

Improve planning, production, and delivery!



## **A regular working day**

How production planning with FEKOR  
secures delivery dates and reduces costs



## FEKOR A regular working day



### Optimal Planning

8 am

The ERP system has provided the planning with 10 production orders.

Within a few minutes Peter Punctual\* has put together the optimized production plan with FEKOR. The system has considered the availability of machinery, equipment, personnel, and production resources and compared several sequence options.

### Deploy resources efficiently

8:30 am

A machine operator calls in sick.

FEKOR knows the skills of all employees and assigns a colleague who has the appropriate training to the affected machine. An employee, who operates several machines at the same time, is put on neighboring machines.

### Secure delivery dates

9 am

A supplier informs that today's delivery for packaging is delayed by a few days.

FEKOR is integrated into the materials management and therefore knows that they still have 400 boxes in stock. Hence Peter can deliver today's requested amount to the customer on time.

### Act quickly

10 am

A bearing of a packaging machine is broken.

FEKOR routes the order to a similar machine and considers all consequences: another, non-time-critical, order will be finished an hour later.

### Minimize unproductive time

11 am

A customer orders 500 articles at short notice.

FEKOR re-schedules the production plan within a few seconds and positions the order into the production sequence. Despite the short-term change only minimal set-up times arise. The graphical control center makes it easy for Peter to see the consequences that the new plan has on other orders.

### Plan foresight

12 pm

A customer orders 2,000 units for next week.

FEKOR calculates that an additional shift is required this weekend. Since production planning and materials management form a unit in FEKOR, the system has controlled and verified that personnel and material will be available. Peter has enough time to discuss the weekend shift with his employees.

### Keep the overview

2 pm

FEKOR reports 'red'.

The FEKOR control center shows a red bar. The reason: a last minute order cannot be finished on time, if it is continued to be processed on only one machine. Therefore Peter splits the order. Within minutes FEKOR runs an Optimization of the plan, distributes the two partial orders on two machines and secures the on-time delivery.

The control center shows the consequences for this change for the whole production plant.

### Informed decision making

3 pm

Conversation with the managing director.

Due to increasing order volume the management considers to invest in a new machine. Peter and his manager simulate in FEKOR the effect of an additional machine for the whole production. Within minutes he copies historical data into the simulation mode and displays the proposed changes in a real environment. The investment decision is now based on actual data.

### Minimizing costs

5 pm

Closing time.

Peter has met all delivery dates and completed the detailed planning for the next day. He knows that FEKOR has calculated the most cost-effective solution in spite of unforeseen events and short-term changes.

\* Peter Punctual is production manager at a medium-size company. A few months ago he introduced FEKOR and significantly simplified detailed planning.

Of course, Peter Punctual only exists in our imagination. However, if he was real, his work day could be very similar.



# Production planning and control with FEKOR

The ultimate goal of every company must be to achieve and secure a high level customer satisfaction and therefore ensure long-term returns. One of the most important factors is on-time delivery.

Detailed planning of production is a highly complex task: only 10 production orders on 1 machine result in 3.6 million possible combinations to optimize the production schedule. This number excludes the consequences any decision has on the other production stages

## FEKOR coordinates the production

FEKOR calculates the best production sequence, so that the promised delivery dates and quantities are met. It reduces lead time, as it optimizes the order sequence to achieve minimal set-up times.

## FEKOR solves the classic conflict

One of the strengths of the system is the implementation of industry specifics.

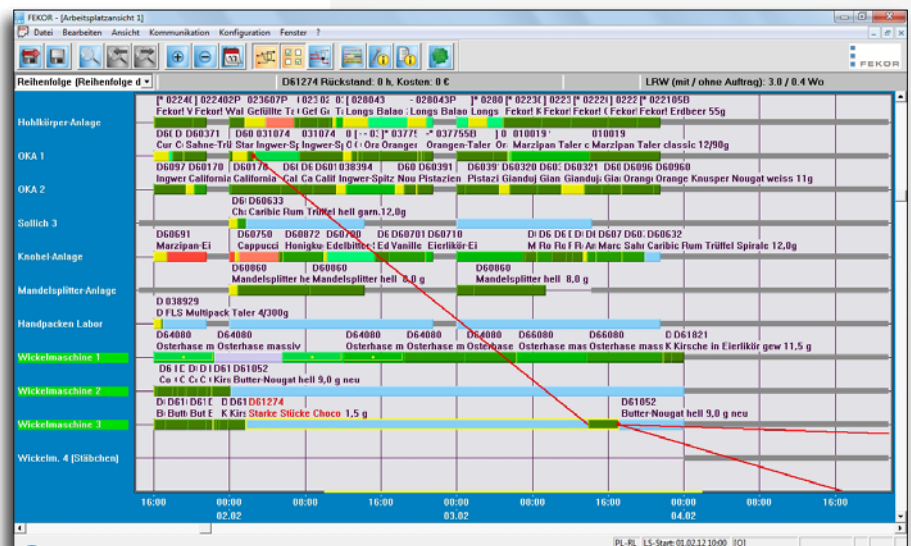
During the optimization FEKOR solves the classic conflict of production planning, which is to bring apparently contradictory objectives together. At each step all cost related factors, such as personnel, equipment, and temporary storage as well as productive and non-productive times, are assessed. As a result, the total costs of the operation are minimized.

## FEKOR creates transparency

The FEKOR control center gives full control over production and disposition and makes operational events in production visible and transparent. It allows the businesses to make informed decisions and react quickly.

## Benefits of FEKOR

- Plan ahead
- Deploy staff and equipment efficiently
- Secure delivery dates
- Minimize unproductive times
- Identify bottlenecks in time
- Decide quickly based on funded data
- Always have an overview of all processes - from customer order to delivery - in one graphical control center





## About FLS

FLS FertigungsLeitSysteme (production control systems) was founded in 1979 by Dr. Hanns Jürgen Hüttner in Aachen. With the production planning system (PPS) FEKOR for production coordination, FLS has been the expert for production planning and material flow detection on the market ever since.

GRP, also founded in 1979 in Aachen, specializes in the process of the entire shop floor in the manufacturing industry (MES, CAQ, DNC, TPM, etc). In 2010, Manfred Keuters, as the current Managing Partner, takes over GRP and has continued to lead the company successfully and with steady growth, particularly on the international market.

The importance of a reliable Manufacturing Execution System (MES System) for production, which controls the growing complexity of today's requirements, is unquestionable. The systems of FLS and GRP have been successfully implemented at joint

customers for decades and complement each other ideally.

Since 2016, both systems are combined under one roof in order to foster the expertise of both divisions even more. Together, Manfred Keuters (Managing Director of GRP) and Janina Keuters (Managing Director of FLS) will lead both companies into the future. The merger of these two pioneers will enable customers to benefit from the long-term know-how of both systems and will be used as an industrial platform in the future.

FLS and GRP systems are used in numerous companies within the plastics, food, machinery, automotive and metal industries. Among others, GRP and FLS customers include world leaders such as Eaton, MöllerTech, Hachez, Geberit, AS Tech, Ceralia, Münz-Prägstatt, DELPHI, Brück, P & G, HEWI and Georg Fischer.

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