



Market Perspective

Revolutionizing Beverage Manufacturing

IN PARTNERSHIP WITH

SIEMENS

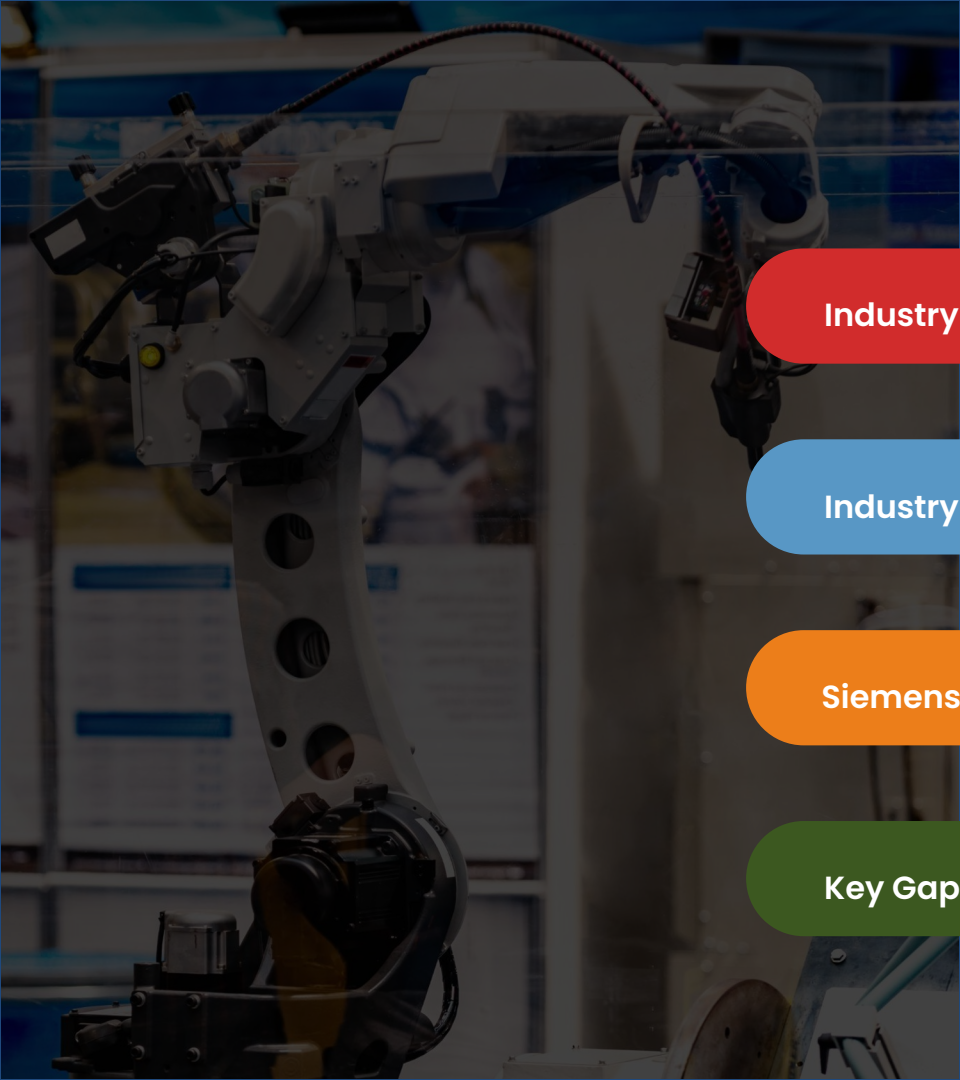
A large industrial robotic arm, likely a Siemens model, is shown in a factory setting. The arm is white and grey, with various cables and sensors attached. It is positioned vertically, with its end effector pointing downwards. The background is slightly blurred, showing other industrial equipment and structures.

