

#forwardtogether

The road to success of digital forethinkers



- How top companies in the process industry have optimized, digitized, and automated their businesses
- What are the challenges of the digital transformation?
- Eight stories illustrating how to turn visions and ideas into specific customer benefits





Dr. Babor GmbH & Co. KG,
Germany



Courage Production,
USA



Pivka perutninarstvo d.d.,
Slovenia



ProMessa B.V.,
The Netherlands

#forwardtogether

Eight exciting stories of digital transformation in the process industry

Pioneering achievements are often sparked by a powerful vision, courage, and the willingness to take risks. This is also true for the digital transformation. In recent years, we got to know many inspiring innovators. They work in food production or in the cosmetics industry, they are the leaders of small family enterprises or global corporations, they come from Europe, Asia, or America.

What these individuals, as different as they may be, have in common is the devotion to their jobs, their curiosity, and their readiness to question established patterns. They have multiple perspectives on their traditional business and on the potentials of digitization. They do not place confidence in apparent effects, but in solid, sustainable solutions that really make a difference and that produce practical results. With the decisions they take, they define the blueprint for the future of their industries.

Successful forethinkers are not alone. They rely on partners and ideas that enable them to go beyond the usual boundaries of industries and structures. CSB is proud to be the innovation partner of these people, contributing to the future viability of these successful and ambitious enterprises. We would like to introduce some of these companies and show you the fascination and diversity of devising and implementing digitization.



Dr. Peter Schimitzek



Sarah Vanessa Kröner

Board of Directors of CSB-System SE



Cukiernia Staropolska,
Poland



Österreichische
Wurstspezialitäten GmbH,
Austria



Wolf
Wurstspezialitäten GmbH,
Germany



Zuger Frischkäse AG,
Switzerland



Other exciting insights can be found
in our video stories: www.csb.com/stories

Paper can bear anything. And that's about it.

When book printing began to establish, it was met with some fierce opposition. The elites were quite aware of the explosiveness of this new technology. And they were right. Printing presses produced leaflets and pamphlets as an entirely new way of creating political weapons, facilitating ideas to spread quickly and widely.

Digitization also has this potential for change. For example, the transformation to a paperless data flow in production increased the timeliness and transparency of data while minimizing the frictions in the communication across the different stages of the value chain. It also allows smart machines, devices, transport media, and even raw materials

and pre-products to interact in this communication. Just as book printing released the communication from manual copying, digitization has released the communication from being tied to a specific medium – which constitutes a radical break.

Forethinkers of digitization are characterized by their ability to recognize the potential of a new technology. They not only use this ability to improve established processes and structures, but they also consider the question, "What can we do now that wasn't possible before?"

Dr. Babor GmbH & Co. KG



Company

Dr. Babor GmbH & Co. KG | Specialist for natural and luxury cosmetics | Market leader for institute cosmetics | Founded in 1956 | Processing of about 900 different raw materials | Supply to approx. 2,500 cosmetics institutes in Germany and 3,500 worldwide | 450 employees | www.babor.com



Solution overview

ERP with Procurement, Inventory, Production, Production Planning, Sales, Traceability, Quality Management and Lab Information System, Hazardous Materials Management, Maintenance Management, EDI, Mobile ERP, DMS, Financial Accounting, Asset Accounting



Top customer benefits

Optimal integration of the entire process chain | All data flows in real time | Paperless processes in production ensure secure mixing processes and full traceability | Real-time postings in picking prevent stockout and excess stock



The topic of digitization will be even more relevant for us in the years to come."

Horst Robertz, CEO of Dr. Babor GmbH & Co. KG



Getting rid of paper

The big digitization campaign of Dr. Babor GmbH & Co. KG began in 2011. Their ultimate objective was to introduce a new ERP system to put an end to the paper chaos at the company. "When it came to deciding which new ERP system we should introduce, we found that CSB provides the optimal integration of our entire process chain: from research and development to purchasing, production, inventory, supply chain management and logistics and to our sales system," says CEO Horst Robertz. Today, eight years later, digitization at the main plant of the market leader is well advanced.

The ERP software is the company's central data turntable, linking all players with each other: the staff in administration and the workers in production and logistics, but also machines and equipment as well as the various electronic devices like hand-held scanners, tablet PCs and smart glasses. One of the main benefits of the paperless data flow is the real-time flow of information between all players. As a result, data is always up to date while providing maximum transparency throughout all stages of the value chain.

