

GE  
Intelligent Platforms



# solutions for dairy manufacturing



imagination at work

# Optimize your dairy operations

Combining extensive knowledge of the dairy industry and processes with the latest innovative technologies, we have answers to address your manufacturing complexities.

As part of GE, we draw on extensive food and beverage industry experience—enabling you to leverage powerful innovations and global expertise from across the company to address your challenges today and tomorrow.

Rapidly changing consumer demands, rising cost pressures, growing consumer concerns over food safety risks and increasing regulatory requirements... these are among the key challenges that today's dairy manufacturers face. To stay competitive, they must align their business and operational strategies with the best technology solutions and address these issues head on.

GE Intelligent Platforms understands the critical needs of dairy manufacturers, and we can help you address these needs to gain a sustainable competitive advantage. We offer a unique and powerful combination of in-depth industry experience and proven technology solutions to help you leverage critical real-time information for increased product quality, end-to-end operational productivity and overall efficiency.

## Areas of expertise

Whether you're producing fresh milk, cream, butter, yogurt, ice cream, a variety of cheeses or other dairy products, our suite of flexible, integrated and scalable solutions for dairy manufacturing is proven to help you optimize your operations. Our solutions are designed to support you along the entire product lifecycle—from milk receiving to processing through final packaging.

### → Milk Receiving

Yields and efficiencies through all production processes depend on managing critical information from milk receiving forward. Ensuring that characteristics such as fat content, protein content, and bacterial load are properly measured as milk is unloaded and fed to processing gives producers the chance to adapt recipes and processes in real-time, so yields are maximized and risks are managed.

### → Milk Processing

The Intelligent Platforms portfolio provides a comprehensive set of automation and IT solutions to deliver precise control of processes along with deep insight into process performance, product quality and food safety measures. This enables producers to minimize solids losses and deliver consistent outputs to secondary processing or packaging operations.

### → Packaging

To help you respond to the continually increasing market demands for new products, our flexible manufacturing and automation strategies and solutions enable quick changeovers, innovative packaging designs and faster time to market for a competitive edge. You can also capture equipment productivity and track material usage to improve efficiency.



# An integrated, holistic approach

Our Proficy suite of solutions offers unique capabilities to optimize your workflow and accelerate efficiency and effectiveness across the production line. It's modular, fully integrated and scalable.

## Delivering where quality is imperative

Our solutions include focused offerings for Statistical Process Control (SPC), Quality Management – from specification management through performance analysis – and work process management, which allows HACCP systems to be fully integrated with automation and production management applications. This combination ensures that quality and safety are managed as a natural part of your production operations.

Today's manufacturers have a more collaborative, enterprise-wide approach toward their operations, driving them to leverage an integrated view of their automation solutions. Aligning to this philosophy, Proficy\* is our comprehensive, fully integrated suite of hardware and software products that offers a powerful, end-to-end solution for dairy manufacturers.

Connecting across multiple, interrelated production processes, Proficy offers a depth and breadth of capabilities—from data collection, visualization and control to operations management and process solutions. It provides real-time actionable information, powerful analytics, integrated control and repeatable recipe execution

throughout your operations, thus enabling seamless connectivity and transparency to deliver results, including:

- Improved product quality and compliance
- Reduced costs and increased profitability
- Increased productivity and operational efficiency
- Improved consistency and control
- Enhanced market responsiveness

With Proficy, you can leverage a broad view of your dairy operations as well as the ability to drill down into functional disciplines and root causes, automate manual processes and leverage real-time and historical data to drive continuous improvement.



**IMPROVING YOUR BOTTOM LINE**  
Proficy provides an integrated approach to understanding milk losses – both from an operational perspective and from a quality or safety perspective. So the relationships between asset performance and quality issues are fully exposed – allowing processes and equipment to be tuned for maximized yield.

# Proven to solve today's challenges

Proficy delivers powerful intelligence and value-added capabilities to address the issues that are critical to your success.

## Ensure product safety and meet regulations

Food and safety regulations are becoming increasingly stringent, impacting the way dairy manufacturers must operate. To comply with these requirements, transparency and control is key, and you need the ability to monitor products throughout every step of the process and identify exactly what materials and quality characteristics each contains.

Starting with milk receiving, Proficy helps you track and trace product genealogy throughout your manufacturing process, providing you with the increased visibility, control and accountability needed to deliver safe, compliant products.

## Reduce total cost of ownership for greater profitability

With aggressive competition and rising costs for raw materials and energy, dairy manufacturers must find ways to lower and contain costs. You need access to critical real-time information across the entire production line to identify and address potentially high-cost areas such as operations, maintenance and repair.