Table of Contents

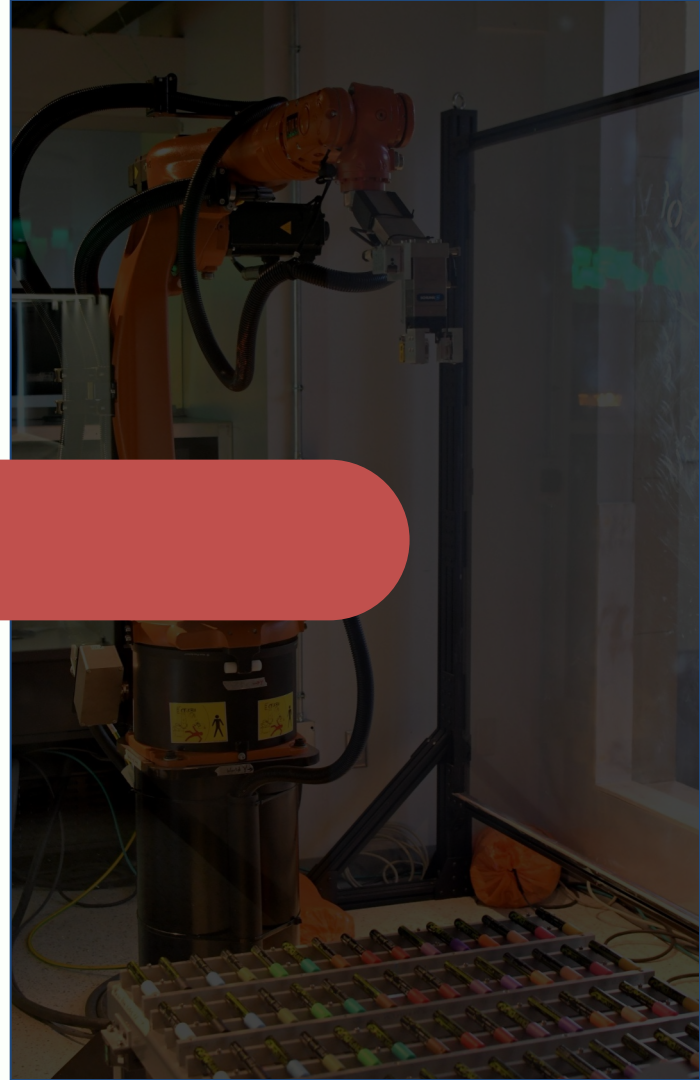
Industry Trends & Overview

Industry Challenges & Best Practices

Siemens Solution Overview & Benefits

Key Gaps & Future Potential

Industry Trends & Overview



Revolutionizing beverage manufacturing: Innovations, consumer Preferences, and globalization define industry evolution

E-Commerce and DTC Revolution

The transformative shift towards online platforms and direct-to-consumer models, reflects evolving consumer preferences and presents new opportunities for streamlined access and personalized interactions within the beverage industry.

Sustainability and Eco-Conscious Practices

Embracing eco-conscious practices involves adopting energy-efficient techniques, eco-friendly packaging, and responsible sourcing to reduce environmental impact and align with the preferences of environmentally conscious consumers.

Health Conscious Choices

A focus on holistic well-being is evident as consumers increasingly seek beverages with added health benefits, including dairy-based probiotic drinks and nut milk alternatives. This trend reflects a growing preference for functional and nutritious beverage options.

Automation and Digitization

This strategic integration enhances efficiency and quality across various beverage sectors, revolutionizing production processes and contributing to a more technologically advanced and streamlined industry landscape.

Craft Beer Renaissance

A notable trend, showcasing a resurgence of small-batch, artisanal beers with unique and captivating flavors. Craft breweries play a pivotal role in shaping the modern beverage landscape by emphasizing quality, creativity, and personalized drinking experiences.

Global Expansion

Beverage companies, including dairy producers, are expanding globally, bringing diverse cultural influences to international markets. This enriching trend is not only broadening market reach but also fostering a more interconnected and diverse beverage landscape.

