

Consumer Products 2025+

CPG INDUSTRY 2025: NEW TECHNOLOGIES FOR INCREASED CUSTOMER DEMANDS



NTT DATA Business Solutions



NTT DATA
Trusted Global Innovator

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CURRENT CHALLENGES, POTENTIAL, STRATEGIES AND SPECIFIC CASE STUDIES FROM THE INDUSTRY

According to a recent PwC study¹ brand loyalty can only be established when companies reliably satisfy customer expectations. That is the view of 46 percent of consumers surveyed. For 31 percent, the availability of goods plays a significant role, while an outstanding customer service is important for 26 percent. Buyers are prepared to spend more money if they can have these factors in return, particularly if even better quality is available or sustainable or local production is provided.

Today for the consumer packaged goods (CPG) industry, sustained success and new growth both depend on the industry's ability to satisfy varied, complex, and changing demands. Customer requirements are only one element in a range of challenges that determine who succeeds in the market and to which companies must respond.

In this strategic guide, we take a look at the key challenges facing your industry and point out possible solutions and potentials. We then take you through the strategic dimensions of digitization and guide you through a number of specific scenarios and digital solutions that we have already implemented. Let's get started!

¹ How consumer goods leaders envision tomorrow, PricewaterhouseCoopers, 2021



(A) SIX TYPICAL CHALLENGES FACING THE INDUSTRY

1

Customer demands are constantly increasing. In the food industry in particular, consistent product characteristics are of critical importance – at the same time this is associated with great effort, considering that producers must create the requisite quality from different sets of input materials. But raw materials often have different qualities, depending on their origin and the time of year. In recent years, **sustainability** in resource usage and the focus on human rights have also become key quality criteria. For example, in Germany, the latter will be protected under the Supply Chain Act, which is due to enter into effect in 2023. Companies are responding by looking for more suitable and local suppliers, by switching to more efficient and more environmentally responsible production processes, and by being more transparent to their customers.

2

International **supply chains** can not only pose ethical questions but also exert great pressure on companies because of the volatility of raw materials and prices. Fluctuations in the availability of raw materials add a new layer of complexity to the procurement process. Consequently, there is a need for solutions that can better ensure the required continuity and reliability.



Blog: Sustainability Management – Together and along the Entire Value Chain [↗](#)



Blog: Sustainability as a Hard KPI [↗](#)



Video: Software-based Determination of a Product's CO₂ Footprint [↗](#)

3

On the product side, there is an ever-increasing trend towards **shortened lifecycles**, reinforced by digitization and further individualization in society. Customers who research and order globally tend to be more demanding, more critical, and more inclined to take their business elsewhere when compared to traditional repeat customers. The result is greater product variety and shorter product lifecycles, accompanied by a decline in unit numbers. For companies, this means that early identification of trends is more critical to success than ever before, as is the flexible adaption of production and product range.

4

Trading at low margins is quite typical for the consumer packaged goods industry. **Price pressure** is correspondingly high when competitors provide a similar level of quality at a lower price. A globalized market does create new sales opportunities, but also adds cost pressure, as high quality is now being produced in many places. For companies in the industry, that means it is important to keep working on quality and innovation in order to remain competitive. Thereby, it is essential that companies are able to put together a profit and loss statement at any time, with a detailed break-even analysis, so that they can decide quickly whether or not and how to develop, adapt and launch their products. In general, pricing remains a complex process, as it involves not just factoring in the volatile costs for raw materials and primary products, but bonuses, commissions, and advertising subsidies as well. All of these subsequent payments must be considered for an exact profit and loss statement.

5

Exceptional **customer service** is a success factor in the non-food industry, where the "customer experience" factor is more important than ever. In a world full of increasingly interchangeable products, companies can make a difference by working specifically toward improving customer experiences and customer management instead of leaving them to chance. These can be customized products, which are nowadays also possible in the non-food industry thanks to digital technologies. As well as outstanding service that goes above the usual industry standard.

6

New standards are increasing automation in digital invoice processing, accelerating the exchange of documents and eliminating errors – a compulsory when it comes to exchanges between public-sector clients. This is just one of many **legal requirements, guidelines, and standards** that companies are required to comply with. Legal requirements and compliance have particular importance in the food industry, and with international trade and production, there is even greater complexity.

