Solutions for Brewery Operations

GE Fanuc
Intelligent Platforms

Enabling manufacturing success

GE Fanuc Intelligent Platforms combines innovative technology and in-depth industry expertise to provide you with the key pillars that help increase production efficiency, quality and execution across your operations.

Today's brewers face significant new challenges, including increasing global competition, consumer demands for new products, global raw material sourcing and major mergers and acquisitions. To succeed, it's imperative to improve manufacturing performance at lower costs, optimize supply chains, enable product and process innovation, ensure product safety and reduce the cost of regulatory compliance.

GE Fanuc Intelligent Platforms understands your business needs, and we have proven best-in-class solutions—backed by deep industry expertise and experience—to address the unique challenges and opportunities you face. We have helped leading breweries around the world achieve key strategic initiatives such as operational excellence, successful supply chain optimization, innovative new products and processes, and end-to-end product quality and safety, all while helping them attain more sustainable operations for a competitive advantage.

Our focused areas of expertise include:

→ **Material Receiving**
Our Production Management software solutions can help you validate COA, vessel quality, and RM quality as processing and packaging materials are received into the plant, providing real-time updates to warehousing and ERP systems.

→ **Brewing**
We offer tools that enable you to download and manage brewing schedules, process orders, recipes and BOMs from the ERP and specification systems to control the entire brewing process—including process parameters, material flow and consumption, and quality control to create the perfect batch every time.

→ **Fermentation**
With our solutions, you can accurately control the amount and quality of yeast going into the fermentation tank; you also have visibility into how well the sugars are fermenting and the ability to control critical parameters such as temperature.

→ **Packaging**
Our comprehensive solutions help you increase machine efficiency, maximize plant capacity, manage the impact of constant new product introductions and the experimental runs associated with them, optimize supply chains and efficiently transfer production information to ERP systems for reporting and accounting purposes.

Expertise, experience and commitment you can count on

As part of GE, we have more than 100 years of experience in process technologies—enabling you to leverage powerful innovations and global expertise from across the company. You can also take advantage of these benefits:

Product breadth

Optimize your brewery operations today and into the future with our suite of scalable products that comprises batch control, HMI/SCADA, data collection, process systems and production management. Our comprehensive solution set can help you achieve operational excellence, profitable and safe supply chain execution, and product and process innovation.

Industry expertise

You can leverage our deep understanding of brewery operations and decades of proven industry experience to effectively meet your manufacturing goals, quality and regulatory requirements, and supply chain objectives. Our industry insight and directional leadership enable value-added solutions that help you achieve operational excellence.

Global customer support

Starting from the moment we are engaged with your project to its successful completion and launch, we never forget that uptime is directly correlated to your profits. Our global presence enables you to access local and prompt support to minimize downtime.

Trusted GE brand

As a GE company, we are bound to the same ideals that have made GE one of the most trusted names in the world.

Ecomagination

This is our company-wide commitment to create and enhance products that help our customers improve their environmental and operating performance. As such, our brewery solutions combine the strengths of our environmental technologies and the collective imagination of our people to be as economically advantageous as they are ecologically sound.

> **GE Fanuc works with the world's top five breweries and many others, helping them deliver real results: improved productivity, quality and consistency at reduced costs.**

Innovative solutions for maximum optimization

With our powerful, integrated capabilities, you can achieve consistency and control across your brewery operations—from material receiving through packaging—to maximize productivity while minimizing costs.

Batch Execution and Analysis

Proficy* Batch Execution software delivers complete data collection, robust batch management, clear process visualization, and powerful supervisory control capabilities. You can produce a specified quantity of end product on any chosen line according to the specifications you define for minimized variance and maximized yields. With Batch Analysis software, you have the tools to compare batches and identify how to consistently achieve the "golden batch."

Visualization and Control

Proficy HMI/SCADA software collects and shares real-time and historical data across all business levels—providing you with actionable visibility to monitor and control plant processes, equipment and resources. Its process visualization, data acquisition and supervisory control provide a solid and reliable data foundation for digitized production management.

