

# APplus MES

CER Center for  
Enterprise Research

ERP SYSTEM OF THE YEAR **2015**  
MACHINERY AND PLANT  
MANUFACTURING

## Optimizing Production: Cross-link and use manufacturing data efficiently.

APplus MES – integrated system enhancement for APplus. It is a proven by experience that productivity is grows by appr. 10% when using a MES, and so does product quality. Delivery reliability and cycle time improve, resource efficiency (machines, material, labor and energy) increases.

### Benefits from using APplus MES

- Production data are up to date
- Planned vs. actual values accelerate reactions on discrepancies
- Production planning using actual dates
- Proper OEE KPI management
- Optimized usage of resources



Image: bigstock/tereh

Dynamic Visualization of relevant KPIs



## A modular tool for manufacturing optimization

Small and medium sized enterprises often have to deal with several issues: Lack of knowledge about the duration of manufacturing phases, no exact figures about the real runtime of the machines, data collection values are wrong or forgotten to register. On the other hand, improvement of the process quality and stability are most important influence factors for the improvement of the product quality. The necessary resources should be used most efficiently.

APplus MES provides important information, such as drawings, information about orders and tools, and quality data. It supports both automatic and manual data collection. Actual data are visualized, monitored and analyzed. The superior processes of order management and supply chain management are provided with actual values for logistics, quality assurance and costing.

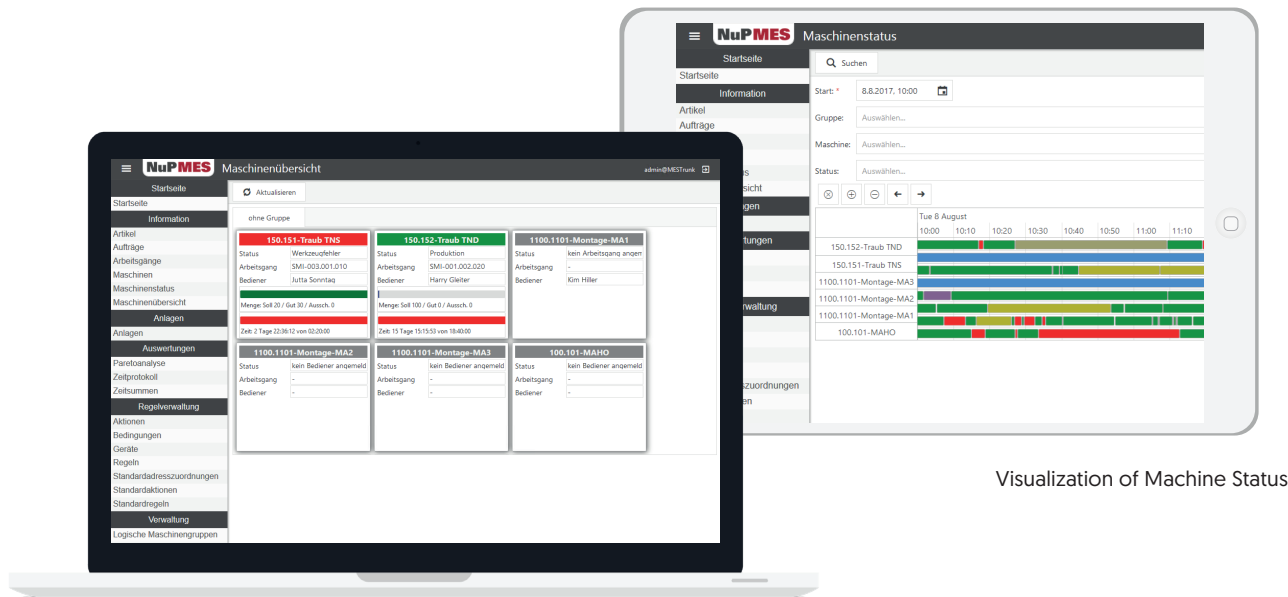
## Data Collection

APplus MES is built in a way that you can make use of several different technical solutions for connecting machines directly to the system. Manual registration of data is possible as well by operating the system on a built-in terminal functionality. You can choose your favorite data collections device from a broad variety, such as Bar-Code scanners, Legic readers, RFID readers etc. The MES system runs on its own, separate database, such assuring system availability even without being connected to APplus. APplus MES fulfills all requirements for multiple machine operations, collective orders and collective operations.