A quantum leap: tablets in production

The positive effects of digitization are tangible specifically in production. Instead of using paper during the weighing process, the staff has tablet PCs that display the relevant information such as manufacturing methods, safety instructions and raw material lists. The intuitive user interface can be operated easily also by employees without IT experience, enabling feedback on processes in the mixing department, the input of SSCC (Serial Shipping Container Code) numbers or the entry of tare and other data related to the mixture.

Besides reliable mixing processes, the tablets facilitate better documentation and logging. As a result, every finished product batch has traceable links to the related intermediate product batch and even to the raw material. "Traceability is an important subject for us. As we are working in accordance with cosmetics GMP, we are required to document every single process step. The tablet PCs in production therefore meant a real quantum leap. This was the first time that our workers were able to report back the production data in real time," says Robertz.

The Smart Factory project continues

In order picking, Babor has taken yet another big step forward. Until a few years ago, the employees used to remove products from the shelves and tick them off in their picking lists. Today, most of the items are handled with a pick by light system in Aachen. Lights installed at the shelves indicate the storage location holding the items to be picked. The picker acknowledges the removal by pressing a key, and feedback is given to the ERP system simultaneously. In the high-bay warehouse, employees work with Google glasses, which guide the pickers through the hall so they can process the orders much quicker.

This method called 'pick by vision' saves Babor around 18 percent in time. With all optimizations achieved so far, Managing Director Horst Robertz has set up the "Smart Factory" for the long term. He argues that this is most of all about the business use of the data in the future. "This subject will be even more important for us in the years to come, and we are convinced that in CSB, we have found the right partner for the future."



New answers are good. New questions are better.

If you don't find satisfactory answers, you can keep on looking. Or rephrase the question. This is exactly the fascinating promise of new technologies: They enable us to ask different questions. Thanks to digitization, we can illuminate areas that until now were hidden from sight. We can precisely monitor the processes running there, analyze them, and develop innovative optimization approaches.

The same goes for many aspects in the production of foods. A smart combination of intelligent scales, a powerful ERP system, and data analysis allows us for the first time to

determine exactly which smoke house causes the lowest loss in weight for a specific product. The smoke house, which used to be a real black box in the past, is transformed into an intelligent element for a targeted use in the optimization process.

From this, we can derive a special best practice for future digitization initiatives: looking for better answers is a compulsory exercise for every entrepreneur while looking for new answers is elective.

Courage Production



Company

Courage Production | Specialist for hot dogs, beef jerky, poultry and delicatessen products | Founded in 1911 | Production volume approx. 7,000 tons | 350 different items | 120 employees | Long-term supplier of retail customers like Costco, Trader Joe's, Whole Foods (Amazon), Safeway and Vons | www.courageproduction.com



Solution overview

ERP with Procurement, Inventory, Production, Coverage Planning, Sales, Production Planning and Control, Quality Management, Traceability, EDI, Business Intelligence, Financial Accounting, Mobile ERP



Top customer benefits

Digital data management enhances the process efficiency and enables in-depth analyses | Optimized smoke house planning and allocation minimizes production losses | Simulated recall takes less than one hour | Optimum utilization of production lines through precise planning and simulation



We are able to optimize the yields of every item in every smoke house and consequently to minimize our losses."

Rob Engelhart, President of Courage Production





Comprehensive digital optimization program

"What if we were able to know exactly which smoke house provides the best results for specific product groups?" That is just one of the questions Rob Engelhart, President of Courage Production, has been asking. The company based in Fairfield, California, was founded in 1911. It specializes in hot dogs, beef jerky and delicatessen products – and it is very successful in addressing its current challenges by using new technologies.

In 2009, Courage introduced the ERP software by CSB-System to better support the government regulations and the increasing documentation requirements in its business. By doing so, the company has laid the foundation for a comprehensive optimization program which, to date, has produced many great results. "We spent a good two years investigating how we could improve the production process. In the past, everything was rather complicated. Every day, some 50 pages of paper were passed on to production: orders, bills of materials, recipes, work instructions, etc. We have now digitized and streamlined this to a great extent. At the same time, we have really intensified our data capturing", says Engelhart.

Which products should go to which smoke house?

The smoke house example clearly shows which major efficiency gains could be achieved here. Courage produces about 350 different items. Every single item, at some stage, will go into one of the four smoke houses, where it will lose part of its weight. But how much is it exactly, and why do the losses in the smoke houses differ? A pilot project was launched to find this out. Every smoking cart was weighed before and after smoking, at PC racks that were set up specifically for this purpose. The weights were transmitted online to the ERP system, and the resulting aggregated data provided a precise overview so that the managers could determine the respective weight losses.

