

11 Questions – 11 Answers

# HOW THE FOOD INDUSTRY CAN ACHIEVE A SUCCESSFUL DIGITAL TRANSFORMATION



NTT DATA Business Solutions



**NTT DATA**  
Trusted Global Innovator

**Foreword:**

**How the food industry can achieve a successful digital transformation ..... 03**

1. Why should companies in the food industry take an interest in digital transformation? ..... 04
2. How should companies in the food industry approach their digital transformation? ..... 05
3. How can digital technologies be used to improve planning? ..... 06
4. How can the sales department tap the potential of digital technologies for its own benefit? ..... 07
5. How can the purchasing department benefit from modern IT solutions? ..... 08
6. What added value do digital technologies – and IoT technologies in particular – offer for production? ..... 09
7. How can IoT technologies support quality management? ..... 10
8. What benefits does digitalization offer for warehouse management? ..... 11
9. How can digital technologies take product development to the next level? ..... 12
10. What role does SAP technology play in the food industry? ..... 13
11. How are you planning your sustainability transformation? ..... 14

## Foreword

# HOW THE FOOD INDUSTRY CAN ACHIEVE A SUCCESSFUL DIGITAL TRANSFORMATION

Innovative technologies open up a wide range of possibilities for companies in the food industry; they allow companies to tackle new challenges and tap new fields of business, they improve effectiveness, efficiency, and transparency, they help companies adhere to compliance requirements, and they serve as a jumping-off point for new services.

On the pages that follow, we will show you what these individual technologies can do. We've collected eleven important questions that come up most frequently in discussions with companies. And we'll provide you with eleven concise answers that summarize everything you need to know.

We hope you will find this information useful and inspiring!

Kind regards,



**Waliuollah Al**

Head of Center of Excellence  
Consumer Products  
NTT DATA Business Solutions

# QUESTION

## 01



## WHY SHOULD COMPANIES IN THE FOOD INDUSTRY TAKE AN INTEREST IN DIGITAL TRANSFORMATION?

Digitalization is relevant to all sectors of the food industry, and it will have a major impact on the entire industry in the years to come. Processes in the food industry are particularly well suited to digital transformation, so digital transformation is becoming increasingly important for food producers, as they need to remain competitive and be able to respond quickly to the constantly growing demands they are facing. Digital technologies provide food producers with enormous opportunities to make their business processes more intelligent, modernize their business divisions, and optimize their workflows.

Consequently, it is very important for companies in the food industry to begin working on their digital transformation at an early stage, as well as to draw up their own road map that lays out which areas and processes can be reasonably digitalized, and to what degree. Using existing digital technologies, processes can be optimized, product quality improved, and human resources put to the best possible use. This allows companies to tackle the growing labor shortage in a targeted way and counteract it over the long term, as well as to improve processes and overall quality.



### **Innovation**

Digital transformation: Providing your company with the best opportunities for the future

## QUESTION

# 02



## HOW SHOULD COMPANIES IN THE FOOD INDUSTRY APPROACH THEIR DIGITAL TRANSFORMATION?

The range of digital technologies available today is enormous; they allow for countless use cases along the entire value chain and across all fields. The huge number of options can sometimes make it difficult for companies to get an overview of what's available, or to figure out which digital use cases make the most sense for them. In the worst case, this causes companies not to take action at all. In order to counteract this risk, we recommend developing a digital strategy for your company that defines the areas in which digitalization can actually be applied and which processes can reasonably be digitalized. A digital transformation can occur in small steps for individual processes. It is not generally recommendable to digitalize all of your company's processes – only the ones in which digitalization adds value or improves efficiency. Ideally, companies should start with projects that offer a rapid ROI. Obviously, this decision is sensible from a financial perspective, but it also provides positive motivation for the people involved in the project. The team achieves success relatively quickly, and the digitalization process becomes tangible for everyone involved.