Therefore, there is no way of circumventing end-to-end digitized processes in local and global markets. For example, to reliably manage use-by dates, food producers need efficient management of minimum remaining shelf life information, as well as a detailed inventory, and documentation of quality features drilled down to batch level.



Blog: How Field Service Teams Are Improving Their Customer Experience [↗](#)



Blog: How to Earn Loyalty by Focusing on Customer Experience [↗](#)



(B) SOLUTIONS AND LEVERAGE POINTS

The good news? The long list of challenges comes with a number of potential solutions that directly address those challenges and can each form building blocks in your digitalization strategy. Here are seven examples:

1

Many companies have now introduced a high degree of automation to their production processes. Frequently, however, this does not include the **connection of machinery** to ERP systems. But linking these together provides major benefits: machinery and production data are available to all business divisions so that order control and production processes are optimized, which leads to a wide range of analysis and improvement options.

2

IoT scenarios in production take things a step further –like interconnected sensors, transport containers, machinery, and systems, which collect and exchange data and optimize your workflows in real time through machine-to-machine communication. These IoT technologies are also well suited to quality management, warehousing, and maintenance operations. As an example, quality assurance in production can be digitized through sensors, while quality inspection can be greatly simplified and accelerated with a digital twin. For machines and equipment predictive maintenance applications help to minimize unscheduled repairs and downtime, thus optimizing overall equipment effectiveness (OEE). Intelligent and scheduled maintenance guarantees a smooth process that saves time, money, as well as labor costs.



Video: Driving Digitization
Forward in the Food Industry [↗](#)



Blog: How Machine Learning is
Helping Farmers and Livestock [↗](#)

3

Even in companies that have already achieved a high degree of automation, there is a great need to **digitize business processes** so that they can be depicted more transparently and controlled more intelligently. Not all companies use integrated end-to-end processes – from sales planning and demand planning to spend management, production, and storage. The networking of all information, services, and processes enables more economically efficient spend management, reduces logistics and manufacturing costs, and ensures on-schedule supply and delivery to the greatest extent possible. The digitization of other end-to-end processes, offers comparable advantages, such as these process steps:

- a. From initial contact and customer interest through to sales generation.
- b. In relation to employees' careers.
- c. From development of a product through spend management, production, and delivery to operation.
- d. For order, purchase, and payment for goods and services.

4

Solutions for the **electronic data interchange** (EDI) with suppliers and customers are now standard in many areas of the CPG industry. Of particular interest are innovations and extensions that can further streamline and automate your processes. For this, you should use intelligent data processing in which algorithms take care of repetitive, manual, and time-consuming tasks. A worthwhile approach is Robotic Process Automation (RPA), where software robots learn the typical process steps, like for ordering, and then take over this task autonomously. Your employees are relieved of routine work, thus freeing them up for activities with greater added value.

5

Many companies have to catch up on their **customer and market management**, as the requirements for addressing customer are increasing, even when it comes to acquiring new target groups. Any company that has previously conducted its marketing with the aid of standalone solutions will quickly learn to appreciate the difference that CRM solutions and customer experience management can make. Provide your sales and marketing team with better tools to record leads, orders and customer inquiries to respond more quickly in the market, accelerate deliveries, manage inventory in real time, and facilitate a more pleasant customer experience. This is a way of improving customer satisfaction and loyalty in the long term.



Case Study: Ferdinand Menrad – Great View to the Future with the Introduction of SAP S/4HANA [↗](#)



Case Study: Rügenwalder Mühle – Transparent Electronic Data Traffic with it.x-EDIconnect [↗](#)



Case Study: Bette – Brilliant & Visionary: Excellent EDI Processes with it.x-EDIconnect [↗](#)



6

Data-based decision making requires valid and readily available data, statistics, and reporting. Accordingly, in recent years of the requirements for BI and analysis tools have increased, which companies use to analyze customers, markets, products, and products groups based on complex criteria. Prerequisites here are reliable data from databases and consistent master data maintenance. For the best results, you can then combine solid data analysis with the intuitive knowledge from your own experience.

