The Digital Consumer Products Industry
Unlocking New Business Value with Intelligent Technology
“In the consumer products industry, we expect more change in the next five years than we’ve seen in the last 50. What consumer products companies do will not fundamentally change. But what is changing dramatically is why consumer products companies do what they do, how they go about it, and even how they define themselves. What’s changed is more than simply the rules of the game. The game itself has changed.

The consumer ‘products’ industry is rapidly transforming into the consumer ‘outcomes’ industry. Consumers today want more than products. They crave subjective, personalized, and timely experiences and outcomes such as joy, confidence, control, protection, and more. They don’t want to be sold to or influenced. They want to be inspired, guided, educated, and helped.”

E.J. Kenney
Senior Vice President
Global Head of Consumer Products and Agribusiness
SAP SE
Consumer Products Companies Face New Challenges and Opportunities Amid Digital Disruption

Macrolevel market dynamics are constraining growth among consumer products companies – but these same dynamics provide massive opportunity for companies that embrace innovation.

The “Amazon effect”
Channel proliferation and increasing cost pressures across product categories are driving new, nontraditional growth models that challenge how products, and even the industry itself, is defined.

New business models will no longer define companies by traditional industry definitions but by the consumers they serve and the ecosystems in which they compete.

“Born digital” competitors
Speed is the new big. Smaller, more agile competitors are entering the market, challenging the old order and becoming the new engines of category growth and innovation.

Transformative consumer engagement strategies focus on experiences and outcomes that extend and expand consumer lifecycles.

“Right now, right here, just for me” consumers
Increasingly well-informed consumers with Gen X and Gen Y needs and preferences expect to be advised in ways that are timely, tailored, relevant, and increasingly local.

A shift is occurring from influencing consumers to buy products to helping consumers solve problems, get things done, and explore the world around them – often through brand-focused communities.

Source: Google Trends, U.S., June 2015 vs. June 2017
To Meet the Challenges, Consumer Products Companies Must Focus on Strategic Priorities That Drive Digitalization

The consumer products industry is in the midst of massive change, with traditional assumptions, models, benchmarks, and metrics transforming to enable new growth opportunity.

Journeys
Engaging consumers throughout the entire consumer journey means going beyond just the purchase and use of a product to include content, services, and other complementary solutions delivered as part of an ongoing dialogue.

Experiences
Consumers seek timely, tailored experiences that guide them through the journey. These experiences drive and sustain engagement, providing valuable guidance for consumers and deep insights for consumer products companies about what motivates and inspires consumers.

Outcomes
Consumers want more than products. They want to achieve outcomes. New digital leaders are creating new value by delivering health, joy, comfort, beauty, control, security, and confidence.

Ecosystems
Business today is so fast paced that companies competing as an ecosystem are at a tremendous advantage. By embracing unique partnerships, these innovators can deliver new value as information, offers, products, and services.

Speed
Today’s innovative companies are capitalizing on economies of speed. They can sense opportunities in the moment, analyze available options, optimize the best response, and act with confidence and agility across both physical and virtual channels.

Fonterra employs the SAP® Global Batch Traceability application, enabling a real-time, global view of individual batch origin and ultimate destination – helping to make total traceability a reality.

Krone has partnered with SAP on an innovative digital farming initiative in which sensor data enables farmers to make better decisions about where to allocate resources.

Swarovski teamed with SAP to integrate machine learning into its retail business model, creating an intelligent library of classified product images to enable consumer interaction.
Our Point of View: To Achieve These Strategic Priorities, Leading Consumer Products Companies Are Becoming Intelligent Enterprises

An intelligent enterprise enables employees to focus on higher-value outcomes and invent new business models and revenue streams.

By applying intelligent technologies such as the Internet of Things (IoT), artificial intelligence (AI), machine learning, and advanced analytics, leading consumer products companies transform into event-driven businesses. These event-driven businesses automate repetitive tasks, enable employees to focus on higher-value tasks, and allow the invention of new business models and revenue streams by monetizing data-driven capabilities and applying core competencies in new ways.

Optimize and extend the value of current processes

Transform with next-generation business processes

- Optimize existing processes for more efficiency or reliability.
- Extend current business processes beyond efficiency gains to capture new sources of value.
- Transform the company’s value chain or business model to capture new revenue streams.
SAP Enables Consumer Products Companies to Become Intelligent Enterprises

SAP helps consumer products companies transform into intelligent enterprises through integrated business applications that use intelligent technologies and can be extended on SAP Cloud Platform. This enables next-generation business processes to deliver breakthrough business value on our customers’ journeys to becoming intelligent enterprises.