Based on critical real-time information, Proficy helps you uncover cost savings opportunities—whether it's minimizing milk loss or optimizing equipment time or reducing expensive accidental mis-processing—to positively impact your bottom line.

## Drive increased productivity and efficiency

The complexity of dairy manufacturing demands an integrated approach to optimize productivity and efficiency and to control inventory. You need to leverage manufacturing data across different production areas—from raw materials receiving to milk processing and packaging—so you can better coordinate operational activities.

Proficy helps you leverage enterprise-wide real-time production data and digitized processes to synchronize activities along





the whole production line, reduce inventories across the supply chain, and coordinate short-term material and logistics plans to boost productivity.

## Enable greater flexibility for improved market responsiveness

Keeping up with the rapid pace of consumers' constantly evolving preferences requires innovation, especially in the dairy sector. Your ability to quickly add new products, change recipes "on the fly" and implement new operational procedures quickly and cost effectively is essential for success.

Proficy supports revolutionary processing and packaging strategies by delivering the flexibility needed for faster product turnover, greater variability and shorter production runs—so you can continually drive innovation and maintain high levels of market responsiveness and brand leadership.

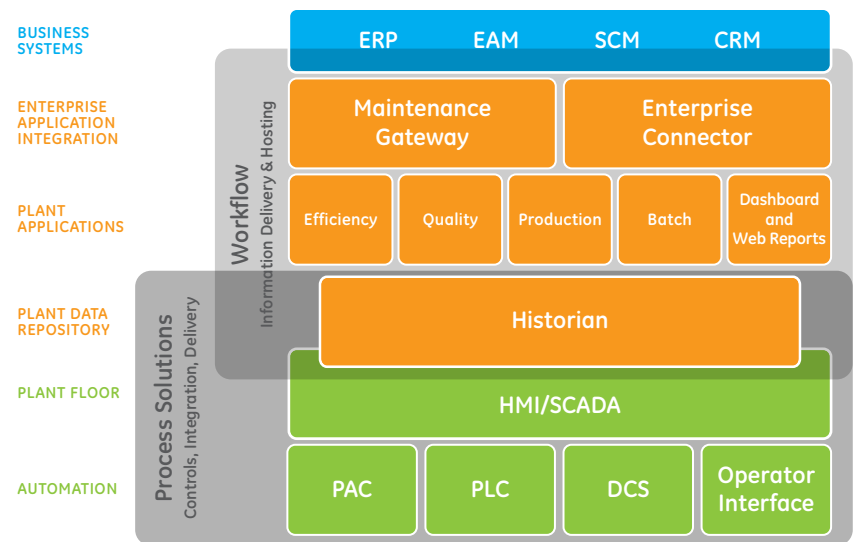
## We're committed to your success

We understand the challenges you face, and our portfolio of proven solutions is a solid foundation for dairy manufacturers to build and sustain a competitive advantage.

## Proficy solutions for dairy applications

Protecting your existing investments, Proficy provides a fully integrated suite of hardware and software applications and is proven to improve the sustainability of dairy operations—delivering in the critical areas of increased product safety, efficiency, productivity and market responsiveness.

- **Proficy Process Systems\*** is a state-of-the-art, fully engineered system for process automation and control that leverages our latest hardware and software technologies to provide a complete control solution for your dairy applications—closing the loop between automation and information.
- **Proficy Historian** enables you to collect, archive and distribute large volumes of real-time dairy production information for tracking and monitoring of performance, batch analysis, production reporting, quality assurance and more.
- **Proficy HMI/SCADA** delivers unprecedented visibility, analytics, and connectivity throughout your dairy operations with real-time information so you can make better decisions for high performance and meet compliance standards.
- **Proficy Operations Management Software** bridges the gap between your dairy plant floor and business systems, combining proven MES, EMI and Quality & Compliance capabilities. With modular, integrated solutions that focus on the most critical aspects of your production, our operations management solutions can help you boost quality, efficiency and transparency across your supply chain.



Built with an open and layered approach, Proficy integrates seamlessly with your existing dairy operations infrastructure and resources to help you leverage your current technology investments—translating into real value. It's also modular and scalable, so you can start small and expand your footprint over time with incremental capabilities as you achieve safe, efficient and profitable dairy manufacturing.