As a result, they were able to identify in which smoke house the specific products had the lowest loss. This in turn allowed optimal economic planning and distribution of the raw materials to the different positions in the chambers. The outcome was that numerous so-called "marginal gains" – such as a two-percent increase in hot dog yields, one percent less water loss for beef jerky – ultimately added up to a major cost saving. "This allows us to optimize the yields of every item in every smoke house, and to reduce our losses to an absolute minimum," Engelhart reports.

Optimum utilization of production lines

While the digital optimizations have led to a high level of efficiency now, the management now focuses on the metrics-based planning and control of the meat processing facility. Predictive machine planning has become increasingly important to ensure the best possible utilization of the production lines and, at the same time, to remain flexible for short-notice orders. With Advanced Planning and Scheduling (APS), both are possible for Courage, as the module takes the five most important factors into account for planning: product group, label, wrapping films, allergens, and set-up changes. The system provides an optimized planning proposal, which can be adjusted dynamically and in detail by the managers.

A series of several optimization measures that Courage recently initiated should bring even more transparency. The aim is to make the ERP system and its data on purchase orders, order entries, invoices, calculations, production orders and inventory movements, the "workhorse" and the growth driver for all business decisions. "We want to double our production and expand our products throughout the United States over the next five years," Rob Engelhart says.

Inventories are bad. Having no inventory is not good either.

Even before the corona crisis, the inventory was a highly controversial link in the production chain. In many industries, inventories notoriously ruin liquidity and profitability, or they are denounced as an inefficient process disruption. Even more so when it comes to perishable goods such as meat products. At the same time, inventory management is a prerequisite for the ability to buffer peaks in the demand, to control varying process speeds, and to ensure supply capability. A business dilemma.

Forethinkers and pioneers love dilemmas. Those who manage to solve them usually benefit from above-average advantages – in the form of higher profitability, better quality, or entirely new service approaches. Take the food industry, for example. Here, the relation between

the disadvantages and the advantages of inventory management could be changed significantly using an intelligent combination of ERP, buffer inventory and data entry points, which results in a perfectly balanced push and pull production. With the right concept, and integrated within the process and system landscape, the inventory can even become an efficiency driver and absorb the fluctuation of prices.

New technologies offer a multitude of creative ways to transform an “or” into an “and”. A successful digitization strategy therefore not only requires looking at the classic optimization levers, but also questioning the dilemmas that, so far, were unsolvable.

Pivka perutninarstvo d.d.



Company

Pivka perutninarstvo d.d. | Production volume: 14,000 tons | Fresh and frozen poultry products and sausages | 550 employees (group) | Slaughter, processing and packing under one roof | Sales volume: EUR 38 million | www.pivkap.si



Solution overview

ERP with Procurement, Inventory, Production Planning and Control, Cutting, Coverage Planning, Sales, Quality Management, EDI, DMS, Mobile ERP, Inventory Management Computer, Route Management, Traceability



Top customer benefits

Maximum efficiency from raw material procurement to picking | Interaction between ERP, buffer inventory and data capture points ensures optimized push and pull production | Real-time data flow allows for intelligent business management | Growth has doubled since the introduction of the ERP system



In the last ten years, we've been growing twice as much compared to the past, with the help of CSB."

Janez Rebec, Managing Director of Pivka perutninarstvo d.d.





New processes and digital data flow required

Poultry processors are well off? Yes, as the global sales of chicken fillets, chicken wings etc. are booming. But poultry production is not a sure-fire success. "We cannot accept any major cost drivers if we want to achieve a good margin. This starts in raw material procurement and continues with the use of the chickens and, finally, picking," says Janez Rebec, Managing Director of the Slovenian poultry processing company Pivka. Their biggest operational challenge: At Pivka, there is a time gap of several hours between the slaughter of the animals and the processing of the customer orders. While slaughtering starts at 5 a.m., the first orders don't come in until after 1 p.m. In the past, this led to extreme peaks and inefficient processes in the production and packing departments.

About twelve years ago, Janez Rebec was no longer prepared to accept this. His goal: to achieve the all-encompassing digitization and optimization of processes, production structures and data flows and thus to manage better the decoupling of process stage scheduling.

ERP and buffer inventory for an optimized push and pull production

Pivka has implemented the main steps for this in collaboration with the experts of CSB. As the basis for their ambitious optimization project, the project managers chose a combination of an ERP system and a buffer inventory to create a perfect balance in the entire push and pull production. Packed into crates, today the processed animals are moved to the warehouse on a single-item basis. From there, the articles are moved just in time to the lines for packing and labeling, in accordance with the orders. CSB-Inventory Management is the central control unit here. It makes sure that the right raw materials go to the right lines.