Intelligent Suite
The set of applications provides the business capabilities that consumer products companies need to run their business. End-to-end business processes span multiple applications, so processes and data must be integrated for automation, a seamless user experience, fast adoption, and ease of operations.

Intelligent Technologies
Several innovative technologies have matured to practical use:
- The IoT makes business applications interact with the physical world.
- Big Data makes large data sets accessible for advanced analytics and intelligence.
- Machine learning and AI automate repetitive processes and learn from human exception handling and decision-making.
- Advanced analytics find data patterns to support decisions and predict the future.
- Blockchain distributes collaborative processes across the entire value network.
- Data intelligence finds new value in data assets for new business models.

Digital Platform
The digital platform, which is powered by SAP HANA®, extends intelligent, end-to-end processes and connects to these data sources:
- Cloud platform that allows customers and partners to extend their intelligent suite to run additional business processes
- Data management to handle and organize data, a key asset of an intelligent enterprise
SAP Leonardo

SAP Leonardo technologies bring the power of intelligent technology to your platform and applications to streamline existing workloads, reveal optimal decisions, maximize revenue and profits, improve customer satisfaction, and capitalize on digitally transformed business models.

In addition, companies can use SAP Leonardo Services, delivered by world-class innovators that combine industry and emerging technology expertise, to help drive innovation and business impact at scale.
SAP Leonardo: Intelligent Technologies Optimize, Extend, and Transform the Business

Intelligent scenarios in consumer products companies
SAP Leonardo technical capabilities are embedded in the business core and industry applications to optimize and extend business processes. Companies can use them together with innovation services to build and assemble next-generation business processes. For consumer products companies, we support more than 20 intelligent scenarios to optimize, extend, and transform their business. Below we highlight a few that will be explained in detail on the following pages.

- Cash application
- Customer retention
- Predictive analytics
- Goods receipt
- Cold chain logistics
- Consumer products assets
- Digital boardroom
- Fleet management optimization
- Source-to-consumer traceability
- Fashion runway
- Connected agriculture

Optimize existing processes for more efficiency or reliability.

Extend current business processes beyond efficiency gains to capture new sources of value.

Transform the company’s value chain or business model to capture new revenue streams.
Optimizing business processes results in achieving the same business outcome more efficiently and reliably. We begin with scrutinizing current practices: What can be automated using machine learning? How can we make processes aware of the real world by connecting them to the things around them? How do we give people the right analytical tools to make sense of vast amounts of data and to handle exceptions?

### Cash application
- Inability to track and assess return on brand-related spend

SAP Cash Application software uses machine learning procedures to train financial applications to learn from manual matching to improve process efficiency. The solution aims at freeing up staff and improving service quality by integrating machine learning capabilities into the accounts receivable workflow.

- **Increased speed and accuracy**
- **Optimized resources for higher-value-added activities**

### Customer retention
- Lack of insight into root causes of consumer attrition

The SAP Customer Retention application anticipates consumer behavior – such as product cancellations or renewals – with instant insights from transactional data and digital interaction points.

- **Increased consumer retention**

### Predictive analytics
- Difficulty forecasting future margin of products under development

The SAP Product Lifecycle Costing solution helps secure future product margins in the early stages when the design is evolving and master data is incomplete. It provides visibility across teams and supports new product innovations.

- **Increased profitability**
- **Optimized costs**

### Goods receipt
- Highly manual process that delays the period-end closing

The SAP S/4HANA® Cloud solution for goods and invoice receipt reconciliation improves the period-end closing process by displaying all necessary data on one screen. This allows the processing steps and statuses to be easily documented in the app.

- **Faster close times**
- **Lower manual effort**
- **Increased user efficiency**
Extending business processes aims at generating more value and new outcomes. Begin by challenging the status quo: Are we doing the right things in managing assets and in shaping customer and consumer relationships? Innovators use digital technology to reimagine business processes to create new value. Digital technology extends services that increase the value of products and enables IoT-driven processes that get the right products to the right place at the right time.

