FROST & SULLIVAN

2024
TECHNOLOGY INNOVATION LEADER

IN THE GLOBAL FASHION AND RETAIL ARTIFICIAL INTELLIGENCE INDUSTRY

CentricSoftware®

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each Award category before determining the final Award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Centric Software excels in many of the criteria in the fashion and retail artificial intelligence space.

AWARD CRITERIA

Technology Leverage	Business Impact
Commitment to Innovation	Financial Performance
Commitment to Creativity	Customer Acquisition
Stage Gate Efficiency	Operational Efficiency
Commercialization Success	Growth Potential
Application Diversity	Human Capital

Overcoming Industry Challenges with an Innovative End-to-end Platform

The retail, fashion, and consumer packaged goods industries face significant external challenges centered around inflation, interest rates, and inventory. Frost & Sullivan notes that these challenges are compounded by economic obstructions, such as supply chain disruptions and increased sustainability and traceability compliance regulations, making product sell-through and profit of even greater importance. Many companies are responding to these pressures by expanding their globalized product portfolios to provide more choices. However, customers' shopping behaviors are shifting towards purchasing from smaller brands online and in-store, which have fewer product assortment options and just the right products. As a result, market participants must react quickly by adopting a "real-time" retail strategy, maintaining a more curated product assortment while still decreasing time-to-market to maximize profits of each stock-keeping unit (SKU). Current product lifecycle management (PLM) methods are inefficient and require time-consuming, manual management that leaves data underutilized to identify, optimize SKUs, or react to product problems effectively. An effective PLM solution automates many of these processes to optimize the process and improve efficiency.

Founded in 2012 and headquartered in Campbell, California, Centric Software (Centric) goes beyond traditional PLM solutions, adopting technology advancements (including artificial intelligence [AI] and data analytics) to drive enhanced decision-making. The company invests extensively in technology innovation, enhancing its industry-leading PLM solutions with AI capabilities and creating additional AI-

driven products, providing its customers with a complete end-to-end platform relevant for all types of consumer goods, business models, and company sizes. As a result, Centric's customers can choose the right product to bring to market, ensure it has the correct features and functionality, and sell it in the proper manner and at the right time.

Centric Software's Comprehensive Platform Strategy

"The latest enhancements to Centric PLM exemplify the transformative power of AI in retail operations. By leveraging AI across the entire product lifecycle, from concept to replenishment, Centric is enabling a new era of 'real-time retail'. This holistic approach to AI integration allows brands to make data-driven decisions at unprecedented speed and scale, potentially reshaping industry benchmarks for efficiency, sustainability, and consumer engagement."

- Karthik Sundaram
Research Director, Industrial

With its foundation as a pure PLM solution provider, Centric recognizes the benefits of having a single platform with integrated taxonomy for pre-, in-, and end-of-season planning to increase visibility and agility and drive overall decision-making. As a result, it expanded its platform to provide end-to-end solutions to support the full range of product optimization and planning across the entire product lifespan, including ideation, retail planning, price, and inventory optimization. The company's three core solutions include: Centric PLM™, which provides a foundation giving clients a complete platform to perform product design from development to delivery; Centric Planning™, to manage forecasting, merchandising, range, demand, assortment, replenishment, and store allocation; and Centric Pricing & Inventory™, which optimizes pricing to ensure sell-through while maximizing profits.

Centric's advanced platform provides customers with unmatched and end-to-end visualization, allowing them to determine the right product to create, the most effective way to make it, and how to sell it efficiently. The company built an optimized and simple user interface with a traditional configuration and development for agile deployment. Finally, Centric's approach to taxonomy is a key differentiator, as it gives users a fully integrated horizontal and vertical solution to perform large-scale brand and product line management. In addition, it can drill down to specific product-level design, allocation, and pricing data. As such, clients can more effectively and proactively act to increase sell-through, drive time-to-market, optimize pricing and profits, and ensure brand alignment.

AI Infusion Empowering Data-driven Decision Making

While Centric's industry-leading solution stack meets customers' needs and provides them with a single solution for the complete span of product creation, management, and profitability, most decisions are still made in a reactive manner, requiring problems to arise before users act. The company's core commitment is to continuously enhance usability, improve decision-making, and save user's time by enabling faster decision-making. As a result, the company infuses AI capabilities across its platform, giving users data-driven insights to make decisions proactively and avoid product management and sell-through issues.

Centric builds its AI capabilities in synergy across its full product line, allowing data from each product to enhance other products, thereby providing customers with a highly accurate and comprehensive analysis and recommendation. The platform leverages deep learning neural networks, image processing, and language processing to create a unique approach to product taxonomy. The platform applies product sets to create reference models, allowing users to analyze the viability of a cluster rather than manually generating product groups within various categories. The system analyzes cluster results continuously with a goodness-of-fit test to sort various consolidations, test them with historical information, and gain a strong prediction model. As such, Centric's AI is learning and adapting continuously to ensure the highest accurate clustering, analysis, and recommendations.