Today, CSB Racks ensure maximum transparency at the lines as they communicate online with the ERP system and supply the staff with all relevant data for order processing. In return, all data originating in production are transferred directly into the ERP system. This real-time data flow enables the managers to keep track of the current activities and allows for intelligent business management. Inventory consumption, sales figures, production volumes: The important facts are available at the press of a button.

Production fit for growth

For Pivka, digitizing the processes constituted a major step forward towards a successful future. The entire organization has become faster and is significantly more cost-efficient today than it was a few years ago.

The interaction between ERP system, buffer inventory and data entry points in production helps to make processing of the orders a lot less stressful. What is more, Pivka can better fulfill the wishes of its customers in terms of availability and freshness thanks to the improved reconciliation of data on inventory, capacity and demand.

These positive effects are also reflected in the key performance indicators: The production volume has been increased by approximately 40 percent. With an annual turnover of 38 million Euro, Pivka has now become the number 2 in the Slovenian poultry market.

"When we introduced the CSB-System here, we were a very small company in the Slovenian market. But in the last ten years, we've been growing twice as much compared to the past, also with the help of CSB. Of course, there are still things that we could improve with our ERP system," reports Managing Director Rebec.

Undermine the economies of scale. Change the laws.

The long-tail strategy is one of the most important laws in digital business models. In fact, it is a complete inversion of fundamental business certainties. Long tail means that the success in e-commerce no longer depends on blockbusters: An elaborate range of special products and niche products can be very profitable, because the production, picking and distribution costs are much less dependent on the economies of scale. This principle is increasingly met by the demand for customized products – with the same quality, speed and price structure as in the high-volume mass market.

These are the expectations that also traditional production companies need to address. More and more frequently, their

customers place low-volume orders for various items that have to be supplied within a very short period – which would normally kill your profitability. Unless you break the established rules and restrictions, using the right tools provided by the new technologies.

In the food industry, for example, parallel processing and picking, integrated and networked information and control processes and consistent automation can help achieve the near-impossible balance between profitability and customization. Digitization pioneers always define their strategies in accordance with the rules and restrictions that need to be undermined in order to turn what used to be an impossible undertaking into a long-term growth driver.

ProMessa B.V.



Company

ProMessa BV | Product range: prepacked meat products (pork, beef, convenience), vegetarian products | Daily deliveries to 1,200 supermarkets | Over 150 employees | Sales volume: more than €70 million | More than 750 products | www.pro-messa.nl



Solution overview

ERP with Procurement, Inventory, Production Planning and Control, Cutting, Coverage Planning, Sales, Quality Management, Accounting and Finance, EDI, Maintenance Management, Sorter Picking



Top customer benefits

Integrated control and monitoring of all processes from purchasing and production to logistics and shipping | Parallel processing and picking of various quality lines | Fast response times for re-orders | High-level diversification of the product range at low logistics costs



With our logistics system, we are able to pick and deliver even small quantities in an efficient manner.”

Harold Rouweler, CEO of ProMessa B.V.





New logistics economically supply 1,200 customers

Meeting the needs of food retailers even better and fostering the market position: This was the goal of Harold Rouweler, CEO of Dutch meat processing company ProMessa, back in 2015. The most important parameter to achieve this was the complete redesign and automation of the logistics system. "We supply some 1,200 supermarkets. For this, we need a logistics system that enables us to process our wide range of artisanal products economically. Our customers, among them Coop, Spar and Plus, can order any item even on short notice and in small quantities. If you place your orders in time, you will receive your goods usually on the same day," explains Rouweler.

Logistics has thus become a major competitive advantage in a country where the traditional service counter is now practically obsolete. Around 90 percent of the meat products sold in the Netherlands are prepacked products from food retail stores.

Fully automated material flow

The core of the project was the high level of integration of the inventory systems in the existing ERP system. Today, the entire logistics system is controlled and automated by a software system, including three crate storage facilities for empties, large and small volumes, four weigh price labeling and picking sorter lines, an automatic dispatch warehouse and the conveyor technology.

The automated flow of goods starts directly at the production exit. Small-quantity items are moved to a single storage position inventory, while fast-movers are forwarded to an innovative portal gantry robot warehouse. From these storage facilities, which serve as a buffer before labeling and picking, the containers are moved to the four weigh labeling lines with connected goods-to-person picking sorters. Customer-specific labeling and picking are completed in a single step. The IT system enables easy processing of the orders by performing a so-called "case calculation" for one batch each prior to picking, splitting the customer orders into pre-calculated mixed containers. In the next step, the order management system ensures the optimal distribution of the required quantities to the four weigh labeler and sorter lines.

