



# GE Workflow

## Right Actions. Right Time. Right Results.

### Guide Operators to Action

Do your operators and technicians know the right actions to take? Is your team overwhelmed with alarms and events?

With GE's Workflow, you can easily document processes, transfer knowledge and drive consistency and predictability into your plant. You can digitize manual and automated processes with one tool across your entire facility – from plant operators and maintenance teams to field crews and leadership.

### Make Every Operator an Expert

GE Workflow provides step-by-step instructions to operators – from your choice of dedicated or mobile client – even from within the window of your usual HMI/SCADA application.

Operators do not have to learn a new system and can immediately improve their response to events and ensure operations run smoothly. Additionally, GE Workflow can filter out nuisance alarms and take automatic action, so your team only needs to perform steps on certain alarms.

You can also use GE Workflow to escalate events, notifying management of a critical situation and next steps. For example, you can automatically trigger emails or text messages when the situation requires.

### Less Emergencies, Faster Troubleshooting

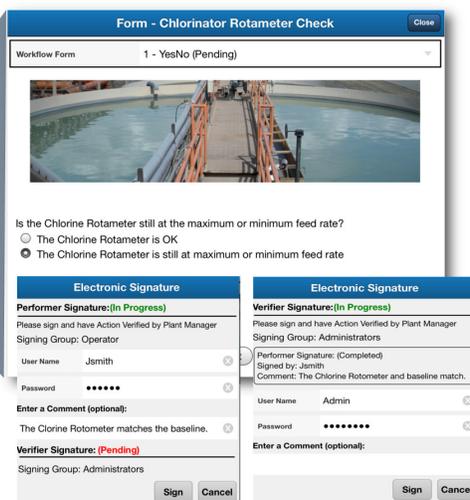
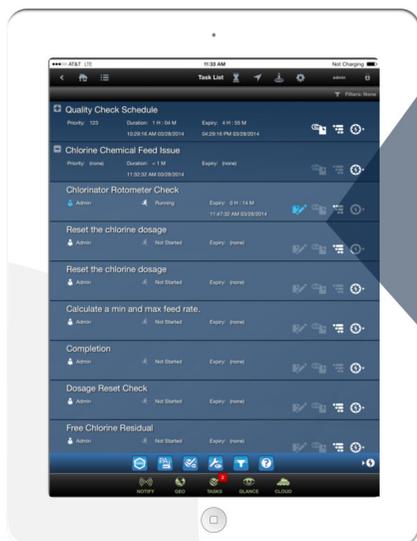
Operators want the right information to do their jobs, and they don't want to call you in the middle of the night or interrupt important meetings. With documented processes and digitized procedures, every operator is an expert – with step-by-step instructions guiding the right actions.

### Features

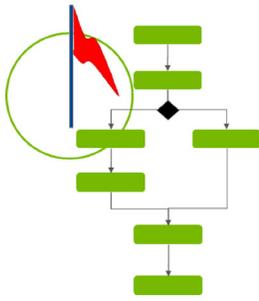
- Guide operators with clear, step-by-step, interactive work instructions
- Document when, by whom, and how long work is performed
- E-signature and audit trails at your fingertips!
- Trigger action based on time or events
- Embed videos, live feeds, pictures, manuals, and MSDS
- Automatic escalation and notification

### Benefits

- Ensure the right actions, fast, anywhere anytime
- Increase consistency – less errors, rework and waste
- Capture best practices before experts retire
- Minimize training time and costs
- Compare staff performance and processes to optimize
- Ease compliance by enforcing procedures



# Guide Operators to Improve Consistency and Reliability



GE Workflow guides operators through your choice of client

GE HMI/SCADA



GE Mobile Client



GE Workflow Client



GE Vision



## Don't Just Acknowledge SCADA Alarms

With GE Workflow, you can go beyond SCADA alarm acknowledgement and drive the right corrective action. With a guided and consistent event response, you can reduce troubleshooting time and those midnight emergency phone calls.

Use reports to identify and eliminate nuisance events, compare operator performance and evaluate opportunities for improvement. Additionally, a digital log entry reduces labor and increases the information collected on events (no more lost sheets of paper!).

