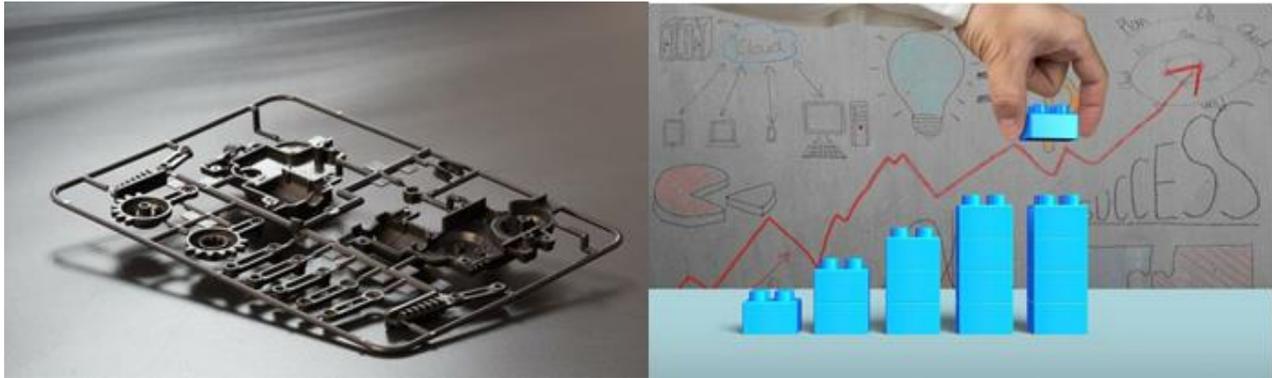


SAP MES (MII/ME) for the Plastic/Metal Injection Molding Industry



What does the Solution offer?

- ✓ Real-time insight and control of production operations at various levels: Plant, Line, Equipment.
- ✓ Overall Equipment Effectiveness (OEE).
- ✓ Automatic production reporting back to SAP ECC/S4-Hana.
- ✓ Provide operators, planners and managers with accurate role based, real-time information using common interactive dashboards.
- ✓ Create a data repository for Injection Molding Machines' configuration, Mold maintenance management, operator user clock ID and other details, as well machine history.

Scope

- SAP ECC Integration for Production Orders, PRT and material.
- Machine Availability & KPI's
- Visual Order Schedule Planner
- Role based Web Enabled HMI Dashboards

Benefits

- Accurate, real time planning and production order management.
- Quick control over operational data, such as cycle time, downtime and scrap.
- Real time Plant level KPI's for decision support.
- ✓ Increase production assets (equipment) utilization via OEE instant notifications.
- Real time monitoring of equipment and production parameters with streamlined maintenance call response.
- Easy to manage production Label printing.
- Mold maintenance with validations during assignments.
- A single web enabled HMI Screen showing real time data from PLC and master data from SAP S4-Hana.

Overview

SAP MES solves the disconnect between the plant floor and the enterprise business system; enabling manufacturers to become adaptive, agile and profitably replenish their supply networks by dynamically responding to unpredictable change.

By leveraging the capabilities of SAP MES, RTS delivers specific Manufacturing Execution System (MES) functionality for the plastics industry. This MES solution can effectively regulate the production process, increase equipment/production resource tool (PRT) utilization, improve production efficiency, provide important shop floor KPI's, all while being flexible enough to add new machines/equipment on the fly.

It also solves the following major problems for the plastics industry:

- Mold Maintenance
- Traceability
- Real time visibility to the plant floor
- Poor visibility to the production data
- Product Quality

The SAP MES application increases company flexibility and makes them more agile to adjust to market requirements quickly. It not only provides up to the minute production status but also provides various means to control and adjust production such as Scheduler to adjust schedules on the fly.

The application is integrated with SAP ERP/S4 Hana and with shop floor PLCs which are connected to the Injection Molding machines. This extended connectivity allows the users to see important contextual data from both, the local dedicated dashboard or mobile devices.



Machine Availability & KPI's

Based on when machines are scheduled to run, the Andon dashboard indicates each work center status with its actual current cycle time. This enables supervisors/plant managers to keep an eye on the overall status of the plant from a single dashboard, with a drill down to each equipment allowing quick corrective action when needed.

Visual Order Schedule Planner

Orders with specific details are downloaded from SAP S4-Hana in the background and are displayed in a searchable table which allows the operator to search with any keyword from the order details. The orders can be assigned to any of the work centers based on the health of the Mold (which is highlighted in red, if there is a Mold issue).



The visual Order Schedule Planner provides a **graphical** illustration of the schedule that can help the Plant/Line manager plan, coordinate, and track specific orders easily. The orders can be stopped/started, rescheduled or assigned to any other work center by dragging and dropping them.

Web Enabled HMI Dashboards

Web and touch enabled, SAP UI5 based HMI Screens connect to the injection molding machines, PLCs and SAP S4-Hana. These screens depict data from all entities on a single dashboard and allow immediate confirmations back to S4-Hana. This provides the option to select single or multiple orders for a work station based on the quantity of Molds a family mold has.

The HMI shows the actual and standard cycle times for the current execution.



Dashboards and portal technologies provide a necessary base for visibility, as well as a launching point for event-based triggers and alerts. Through enabling a portal view into processes as they occur, and monitoring events or drilling down into areas of concern, employees take a proactive view of manufacturing using tools that look beyond the symptoms and provide details to enable root cause analysis. Visibility, whether gained through portals, dashboards or alerts delivered to wireless devices, easily trigger corrective or preventive actions when necessary.

A quick search screen allows the users to search any mold from the list of molds with any keyword from the Mold details.

Summary

The SAP MII MES solution for the plastics Industry will bring transparency to the plant floor processes, help in easing the planning process, increase quality of products by helping operators choose healthy Molds, help in maintaining the Molds and overall increasing production flexibility and agility to meet market requirements.

Deployment Time: 16 Weeks + 2 Weeks UAT

[RTS Consulting-Automation Inc.](http://www.rtsperfectplant.com) has over 27 years of experience providing control system engineering services and leading software solutions while assisting companies adopt new technologies and achieve Operational Excellence. RTS has been instrumental with large organizations with their "Digital Enterprise" transformation. Our Background and expertise in Manufacturing Execution System (MES) implementations, shop floor automation control systems integration (PLC's, SCADA, IOT and Historians) and shop floor asset connectivity gives RTS a strategic advantage when developing and implementing IT/OT solutions for our customers.

We welcome you to [Connect](http://www.rtsperfectplant.com) with us to discuss about your current manufacturing challenges and concerns when it comes to transforming the way, you do business.