Productivity up 100 % at 99 % delivery performance

As a result, all systems can now process the largest possible quantity per item. The adjacent dispatch warehouse combines the completed containers in customer stacks. All of this is performed in a route-optimized manner, also decoupled from all upstream processes throughout the day.

The automation has significantly improved ProMessa's productivity: "We have nearly doubled our output to about 150,000 packages per day," said Rouweler. Not only has ProMessa optimized its performance, it has also achieved substantial improvements with regard to its stocks. "Thanks to the speed of our logistical system, we now buffer only prepacked non-labeled goods for one day," the CEO explains. Daily deliveries to customers can be realized even with very short order lead times. The delivery performance currently is over 99 percent.

Penetrate, not break, the barriers to growth.

Step costs can be impenetrable barriers to growth: success stories come to a standstill because the next step unexpectedly requires totally different rooms, machines, control processes and organizational structures. Further growth often entails crossing a threshold in the philosophy, such as the transition from manual work to industrial production, which is a difficult decision to make especially for traditional enterprises in the food industry.

Digital solutions offer possibilities to match the growth with guerrilla tactics, aiming to penetrate rather than painstakingly breaking down the rigid barrier of step costs. For example, by digitizing and automating order processes, quality tests, enterprise resource planning, raw material input or production planning. The result is an increase in the efficiency and productivity of the team, allowing you to master the complexity and to reduce the cost pressure so that you can still traditionally pursue your craft despite the increase in size.

Cukiernia Staropolska



Company

Cukiernia Staropolska Wojciech Kozłowski | Owner-managed production company for fresh pastry and confectionery products | Daily production volumes: approx. 20 tons | 500 employees | 40 own subsidiaries | www.cukierniastaropolska.pl



Solution overview

ERP with Procurement, Inventory, Production, Quality Management and Traceability, Sales, EDI, Subsidiary Information System, Financial Accounting, Mobile ERP



Top customer benefits

Precise automated planning of semi-finished and finished products | Efficiency up, costs down by digitizing the shop floor | Standardized product quality through full control of the weighing process | Seamless traceability of all products



Thanks to CSB, we were able to optimize our production and to reduce our raw material stocks substantially.”

Wojciech Kozłowski, Managing Director and owner of Cukiernia Staropolska



Craft, yes – but supported by information technology

With his traditionally manufactured cakes, gateaux and pastries, Wojciech Kozłowski suits the taste of many consumers. At the ultramodern pastry shop, still a lot of products are made by hand, and the company plans to “keep it this way”. To make this business model economically viable, the managing director relies on the latest technologies and an integrated business software. In doing so, Staropolska pursues a coherent optimization strategy for its business, which like many other food producers is confronted with high raw material prices. Any potential digital improvement should be used to make the operations more efficient and, consequently, to produce faster and more cost-effectively. In order to prevent any interruptions in the flow of information, interfaces to a separate production planning system or even the coexistence of several systems like Access or Excel have to be avoided.

Better planning and control

The software by CSB is not only used to order raw materials from the suppliers, but also to manage customer orders, organize the inventory, check the quality, and ensure traceability. In addition, the subsidiaries and their cash registers are connected to the central system.

In light of the short shelf life of the fresh products, exact and up-to-date information on orders, raw materials, ingredients, product calculations and quality information is increasingly important. This posed a particular challenge for the project. Today, Staropolska is able to plan the use of raw materials, auxiliary supplies and operating materials in an optimal way, thus making sure that the right raw materials are supplied with the right quality at the right time and at the right machines. Supported by the system, the staff plans the optimal sequence with varying levels of detail. As a result, the orders in the sponge, cream and fruit cake divisions can be produced with constantly high quality while keeping the setup changes to a minimum.

The improvements in planning have a direct effect on the processes in the different departments. “We were able to substantially reduce our raw material stocks, to optimize our production and consequently, to boost the effectiveness of our company.”

Digitization enables quick wins and long-term success

Staropolska is a good example of how digitization often starts small, producing quick results in the operation, and then continually yields further benefits for the company. For example, the recipes in dough processing and other production departments are now displayed digitally. Given the direct link between the scales and the ERP system, the processing accuracy is enhanced significantly. When the individual raw materials are weighed, the weight data of the scale are transferred directly to the system, practically ruling out any processing errors. This ensures again a high and reproducible product quality, and it minimizes losses caused by incorrect weighing. Collecting and processing all data digitally also enables Wojciech Kozłowski to establish precise evaluations, even with his smartphone.

