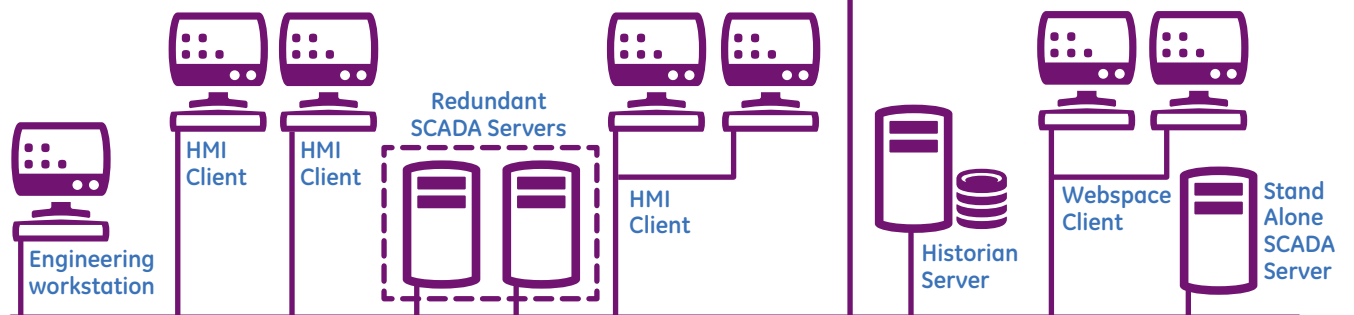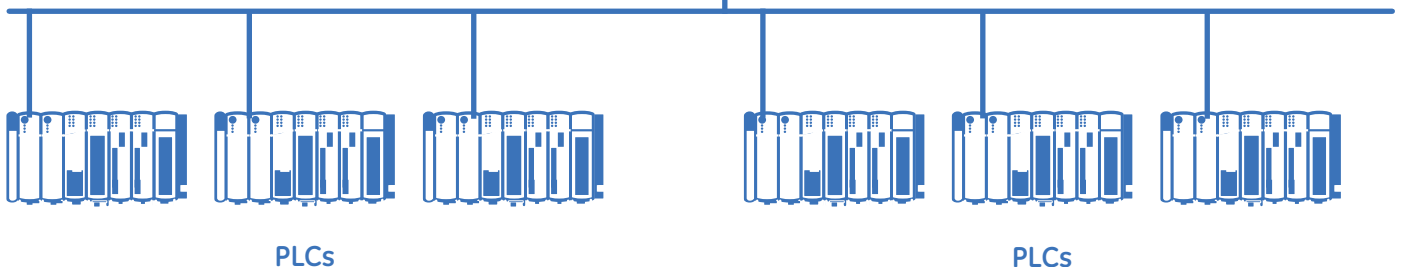
Enterprise Layer

Mobile Devices
• ProficySCADA
• Proficy Mobile

Internet

Vision Client

Business Systems

DMZ

Vision Client

TS Client

PAS (Proficy Application Server)

PAS Web Services

Proficy OEE Server

Webspace Client

Plant / Control Layer

Engineering workstation

HMI Client

HMI Client

Redundant SCADA Servers

HMI Client

Historian Server

Webspace Client

Stand Alone SCADA Server

Control Layer

PLCs

PLCs

GE Intelligent Platforms Contact Information

Americas: **1 800 433 2682** or **1 434 978 5100**
Global regional phone numbers are listed by location on our web site at **www.ge-ip.com/contact**

www.ge-ip.com/hmi