FASTEC
Software for Production

We digitalize factories

User Report

apetito AG

apetito

Content

The Smart Way to Transparent Production – Selection and Cross-Plant

Implementation of FASTEC 4 PRO at apetito

While apetito started out as a family business it now supplies customers all around the world. As the company grows, so does the need for efficient production and comprehensive reports to evaluate it. The basis for this is solid data collection in production, which is not based on manual records or Excel but is available digitally in real-time at any time.

Read this success story to find out how apetito can now serve the multi-layered requirements of food production more efficiently with the help of FASTEC 4 PRO and how it records and reports production data entirely digitally.

- **Initial Situation: Requirements and Decision Process**

- **Solution**

- **Implementation: Phases 1 and 2**

- **Results, Testimonials from Production**

- **Contact**

Goal: Transparency in Real-Time

Initial Situation

As a responsible family business, the apetito corperation has been providing nutritious food for people in different nutritional and life situations for over 60 years. Founded in 1958, the apetito Group is now divided into apetito AG for retail and system business and apetito Catering. In total, the company employs 12,000 people. Apetito is active in the development of gastronomic services in eight countries, including the USA and Canada.

Despite the company's size, a family-like approach and short decision-making paths are part of the corporate philosophy. Aware of the importance of digital data collection, apetito had its own MES solution in operation for several years. However, with increasing company growth and demands for significant data as well as comprehensive transparency, this solution reached its limits. The self-developed software, which was used in one plant, was no longer expandable; for example, there was no monitoring to control the processes, the reporting options were in-

sufficient, and data could not be viewed in real-time. In addition, the solution was very maintenance-intensive.

The other three plants used Excel spreadsheets or manual records to collect data. This approach was error-prone and made cross-plant data analysis and reporting virtually impossible.

The dynamic development of digitalization and the growing importance of Industry 4.0 brought the search for an MES provider to the forefront of the company's priorities. Therefore, apetito looked for an external MES software solution, compared different providers and attended the FASTEC user forum.

| Companies | Kindergarden | Clinics | Meal Services | Schools | Retirement Homes | Day Care | Workshops | Meals on Wheels |

Mastering Complexity

Requirements for the Software Solution

● **Objectives for the Implementation of an MES:**

➜ Comprehensive transparency in production (OEE calculation, recording of malfunctions, quality assurance) as a basis for identifying optimization potential in order to achieve a long-term increase in productivity

➜ Consolidation and standardization of the IT landscape below the ERP system SAP

➜ Establishment of a basis for further digitalization projects, e.g. binding of weighing technology and personnel data

➜ Standardized MES solution across four plants to enable comprehensive, comparable reporting

● **Procedure:**

A project team was formed involving all four plants and a joint specification was drawn up to record all requirements in detail.

Particularly relevant was the compliance with legal regulations as well as the demonstrable assurance of constantly high product quality according to the requirements of the HACCP concept. Furthermore, the interface to the ERP SAP was important, which enables messages and feedback between MES and ERP. SAP is the control system for production and contains cycle times, process orders, the assignment of items to lines, operations, bills of materials, and other basic data that the MES must read out.

Real-time reporting with clear visualization was also an elementary part of the specifications. In particular, this includes a user-friendly order overview, the visualization of order progress in real-time, and the display of all key figures in individually compiled overviews at the push of a button.

● **Why FASTEC?**

The plant management at apetito had the requirement to use evaluations and reports for higher-level strategic decisions. During the selection process, it was determined that many software vendors provided solid data collection, but the design of meaningful evaluations and reports had severe limitations. Also, some vendors could not map the critical FDA legal regulations and the HAACP concept transparently and reliably, which automatically disqualified them.

Based on the specifications, an corresponding evaluation matrix and a utility analysis, FASTEC GmbH won the tender because it met all of the food producer's requirements.

