



A Technology Boost for the Dairy Industry: Product Lifecycle Management

Enhancing efficiency and innovation
through effective product lifecycle
management (PLM) strategies



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Dairy industry challenges

Dairy producers face numerous challenges in today's market. Some of those are constantly changing consumer habits, keeping the milk supply safe and regulatory compliance.

Shifting Consumer Tastes

Fluid milk consumption has shifted over the decades. There is some good news: China has begun to embrace fluid milk with a CAG of 9.4% in recent years¹ but lags far behind Europe, Australia, the US and most other countries in per capita consumption. On the downside, the US has seen a steady drop in per-person intake of fluid milk in each decade since the 1970s.² In the UK, fluid milk consumption has also decreased during the same approximate time period.³

This **overall general decline** in the volume of milk as a beverage, makes innovation of further-processed dairy products all the more urgent; businesses would be prudent to come up with alternate SKUs to maintain dairy volume and thereby, profits.

One category that has enjoyed definite growth is **cultured dairy** which includes yogurt, sour cream, cottage cheese and kefir, due to its association with **gut health** and **higher protein**.⁴ High protein diets are trending. A survey conducted by the International Food Information Council (IFIC) found 71% of respondents said they are trying to consume more protein.⁵ A Euromonitor report cites sour milk products (including kefir) to have a projected CAGR of 4% in retail sales worldwide.⁶



¹ Arendse Huld, "China's Dairy Industry - Market Trends and Opportunities," Dezan Shira and Associates, February 27, 2024, www.china-briefing.com

² Fred Kuchler, Hayden Stewart, "Fluid Milk Consumption Continues Downward Trend, Proving Difficult to Reverse," Amber Waves, U.S. Department of Agriculture, Economic Research Service, June 21, 2022, www.ers.usda.gov.

³ Department for Environment, Food & Rural Affairs, "Statistical data set, Family food datasets. Detailed annual statistics on family food and drink purchases," updated October 17, 2024, www.gov.uk.

⁴ Barbara Harfmann, "2024 State of the Dairy Industry: Cultured Dairy," Dairy Foods, November 18, 2024, www.dairyfoods.com.

⁵ Keith Nunes, "Opinion: Latest IFIC survey data show the powerful pull of protein," July 3, 2024, www.foodbusinessnews.net.

Health and safety

To maintain milk safety, it is carefully regulated. In addition to Hazard Analysis Critical Control Points (HACCP), there are specific milk hygiene practices like the PMO. Some of those include the health of the cows, the milking environment, cold storage temperatures, transportation, the cleanliness of the equipment at the processing plant, the hygiene practices of the workers (HR1) and of course, the processing of the milk itself—pasteurization or UHT. It is critical that all steps in the chain are strictly followed, due to previously identified diseases and in light of emerging threats like the H5N1 Avian Flu, which has found its way into dairy herds in recent years.

A modern PLM like **Centric PLM™** houses HACCP plans, hygiene, compliance data, processing and can integrate with Enterprise Resource Planning (ERP) systems and Farm Management Software (FMS) to provide one source of truth where all product information can be found. This drives efficiency and that drives margins, not to mention positions dairy companies in good stead to avoid a dreaded recall or milk-borne illness.

Regulatory compliance

It is difficult to keep track of **changing regulations** and standards of identity. With Centric PLM, regulations can be stored in the system. To take it one step further, for instant access to the most up-to-date rules, Centric Software has partnered with **FoodChain ID**, a company that covers regulatory compliance in 220+ countries. Via this relationship, Centric PLM users can see standards of identity for the different dairy products, hygiene requirements, allowed ingredients and additives, food contact and packaging standards, as well as animal feed regulations.