Digital Shift

7.2%

CAGR of digital channel sales of beverages >2X of Industry growth.

Sustainability

27%

of consumers say that a beverage brand's sustainability practices influence their purchase decision.

Health

41%

of consumers are willing to pay more for functional beverages that improve health or specific body functions.

Automation and AI

5X

Increase in spending on automation and AI in the beverage industry between 2024-28.

Global Beverage Industry

\$2,071 Billion

by 2028, at a CAGR of 3.8%.

Global Brewing Industry

\$585 Billion

by 2028, at a CAGR of 3.9%.

Global Dairy Industry

\$708 Billion

by 2028, at a CAGR of 3.6%

Global Soft Drinks Industry

\$612 Billion

by 2028, at a CAGR of 5.6%

Success in the beverage industry rests on the dynamic interplay of robust products and perpetual innovation, a synergy that fuels sustained growth and market distinction

In the dynamic landscape of the beverage industry, continuous product innovation is imperative for companies striving to outpace their competitors. Equally crucial is the establishment of robust brand awareness. Effective distribution strategies and robust networks are essential for ensuring products reach consumers where and when they desire, contributing to enhanced accessibility, customer satisfaction, and brand loyalty.

Key Industry Players

Breweries

Anheuser-Busch Inbev.

Heineken

Asahi

Kirin Brewery Co.

Molson Coors Brewing Company

Dairy

Lactalis

Dairy Farmers of America

Nestle (*Dairy*)

Danone

Yili

Soft Drinks and Others

Nestle

The Coca Cola Company

PepsiCo Inc.

Starbucks Corp.

Red Bull

Industry Challenges & Best Practices



Beverage Industry Challenges: Driving Innovation, efficiency and compliance

Intense Competition



In the beverage industry, intense competition is a prevailing challenge characterized by over 500+ global and regional brands and over 19,000 local brands.

This saturation underscores the need for beverage companies to differentiate themselves through innovative techniques, unique products, and effective brand positioning to stand out in a crowded market and secure a meaningful market share.

Quality Control



Factors controlling quality pose significant challenges, with 63% of manufacturers citing product safety as a concern.

Achieving consistency requires stringent quality control measures throughout the process, from ingredient sourcing to production and packaging. Factors such as variations in raw materials, performance, and environmental conditions can impact the final product.

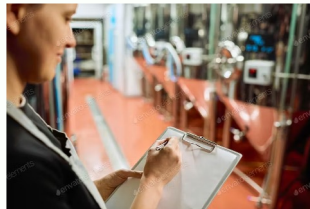
Efficiency



This emerges as a significant challenge in the beverage industry, with 70% of manufacturers being unaware of future downtimes.

Manufacturers must continually invest in advanced technologies, streamlined processes, and proactive maintenance strategies to mitigate downtime, enhance overall efficiency, and ensure a seamless production flow.

Regulatory Compliance



Non-compliance issues carry a remarkable consequence, with fines averaging \$100K per violation.

Beverage manufacturers must invest in robust compliance management systems, stay abreast of regulatory changes, and implement stringent protocols to avoid financial penalties and reputational damage.

Supply Chain Disruptions



Managing supply chains amid global disruptions is critical for maintaining production and distribution timelines.

Unforeseen events can disrupt the seamless flow of materials and goods. Navigating these challenges requires agile supply chain strategies, contingency planning, and real-time monitoring to mitigate risks, ensure continuity, and maintain a resilient and responsive network.

Elevating best practices with a holistic approach not only to overcome industry challenges but to drive innovation

Consumer-Centric Innovation: Integrate market research and agile product development to align with evolving consumer preferences, including product reformulation to meet health trends by reducing sugar and artificial ingredients in beverages. Innovative healthy offerings, such as non-alcoholic, organic, or functional beverages, cater to health-conscious consumers.