# QUESTION

## 03

### HOW CAN DIGITAL TECHNOLOGIES BE USED TO IMPROVE PLANNING?

The planning process is vitally important to companies in the food industry. That's why good planning begins with sales projections that are as precise as possible. However, as the market-driven factors that influence sales are growing increasingly complex and fast-paced, targeted sales planning is becoming more and more challenging.

Intelligent systems offer incredible potential here, particularly as regards the identification of factors that influence sales and the analysis of causal relationships based on the available data. Modern planning solutions take into account product- and customer-specific seasonal factors and use targeted statistical projection methods to optimize projection quality.

Digital technologies and AI methods also help to assess the quality of the projections and to continuously optimize them with the help of intelligent, self-teaching algorithms.

The subsequent processes in requirements planning and capacity planning can also be optimized and improved using digital technologies.

This allows you to compare planned sales to inventory and capacity, and to identify and resolve problems and roadblocks in your supply chain at an early stage. It also means you can plan your purchasing for the long term and ensure that your inventory is transparent across all locations, helping you to make an informed comparison between your inventory targets and remaining time.

In short: using modern, intelligent systems is enormously helpful for companies in laying a reliable foundation for their entire planning process and continuously improving the results in integrated and rolling planning.

# QUESTION

## 04

### HOW CAN THE SALES DEPARTMENT TAP THE POTENTIAL OF DIGITAL TECHNOLOGIES FOR ITS OWN BENEFIT?

Even in the digital age, personal contact with customers remains a fundamental, decisive aspect in sales. However, digitalization can provide enormous support in this process, giving the sales department more time and space to concentrate on core aspects of the sales process and on maintaining ideal customer relationships. Digital technologies can automate standardized processes and prepare all the important information about a given customer in a digital format tailored precisely to each customer meeting.

Modern solutions such as SAP CX in Customer Experience Management provide companies with an extensive range of functions for optimum customer support – from first contact to the final purchase – and for offering long-term support and bolstering customer loyalty.

The decisive factor here is that the sales department can always access the relevant data (also via mobile apps) to provide customers with exactly what they are looking for, as well as to trigger follow-up actions in order processing.

Electronic data interchange (EDI) is already commonplace in the industry. Intelligent solutions such as RPA bots (robotic process automation), which can considerably optimize the entire order processing sequence and reduce the sales department's workload, offer additional potential.

In planning, too, the right digital solutions can streamline and optimize the sales department's work. Integrated business planning can significantly improve the coordination of campaigns and changes in sales projections. Flexible, user-friendly interfaces with comprehensive reporting ensure complete transparency using the latest data, and they also greatly reduce the amount of work required to record planning data.



#### **Innovation**

Robotic process automation:  
automating time-consuming tasks



#### **Solution**

Implementing the SAP Customer  
Experience Suite (CRM software)

## QUESTION

05

# HOW CAN THE PURCHASING DEPARTMENT BENEFIT FROM MODERN IT SOLUTIONS?

From the perspective of strategic and operational purchasing, digital technologies are extremely helpful for optimizing purchasing processes. From selecting suppliers and supplier qualification to invoice processing, the right SAP applications can add significant value. These applications allow you to call up central information from extensive networks of business partners for goods and services; at the same time, you can negotiate favorable conditions by comparing providers. They also optimize the ordering process by making all the necessary documents – such as bids and contracts – available digitally on a single platform. The cutting-edge, intuitive user interfaces also help to reduce employees' daily workloads.

In addition, they offer greater transparency regarding processes such as goods receipt and order monitoring, as orders can be tracked and coordinated along the entire supply chain. Data is collected systematically, collated to determine KPIs, and used to generate detailed analyses and reports. This allows you to conduct supplier assessments and determine your order volumes based on solid data, as well as to clearly map developments in the prices of products and suppliers across any given period of time. You also have the ability to fully digitalize invoice processing. Intelligent systems already offer a wide range of options here; self-teaching RPA bots can help to further optimize the process.