These numerous improvements laid the foundation for the big growth of the pastry shop, which has achieved a fivefold increase in production volumes over the past 10 years. This trend should continue: “We will build a new bakery because the one we have now has become too small. In the new plant, we will again rely on the software by CSB.”



Secure resilience through hybrid decisions.

Resilience is the capacity to adapt quickly to changing situations, to overcome shocks without irreparable damage to the core functions, and to return quickly to normal operations. A difficult requirement for which there is no alternative in a world that has become virtually unpredictable.

Transparency is a prerequisite to resilience, particularly for complex structures like food production. Transparency is the precondition that enables sustainable decisions concerning the daily routines as well as strategic issues. For example, with a view to prices, conditions, and delivery terms that are agreed with a customer; capacity limits of the machines; guarantees for specific quality standards; or the profitability

of specific production lots. Defining the required indicators, capturing an up-to-date, complete set of information, and preparing the data as a basis for decision-making, is only feasible by using intelligent technologies in a networked organization. This is the only way to master the complexity and dynamics of the environment.

Digitization forethinkers are keenly aware that they have to build on "hybrid decision processes" in the coming years. Intuition, experience and the willingness to take risks will remain essential for managing your business. However, the basis for this will be a transparency that is created out of the interaction of data and smart technologies.

Österreichische Wurstspezialitäten GmbH



Company

Wiesbauer – Österreichische Wurstspezialitäten | Market leader for cured sausages in Austria | Family-owned business into its third generation | Four locations | 825 employees (group) | Sales volume: 189 million Euro (group) | Sales: 27,000 tons (group) | www.wiesbauer.at



Solution overview

ERP with Procurement, Inventory, Cutting/Production, Sales, Quality Management, EDI, Weigh Price Labeling, Computer Integrated Manufacturing, Business Intelligence



Top customer benefits

Commercial key performance indicators at the press of a button | Paperless information processing at all processing levels | Extensively automated processes from Cutting to Production | Central data management to ensure error-free labeling



It is a big advantage to have one partner and one system that is so closely interlinked."

Thomas Schmiedbauer,
Managing Director of Wiesbauer – Österreichische Wurstspezialitäten GmbH





Wiesbauer started its digitization over 20 years ago

Integrating all processes in one software system has always been an important part of Wiesbauer's corporate strategy. Whether enterprise resource planning, labeling, logistics or traceability: at the company's four sites in Austria and Hungary, all employees work with the same ERP system. "It is a big advantage to have one partner and one system that is so closely inter-linked. Thanks to CSB, our company is much more efficient in many areas," says Thomas Schmiedbauer, Managing Director of the company, which is now into its third generation. When Schmiedbauer's father Karl built the greenfield facility some 20 years ago, he anticipated a great deal of what we would refer to as "digital sausage production" today.

Paperless information processing, automatic production and logistics processes, intelligent material flow control, networking with the other three locations: The key factors of a smart factory were taken into account right from the planning phase of the plant. The material and product flows have been automated to a great extent for many years now. The highlight is the process from cutting to production, which is fully controlled by the software to ensure maximum organizational efficiency.

Good data basis for smart decisions

Schmiedbauer particularly focuses on the data transparency, because making reasonable decisions means that you need to have accurate information at hand. "When I'm talking to my customers and conducting negotiations, I want to be able to decide right away whether it's a deal or no deal. For this, I can draw on the calculations in the ERP system, its reports and the customer evaluations." Vital data like key performance indicators from production, but also sales volumes, terms of payment, order rhythms, conditions, rebates, discounts – everything is available at the press of a button.

Today, such a degree of transparency is crucial in the day-to-day business, but it should be taken even one step further. "Right now, we are working on a way to portray not only the sales volume, but also the gross margin or the customer's profit and loss account based on the latest information," says Schmiedbauer. Optimized data management plays a central role also in other divisions of the company, as this is the only way to guarantee a smooth and error-free information flow in the sausage production. This applies to cutting as well as to the production departments and, most of all, to traceability.

Expanding the digital sausage factory – for the benefit of the customers

Networking its four sites is another important factor for the daily operations at Wiesbauer. For example, with regard to labeling: at Wiesbauer, all details that are relevant for labeling are stored centrally in the ERP system. As a result, changes in the bills of materials are made available immediately at all locations and lead on to automatic adaptations of the labels.