Sustainability: Sourcing ingredients sustainably, adopting eco-friendly packaging made from recyclable or biodegradable materials, and implementing efficient water management practices, including conservation techniques and support for community stewardship initiatives.

Digital Transformation: Transformation strategies leverage a variety of digital platforms such as social media, mobile apps, and online channels for robust marketing, brand engagement, and direct-to-consumer sales. Complementing this, the integration of data analytics plays a pivotal role by providing valuable insights into consumer behavior.

Efficient Supply Chain Management: Enhancing supply chain resilience involves diversifying suppliers to reduce dependency on single sources and adopting technology integration. Utilizing advanced technologies like blockchain ensures transparency, while the Internet of Things (IoT) enables real-time monitoring and logistics optimization.

Continuous Learning and Development: Businesses prioritize regulatory compliance, ethical practices, global/local market adaptation, and culturally sensitive marketing tailored to diverse preferences. Continuous improvement includes ongoing research and development investments for enhanced products and sustainability, along with fostering employee development for company growth and adaptability.

For Hofbräu, transparency is important for us because it makes it easier to access our production data to improve the production process and produce more sustainable.

Silvia Di Tano, Head of Electrical Engineering, Hofbräu Munich

Siemens Solution & Benefits



Siemens has the most easily scalable process control system for all requirements in the beverage industry. The solution has 4 core components

Fast root cause analysis

The replay mode function visualizes historical data at the press of a button.

It's as simple as operating a video player, which makes it easier to optimize production processes and perform fault analyses.

Improved efficiency and better planning

Orders can be adjusted to the actual demand and capacities. Interfaces with existing planning systems make it easier to import production plans.

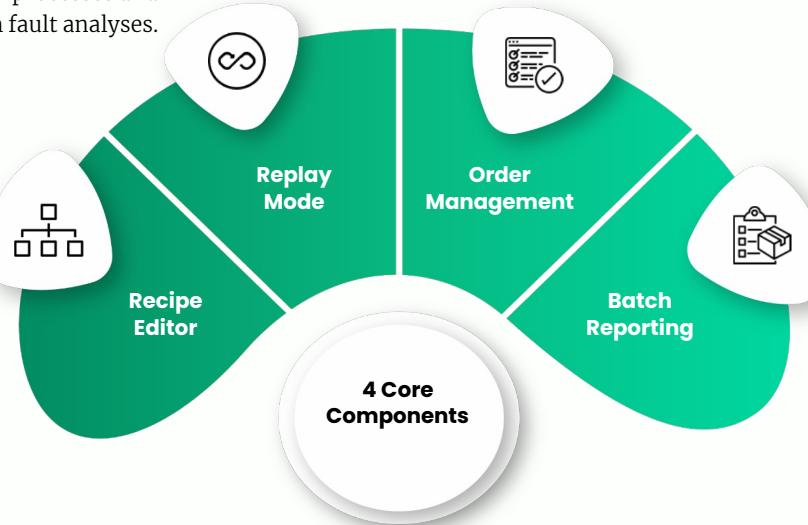
Easy introduction of new recipes and products

The recipe editor allows access to recipes during ongoing operation and makes it possible to implement adjustments with no programming effort. It graphically displays the steps already taken and the next steps needed to provide a perfect overview.

The recipes are structured and stored hierarchically, and predefined processes and individual steps can be easily reused to save time.

Full transparency for regulatory compliance

When automatically generated by the system, it helps optimize production and gives one the option to generate their own reports.



Web
Process
Screens

Track and
Trace

Route
Control

Open IT
Interface

Siemens solutions transform beverage production and ensure scalable, transparent and compliant operations at reduced costs

The user-friendly design of Siemens' solution enhances efficiency, making recipe creation and execution a seamless and user-centric process. The process control system demonstrates remarkable scalability, seamlessly adapting to diverse beverage operations. The solutions also employ data analytics and connectivity to provide insights into inventory levels, production status, and distribution schedules. This ensures real-time supply chain visibility and compliance.