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<td>Lack of visibility into condition of in-transit perishable items</td>
<td>Key decisions about assets that are highly reactive in nature</td>
<td>Lack of visibility across key dimensions of the business</td>
<td>Difficulty predicting when vehicles require maintenance</td>
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The SAP Leonardo industry innovation kit for Consumer Products, cold chain logistics option, is an IoT solution for real-time monitoring of temperature, humidity, and location of goods that are in transit as well as those stored in warehouses. Cold chain logistics provide monitoring and tracking of refrigerated cargo whether it is moved by sea, land, or rail.

- Decreased loss due to spoilage
- Greater customer satisfaction
- Reduction in lost revenue due to stock-outs
- Maximized equipment uptime
- Faster decision-making
- Increased executive focus on strategic activities
- Decreased vehicle downtime
- Increased fuel efficiency

The assets option for the SAP Leonardo industry innovation kit for Consumer Products provides visibility across a connected series of assets, such as branded freezers and coolers that are located in retail and convenience stores. Assets can be monitored to ensure they are optimally located, appropriately stocked, and kept at the right temperature. Further, maintenance resources can be dispatched before a potentially costly problem occurs.

SAP Digital Boardroom equips C-level executives with real-time contextual information and ad hoc analysis from across their organization. Built on the SAP Analytics Cloud solution, this next-generation board portal leverages line-of-business data from SAP S/4HANA and other applications to provide a single source of truth for the company.

Fleet management optimization enables the fleet manager to view fleet performance across a number of important parameters, from routes to fuel efficiency to driver behavior analysis. Based on a real-time view of data, the manager can then make better, more-accurate decisions about everything from vehicle routing to proactive maintenance.

Cargill has partnered with SAP to digitize its supply chain using tools driven by SAP Leonardo – such as manufacturing and transportation management – all in support of Cargill’s mission of “helping the world thrive.”

Colgate-Palmolive has teamed with SAP to build the SAP Digital Boardroom into its day-to-day operations, gaining a real-time view of valuable data from across multiple processes to enable better decision-making.

Bosch is using IoT technology to keep its truckers and cargo safe by locating secure parking spaces in real time. Scanning technology “recognizes” the trucks to eliminate the possibility of fraud.
SAP Leonardo: Intelligent Technologies and Innovation Transform the Consumer Products Value Chain and Business Models

Transforming the business starts with ideas to conquer new markets with current products or deliver new value on your home turf. It often goes along with a renewed view on who is the ultimate customer and what kind of value they really need.

### Source-to-consumer traceability
Lack of visibility into a product’s journey from farm or factory to wholesaler to retailer to consumer; inability to pinpoint a specific batch or shipment in the case of a problem

With source-to-consumer traceability, blockchain technology enables the creation of a “chain of custody” – a detailed ledger of data regarding a product’s origin that is carried all the way through to the consumer. This provides greater assurance to the consumer while enabling the producer to take action in case there are problems.

- Increased consumer trust
- Decreased loss in case there are problem batches

### Fashion runway
Difficulty of garnering real-time feedback on fashion designs during runway shows; inability to forecast likely demand for fashion items

Using the mobile app for fashion runways, fashion houses are able to view real-time consumer response to a given design. Further, they can determine whether characteristics such as geographical location have a meaningful impact on sentiment. Taken together, this data enables better decision-making about which designs to pursue and in which locations.

- Faster time to market
- Increased revenue

### Connected agriculture
Inability to gain a wide-angle view of farming operations, hindering decision-making about allocation of valuable resources such as water, fertilizer, and human labor

With the SAP Connected Agriculture solution, farms are able to harness data from sophisticated sources such as drones and smart machines to gain a holistic view of farming operations. Armed with this data, they can make highly accurate decisions – even down to the plant level – about what level of resource a given field or crop requires.

- Increased yields
- Decreased outlay of resources
Business transformation often starts with a paradigm shift that triggers a cascade of business innovations that may end with new business models. Change the focus from assets to relationships or from physical goods to data, and innovators will generate a broad range of opportunities. Rapidly turning ideas into experimental practices requires technologies and services for rapid composition of new ways to do business.

Example

<Vendor ID; material name; material ID; quantity; production date; production location; quality grade>

Example

By way of blockchain Web app

Enterprise systems or cloud solution retrieving and writing data to this material provenance blockchain
SAP Leonardo: Transformational Scenario – Fashion Runway

Build a mobile app for fashion runways, such as the Apple iOS app originally created for iconic designer firm Badgley Mischka’s New York Fashion Week show in February 2018. Consumers attending or viewing the show were prompted to download the app and provide real-time feedback, such as which styles they liked or loved. In addition, the designers could spot subtrends based on the geographical location of the viewers.