Data Collection

Proficy Historian software provides a robust and effective plant data repository to collect, archive and distribute large volumes of real-time, plant floor information quickly and easily. With the ability to read all types

of process data, Historian provides a window into your manufacturing operations across all key metrics.

Process Control

Proficy Process Systems* is a state-of-the-art, scalable, fully integrated system for process automation and control that leverages the latest hardware and software technologies. It combines the power of traditional DCS systems with the flexibility, freedom and affordability of a PLC-based approach to help you improve quality and productivity.

Built on an open and layered architecture, Proficy Process Systems leverages existing investments to support both real-time decision-making and the deeper analytics that provide the foundation for continuous improvement as products and processes evolve.

Production Management

Proficy Plant Applications is a suite of Manufacturing Execution Systems software that is uniquely tailored to manage operations that combine process with discrete and/or packaging operations. Leveraging our Proficy Historian and functional modules that address Efficiency, Quality and Production, Plant Applications allows you to easily integrate automation data into detailed production models.

As a result, your production management system can track key information like progress to completion of an order or material genealogy, and allow for easy correlation of detailed process and machine event data. In addition, with certified integration with leading ERP vendors, Plant Applications can align with your enterprise systems investments for increased ROI.

Plant floor reporting. Proficy Real-Time Information Portal delivers contextualized real-time information through a common web client and reporting environment—providing comprehensive visibility into your plant operations. By applying sophisticated trending, graphical presentation and statistical analysis to all of your online data, it provides insight into how your plant is operating and how to improve it.

Enterprise analysis. Reaching deep within your operations, our Proficy DataMart software extends the ad-hoc reporting and analysis capabilities in the plant while going beyond the plant for comprehensive enterprise analysis. We can summarize KPIs for one plant or many plants into an executive view for wide distribution via web-based reporting tools—enabling your operators, managers, and executives to make real-time decisions throughout your plant.
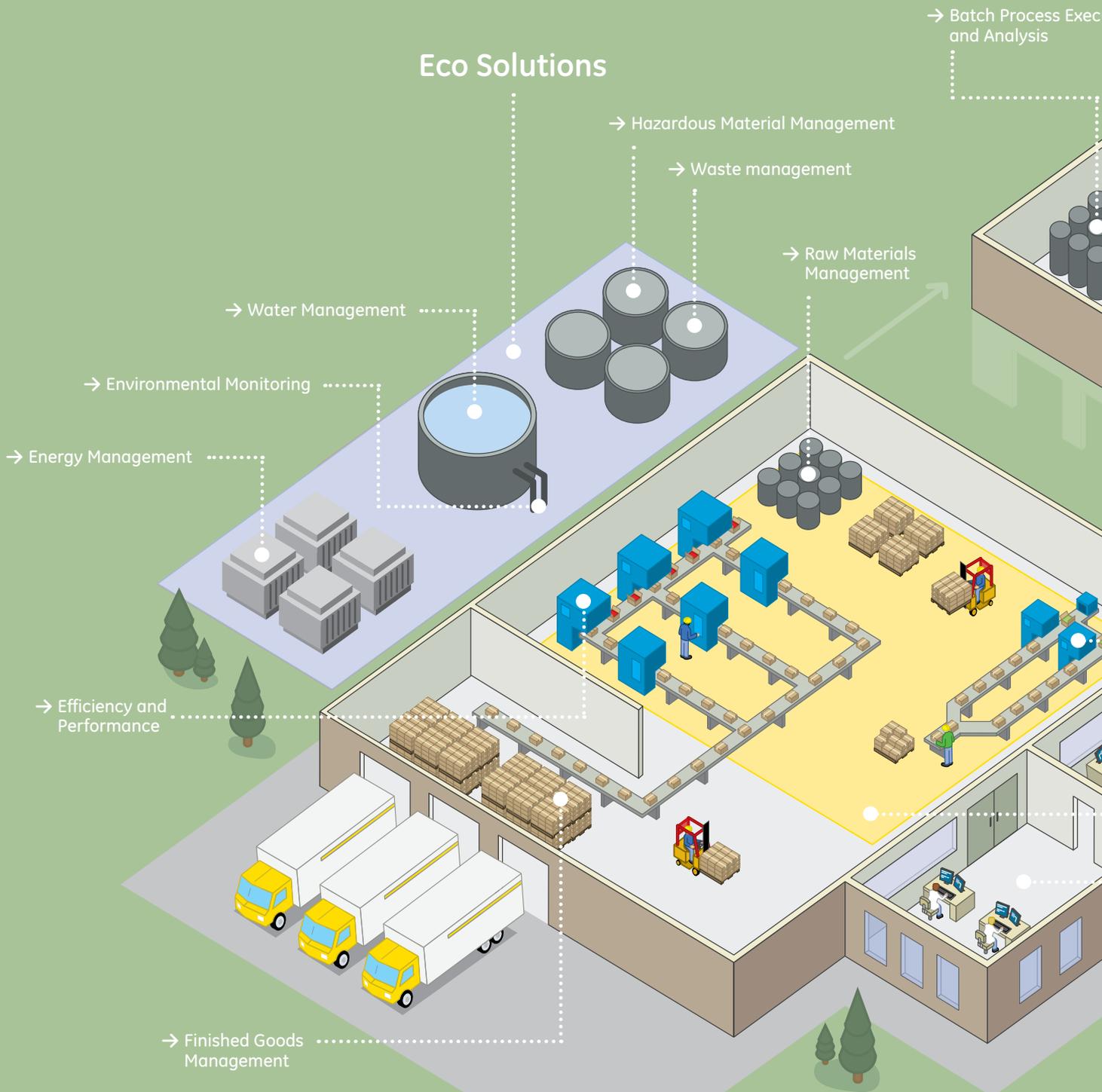
GE Enterprise Solutions

