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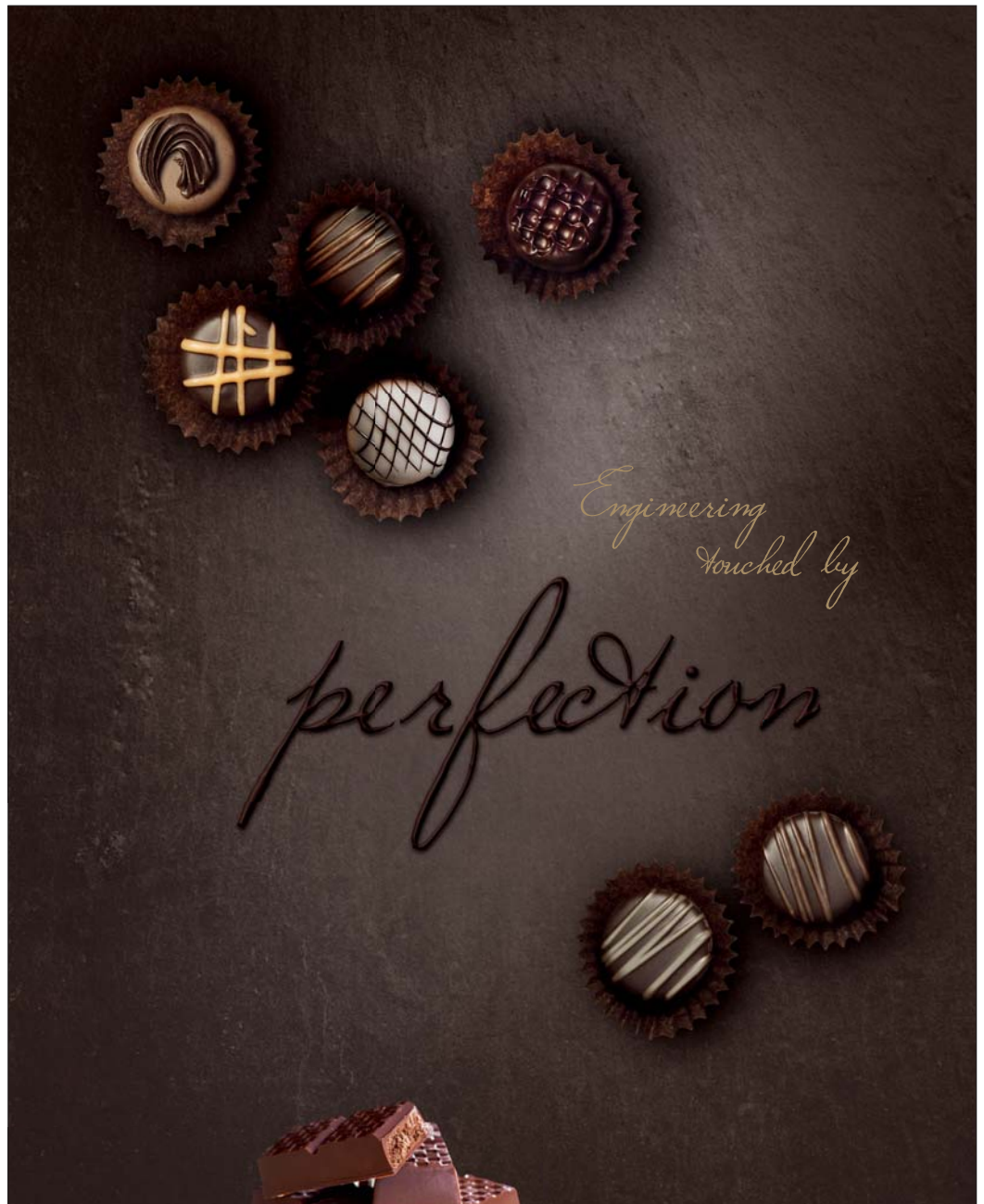
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MONDOMIX

Planning system makes chocolate manufacturing sweeter

From looking at a praline box you cannot tell how complex production and packaging are. But a praline box is like a construction kit: if only one part is missing the packaging process cannot be started. Since implementing Fekor production planning, Hachez has manufacturing and packaging under control.



Mit Fekor ist sichergestellt, dass immer genügend Material für die benötigten Produktionsmengen vorrätig ist. Fekor ensures that sufficient material for the required production amount is available.

uses Fekor all the way from producing chocolate bars and pralines up to the packing station. Also the planning for the sales display packing, which is located at another site, is done in Fekor. Currently the system handles more than 4,600 items, including approximately 800 individual chocolate shapes, chocolate bars or other semi-manufactures. The planning is covering different time horizons, between a few hours and two years.

The sales department is entering the planning of individual items and orders into a sales planning system which feeds the information to Fekor. Fekor then determines the production orders, while taking into account the inventory. The resulting production schedule includes the required inventory coverage, the optimal lot sizes, and set-up times.

Costs are minimized

The three systems – Fekor, the demand planning system, and the inventory control system – are linked through an interface. The data is synchronized. Normally on Monday the current week is updated and the next week is roughly planned. On Tuesday the production plan for the following week is handed out. The plan also includes workforce planning.

The planner usually starts the day with reviewing the production performance reports of the previous day, which were reported overnight. If any orders could not be processed, he adds them to the schedule and runs a new optimization within a few minutes. Short-term changes are circulated as part of the production meeting or by telephone.