Enhance the value of your HMI/SCADA with:

- Alarm corrective action – Fix production faster and gain greater visibility by automatically sending tasks to people or other systems for corrective action
- Rapid development of Digitized Work Instructions with validated entry
- Eliminate scripting for defining processes, using GE Workflow instead

Approximately  
**30-50% faster**  
 than HMI scripting and easier to maintain

**40%** reduced waste  
**70%** increased operator productivity  
**20%** increased capacity  
**2X** workforce efficiency  
**33%** increased operations capacity  
**Zero** errors in shipping  
**20%** increase in operator efficiency  
 \*Data provided by GE Workflow customers. Results vary.

# Get Connected and Speed Operator Response

## Condition-Based Asset Performance Management

With GE Workflow, you can also bridge the gap between Operations and Maintenance – finally achieving real-time, condition-based asset management. Connect GE Workflow to your CMMS/EAM, such as Maximo, SAP PM, Infor, Cityworks, and more.

When an out-of-spec event takes place in the SCADA, GE Workflow can trigger a work process to interface with the CMMS system, secure a work order number, send specific instructions including GIS location information to an operator, and facilitate the corrective action to remediate a problem.

GE Workflow can then close out the work order with the CMMS, whether plant or GIS centric, and record the actions taken for historical records.

You can reduce the need for operators making scheduled rounds and device readings – and automate the process of

moving from condition detected to creating work requests and the right corrective action. That means less downtime, maintenance, risk – and lower costs.

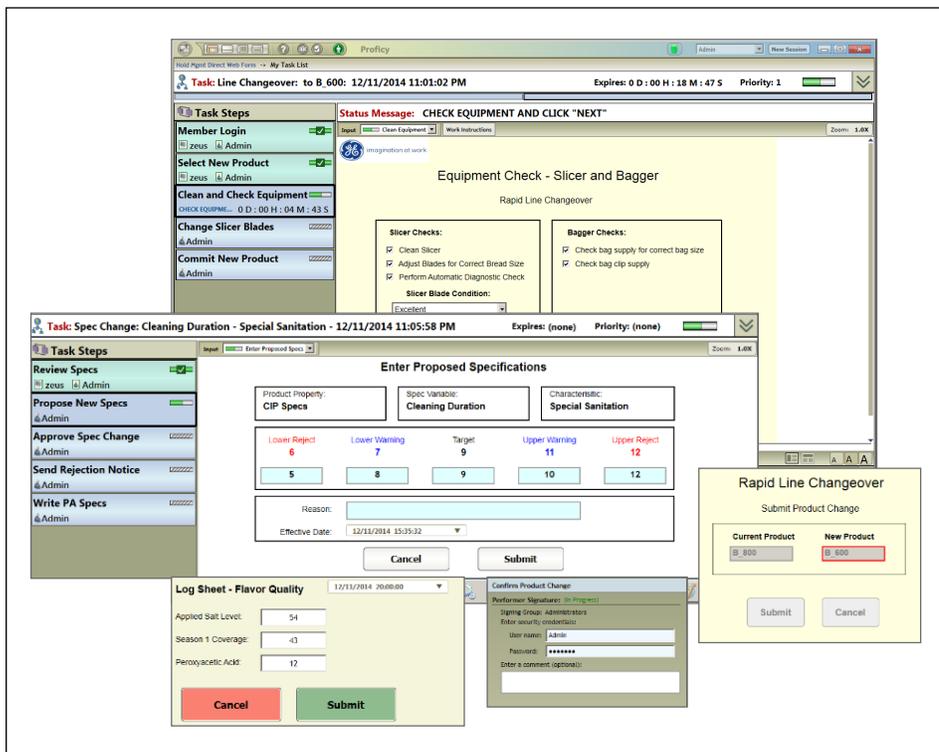
## Enhance Your Production Operations with Real-Time Guidance and Orchestration

Workflow can help you:

- Document for audit trails, including e-signature
- Deliver information and functionality based on business processes and workforce roles
- Drive process visibility – know where orders are at in the plant – right now
- Eliminate scripting languages
- Synchronize sequences and processes
- Escalate expired work requirements
- Condition data for reporting

## Popular Use Cases

- Electronic Standard Operating Procedures (eSOPs) / Paperless operations
- Automate Engineering Spec Changes
- Exception management/corrective action
- Event-triggered QA sampling request
- Quality check
- Quarantine
- Rework product / Scrap product
- Production order dispatch
- Package finish goods
- Machine setup
- Delivery – Truck reception / Receive materials
- Metal detector check
- Data conditioning / middleware



# The Right Work Instructions, Anywhere Anytime

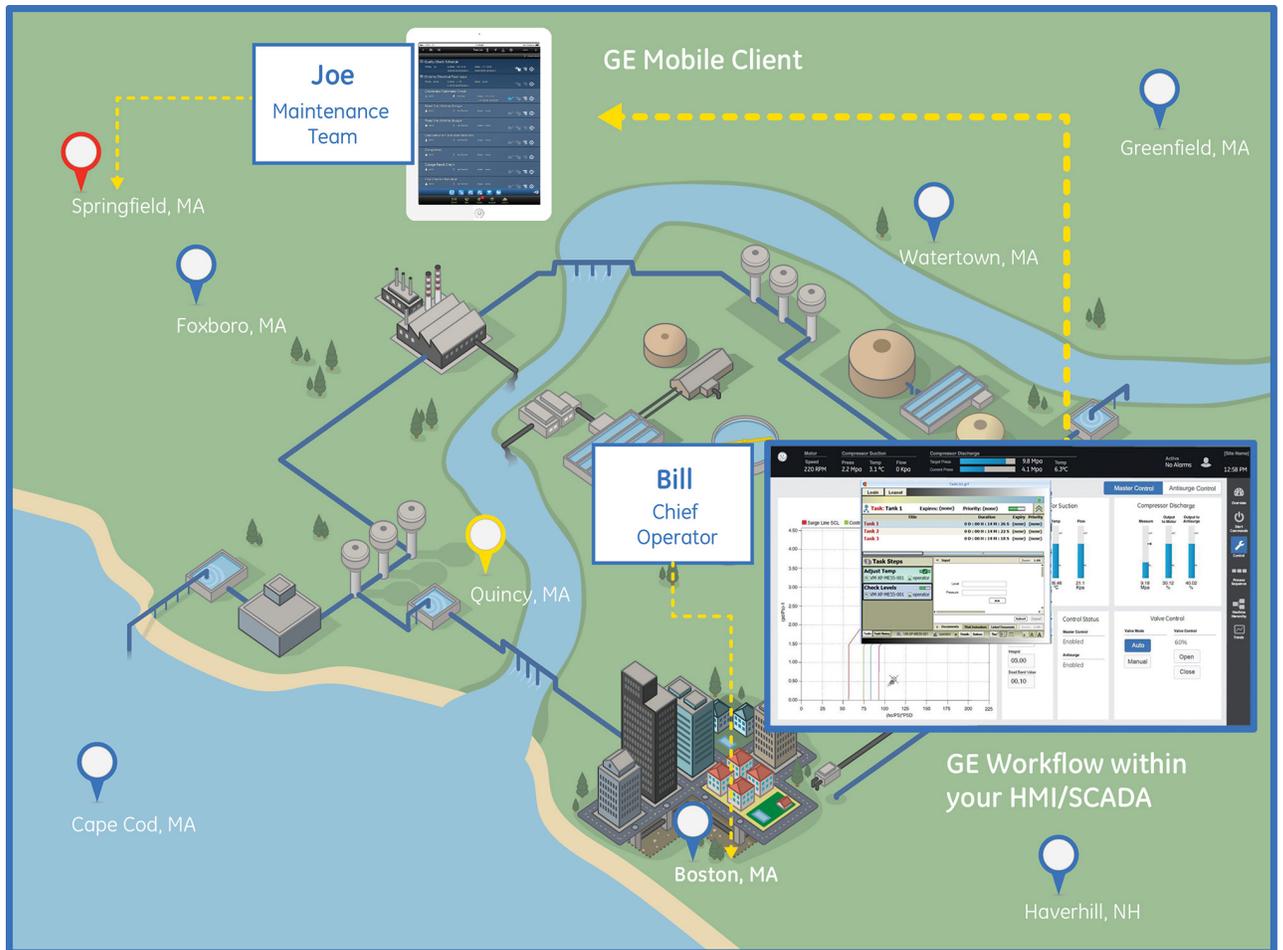
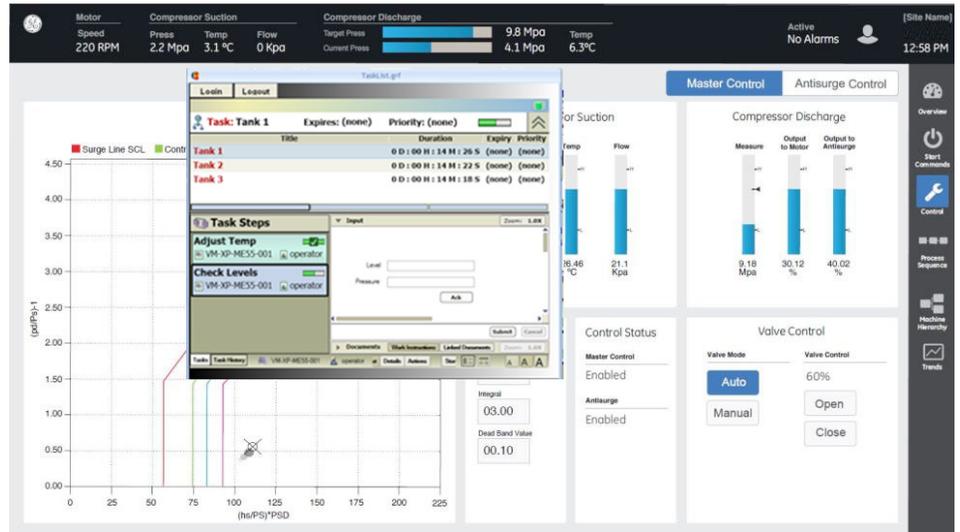
## Mobile Task Management