Value Delivered

- Faster fashion, trimming a minimum of six weeks off runway-to-store time
- Greater profits by making styles consumers want
- Replacement of social media for a uniquely immersive experience
- Global reach, with consumers everywhere taking part
- Speed to innovation, with development to industrial-strength global release in eight weeks

Fashion runway app built for Apple iOS

Runway analytics app built on SAP Cloud Platform

Runway analytics screen is illustrative only.
SAP Leonardo: Transformational Scenario – Connected Agriculture

Large-scale farms today are typically beset with a series of challenges that stem from a common cause: inability to gain a holistic view of operations in order to make optimal decisions. Which plants need to be fertilized or watered? Which are ready for harvest? What is the best sequence of daily activities to maximize productivity? Without these insights, farmers can make costly decisions such as overfertilizing, underwatering, or not harvesting crops in time.

With connected agriculture, crucial data is made visible and available from across a chain of processes through automated data ingestion from IoT-enabled sources such as sensors and drones. Analysis of this data in real time enables better decision-making about everything from crop planning to water management to fertilization and harvest.

Data sources

- **Aerial images**
- **Sensor data**
- **Machine data**
- **Content and master data**

Analytics and optimization layer

Farm management process layer

Data layer
SAP and Customers Jointly Enable the Transformation Journey

Reimagine: Business model, business processes

Digital business pillars: Customer experience, digital core

Related KPIs: Days in inventory, time to market, customer satisfaction

Shoe shopping is going digital with Aimiqi Shoe Company

Aimiqi’s goal is to connect people and processes by using digital R&D machine learning to create a whole new consumer experience and respond to changing market requirements and fashion trends. Earlier, only 5% of design proposals would reach the production stage, and there was significant overstock and wastage.

Aimiqi uses SAP S/4HANA Cloud for intelligent product design on SAP Cloud Platform with product lifecycle management and virtual reality technologies in the SAP Leonardo IoT Bridge digital operations center. With these solutions, Aimiqi is able to collect and analyze customer requirements to design products that truly fit market needs. Customers can design personalized pairs, select the desired color and the right fit, “virtually” test the “end product,” and place an order.

Read the press release.

“Through the digital innovation platform from SAP, we gained agility and precision in design and production and reduced inventory. It is totally game changing for the footwear industry.”

– Lin Yuchun, President, Aimiqi Shoe Company

Click here to watch the video.
How to Get Started with SAP Leonardo

Whether you’re still exploring new ideas or have defined one idea in detail already, SAP Leonardo brings together world-class innovators, industry and emerging technology expertise, proven use cases, and design thinking methods to help you optimize your business and drive innovation and impact at scale – faster and with less risk.

SAP takes a holistic approach to innovation. Because digital transformation isn’t just about installing the latest technology, we also address the readiness to receive a new idea. From human capital to infrastructure, we bring best business practices across your organization to improve communication, plan for employee training, review technical and regulatory feasibility, and consider other cross-functional needs to drive change and truly scale your innovation.
SAP Is the Innovation Partner for Consumer Products

Ten-year innovation vision
Deliver fully intelligent business solutions and networks that span across company boundaries and promote purpose-driven businesses. These solutions will be the most empathetic symbiosis between machine intelligence and human ingenuity.

- Self-running enterprise systems
- Self-organizing business ecosystems
- New markets and business models

Comprehensive industry coverage
SAP enables the comprehensive coverage of the complete consumer products value chain. With its clear industry road map, SAP is the partner of choice for consumer products companies.

- More than 14,100 consumer products companies in 134 countries are innovating with SAP solutions.
- SAP customers produce more than 79% of the world’s chocolate.
- All lines of business are supported on a single platform.

Proven services offering
By bringing together world-class innovators, industry and emerging technology expertise, proven use cases, and design thinking methods, we help consumer products companies develop innovations that deliver impact at scale.

- Use proven methodologies to drive innovation, from reimagining customer experiences to enhancing operations
- Fuel your innovation through a managed innovation ecosystem from SAP
- Build your own innovation capability and culture

SAP delivers support for becoming an intelligent enterprise in the consumer products industry – providing integrated business applications that use intelligent technologies and can be extended on SAP Cloud Platform to deliver breakthrough business value.