



## sar@mes – the binding link between production level and company management level

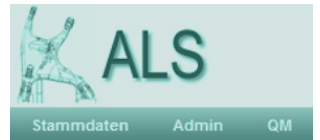
**Description:** MES stands for Manufacturing Execution System, a link between the company's management level, with its commercial weighting and the production level with its process and production resources

**Technology:** Platform independent, thin client solution with countless interfaces and databank connectivity

### Cost reduction in the manufacturing process

The sar@mes suite closes the gap between the production level and company level. The goal is a cost reduction in the manufacturing process and is achieved by various advantages and uses for the client:

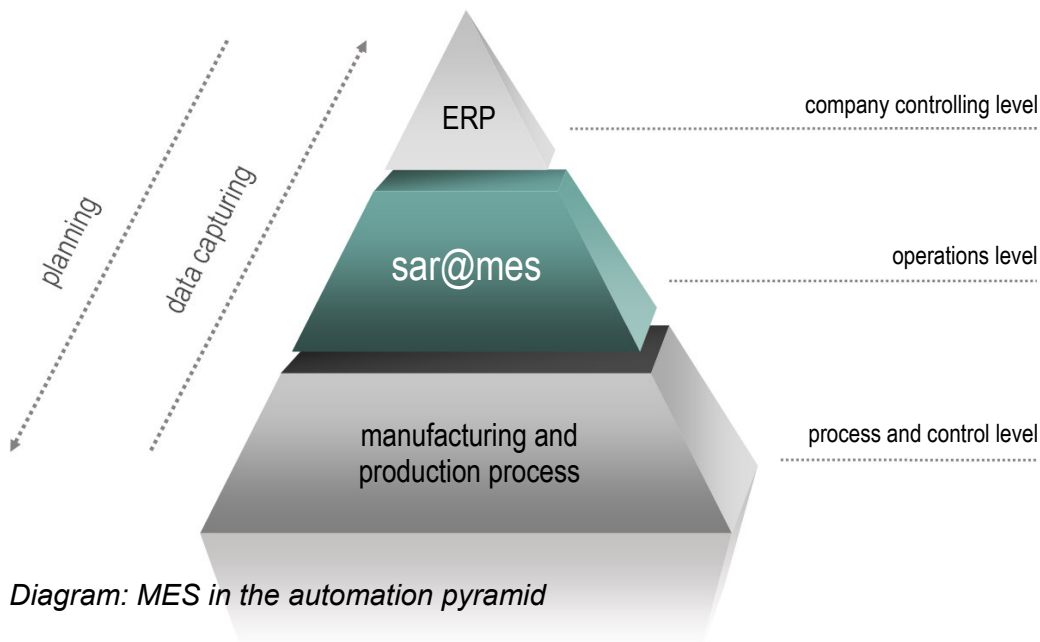
- **Higher Transparency**  
in production due to commonly defined key data and statistics. Optimization potential can therefore be found and implemented.
- **Reduction of throughput times**  
due to the optimisation of the manufacturing process based on the capturing and analysis of the manufacturing plant and transport route data
- **Increasing of productivity**  
as a result of the reduction of throughput times
- **Improved process security**  
by means of a central set-point control (spanning a single production or even various plants) with a simultaneous quicker intervention possibility into the process, as changes to set-points and tolerances become effective immediately. An integrity check is possible, i.e. a process can only be started if the preceding process was completed successfully. With a corresponding process visualisation, the effectiveness of taken measures can be evaluated quickly, reliably and with the necessary transparency.
- **Better adherence to delivery dates**  
as a result of production transparency and process security



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### sar@mes – modular setup

In order to enable the necessary flexibility in complex production processes, sar@mes was built up modularly.

#### Base module

sar@mes

- Configuration and master data administration
- User administration
- Log
- Remote service, diagnosis
- Multilanguage ability
- Base connectivity to SAP (IH, PM)
- Shift calendar
- Base visualisation

#### Retraceability / tracking & tracing

sar@tracking

- Process data capturing
- Definition of production sequence
- Set point check (intervention points)
- Completeness check
- History and trending display according to plant, single part, charge, time and parameters
- Process analysis and optimisation
- Definition of product structure

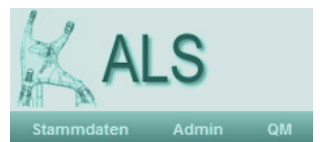
#### Logistics & warehousing

sar@logistics & sar@warehouse

- Material flow tracing
- Route planing
- History (store position, store/transport system etc.)
- Store / bin occupancy with status changes (store position, store / transport system)
- Storage policy of store (ABC – classification, etc.)
- Storage in/out policy
- Statistics standard (drive / transport command, storage movement, etc.)



IT Services



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## Production data acquisition

sar@production

- Machine data capturing
- Fault capturing
- Fault data analysis including reaction
- Assignment lists
- Allocation map / fault texts
- Lot size / cycle time capturing, shift capturing plant and part dependant
- Statistics (OEE, availability, utilization, process efficiency)

## Optional modules / services

Due to enormous variations on the manufacturing level, a system like this can generally not be implemented as is. The required adaptations in the following functionality requirements can then be implemented in the planning phase

- Reports
- Statistics
- Expanded SAP interface
- Expanded visualization
- Interfaces to the production systems

## The technology

- The connection to SAP can be done via RFC, IDoc or web services
- Web surface thin client (browser)
- Data bases: Oracle, SQL Server, My SQL etc.
- Platform independent (Java)
- Interfaces to the plants, production lines, robots or similar CP/IP, OPC, Profibus, Profinet

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