Centric focuses first on infusing AI capabilities to have the most actionable, impactful, and measurable results for maximum business value. As a result, the company enhances the abilities of Centric PLM, Centric Planning, and Centric Pricing & Inventory while also creating two additional core products (Centric Market Intelligence™ and Centric Visual Boards™). Its current AI tools include such capabilities as, demand forecasting, assortment planning, assortment management and basket analysis, product selection, development and design, price promotion and markdown optimization, fashion inspiration generation, in-season demand forecasting, market trends and price data analytics, allocation/replenishment/re-ordering, forecast method management for pre-season and in-season rule based forecast, competitive pricing, product recipe and bill of material (BOM), and style trend including product matching and tagging. Centric is also working on AI for its machine learning forecasting and markdown optimization tools and plans to create additional AI capabilities for just-in-time (JIT) demand signal intentions based on price optimization with JIT, assortment allocation and forecasting, pre-season merchandise financial forecast, and vendor capacity and planning.

While many market leaders rely on brand recognition to maintain their customer base and become stagnant in innovation, Frost & Sullivan is impressed with Centric's unwavering commitment to technology innovation, continuously optimizing solutions to enhance predictability, automation, and adaptability and thereby increasing value to its customers further.

Unique Approach to Taxonomy Enabling Product Synergies

Centric's solutions have a shared taxonomy, providing data to one another to enhance the usability and accuracy of AI-provided analysis. For example, data from Centric Planning feeds into Centric PLM, giving the framework of a brand's plan at the assortment or class level. As such, Centric PLM can enhance the data on product design, including if it will be internal or supplier-led design, to ensure various aspects of the brand the product is fulfilling targets for financial defining options, volumes, margins, and price points. This is enhanced further by Centric's Market Intelligence engine, providing competitive analysis regarding price points and trend comparisons with visuals, which are combined with historical product range and product sell-through data to drive design decisions and supplier briefings. Finally, Centric PLM's AI capabilities can help customers choose the right supplier by monitoring a supplier's performance and analysis of the supplier's showrooms, identifying suppliers that best match a brand's range plan and needs for a particular product. These capabilities extend to retailers, analyzing which brands to select based on specific criteria and products to best fit a retailer's plan.

Centric Planning

Centric Planning is an innovative, cloud-native AI solution for end-to-end planning that aims to maximize retail and wholesale business performance. It provides tools for the complete inventory management ecosystem, including merchandise and pre-season planning, assortment strategy and planning, internal allocation and replenishment, demand and supply planning, and lifecycle pricing for pre-, in- and end of season stages. Customers gain deeper data analytics and recommendations across the Centric Planning product, including for assortment, quantification, clustering, tagging items with taxonomy information, forecasting, inventory optimization, price management, and inventory rebalancing.

Centric works directly with customers to identify the most beneficial use cases and develops AI capabilities to enhance value for its clients. This collaborative approach ensures the company understands customers specific and emerging needs, allowing it to adapt and improve solutions to meet these requirements continuously.

Key use cases for AI enhancements in Centric Planning include:

- AI analyzes transactional data to identify products that are most often sold together, allowing customers to create product lists and groupings of products sold together. This increased visualization provides a unique planning proposition, as customers can ensure stores have proper allocations and inventory of cross-sellers to enable customers to purchase products together, thereby maximizing overall sales.

- Assortment recommendations predict the sell-through performance of the current range, allowing users to compare the expected potential with the actual performance of a product. As a result, customers can decide early in the season whether to keep, drop, or swap a product, ensuring stores have relevant and popular items. Assortment recommendation capabilities can also filter for specific aspects, such as colors, price points, materials, or store locations, gaining deep insights into purchasing behavior. The tool then analyzes the customer-chosen data to turn it into insights and recommendations, helping to decide how to best manage allocation.

- Assortment planning enhanced with AI capabilities goes beyond traditional assortment planning that requires users to decide which products to place in front of a customer and use past performance and sales potential to calculate the product quantity to purchase. Due to the short sales product life of about 12 weeks, AI is usually limited in its impact due to there being no historical data to feed into predictive analytics. Centric's assortment planning AI goes beyond historical data, leveraging the platform's single taxonomy to analyze a product's image and pull data from prior products with similar features and functionality, generating a more accurate quantity recommendation based on comparable products' past performance data.