Compañía de las Cervecerías Unidas (Argentina)

Objective

- Develop the ability to quickly make modifications and adaptations to the given production systems.
- Utilize industry-standard control systems for cellars.
- Develop new functional capabilities that can adapt to current and future challenges.

Result

- The process control system BRAUMAT demonstrated stability and ease of configuration and maintenance, leading to improved system availability.

Dresdner Whiskey Manufaktur (Germany)

Objective

- Standardize the quality of raw materials and aroma components used year over year (Y-O-Y).
- Implement automation technology to improve control over the entire distilling process.

Result

- Automated ingredient management, resource allocation, and product development.
- Digital monitoring and control of the entire system via process control system SISTAR.

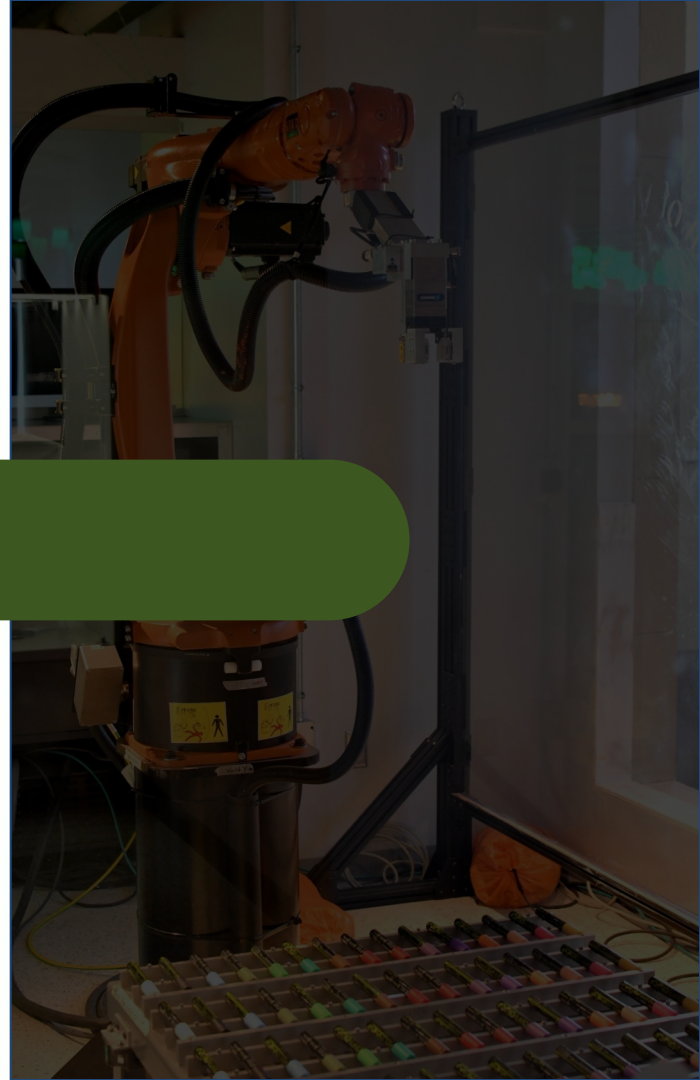
SISTAR is exactly the right solution for us. It is absolutely stable, simple to configure and maintain, and troubleshooting is easy.

Thomas Bissinger, Head of process control, Zott SE & Co. KG, Mertingen

With replay mode, we're certainly saving 50% of the time required for troubleshooting.

Thomas Dahl, Process control manager, Zott SE & Co. KG, Mertingen

Key Gaps & Future Potential



Increased consumer expectations, growing operational complexity and technological advancements are adding to the challenges for the beverage industry

Operational

Supply Chain Resilience: Fragility in global supply chains, highlighted by recent global events, exposes a pressing need for more robust, flexible, and resilient supply chain strategies

Sustainability in Production: While strides have been made towards sustainable practices, significant gaps remain in reducing water usage, energy consumption, and waste in production processes.