# QUESTION

## 06

### WHAT ADDED VALUE DO DIGITAL TECHNOLOGIES – AND IOT TECHNOLOGIES IN PARTICULAR – OFFER FOR PRODUCTION?

Digital technologies can significantly optimize production processes. Intelligent planning can minimize set-up times, while sensors can automate processes in many areas, for example. IoT technologies can be used to network machines with one another, allowing for real-time monitoring of production resources and facilitating dynamic optimization of production processes. Using intelligent tools and AI algorithms can also help you design and implement optimized staff planning in production, taking into consideration the wide range of factors that can influence processes. These systems can take into account the qualifications required for the individual steps of the

production process, as well as vacation planning or real-time changes such as short-notice employee absences.

Additionally, digital worker assistance systems can provide context-dependent support for shop-floor workers in various processes and situations to help reduce their workload. This networking, the provision of shop-floor data, and the analysis of machine data also provide incredible potential for optimization in the maintenance and repair of machinery. Technicians can intervene based on the current status of a machine, and machines and systems can undergo predictive maintenance or repairs before unplanned downtime occurs.



#### **Innovation**

IoT and Industry 4.0 –  
From hype to a driver of business

# QUESTION

07



## HOW CAN IOT TECHNOLOGIES SUPPORT QUALITY MANAGEMENT?

In the food industry, it is essential to ensure reliable, end-to-end quality assurance during the production process. Deviations in quality must be identified as quickly as possible so that they can be corrected and faulty batches can be prevented. This generally involves a great deal of extra work, as samples must be taken at regular intervals and analyzed and tested in a lab.

If these samples deviate from the expected quality, the team will need to intervene in order to correct the quality of the batches. The delay between the analysis of the samples and ongoing production can result in faulty batches. These will need to be reprocessed, which takes a great deal of time and effort – or in the worst case, they will have to be destroyed.

Intelligent IoT solutions can help here: the relevant production parameters can be mapped as digital twins. During the production process, sensors are used to measure the data and compare it with the digital twin.

This ensures consistent quality assurance in production by collecting data on an ongoing basis and monitoring measured values. Deviations in quality are spotted immediately and production parameters are automatically adjusted to compensate. If that doesn't help, an immediate alert will be sent so that production can be stopped to prevent further faulty batches. This saves a great deal of time and resources and safeguards the high standards of quality required in food production.

The digital twin is also ideal for helping to meet growing requirements, as it becomes more and more intelligent and continuously learns as the algorithms expand.



## QUESTION

# 08

## WHAT BENEFITS DOES DIGITALIZATION OFFER FOR WAREHOUSE MANAGEMENT?

Batch-specific inventory management in connection with the best-before date of products is one of the greatest challenges facing warehouse management in the industry. First and foremost, the remaining time and the “FEFO” principle (first expired, first out) must be taken into account. This is necessary in order to prevent batches from expiring, and it also ensures that goods are delivered to retail outlets punctually, in line with the requirements regarding the time remaining until expiration.

Organized warehouse management can be an enormous help in ensuring that these requirements are met. Using digitalized processes can help optimize warehouse management and product order-picking. Scanners, headsets, or voice commands can be used to record, sort, and accurately pick batches. The data is collected via the integrated system, ensuring a high level of transparency regarding the current inventory and batches. This improves the traceability of the batches and ensures that delivery and production are networked.

The processes in warehousing and stock removal can also be optimized and automated. Rather than manually

maintaining tables and lists, you can use the appropriate software and hardware to automatically record and manage goods receipt and goods issue, such as by scanning a bar code.

The goods labeling process during goods receipt can also be digitalized. Intelligent solutions provide comprehensive support for the cross-docking process and help to optimize storage areas for fast- and slow-moving consumer goods, in order to make ideal use of warehouse space and continuously improve stock turnover.