- In-season prediction uses AI to analyze a product's performance based on size and sell-through to make accurate recommendations on when and how much of a product to reorder to meet customer's key performance indicators (KPI), or when to mark down products to help increase sell-through and minimize potentially lost revenue.

Centric PLM

Centric's AI enhancements to Centric PLM enable more efficient decision-making regarding the product design from development to delivery, reducing development time. Centric PLM gives users verticality, diving deeper into their specific product to design the correct product in relation to their brand, product mix, and past performance. Customers can ensure they have the right product mix at the right time in the right location. Centric PLM's enhanced AI enables it to go beyond traditional PLM solutions, leveraging customer-specific KPIs and extensive data sets, including end-to-end planning, pricing optimization, inventory, market intelligence, trend analysis, and competitive analysis to drive informed decision-making. The solution aggregates data across these points, allowing customers to analyze data consistently to predict and optimize product assortment, including driving design choices on new products, harmonizing existing products, determining if it has too many or too few products in a category, and identifying different regional purchasing variations and trends. As such, customers can react, adapt, and engage again quickly, based on changing, real-time demands, to optimize offerings and enhance profitability and sales.

The latest enhancements to Centric PLM exemplify the transformative power of AI in retail operations. By leveraging AI across the entire product lifecycle, from concept to replenishment, Centric is enabling a new era of 'real-time retail'. This holistic approach to AI integration allows brands to make data-driven decisions at unprecedented speed and scale, potentially reshaping industry benchmarks for efficiency, sustainability, and consumer engagement.

Centric Pricing & Inventory

Centric enhanced the Centric Pricing & Inventory solution by integrating AI capabilities that allow for enhanced focus on price and inventory optimization throughout the product lifecycle. When enhanced by Centric Market Intelligence, users can price items based on a competitive analysis or can make fast reactionary changes to social media trends, optimizing profits or increasing sales of a previously struggling product. Furthermore, Centric Pricing & Inventory provides price optimization recommendations based on various parameters, builds, and simulations, allowing users to change the price to meet multiple goals. The AI enables users to select and change pricing strategies (such as optimizing stock sell-through or enhancing profit margins) and provides price recommendations that will meet the parameters best. Moreover, the tool allows users to amend and adjust the price goals throughout the season or as their goals change, thereby meeting a customer's evolving needs. Centric Pricing & Inventory drives margins and boosts revenues to ensure customers sell products that best fit their overall goals and in response to competitive analysis.

Centric Market Intelligence

Centric Market Intelligence is an AI-driven platform for market insights, providing an analysis of market and competitive aspects to drive better decision-making. The solution collects market trend data, such as politics, shopping habits, viral trends, consumer trends, and relevant legislation changes. Moreover, it analyzes competitor offerings, price points, and styles. By combining and aggregating these expansive data sets, Centric Market Intelligence helps power data-informed decision-making, enhancing the accuracy and sales performance of customers' products.

Centric Visual Boards

> *"Centric's AI Fashion Inspiration represents a paradigm shift in product development. By integrating GenAI directly into the PLM workflow, Centric streamlines the design process and fundamentally reimagines how creativity and technology intersect in fashion. This innovation has the potential to accelerate time-to-market dramatically while simultaneously enhancing design originality and market responsiveness."*
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> *Research Director, Industrial*

Centric Visual Boards is a visual collaboration tool that pulls data from multiple systems for enhanced collaboration on product ideation, product development and assortment development. Traditional solutions allow users to take an initial design, create two- or three-dimensional (3D) specs, and enable users to choose a full span of features, including BOM, size chart, materials, colors, and accessories. By applying AI, Centric provides users with enhanced capabilities, such as leveraging AI to find material within a price point, end-use, or that looks similar to an existing product. It also allows mass creating or replacing styles with common components to align with a brand's strategy. Customers can use this launching point to finish the design, such as building the BOM, shapes, or size charts. The solution then leverages headless 3D design and AI-driving parameterization to automatically generate visuals based on key models connected to the models, materials, and specifications. The technology package's automation streamlines product development but also reconciles global and local assortments so that brands and retailers can simultaneously take advantage of economies of scale but also locally driven (by trend, supplier, theme/calendar, etc) offers. Visual Boards is a space that pulls both data and people from multiple systems (ERP, PIM, e-com/POS, etc.) and teams (buying, merchandising, product development, design/R&D…) to collaboratively ideate and make decisions on individual products, ranges and assortments both at the worldwide and regional levels. Finally, Centric Visual Boards allows users to pivot around a variety of parameters (price point, delivery date, product family, region, etc.) to view products and assortments from different points of view to ensure a robust, customer-focused offer. Customers enjoy a faster time to market and hit rate than when leveraging traditional processes by streamlining development time, ensuring products meet brand needs, and increasing the frequency of a product-to-market.