With GE Mobile Tasks, you can leverage the power of GE Workflow on the go to receive expert guidance while performing field jobs. In addition to digitized work instructions, SOPs and alarm response procedures, you can collaborate with experts and peers on tasks in real time.

Mobile Tasks runs natively on mobile devices – including iOS, Android and Microsoft Surface tablets.

As another mobile option, you can use Workflow's mobile-sized client application to interact with the Task List display. You can access the client from a mobile/remote device either through an application like Windows Terminal Services or through an

ActiveX interactive object embedded into your HMI/SCADA screen, including from your smartphone and tablet through the HMI/SCADA mobile app.



# Reports: Your Key to Optimizing Processes and Performance

With GE Workflow, you have an unprecedented way to analyze and optimize both staff performance and work processes.

You can automatically store task-related information into an audit trail – then use this data to generate reports. GE Workflow includes report templates, and you can easily build custom reports.

As part of your continuous improvement efforts, you can analyze the following and more:

- Time to complete tasks
- Completed vs incomplete steps or tasks
- Reasons behind exceptions
- Variation across staff
- Steps that take the most time to complete or have the most exceptions
- Common alarms/events that are triggering workflows

With this analysis, you can easily make and deploy process changes using GE Workflow. You can provide instant feedback to staff on process performance. Additionally, you can lean processes and eliminate unnecessary steps.