Speaking of digitization, Thomas Schmiedbauer not only thinks of his own company, but also of the customers. His goal is a smart sausage factory that is resilient to downtime and that can always respond flexibly to change requests of the customers. In his view, this is a prerequisite for successful customer relationships. "If I cannot rely on my software and technologies, I will not be able to guarantee my services to the customers, which I would lose. This is why continuous digitization is extremely important nowadays."

Sustainability through the back door.

Sustainability has many aspects. However, it can only provide substance and future viability if ecological and ethical principles do not have to be weighed against profitability. One example for this is smart logistics. For example, by significantly reducing the number of routes, a company can save time and money. At the same time, it actively contributes to a reduction of exhaust emissions and traffic volumes. This requires sophisticated planning, because a multitude of parameters from transport logistics, inventory management, production and coverage planning need to be linked intelligently with external data and maps. This is a

task that can be – and actually has been – solved by using cutting-edge digital technologies and optimization models that are based on data, as demonstrated in our examples.

Digitization has the potential to resolve decades-old oppositions and to make business goals achievable. It can establish a framework where we are not forced to choose between sustainability and profitability, protection of livelihood and growth, regional high-quality production and competitiveness.

Wolf Wurstspezialitäten GmbH



Company

Wolf Group | Founded in 1925 | Family-owned business into its fourth generation | 1,800 employees | Production volume at four plants: about 60,000 tons of meat products and sausages per year, including 40 million pieces of Original Thüringer Rostbratwurst and 210 million pieces of Original Nürnberger Rostbratwurst | Sales volume: 300 million Euro (2016) | www.wolf-wurst.de



Solution overview

ERP with Procurement, Inventory, Production Planning and Control, Cutting, Production, Coverage Planning, Sales, Traceability, Quality Management, Accounting and Finance, BI, HR, DMS, EDI, Mobile ERP, Maintenance Management, Inventory Management System, Route Planning and Optimization



Top customer benefits

Optimal planning of production at several facilities | Real-time data to increase machine effectiveness | Route optimization to cut down on transport costs | Full traceability of raw materials and finished products



Today, data is crucial, because without data, you won't get a listing on the market."

Jan Seidel, Managing Director of the Wolf company group



Good data management needs a control center

Just like many other companies in the meat and sausage industry, the Wolf group is on the verge of change. Besides good product quality, data management is becoming increasingly important for their success in this complex industry. There is a change in the expectations and demands for information by the market players: "Today, data is crucial, for example about origin, production, quality and billing. We do not only need this information for ourselves in order to be able to respond quickly. We also need to provide this data to our suppliers and customers. Let's put it straight, without data, you won't get a listing on the market," says Jan Seidel, Managing Director.

Following various digitization measures, the four production facilities of Wolf have acquired an ideal data-oriented position. Jan Seidel relies on coherent IT as a control unit to manage, optimize and document all processes of the company. In doing so, the medium-size enterprise aims at achieving a visionary strategic goal: being a major player in digitization.

Data as a lever for increasing efficiency

In an early digitization wave about 20 years ago, Wolf implemented the ERP system by CSB at all of its locations. Today, the company uses the software to manage all data, to plan procurement and production, to optimize recipes and to enhance the transparency of costs and gross margins.

In its transport logistics, the electronic (IT aided) optimization of routes enabled Wolf to achieve improvements in route scheduling, distances, capacity utilization, load weights and volumes, making the most of the available vehicles and staff. "The entire project paid off in less than 6 months because we were able to cut down on many routes," Seidel reports.

After all, the focus on data assures full traceability. To be able to identify products quickly in case of an incident, every incoming raw material is assigned a lot number which it keeps throughout the entire processing of the batch in production and all further steps. As the weigh price labelers and labeling systems receive their data from the CSB-System, traceability data can be encoded in 2D barcodes (QR, Data Matrix, etc.), which are attached to the single packages. In parallel, the data is transferred to consumer information systems such as ftrace and mynetfair.

Digitization is increasingly important for success

Jan Seidel has a clear vision of how to proceed with digitization at Wolf. Ultimately, all processes should be controlled by the IT system to make the paperless factory become a reality.

Currently, Wolf focuses on capturing the data of the production machines in use and further improving the utilization of this information. In this context, connecting the filler lines to the ERP system is the first step towards achieving full transparency in the filling process. At the end of the day, the networked production should bring many economic benefits, including the determination of the overall equipment effectiveness (OEE). The actual quantum leap will be the enhanced control of the different departments, machines and margins. "First and foremost, we produce meat products and sausages. But we also want to achieve world-class level when it comes to digitization. For us this is the basis of a successful business."



Food industry – the next chapter.