Centric AI Fashion Inspiration™

Centric AI Fashion Inspiration is an innovative, generative AI (GenAI) image tool that aims to facilitate faster design iterations to enhance collaboration and accelerate speed to market. Traditionally, customers' PLM solutions only integrate their own data, falling short of capturing AI capabilities' full benefits. Centric AI Fashion Inspiration is integrated with data derived from Centric PLM and Centric Market Intelligence which houses 10 year's worth of publicly available images as well as product specific characteristics, training the tool's AI with over 1 billion clean fashion images across 800 categories. Centric then applies a customer's particular dataset to this core taxonomy. As such, the tool uses GenAI for concept ideation in fashion design, generating unique product variations based on specific characteristics without replicating intellectual property. Centric AI Fashion Inspiration generates detailed 3D models of product variations, giving users a starting point for product creation and allowing for enhanced collaboration. It also allows users to create a new style or connect a product to existing styles, thereby

ensuring the new product aligns with a brand's existing line.

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Centric Software: A Name Synonymous with Satisfaction

Frost & Sullivan notes that Centric's commitment to meeting customer's specific needs expands to its sales and service model. The company works closely with customers from the upfront purchase, making sure they receive the highest return on investment (ROI) quickly. Furthermore, it enables customers to scale up their solution package to purchase one product and add additional solutions and capabilities as they expand or identify additional obstacles to overcome. This strategy also allows clients to experience Centric's benefits firsthand without becoming overwhelmed by an extensive platform and enhancements from a single purchase, ensuring that they gain the most benefits and leverage the platform's full capabilities. As a result of this strategy, customers experience unprecedented ROI, including increased gross margins by up to 15%, improved revenue by up to 18%, reduced time to market by up to 60%, decreased inventory requirements by up to 30%, diminished cost of goods sold by up to 15%, and improved productivity by up to 50%.[1]

As a result of Centric's ability to enact immense value, it has experienced explosive growth. The company reports a 100% growth in bookings in quarter 3 of 2024.[2] Moreover, it continues to grow its client base to customers across various industry segments, with notable recent customer acquisitions, including Aeon, Lacoste, Abercrombie & Fitch, and Brax. Centric solutions bring products from over 18,000 brands to market spanning 870 companies in 58 countries, including 540 fashion and apparel clients, 176 outdoor and gear customers, 70 food and beverage and cosmetics and personal care customers, and 77 consumer goods references.[3] Moreover, the company supports 39 various languages and has 19 offices and six virtual centers with over 1,100 employees globally, servicing customers quickly and effectively, safeguarding its value proposition, and ensuring that clients' needs are truly met.

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[1] Interview with Centric Software. October 2, 2024.

[2] Ibid.

[3] Ibid.

Conclusion

The retail, fashion, and consumer packaged goods industries face significant challenges, including inflation, supply chain disruptions, increased competitive pressure, changing shopping behaviors, and increased sustainability regulations. As a result, market participants must react quickly by adopting a real-time retail strategy, ensuring they maintain the right product assortment while still decreasing time-to-market to maximize profits further. Current product lifecycle management solutions often focus on a single aspect of the product management lifecycle (either pre-, in-, or after-season inventory management) and rely on time-consuming manual processes that leave data underutilized, making companies unsure of how to react to arising problems best or how to optimize product assortment and allocation.

Recognizing these shortcomings, Centric Software (Centric) provides its customers with a comprehensive ecosystem of solutions, covering the full product management lifecycle. Moreover, the company's commitment to continuous innovation and value enhancement led it to infuse artificial intelligence (AI) capabilities throughout its platform, driving proactive and data-driven decision-making to improve customers' overall product management performance, thereby improving product sell-through, enhancing profitability, and reducing time-to-market. Its single taxonomy design empowers synergy between its different products, increasing data specificity and precision to provide highly accurate and relevant recommendations for improved product management optimization. Finally, Centric's collaborative nature ensures it designs AI capabilities to overcome customer's greatest needs, thereby enacting the highest value and return on investment across its client base.

With its strong overall performance, Centric Software earns the 2024 Frost & Sullivan Global Technology Innovation Leadership Award.

What You Need to Know about the Technology Innovation Leadership Recognition

Frost & Sullivan's Technology Innovation Leadership Award recognizes the company that has introduced the best underlying technology for achieving remarkable product and customer success while driving future business value.

Best Practices Award Analysis

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

Business Impact

Financial Performance: Strong overall financial performance is achieved in terms of revenues, revenue growth, operating margin, and other key financial metrics

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

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The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™.
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Key Impacts:

- **Growth Pipeline:** *Continuous Flow of Growth Opportunities*
- **Growth Strategies:** *Proven Best Practices*
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)