DIGITAL FACTORY





MES/MOM SYSTEM COMES®

The MES/MOM system COMES consists of modules that can be applied separately with the Logon module. The COMES installation is scalable according to the production process or the performance needs. The operation is available in one window without need of switching modules. The standard part of all modules is the configuration part and the Audit trail, an important function of fully digital manufacturing and its documentation.

COMES® MODULES

COMES® LOGON

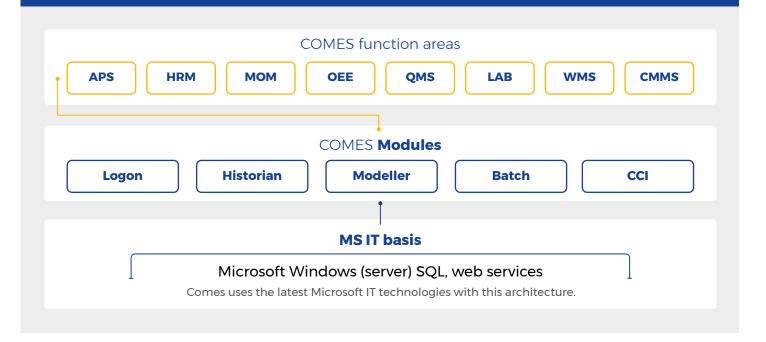
COMES® **HISTORIAN**

COMES® **MODELLER**

COMES® BATCH

COMES® CCI

ARCHITECTURE OF THE MES/MOM SYSTEM **COMES**



MODULES AND ITS FUNCTIONS

COMES® LOGON



- · Configuration of users / groups and their rights
- · User authorization
- Plant model configuration (areas and devices acc. to ISA 95)
- Common management of modules in: Logs | Audit trail | Diagnostics | Backup
- · User system settings and favorite commands
- · System event management, sending reports to users

COMES® HISTORIAN



- · Acquisition and archiving of technological tags
- $\boldsymbol{\cdot}$ Display of tag values in trends, including batch number
- Trends with interpolation, the possibility of displaying samples of tags
- · Comparison of multiple trends in different timelines
- · Alarm messages with filtering by two-level filters
- Working with data, calculations and process optimization, data analysis, basic statistics, exports to csv
- · Print to PDF

COMES® **MODELLER**



- Modeling links and relations among data
- Configuration framework for function areas COMES APS, HRM, MOM, OEE, QMS, LAB, WMS, CMMS
- · Visualization of production status
- · Monitoring of manufacturing data
- · Data analysis, statistics, protocols, dashboards
- · Documentation of the production, shift protocols
- Communication to IT systems (ERP, LIMS, MIS, ...) by CCI module

COMES® **BATCH**



- For flexible control of fully and partially automated batch processes
- Multiproduct and multiline control of batches in the technology
- Graphical configuration of recipes, phases and its parameters
- · User convenient interactive batch control
- Electronic signatures of production operations
- · Electronic Batch Records (EBR)
- · Configurable Batch Protocols (BP)