(UTC-0500) Eastern Time (US & Canada)  
3/13/2014 8:30:00 AM  
FSP-SQL-DEMO\GEAdmin

## Inspection Equipment Challenge Report

Completed :	Personnel :	Results	Failures	Description	Product Affected	Comments
Mar 12, 2014 04:29 PM	fsoperator	Failed	Wand 3	Found odd pieces of material in bread loaf	Only the loaf we saw with odd material, and the one before and after that in the line	No additional comments
Mar 12, 2014 04:27 PM	fsoperator	Passed				
Mar 12, 2014 04:08 PM	fsoperator	Failed	Wand 3	Found pieces of metal in one of the loaves - looks like a screwdriver?	fdsa	None
Mar 12, 2014 04:05 PM	fsoperator	Passed				
Mar 12, 2014 04:02 PM	fsoperator	Passed				
Mar 12, 2014 03:47 PM	fsoperator	Passed				
Mar 11, 2014 04:45 PM	fsoperator	Failed	Wand 3	fdsafdsa	fdsa	fdsa
Mar 11, 2014 04:42 PM	fsoperator	Passed				
Mar 11, 2014 01:58 PM	fsoperator	Passed				
Mar 11, 2014 12:22 PM	fsoperator	Failed	Wand 1	Notified Supervisor and	n/a	no additional comments

# Proven and Supported Around the World

## Easy Process Configuration

With an easy-to-use interface and template strategy, you can speed documentation and digitization of work processes. Templates can allow the creation of hundreds of workflows in a short amount of time – minimizing the effort to document even the most complex work processes.

The easy interface allows clerical support to enter and modify workflows – without technical assistance.

When you need even more capabilities, Workflow's authoring environment gives power to your engineers to graphically digitize any work process or template.

## Leveraging Industry Standards

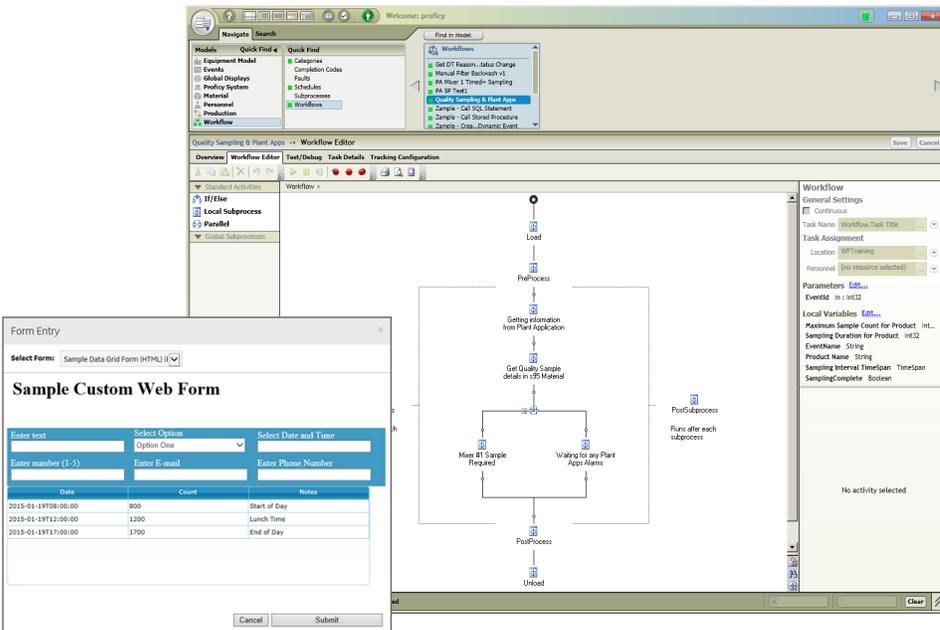
With GE Workflow, you can bring context to your data using ISA-95 models. The models provide structure, flexibility when making changes, and ease communication.

## ISA-95 Resource Models

1. Equipment Model
2. Material Model
3. Personnel Model

## ISA-95 Work (Production) Model

1. Work Process Segments
2. Work Definition Segments
3. Work Schedules
4. Work Responses



### GE Workflow helps...

- Keep water clean and safe
- Make consumer products like paint, cosmetics, perfume, and deodorant
- Assemble cars and trucks
- Guide and document regulated production like pharmaceutical and food
- Process and package beer, soft drinks, juice and dairy products
- Make industrial products like turbines, jet engines and iron ore
- Optimize equipment in power/energy

### 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. [www.ge.com](http://www.ge.com)

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