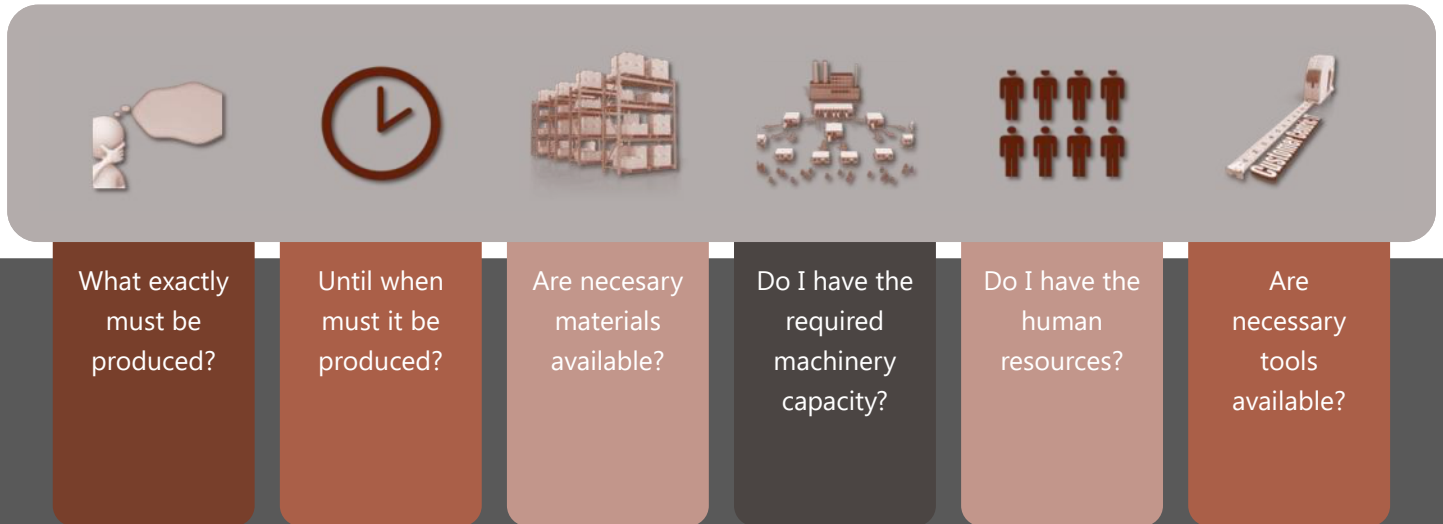


Shop floor control

Planning, control & documentation of work within

Production Units



Detailed production structure data



▶ Productive Resources

- ◆ Machinery
- ◆ Tools
- ◆ Human Resources - expertise
- ◆ Shifts
- ◆ Resources availability

▶ Working centers

- ◆ Machinery
- ◆ Machinery groups
- ◆ Production lines
- ◆ Production workers groups
- ◆ Cost centers mapping



▶ Production phases - routing plans

- ◆ Required processes and resources/ tools per phase
- ◆ Phase dependencies ((sequence - parallelism)



▶ Technical specifications

- ◆ Differentiation per production unit
- ◆ Seasonality
- ◆ Origin of requirement (customer/stocking)
- ◆ Main, alternative and supplementary productive resources
- ◆ Equivalent materials
- ◆ Phantom materials (of general type)
- ◆ BOM ratings (Active, R&D, Test)

Production & Manufacturing

Shop floor control

Planning, control & documentation of work within

Production Units



May I increase the quantity?



Are the necessary raw materials obtainable?



May I increase the shifts?



Do I have the required machinery capacity?



Do I have the human resources?



Are necessary tools available?

Short-term planning - Production calendar

► Scheduler

- ◆ Continuous - circular production
- ◆ Prioritization of requirements
- ◆ Planning of specific process - phase
- ◆ Incorporation of changeover time, setup, cleanup time
- ◆ Centralized planning of semi-finished products
- ◆ Production orders - Movement orders
- ◆ Binding raw materials to ensure the feasibility of production plan
- ◆ Plan optimization based on KPIs of the production process



► Decision making

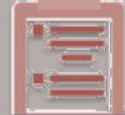
- ◆ Process transfer to another machine
- ◆ Merging of identical tasks
- ◆ Splitting tasks to more than one
- ◆ Reschedule tasks with recognition of all dependencies and automatic repositioning
- ◆ Change quantities or technical specifications. Direct check of raw materials availability.
- ◆ Capacity - availability control
- ◆ Easy adaptation to changes and unexpected events
- ◆ Presentation simplicity

Production & Manufacturing

Shop floor control

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Production Units



What resources are occupied and for how long?

In which stage of the procedure were there delays?

What is the route of a specific batch?

What is the status of a specific batch?

What damages were reported?

What were the unproductive periods and in which shift?

On line production execution

▶ Capturing of actual activities

- Beginning and completion of work - production duration
- ◆ Produced items
- ◆ Consumed items
- ◆ Staff report
- ◆ Damages reported - damage duration



▶ Production Orders detailed overview

- Real time order status
- ◆ Check of feasibility of changes, according to current status
- ◆ Report for actual process modifications



▶ Specific equipment

- Portable terminals
- ◆ Specific screen equipment
- ◆ Interconnection with P.L.C. systems (programmable logic controllers, D.C.S. (data collection systems) ...

▶ Fully integrated operation with ERP & WMS

Production & Manufacturing

Shop floor control

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Production Units



Increased accuracy in deliveries - deadlines

Minimized total delivery time (cycle time)

Improved utilization of resources

Resource efficiency increase

Reduction of handwritten work
Enhanced reliability

Fully transparency & control of the production process

▶ Production process monitoring

- ◆ Production order execution process - per shift - per machine
- ◆ Detailed overview of Work in Progress

▶ Registry findings for optimization

- ◆ Product deficiencies and damages per cause
- ◆ Wastage per machine and process
- ◆ Losses in time and product units per shift - per machine

▶ Reporting

- ◆ Production calendar - review
- ◆ Machine & production line productivity
- ◆ Operators productivity
- ◆ Batch traceability