Your operations may need additional value-added solutions, in which case you can tap into an entire suite of capabilities from GE:

→ Electrical and distribution solutions
→ Wireless technologies
→ Site security solutions
→ Digital energy solutions
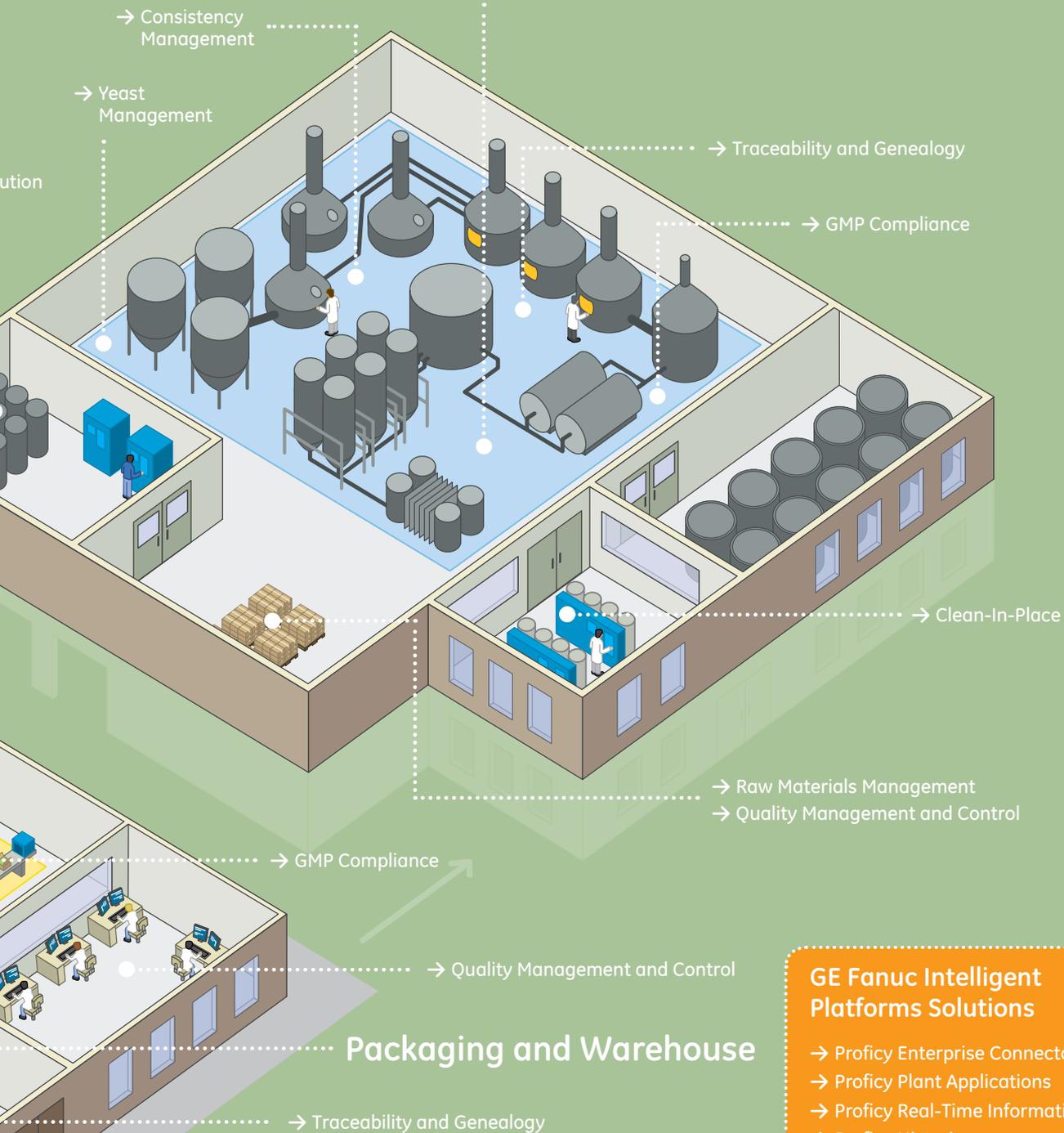→ Sensing and inspection solutions

We're committed to your success

We understand your business needs, and we have a proven track record helping breweries around the world enhance production performance and innovation for a sustainable advantage. To learn more about GE Fanuc Intelligent Platforms' solutions for brewery operations, visit **www.gefanuc.com/brewing**

Best-in-Class Brewing Solutions

Eco Solutions

→ Batch Process Exec and Analysis

→ Hazardous Material Management

→ Waste management

→ Raw Materials Management

→ Water Management

→ Environmental Monitoring

→ Energy Management

→ Efficiency and Performance

→ Finished Goods Management

Brewing, Fermentation, Filtration and Bright Beer

→ Consistency Management

→ Yeast Management

...ution

→ Traceability and Genealogy

→ GMP Compliance

→ Clean-In-Place

→ Raw Materials Management
→ Quality Management and Control

→ GMP Compliance

→ Quality Management and Control

Packaging and Warehouse

→ Traceability and Genealogy

GE Fanuc Intelligent Platforms Solutions

→ Proficy Enterprise Connector
→ Proficy Plant Applications
→ Proficy Real-Time Information Portal
→ Proficy Historian
→ Proficy Shop Floor SPC
→ Proficy HMI/SCADA-iFIX*
→ Proficy HMI/SCADA-CIMPLICITY*
→ Proficy Batch Execution
→ Process Solutions
→ Series 90* controllers
→ PACSystems*
→ QuickPanel*

**GE Fanuc Intelligent Platforms
Information Center**

Headquarters:
1 800 GEFANUC
1 800 322 3616
1 434 978 5100

Global Regional phone numbers
are available on our web site
www.gefanuc.com

Additional Resources

For more information, please visit the
GE Fanuc Intelligent Platforms web site at:

www.gefanuc.com

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