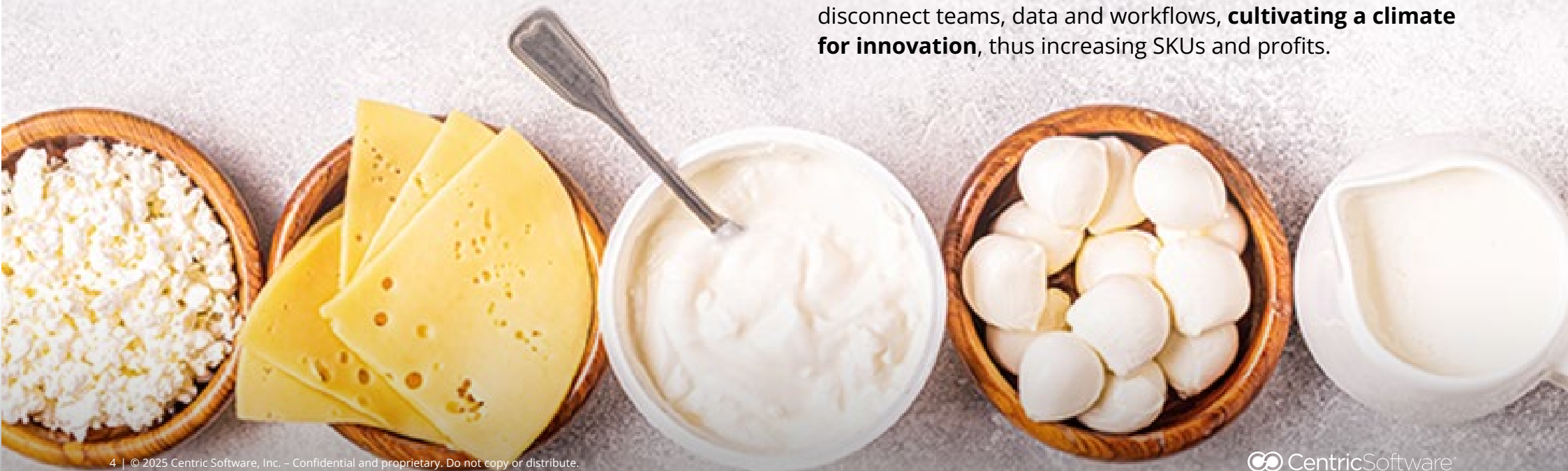
New product innovation

Dairy processors of fluid milk, ice cream, cheese, dairy ingredients and more are looking to **innovate**. This is particularly true of those products that fall into the functional food category where pre and probiotics are growing, as businesses look to boost innovation and expand their product offerings. The same goes for the growing cultured dairy arena and plant-based 'dairy'. These sectors are heavy on product development, requiring innovation, agility, cost, collaboration and fast decision-making. Not to be overlooked, fluid milk is the starting material for other, further-processed dairy products.

Centric PLM give companies the tools to manage:

- what to make
- how to make it
- where to sell it
- when to sell it
- how much to sell it for
- what's required to meet regulations in the countries in which it will be sold

Centric PLM stores formulations, specifications, ingredients and processes. Having a central hub breaks down silos that disconnect teams, data and workflows, **cultivating a climate for innovation**, thus increasing SKUs and profits.



Least cost formulation

In most countries, milk has a **standard of identity** that specifies milkfat content and nonfat milk solids for the different types e.g., whole milk, low fat, skim. For other products with standards of identity like cream, condensed milk, butter, cheeses, yogurt, ice cream, whole and skimmed milk powders there are also minimum amounts of milkfat and protein solids, regional requirements and maximum amounts of moisture allowed in products like butter. It is crucial to maintain the identity standards for each product category and to meet the requirements while keeping **costs in check**. Centric PLM™ has a solution for this.

Enter **Least Cost Formulation (LCF)**, optionally available with Centric PLM. Set minimum nutrient composition and other parameters to generate milk blends that meet both **cost** and **nutrient requirements** for the different milk grades and classes. R&D teams can use LCF to optimize product formulas quickly in response to fluctuating nutrient levels in raw milk based on the day's production and availability. Users set parameters for nutrients like fat, solids or protein to meet claims or maintain quality while adhering to standards of identity and certification declarations like organic, grass-fed, lactose-free and so on.



Tracking and trace back

Managing vendors and certifications is key to making sure that labels reflect the true nature of the food they represent, especially regarding allergens. Also important, is that kosher, halal or organic ingredients are used when a claim is made. With Centric PLM, **a single version of the truth** captures and records all product data in real time, including project status, supplier management, ingredients, allergens, formulation, packaging and quality parameters.

Bar codes, RFID, blockchain and more are all ways to track food products after they leave the producer. By having **all the product data organized in PLM**, it sets the dairy company up to have the information electronically packaged so it can travel forward with the food product and be able to trace back where the ingredients in that product came from.



Project management

Taking a product from raw milk to one ready for retail sale requires more than just managing timelines and people. Centric PLM is an **integrated project management solution** that breaks down bottlenecks to bring more products to market faster and respond rapidly to changing market conditions. Integrated project management has to account for all aspects of a project, from iterative planning and execution to monitoring and control of the product, people and processes involved.