Material flow is one aspect of digital and networked production that often isn't on a company's radar. Tracking the position of items, containers, or loading equipment in a warehouse in real time and posting status changes to the SAP system automatically – you can do all of this with the high-tech indoor logistics solution “loopa”. “loopa” is a standardized system solution made up of hardware and software components and is already directly integrated into existing SAP systems. In production and other areas, “loopa” can be used to create a digital twin, allowing for tracking and automatic posting to the SAP system.

## QUESTION

09



# HOW CAN DIGITAL TECHNOLOGIES TAKE PRODUCT DEVELOPMENT TO THE NEXT LEVEL?

In the food industry, there are many brand-name products that have been staples of the product range for many years. In order to meet growing customer demands for new, more diverse products, new products are being launched at ever-shorter intervals. The dynamic way in which customer requirements are changing, seasonal products, and individual preferences for certain flavors are driving companies to constantly enhance their recipes. In order to remain competitive over the long term, it is important for companies to clearly stand out from the crowd.

Consequently, companies' recipes are their foundation; managing existing recipes and developing new ones based on those is an important aspect of successful product development and, correspondingly, of a company's success. Fluctuating raw material prices and customer/market demands with strict price requirements for the products produced must be taken into account in the process.

Customized IT solutions can significantly optimize the creation, maintenance, and management of recipes in line with these complex requirements. In an integrated system like SAP, data from all divisions (purchasing, production, quality management, sales, finance, controlling) is available and can be used to update existing recipes and, above all, to develop new ones. The system can analyze experiments conducted in the past, and based on that data, it can determine which recipes have already been developed, tested, or discarded.

This data can be used to develop new products, saving companies considerable time and effort. Here, too, integration allows the SAP system to offer precise price calculations for products, helping companies stay in line with market prices.



# QUESTION

# 10



## WHAT ROLE DOES SAP TECHNOLOGY PLAY IN THE FOOD INDUSTRY?

The fully integrated solutions from SAP – including cloud-based solutions – are ideal for end-to-end mapping of industry processes and offer a wide scope of options for optimization in all areas, from product development to financial management of the entire company. The logistical, technical, and financial processes are all closely interconnected: Planning sales and requirements, procuring raw materials, managing production, delivering products to customers, drawing up invoices, and setting up integrated controlling with product cost and contribution margin accounting – SAP systems can significantly improve a company's productivity in individual areas as well as across the board.

SAP provides a high-performance digital platform based on cutting-edge modern technology; it includes a large number of applications for the food industry, and that number is continuously increasing. The customized software and add-ons developed in-house by NTT DATA Business Solutions are the perfect complement to the SAP portfolio; they fulfill industry-specific requirements such as offering typical processes for planning, weighing processes for production, or the central management of label printing with batch information for production and warehouse management. With our many years of industry expertise, we help our customers navigate the wide range of available solutions to make the best choice for them, and we provide them with expert advice as they successfully implement the digital transformation process at their companies.

# QUESTION

11



## HOW ARE YOU PLANNING YOUR SUSTAINABILITY TRANSFORMATION?

NTT DATA Business Solutions' close partnership with SAP allows our specialists to use the "SAP Cloud for Sustainable Enterprises" SAP solutions and supplement their functions. The innovative SAP Sustainability Portfolio is perfectly in line with modern society's sustainability requirements, and it is also ideal for our customers' needs – it lays the foundation for more sustainable business and management. But the right software is just one aspect of the transition toward becoming a more sustainable company. As an SAP specialist within the NTT DATA Group offering helpful add-ons, individual services, and our transformation expertise, we would be happy to support you on your own personal journey toward more sustainable business processes.



### Innovation

Sustainability as a driver of innovation



### **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.

[www.nttdata-solutions.com](https://www.nttdata-solutions.com)

Learn more about our expertise:

<https://nttdata-solutions.com/contact>

Follow us on



**NTT DATA Business Solutions**



**NTT DATA**  
Trusted Global Innovator

05/2022