Cost Management and Efficiency: Fluctuations in raw material costs, energy prices, and logistics expenses present ongoing operational challenges.

Consumer

Health and Wellness: With increased demand for healthier products, the gap between consumer expectations and available options signifies an opportunity for innovation in product development.

Personalization and Engagement: Consumers seek personalized experiences and tailored products. The beverage industry needs to leverage digital technologies to enhance consumer engagement, offering customization options and fostering brand loyalty through personalized marketing strategies.

Technology

Digital Transformation and Data Utilization: While many beverage manufacturers are embracing digital technologies, there is a gap in fully leveraging data analytics for predictive insights, consumer behavior understanding, and operational optimization.

E-commerce and Digital Marketing: Manufacturers must improve their e-commerce platforms and digital marketing strategies to meet consumers where they are. This includes optimizing online sales channels and developing direct-to-consumer models.

Innovation in Sustainable Technologies: Adopting new technologies for sustainable production, packaging, and distribution is essential. However, the cost and implementation of such technologies (e.g., biodegradable materials and renewable energy sources) remain significant challenges.

Workforce

52%

of employees in the beverage industry receive training only at the time of joining.

Transparency

62%

of consumers look at the ingredients on beverages before they make a purchase.

R&D Spend

<1.5%

of revenue, which is lower than other consumer product segments.

Future potential in beverage manufacturing lies in embracing advanced technologies like AI and smart packaging, fostering sustainability, efficiency, and a personalized consumer experience

Firms that adopt predictive analytics have witnessed

40%

Reduction in maintenance costs

70%

Decrease in equipment downtime

25%-30%

Increase in equipment effectiveness

Technology adoption (IIoT, AI, Edge, etc.) in the beverages industry has enhanced efficiency, guided strategic decision-making, and contributed to a more sustainable future



Supply Chain Resilience

This strategic approach not only fortifies businesses against unforeseen disruptions but also carries substantial cost-saving implications. Projections indicate that companies embracing supply chain resilience measures are poised to achieve a noteworthy 15% reduction in supply chain-related costs.



Personalized Beverage Experience

This transformative concept envisions a shift towards customized offerings, where consumers can have beverages crafted to align with their unique preferences and tastes.



Adoption of AI and Predictive Analytics

With an anticipated 40% increase in AI adoption and predictive analytics, this technological shift holds transformative implications for the industry, as AI can enhance various aspects of beverage manufacturing, from production and quality control to supply chain management.



Production Efficiency

The integration of circular economy practices helps in reflecting a commitment to sustainability and innovation. This approach envisions a closed-loop system, where resources are continually recycled, reused, and repurposed to minimize waste and impact.



Smart Packaging Solutions

Utilizing technologies such as RFID tags, QR codes, and sensors provides comprehensive information on product freshness, authentication, and tracking. This not only reduces food waste but also improves product safety and enhances consumer convenience.



ABOUT INCISIV

Incisiv is a peer-to-peer executive network and industry insights firm for consumer industry executives navigating digital disruption.

Incisiv offers curated executive learning, digital maturity benchmarks and prescriptive transformation insights to clients across the consumer and technology industry spectrum.

[incisiv.com](https://www.incisiv.com)

IN PARTNERSHIP WITH

SIEMENS

ABOUT SIEMENS

Siemens AG is a global technology powerhouse that brings together the digital and physical worlds to benefit customers and society. The company focuses on intelligent infrastructure for buildings and decentralized energy systems, on automation and digitalization in the process and manufacturing industries, and on smart mobility solutions for rail and road transport.

To learn more, visit

[siemens.com/braumat](https://www.siemens.com/braumat)

[Siemens.com/sistar](https://www.siemens.com/sistar)

[Siemens.com/smart-manufacturing-fab](https://www.siemens.com/smart-manufacturing-fab)