7

The use of **AI technologies** offers additional potential to further capitalize on the building blocks referred to above for each company individually, - whether for analysis in real time, more rapid reporting, or automating decision making along the value chain. Artificial intelligence applications are available in many areas and are easy to integrate and embed in everyday business processes, helping to provide transparency on ongoing processes and preserving valuable resources. Companies can turn to process automation with RPA, for example, as way of improving inefficient processes in terms of cost, susceptibility to error, and speed of implementation. RPA bots are accurate, work 24/7, and can be deployed in companies of any size and in any industry.



(C) FROM CASE TO STRATEGY

Each of the seven building blocks has the potential to make your company more competitive. However, a systematic approach to digitization needs an overall picture: What are your company's weaknesses, strengths, potential, and opportunities? Which approaches have uppermost priority as they can unleash the greatest potential? How do the individual building blocks interact, and which project sequence makes sense? All of these questions can be answered by a digitization strategy that is tailored to individual customer needs.

The first step is a well-grounded inventory: the "Industry 4.0 Maturity Index" can be useful for manufacturing companies and their strategy development. It outlines the six steps from computerization to connectivity, visibility, transparency, predictability, and adaptability and provides orientation for the next steps. It was developed by the industry 4.0 Maturity Center in Germany in collaboration with NTT DATA Business Solutions.

If you'd like to know more about how you can benefit from Industry 4.0 opportunities, or if you're interested in a customized digitization strategy and IT roadmap, please get in touch!

(D) FIVE SPECIFIC SCENARIOS AND DIGITAL SOLUTIONS

We act as a partner with expertise in consulting and implementation to help you recognize your individual degree of digitization, identify potential, develop a strategy and roadmap - and thus secure the long-term success of your company. Our experience tells us which opportunities digitization can offer, and we can substantiate this with countless examples from practice. Be inspired and get to know your individual digitization potential through our workshops or with a proof of concept with our NTT DATA Business Solutions Co-Innovation Lab.





1. DIGITIZATION OF LOGISTIC PROCESSES: ASSET TRACKING WITH BEACONS

The Challenge

How can you ensure that, during production, the right container with the right content from an appropriate batch is processed and that the environmental parameters, such as temperature, are maintained during transportation? Verifying and documenting this information requires high manual effort. Movements of goods must be posted timely and all relevant information must be entered in the SAP system during posting.

The Solution

With *loopa* and *loopa.Integration*, we use four simple steps to assist you in making your production and logistics processes transparent and automated. All relevant goods or load carriers are equipped with *loopa.Beacon* – a small, Bluetooth-supported device that is capable of processing position and status data. One or multiple SAP objects (e.g., transportation orders, materials, boxes, etc.) are linked to *loopa.Beacon*. The *loopa.App* can then be used to track their positions. In this way, linked SAP objects can be registered and located along your process chains in real time using *loopa*. Our *loopa* integration add-on also helps to ensure seamless posting of all process steps in the SAP system.



A Practical Example: An employee receives the picking order for production supply, either on a mobile device or on paper. The order includes all relevant information, such as the picking location, target storage location, item number and batch. In the following step, the employee enters the picking zone to pick the item. A pick-by-light and/or pick-by-voice is then triggered by the loopa.Beacon, thus ensuring that the correct batch is picked. The employee then leaves the picking zone, and the order is automatically set to transportation in the SAP system, and it is confirmed once it reaches its destination. In the event that the environmental parameters are violated during transportation, the violation is documented, and an alert is triggered so that essential follow-up processes can be initiated. Seamless integration of loopa in the SAP system and with corresponding SAP objects and processes ensures that movements and environmental parameters in intralogistics are posted in the SAP system automatically and in real time. Thanks to the modular configuration of the loopa solution, there are many other processes that can be automated. This process automation is fully consistent with the lean management of a “smart factory” and can help to significantly reduce the number of activities that do not add value.