Keeping up With the High Demands

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FASTEC 4 PRO

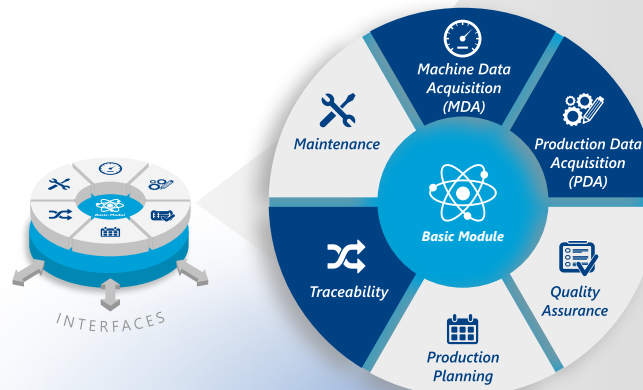# Solution

Our Software:

Flexible, Modular, Individually Adaptable

The modular software solution FASTEC 4 PRO supports the optimization of your entire production.

It improves production planning, creates more transparency and regulated processes, provides KPIs, analyses and reports – regardless of industry and flexibly adaptable even to special production processes.

Based on the basic module, the six main modules can be combined according to individual requirements and supplemented by various additional functions. The individual modules access a joint and standardized database.

As a result, consistent data is available at all times – there are no additional interfaces between the modules and no redundant double data storage.

INTERFACES

Machine Data Acquisition (MDA)

Maintenance

Production Data Acquisition (PDA)

Basic Module

Traceability

Quality Assurance

Production Planning

FASTEC 4 PRO at apetito

Applied Modules
- Machine Data Acquisition (MDA)
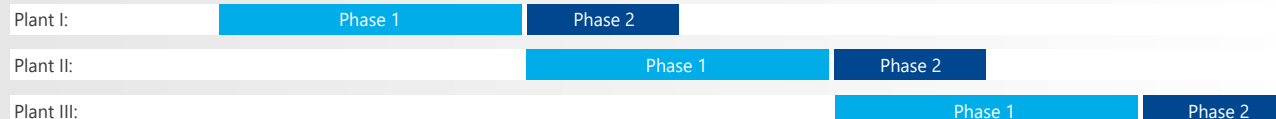- Production Data Acquisition (PDA)
- Traceability (TRC)

Additional Functions
- Process Data
- Alerting
- Document Display
- KPIs

Special Features at apetito
- SAP interface
- OPC UA for data acquisition
- Close cooperation with the FASTEC partner Gustav Wilms oHG. Via the RFID solutions of Wilms, process-relevant information of the VA trolleys can be recorded in production and imported into FASTEC 4 PRO.

The benefit: a transparent, completely digital container management. This ensures comprehensive quality assurance as well as improved container tracking and container status recording to increase efficiency in production processes.

Plant I:	Phase 1	Phase 2	
Plant II:		Phase 1	Phase 2
Plant III:		Phase 1	Phase 2

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FASTEC 4 PRO

Implementation Phase 1: Filling and Packaging

- **Pilot Launch at the Rheine Plant:**

  The implementation of the software solution started at the plant in Rheine. In phase 1, the filling, freezer and packaging departments were bound to FASTEC 4 PRO. First, a sketch of the production was converted into a data model and together the apetito project team and FASTEC employees determined where which type of sensors had to be placed.

  „In the implementation of these requirements for our production process, which are admittedly very complex, the company FASTEC supported us ideally with its knowledge based on experience."

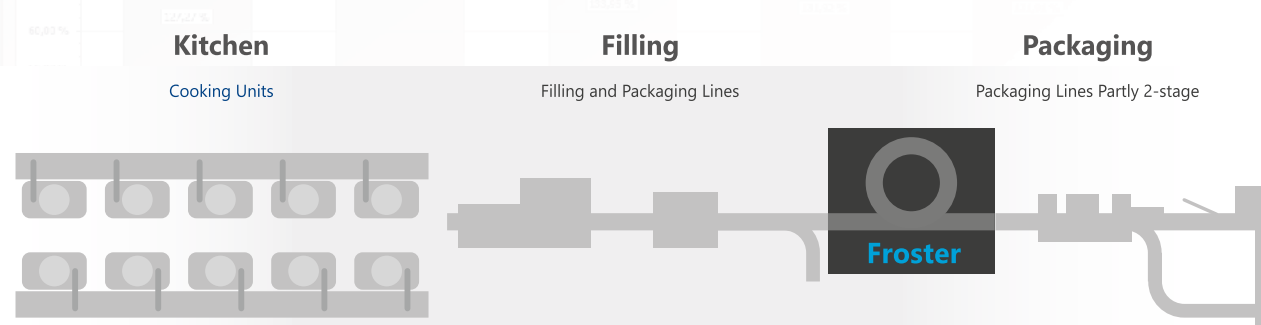 **Jörg Maxara**
  Technology/Project Management, apetito AG