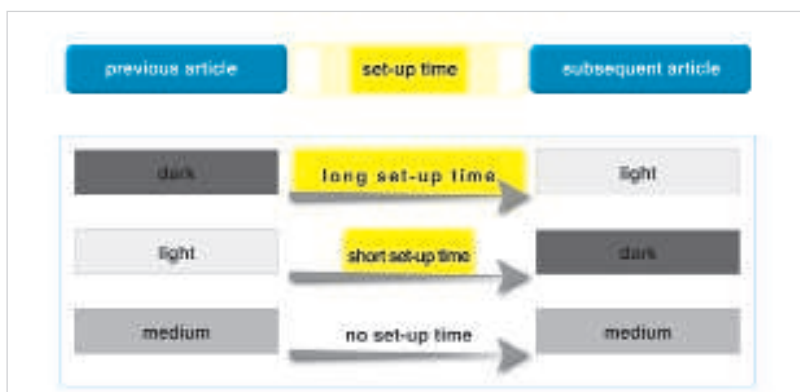
During the optimization Fekor solves the classic conflict of production planning, which is to bring appar-

Hachez has a strongly staggered production and they had already invested in a computerized planning system in the 90s. Over the years the requirements got considerably more extensive, because Hachez expanded their product range significantly. So it was time for a new and more flexible system. The company has a large range of products and in comparison to other manufacturers a particularly deep staggered production. Many process steps run parallel and are intertwined.

The goal was to solve the complexity of these processes technically and to implement a production planning system, which guarantees on time delivery and at the same time a low-cost production. With the help of a consulting company Hachez had developed a specification document and

scanned the German market. Already during the selection process it got obvious that the requirements for Hachez place high demands on a production planning system. One reason being the necessary long-term planning, considering every item and every month in advance. Finally the winner was Fekor from FertigungsLeitSysteme GmbH und Co. KG (FLS), because the system already fulfilled most of the requirements in its basic version. It could easily be adapted to the special conditions of Hachez. The production planning and control system is in use by Hachez since 2001.

It is Fekor's task to ensure the availability of products and materials, to create the production plan and to generate production orders. The system serves as interface between sales, production and procurement. Hachez



Mit Fekor lassen sich Artikelgruppen einrichten, durch die sich wiederum die Rüstzeiten verringern.
Fekor is using article groups – they reduce setup-times significantly.

ently contradictory objectives together. At each step all cost related factors, such as personnel, equipment and temporary storage as well as productive and non-productive times, are assessed. As a result, the total costs of the operation are minimized. The top priority however is to keep the promised delivery dates.

If there are changes during the week which require rescheduling, the planning is optimized by Fekor quickly. Fekor displays the new production plan as well as all the consequences it brings to other orders. It is so fast that the optimization of the plan can be done multiple times per day, as each optimization takes only a few minutes.

The demand planning with Fekor is very transparent: account plans show not only the current stock for every single product, but also its future development with the planned in and out flows. The system knows for each product in which mixed box they are used. This makes it easy to plan when which quantity has to be produced. Fekor is also important for the medium-term planning: the production of seasonal items can be controlled in a way that early production can still guarantee the freshness and keep expiration dates. In addition Fekor calculates in advance for each calendar week, when and how many additional temporary workers are required during seasonal peaks.

With Fekor the planner can focus on what really matters: react fast on unforeseen events and develop cost-effective solutions. However the system cannot make all decisions. If for example only a small amount of a praline type is missing for a certain pro-

duction, an automated system would delay the entire order until the last missing praline is also available. The planner can interfere manually and use his experience: he shortens the production order on a lower average inventory level and moves the production of the remaining missing quantity to a later date. The knowledge of the planner also comes into play when potential bottlenecks occur: he can change the priorities for individual orders with just a few mouse clicks. The extensive product range forces Hachez to change the machine set-up for almost every shift.

Reducing set-up time is extremely important to them. As a major feature Fekor is using article groups. Items which have the same or a similar format can be combined in a group and will be produced together. This reduces set-up times significantly. Additionally Fekor minimizes cleaning times by optimizing the sequence.

Planning of special promotions

Personnel deployment is optimally planned with Fekor, since it calculates staffing requirements automatically. Given the high proportion of personnel costs at Hachez, the ease of forecasting human resources is very important for expense management. Fekor determines the net requirements of production hours.

The system allows sales to be flexible, since the production planner can quickly answer whether production capacity is available at a desired time. This is particularly important when sales plan special promotions. Fekor directly provides the information whether a short dated order can be

completed within the preferred time frame. Additional calculations could include checking whether it makes sense to produce an order together with other items and therefore make production more efficient.

Also the purchasing department benefits from Fekor: the system reports the demand to the purchasing system, so the correct parts are procured and available in the right amount at the right time. Purchasing at Hachez has a planning period of two years ahead. This allows closing long-term contracts with sufficient lead time to procure all materials. This of course requires a reliable sales plan.

Reduction of error rate

As Fekor is deeply integrated in the production process, an operational reliability is crucial. Fekor is in use and has never failed since 2001. The safety concept provides that even with an outage for several days the production can continue without disturbance, since the production plan is prepared for several days in advance.

For Hachez investing in a standard system 'off the shelf', that was easily adapted to the specific conditions at the factory in Bremen, has proven of value. The continuous development of the system was important, as Hachez benefits from the ideas of other users. FLS implements those enhancements through updates.

Fekor's benefit is making scheduling and optimization very simply. It provides transparency about the demands of each department and each line. Within minutes you can reschedule a plan and the planner can be certain that all consequences are considered. Fekor ensures delivery, because it lets you know as early as possible, which components will be needed when. Since the introduction of the system, the error rate is significantly reduced. One planner alone does the planning and scheduling for the entire production with the system. This requires optimal data maintenance, which also depends on the level of desired automation of planning. Fekor allows to define the optimum level strived for. Although it is a standard software, it maps the processes very well that are typical for the confectionery industry. ■