Results

- Inventory transparency in real time
- Automated inventory posting through location changes detected by sensors
- Significant reduction in posting effort
- Increased product and logistics security
- Analysis of IoT information from the loopa.Beacon to further optimize processes



Video: Digitization of the Supply Chain with loopa [↗](#)

2. NOT AN OUNCE TOO MUCH: THE SMART SCALE

The Challenge

In food production in particular, it is important to be aware of the correct inventories and weights of the individual packaging units moving from production to the warehouse. For this, container weights need to be recorded accurately, both after the production process and after filling. This involves weighing the packaging unit, whether a box or container, during the material flow, preferably by means of direct scale integration. Up to now, the challenge has been in recording individual weights – the fill levels of individual units have, until now, been recorded as a total across the pallet as a whole. This has meant that employees need to manually calculate the new weights of opened pallets before updating them in the ERP system.

The Solution

The solution to the problem: *it.x-scale*, the smart scale adapter, determines the weights, with RFID tags fitted to the packaging units. With these, the boxes of finished goods can transmit data, such as weight and location, to the RFID gateway. The gateway then sends the data to the SAP ERP system. The packaging units are automatically recorded with the RFID tag, allowing the actual fill weights to be determined with direct system feedback. RFID-based recording of boxes also allows for automatic posting of the removal in the SAP ERP system at the mixing hopper. Automatic pallet recording takes place during transportation with the aid of an RFID reader at specific points in the production warehouse. In addition, each pallet can now be automatically recorded during transportation by RFID readers at specific points around the production warehouse.

Results

- Better overview of inventories
- Optimized controlling of production costs and output quantities
- Potential for optimized inventory management and warehouse management
- Removal of manual effort and manual calculation errors during weighing
- Prevention of errors thanks to automated posting



3. SMART SALES AND TURNOVER PLANNING: SALES AND OPERATION PLANNING FOR CONSUMERS

The Challenge

Particular challenges faced by the CPG industry are rapidly changing demand, fluctuating production and spend management capacities. Simultaneously high product availability demands, and precise annual budget planning. Companies are increasingly beginning to question their traditional, mutually independent sales and procurement processes when compared with the potential of an integrated sales and operations planning process. This integrated process promises a special kind of added value in terms of flexibility, efficiency, and transparency in sales and turnover planning.

The Solution

The ready-to-run solution and SAP-qualified partner-packaged solution *it.sales and operations planning for consumer^{R2R}* takes in the full sales and production planning process and specifically addresses the challenges faced by the consumer packaged goods industry. With this solution, promotional quantities can be planned as part of sales planning, or scheduling can be automated using statistical forecasting methods as well as consideration of trend and seasonal changes. Aggregation levels that are typical for the CPG industry, such as product group and customer group, are also taken into consideration as standard. With the aid of comprehensive analysis functions and visualization tools, such as dashboards, spend management and production can promptly identify new capacity requirement peaks, even in terms of specific suppliers. The master data model provided in the solution includes all areas of the supply chain that are relevant to the CPG industry, from suppliers to production, distribution, retail, or wholesale.

Results

- Transparent planning of sales quantities and planned prices
- Accurate demand forecasting for purchasing and integration of suppliers
- Exact overview of production utilization
- Comprehensive analytics and dashboards
- Streamlined process design without significant implementation effort





4. RAPID AND PRODUCTIVE ON SITE: MAINTENANCE WITH MOBILE DEVICES AND IT.XIA

The Challenge

Conventional maintenance during production tends to be associated with higher costs, and there is a need to avoid machine downtime and wasted resources. One obstacle to rapid maintenance is that technicians do not have access to information where and when they need it but instead spend lots of time acquiring missing data about objects. Verifying the availability of any required spare parts also takes time and generates high costs on account of long downtimes of inactive machinery.

The Solution

Mobile devices can help to design faster and more intelligent maintenance processes. Scheduled and unscheduled maintenance orders are transmitted to technicians' terminal devices using specialist apps. With this solution, technicians always have an up-to-date worklist. They can respond more quickly, and thus reduce or prevent machinery downtime. There is also the option of full access to machinery documentation as well as complete fault documentation, feedback for systematic vulnerability analysis, efficient warehouse management and shop-floor reporting.