## Data Processing and Reporting

The MES Monitor provides you with a real time overview of your machines, the respective status of each machine, and Pareto analyses. Reporting functions will graphically display the relevant KPIs. An additional plugin allows to trigger device actions, such as machine cycle counts or changes of the machine status, and connect scales. APplus MES contains both surveillance and alarm functions. This works by showing variances between planned and actual values (time and quantity), and classical traffic lights. By using sophisticated parameter management, the production processes can be traced and tracked in each detail.





Visualization of Machine Status

## Core Functionality

### The Terminal

The Terminal provides you with all relevant information directly next to the production process. Your worker will have important information in time and is able to register production data quickly and simply.

- Assigning workstations, machine groups and single machines to one MES Terminal
- Define your own operational states (e.g. "running", "set-up", ...)
- Personalized messages
- Registration of operation start, interruption, end
- Registration of production quantities (good parts, scrap, re-work)
- Display of drawings and other documents needed for the respective production operation

### The Monitor

Using the Monitor, you can assure the quality of your processes and products, and you have a reliable early warning system. By showing the reasons for problems directly, it gives you the chance to act appropriately, and immediately. Continuous data analyses reduce downtime and secure the manufacturing process.

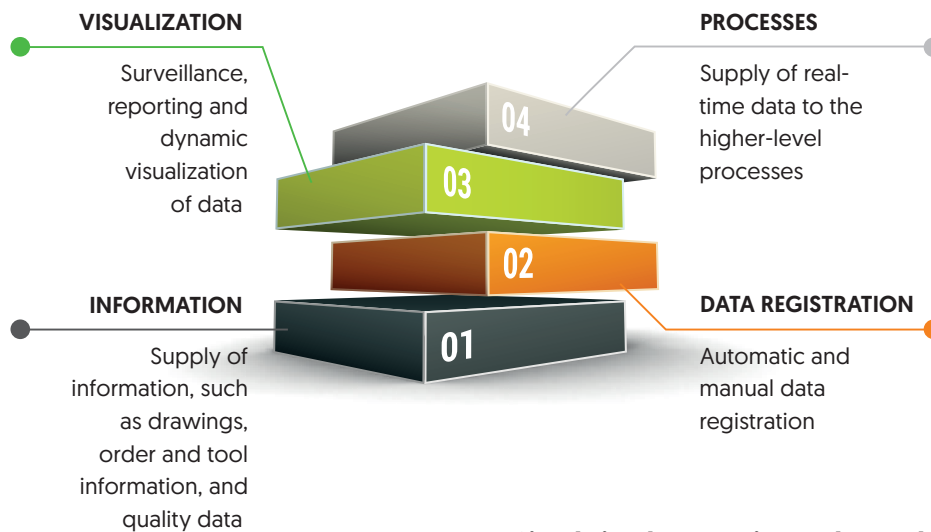
- Browser based, password protected, online
- Overview of machines and workstations
- Machine status, time curves
- Pareto analysis
- Administration functions

### The Reporting Tool

Increase production output! Transparent production KPIs help to analyze problems, find the reasons, and re-adjust the process.

- Java based, intuitive operating
- State-of-the-art reporting tool, dynamic visualization of important KPIs
- Existing reports for status of the machines, set-up ratio, scrap ratio, OEE and more
- Configurable own reports
- Visualizing of trends

## Functionality



### Continuous processes

The APplus Web Service provides in-depth interaction between all APplus business processes, even down to single machines.

- Consistent terminology
- Avoiding of duplicate data management, e.g. for work stations, employees, shift schedules or operation status

Concerning the new parameter management functionality in APplus, MES provides a wide range of enhancements for both registration and availability of data for employees and machines.

### Simple implementation and operability

- The total quantity of all functions in the APplus MES is scalable, which means it can be implemented step-by-step
- Based on the single components, individual automatization projects can be realized

### Project start by analysis of potentials

Simple, comprehensive project steps will convince you of the high benefit of an APplus MES implementation project. We are able to register and analyze your real data within just 4 weeks.

What you will get:

- Information concerning price and deliverables
- Estimate in investment cost
- Estimate in ROI
- Implementation strategy for the project realization

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## Asseco Solutions in Numbers.

-  810 employees
-  18 locations
-  7 countries
-  1,731 APplus customers