- **Revealing Other Challenges:**

  In the production process, there is a freezer that freezes produced food, preparing it for the packaging process. When reporting and analyzing the reasons for malfunctions, it is important for a prompt response to malfunctions to clearly identify whether the reason for the malfunction is in front of the freezer or occurs at the back in the packaging area.

  apetito has a two-stage packaging process consisting of cold packaging and final packaging. In cold packaging, the finished, frozen products are packed into bags and then sorted into boxes and palletized in final packaging.

  Another challenge is that the products, which are created in SAP in a specific unit, change units two to three times during the production process. This makes reporting difficult and requires a very flexible software solution.

  Alongside data acquisition via sensors on the line, additional data was implemented which is read directly from the PLCs of the machines. These are data such as pressure or temperature during the production process, which are recorded for documentation and quality assurance purposes.

Kitchen	**Filling**	**Packaging**
Cooking Units	Filling and Packaging Lines	Packaging Lines Partly 2-stage

Froster

Displaying Complex Production Processes

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Implementation Phase 1: Monitoring and Reporting

• Data Acquisition and Real-Time Monitoring

The screenshot shows an example of the worker termi-nals. The OEE of the item is shown, as well as a visual representation of the finished product currently being produced on the line. On the timeline, even from a distance, you can see whether things are going well or poorly on the line at the moment.

The apetito employees have come to appreciate this very much. Thanks to a real-time reporting view, even when only passing by, the plant manager can see what is currently running on the lines and where any disrup-tions are.

• Reporting – Condition Evaluation

The definition of the categories for recording the rea-sons for malfunctions was carried out in cooperation between apetito and FASTEC. The category system consists of three levels and was further optimized from the launch of the system until an optimal coverage of all possible reasons for malfunction was possible. In the corresponding analyses of the reasons for malfunction, it can be seen very clearly that some items are more susceptible to malfunction than others. In the food sector, this is often due to product features and certain consistencies.

The reports can be displayed in more detail or aggre-gated again with a mouse click. Individual days, but also weeks, months or annual overviews can be visual-ized. This is helpful to identify available capacities in the plant or to derive strategic decisions. apetito also uses FASTEC 4 PRO's interface to Power BI to realize even more comprehensive reports by combining different data sources.

The reports are discussed daily in the Level 1 meeting with the shift supervisors and weekly in the plant man-agement team. The reports serve as a tool for identify-ing optimization potential and jointly deriving meas-ures. Per mouse click, the views are broken down into details in order to identify the causes of disruptions.

In meetings with the management, on the other hand, the overall performance is considered and details are only consulted in case of specific queries. All parties involved are extremely satisfied with this flexibility, which was achieved by FASTEC 4 PRO in reporting.
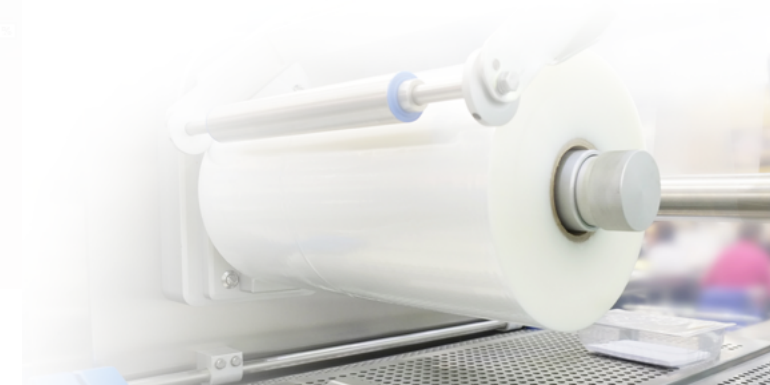
Conditions Visualized in Real-Time

Implementation Phase 2: Cooking Aggregates and Cooking

In the second phase of the digitization project, digital data acquisition, batch tracking, and container management were implemented in the area of cooking aggregates. The goal of the second phase was, on the one hand, to optimize and further digitalize the already existing batch tracking. For this purpose, we use the RFID solution of our partner Gustav Wilms oHG, which can be optimally bound to FASTEC 4 PRO.