For more information, visit [www.ge-ip.com/dairy](http://www.ge-ip.com/dairy)

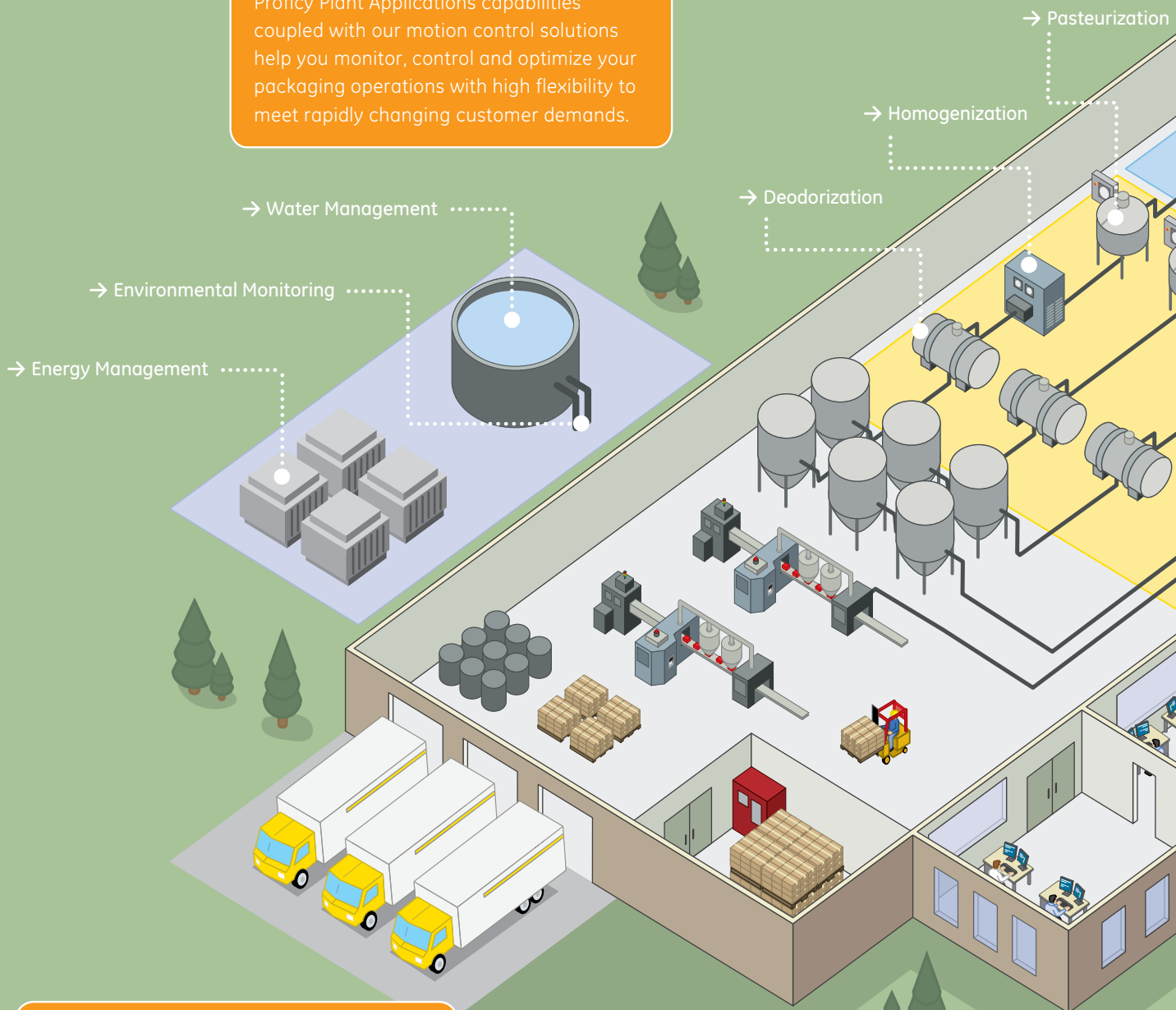
# Dairy Capabilities

## Deliver Consistent Quality

Proficy Process Systems helps improve batch consistency and productivity of your key processing steps such as blending and pasteurizing, thereby reducing quality variations, improving yields and achieving consistent and predictable product specifications.