Centric PLM standardizes and automates process flows. It goes beyond the bounds of traditional project management and gains simultaneous visibility into the product, people and process to plan resources, scope of work, action pipeline information, project-related costs, status updates, deliverables and more.

Rekeying of data, too many emails, confusion as to which document version is the latest, will be a thing of the past. Companies have records of product changes and work breakdown structure. E-commerce and collaboration tools like Teams and Slack are integrated within PLM to make it a central hub for seamless product development and project management.

Companies that use Centric PLM with integrated project management have seen

- reduced costs of 23%
- increased product margins by 21%
- 50% improvement in efficiency and 50% reduction of time to market



Supercharge planning with Centric Visual Boards

Centric Visual Boards™ are a new tool that enables companies to create visual layouts that showcase how products work together, emphasizing different categories, packaging and overall brand identity.

This level of visualization gives teams an actual picture of the products so they can make **informed decisions** about assortments. Missing shelf-stable products? What about personal vs. family sizes? Flavored milk, cultured products, organic, probiotics, lactose-free or plant-based? With Centric Visual Boards, you can slice and dice products by type, size, price point and more, to identify gaps and get an overview of the whole product assortment.

Centric Visual Boards enable users to curate, manage and present product assortments digitally. Users visualize product categories and market segments (organic, natural, free-range, grass-fed) in real-time, streamlining the planning process.



Summing up Centric PLM

It has been mentioned throughout, but what exactly is Centric PLM and what are the benefits? In a nutshell, it is a comprehensive, digital solution for end-to-end product development, involving departments like R&D, regulatory, nutrition, quality, engineering, sensory, marketing, project management, specification management, raw material libraries, certifications, packaging, procurement, manufacturing and more. Not only does it enact traditional workflow automation, Centric PLM goes beyond, **tying product development data directly to executable tasks** and the teams that perform them.



Centric Software is a technology partner

Centric Software is focused on fast-moving consumer goods including food & beverage, developing powerful and innovative tools that deliver **measurable results** and **maximum ROI**. Centric Software pairs food & beverage industry expert team members with corresponding customers, to collaborate and deliver tailored solutions to solve individual customer's unique business challenges. Centric expertly guides change management strategies, providing training and support for users and suggesting industry best practices leading up to and during implementation.

All of the Centric Software solutions have built-in market-driven enhancements based on a Customer Advisory Board (CAB) and through direct customer feedback. Centric Software is **continually improving** with frequent updates, incorporating popular customer requests that benefit all users.



Success in the dairy industry requires a multifaceted approach, including investment in technology, collaboration across the supply chain, and a commitment to food safety. As consumer preferences shift and regulatory pressures increase, dairy processors and companies must adapt to remain viable and responsible in the face of these challenges.

Want to learn more about Centric PLM and Visual Boards for dairy? Get in touch for a discussion or to set up a demo!

[CONTACT US](#)

About Centric Software

From its headquarters in Silicon Valley, Centric Software provides the market-leading AI-enabled Product Lifecycle Management platform for food & beverage manufacturers, grocery, brands and multi-category retailers. As experts in all fast-moving consumer goods, Centric Software delivers best-of-breed solutions to design, develop, source, buy, make, package, assort and sell products. Centric solutions optimize the product portfolio, harmonize product offers and streamline product development by speeding time to market and innovation while enhancing quality control and ensuring regulatory compliance.

Centric PLM™ features integrated industry best practices and innovative, AI-enabled capabilities tailored specifically for food and beverage manufacturers, retailers and food service providers. Seamlessly manage the overall product lifecycle, from initial concept and formula development to packaging, quality, supplier collaboration, nutritional labeling, production, SKU rationalization and beyond. Results include up to a 50% improvement in productivity and a 60% decrease in time to market.

Centric Visual Boards™ are a visually oriented top-down/bottom-up product portfolio optimization tool. Real-time data and imagery from multiple business systems are brought into a singular accessible workspace, creating a new, visual way of working for all teams to ensure robust, well-balanced global/regional product offers, dramatically decreasing assortment development cycle time.

Centric Software has received awards for excellence from Just Food, Just Drinks, Business Awards UK, Frost & Sullivan and many other regional accolades. Centric Software is proud to provide the best solutions, backed by the best team and to partner with the best customers.

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