On the other hand, container management was to be introduced to optimize the planning of containers and their availabilities and display the status and condition evaluation of the containers.

In contrast to the MDA area, apetito had no experience with previous solutions. With FASTEC, all requirements and possibilities were discussed in a workshop to work out an optimal individual digitization solution.

In the production area between the cooking kettles and the production lines, ready-cooked dishes and components are transported to the filling lines in VA trolleys that hold approx. 200 liters. In order to simplify the checking of batches and quality, the PLCs of the cooking kettles are now read out, and an MDA is also implemented at the cooking kettles, which allows recording the start and end of cooking processes as well as the start and end of cleaning or malfunctions. This information is recorded via scanners and RFID chips on the VA trolleys.

Thanks to a special adhesive, the RFID chips are optimally adapted to food production requirements and can easily withstand both freezing and high temperatures during cleaning. This technology was implemented by Gustav Wilms and integrated with FASTEC 4 PRO.

The information from the RFID chips is displayed in FASTEC 4 PRO at the line and matched with information from SAP to ensure that the VA trolleys arrive at the correct line destined for further processing of the contents. The current status and availability of the VA trolleys are also digitally recorded via the RFID chips and can be viewed transparently.

Quality Assurance and Traceability

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Results, Review

As Part of a Project Review, an Acceptance Protocol Was Created Based on the Contents of the Specifications. The Result Is Convincing.

Self-explanatory, intuitive user interface –Simplified information retrieval for employees ✓

Increase in productivity through optimization measures – achievement of savings ✓

Up-to-date, reliable data at any time at the push of a button – derivation of measures in meetings with production planning and scheduling ✓

Online monitoring – control of production in real-time ✓

Extensive reporting with individual views – fast decision-making in day-to-day business ✓

Significant improvement in data reliability ✓

Effective control of production through prompt reaction to deviations – improvement of OEE ✓

„We have achieved everything we set out to do. FASTEC has fulfilled its task to our complete satisfaction!"

Jörg Maxara
Technology/Project Management, apetito AG

All Set Goals Were Met.

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Testimonials from Production

„Pilot mentoring was time-consuming, but FASTEC's error handling was really fast and generated trust."

Project Teamer

„Finally a good looking databased system. I mean, basically, great and we haven't even fully explored it by a long shot."

Technical Employee

„Easy as pie to operate."

Machine Operator Packaging

„Very good data transparency."

Technical Management

„Very colorful, but a good overview."

Machine Operator Packaging

„You can now transparently see the status of other departments."

Machine Operator Filling

„Frost tracking is changing and getting better."

Machine Operator Cold Filling

Satisfaction at All Levels

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Why Not Get to Know Us Personally?

Production companies must produce on time, in a traceable, flexible and customer-specific manner, while ensuring consistently high quality. Achieving these goals requires transparency through real-time information, good planning and quick and adequate reactions to deviations. Our Manufacturing Execution System (MES) FASTEC 4 PRO is the right tool for this purpose. With great success since 1995.

We would also like to give you a good advice personally!

Our sales department will be happy to provide you with further user reports and information material! Or else, make an appointment with our sales department for a presentation at your location, in our company or via web. Of course, you can also experience FASTEC 4 PRO live and on site with our customers.
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Additionally, we offer videos of our software and customer solutions in our YouTube channel:
www.youtube.com/FASTECGmbH

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With FASTEC 4 PRO, you gain the necessary level of transparency in all areas of production in real time, enabling you to discover previously unused potential for increasing productivity and optimizing processes.
Thanks to targeted planning, you can also respond to short-term requirements from sales and efficiently design production processes – traceable and documented.

FASTEC 4 PRO

- Get transparent data in real time
- Reduce production costs
- Detect and eliminate weak points
- Develop high productivity potentials
- Benefit from the continuous flow of information
- Use available resources efficiently

▶ **As a data hub, FASTEC 4 PRO is essential on the way to the Smart Factory.**

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