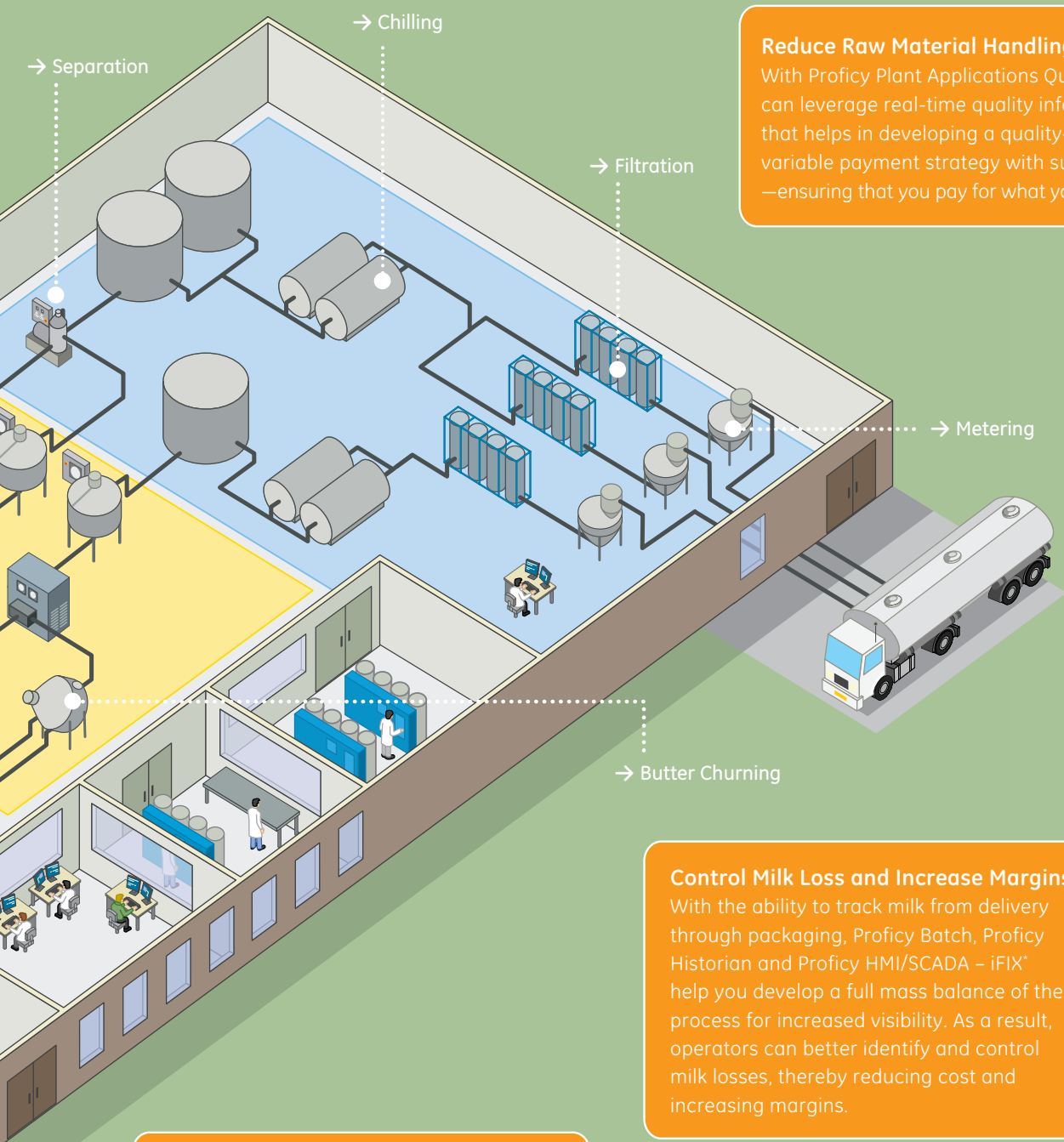
## Improve Packaging Efficiency

Proficy Plant Applications capabilities coupled with our motion control solutions help you monitor, control and optimize your packaging operations with high flexibility to meet rapidly changing customer demands.



## Leverage HACCP Procedural Control

Digitizing both manual and automated work procedures, Proficy Workflow and Proficy HMI/SCADA - IFIX help you minimize your production errors with features like review by exception and live SOP reviews.



**Reduce Raw Material Handling Cost**  
With Proficy Plant Applications Quality, you can leverage real-time quality information that helps in developing a quality-based variable payment strategy with suppliers —ensuring that you pay for what you receive.

**Control Milk Loss and Increase Margins**  
With the ability to track milk from delivery through packaging, Proficy Batch, Proficy Historian and Proficy HMI/SCADA – iFIX\* help you develop a full mass balance of the process for increased visibility. As a result, operators can better identify and control milk losses, thereby reducing cost and increasing margins.

**Ensure Food Safety and Compliance**  
Proficy Plant Applications Genealogy enables you to track and trace every material movement and offers powerful genealogy capabilities throughout your manufacturing process, so you can deliver safe, compliant products as well as limit liabilities and costs should a recall occur.



### 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](http://www.ge-ip.com/contact)

[www.ge-ip.com/dairy](http://www.ge-ip.com/dairy)

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