Will digitization really have the pledged effects? Can it live up to the many ambitious promises of its advocates? There really is not a clear answer to this. It usually takes several decades for a disruptive innovation to take effect: fifty years after opening the first commercial power plant until electricity had a noticeable effect on the economy. Thirty years after the introduction of the first computer models until they provided a measurable contribution to productivity. The daily life and the daily business routines had to be changed fundamentally in order to create an environment where the new technology could become fully effective.

The good news is that these cycles have accelerated drastically. Economy and society are learning incomparably faster, and knowledge is disseminated in real time around the globe. Although we are still far from unleashing the

full potential of the new technologies, it has been proven that digitization is not “nice to have” but highly relevant to competitiveness.

Numerous pioneers have demonstrated that the use of innovative, data-based methods has an enormous impact on productivity and growth. Digitization can lead to quality leaps while drastically reducing the quality cost, halving the time needed in picking and logistics, substantially improving response times and flexibility, accelerating product development and revolutionizing customer services.

With digitization, the food industry can start a new fascinating chapter. We want to build this future together with you. Let us start now – there is much to do.

Züger Frischkäse AG



Company

Züger Frischkäse AG | Swiss market leader for mozzarella and other cream cheese specialties |
Export share: 40 percent | 250 employees | 400 suppliers | 700 customers | 2,500 packaging components
www.frischkause.ch



Solution overview

ERP with Procurement, Inventory, Sales, QM, EDI, BI, DMS, Financial Accounting, Human Resources,
Route Management



Top customer benefits

Optimal portrayal of the complex processes to ensure the efficient production of small batches |
Coverage planning management to ensure the availability of materials and capacities at any given time |
50 percent time saving and minimized error rates in picking | Standardized and transparent returns
management



In the past ten years, we have massively upgraded our IT so we can better portray the market requirements.”

Christof Züger, CEO of Züger Frischkäse AG





Better meet customer needs with IT

By introducing the CSB-System, the CEO has positioned the information technology at the cream cheese company so that it can better fulfill the customer requirements. "We offer our customers what the industry giants cannot do," says Christof Züger. For example, Züger supplies easy-to-handle convenience products like cheese cubes and slices or heart-shaped mozzarella. Besides conventionally manufactured products, the customers can choose from an organic product line as well as small product series. Overall, Züger processes the milk of its 400 suppliers in about 700 different products, some of them in very small batches. There are 2,500 packaging components, seven production departments and three high-bay storage facilities. Add to this Switzerland's expensive production conditions. Their impact must not weigh too heavily on the prices, especially in the international business. Under these conditions, a professional IT infrastructure is a must for Züger. To keep the processes at the factory as lean as possible, the cream cheese specialist integrated all company areas in a network – with the ERP system by CSB.

Permanent digital optimization

Establishing the information technology as a "business enabler" started early on in the company's history. At the same time, this constituted a vital step for the further success of the then five-strong team. Aided by the ERP software, Züger is able to control the processes in administration and production in an optimal manner. All data from milk acceptance to the different processing stages, inventory management and picking and delivery is captured in the system so it can be processed immediately. The real-time data has also enhanced the planning. For example, Züger uses Coverage Planning to assure the availability of materials and capacities. As a result, the operational processes can be steered so that the orders are delivered at minimal cost and at the requested date. In picking, Züger achieved 50 percent time savings while minimizing the error rates by combining high-bay storage facilities and mobile data capture. With CSB-Document Steering, Züger benefits from defined standard processes and a better overview of returns.

After about 20 years in operation, the outcome for the cream cheese specialist is very positive. The micro-business has evolved into a globally successful niche player with a staff of 250 employees. "Only with the growth in the ERP system, were we able to portray the organic growth of our company and to keep efficient structures," Züger reports.

Digitization continues to play a central role

For Christof Züger the further digitalization of the company remains a top-floor issue: "We have installed a lot here in Oberbüren in order to live a kind of Industry 4.0. This has many benefits for us, but also for our customers. Right now, we are upgrading our German branches to CSB, with the same logic we have here in Switzerland." At the main plant in Oberbüren, the maintenance module is also planned to be implemented in order to facilitate early maintenance and repair of the machinery pool. It also helps to get a clear overview of weak points and costs. In the future, goods receiving is planned to be handled with hands-free terminals so the data is transferred to the ERP system even faster. With the Business Intelligence solution, Christof Züger intends to enhance the transparency of his company and, for example, better analyze the complex data sets from production and logistics. His goal: Making the right operational and strategic decisions, and making them even faster.

Programmed for Your Success

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