Results

- Efficient use of maintenance personnel
- Reduced machinery downtime thanks to rapid response in the event of faults
- Reduced costs through reduced documentation effort
- Time savings as a result of direct feedback on the terminal device

5. THE RIGHT DATA IN THE RIGHT PLACE: PRODUCT MASTER DATA WITH ECLASS

The Challenge

Complete, standardized master data are essential to automated and digitized business processes, as is unambiguous terminology. In spare parts procurement, therefore, individual machinery, systems, and components must be classified accurately so that the right spare parts are ordered from suppliers and can be installed as required. This leads to protracted, manual efforts in procurement, as those involved need to consult individual manufacturer catalogues to find the components that they are looking for. Maintaining product classifications manually is extremely time-consuming and highly susceptible to error. Standardized classification of products and services can help to remedy this.

The Solution

ECLASS is the only ISO/IEC standard-compliant industry standard to classify product data uniformly and accurately on a national and international level. It is the global data standard for classification and unique description of product master data and can be used in procurement, sales and controlling as well as process data management. Classifications from ECLASS and material master data can be automatically imported with the smart *ClassCOCKPIT* solution in collaboration with our partner D&TS. The class structure is based on the classification standards used in ECLASS and both enables rapid development of classifications and prevents duplication. This improves data quality, increases efficiency and speed, and optimizes operational processes. In spare parts procurement for always-on production systems in particular, this can help to ensure that the right spare parts are procured both quickly and accurately. Users can thus avoid procurement errors as well as resulting unnecessary, costly machine downtime.

Results

- More reliable and more rapid spare parts procurement process
- Higher degree of automation and avoidance of unnecessary delays in the procurement process
- Reduced process costs
- Improved product master data quality



(E) OUR EXPERTISE IN THE CONSUMER GOODS VALUE CHAIN

Our industry and process experts understand the requirements of your industry. We help with optimization of your core processes, whether in R&D, production, quality management, sales, compliance or warehousing. The approach that we follow ranges from analyzing your company's unique challenges to innovation and strategy consulting to rapid implementation of application scenarios to support your success. This could include integrated product development with its associated formulation of product specifications and declarations in accordance with LMIV, recipe management, customer-specific label creation, end-to-end batch tracing, and the integration of mobile devices.

Six Reasons to Embark on a Journey with NTT DATA Business Solutions:

- 1** Intelligent enterprise from a single source
- 2** More than 30 years of international experience in SAP
- 3** More than 100 SAP S/4HANA transition projects worldwide
- 4** In-depth industry expertise
- 5** Holistic services from consulting to support
- 6** Expansion of the SAP portfolio through own products and solutions specified for your industry



HOW THE CPG INDUSTRY SUCCEEDS THE SUSTAINABILITY TRANSFORMATION

Thanks to NTT DATA Business Solutions' close partnership with SAP®, our specialists can use and functionally supplement SAP solutions around 'SAP Cloud for Sustainable Enterprises'. The innovative SAP sustainability portfolio meets the current sustainability requirements of both society and our clients' capabilities and thus forms the foundation for more sustainable business and entrepreneurship. However, the right software is only part of the change towards a more sustainable business. With our SAP expertise within the NTT DATA Group, complementary add-ons, individual services and our transformation expertise, we accompany you on your personal path to more sustainable business processes.



Website: [Driving Sustainability through Innovations](#) 

#EnablingInnovations

DIGITIZATION IS CHANGING EVERYTHING, AND AT A RAPID SPEED

And everything that can be digitized will be digitized. But how does it work? And what are the benefits? If digitization is the answer – then what was the question?

We at NTT DATA Business Solutions are firmly convinced that digitalization must never be an end in itself - but that there is no alternative if we want to remain successful. We know that there is no formula for the digital transformation, but only succeeds in close partnership with you, our customer.

What do we bring to the table? The technological innovations from SAP, coupled with deep, local market and industry understanding. Moreover, our services are available in more than 30 countries and since our more than 30 years of experience we have helped thousands of companies to become even more efficient and productive.

Within NTT DATA Business Solutions 12,000 employees are active globally and accompany you on the way to an Intelligent Enterprise - wherever you want to start! Our common goal is making the most of a sensible combination of new technologies and adapted processes the decisive competitive advantage for you.

We Transform. SAP® Solutions into Value

Digital transformation helps companies reach their full potential – if the underlying technologies work for the people using them! At NTT DATA Business Solutions, we design, implement, manage and continuously enhance SAP solutions to make them work for companies – and for their people.



Get in contact and learn more
about our expertise:

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