

# Applied SmartFactory® MES FACTORYworks+™

An out-of-the-box manufacturing execution system designed for semiconductor back-end (assembly, test, and packaging) and adjacent industries, built on the highly-scalable FACTORYworks framework.



## INDUSTRIES

Semiconductor assembly, test and packaging

Semiconductor-adjacent discrete product

Roll-to-roll processing



## FEATURES

Integrated with SmartFactory portfolio

Continuous, real-time work-in-process (WIP) tracking

Material consumption and equipment tracking

Assembly via configured bill-of-materials of inventoried parts and work-in-progress parts

Grading of product based on quality test results

Configurable time constraints by location for inventoried materials



## BENEFITS

Enables processing via various levels of factory automation

Highly customizable framework

Easily scalable with factory growth

Minimize misprocessing due to manual error

Improve product quality and manufacturing efficiency

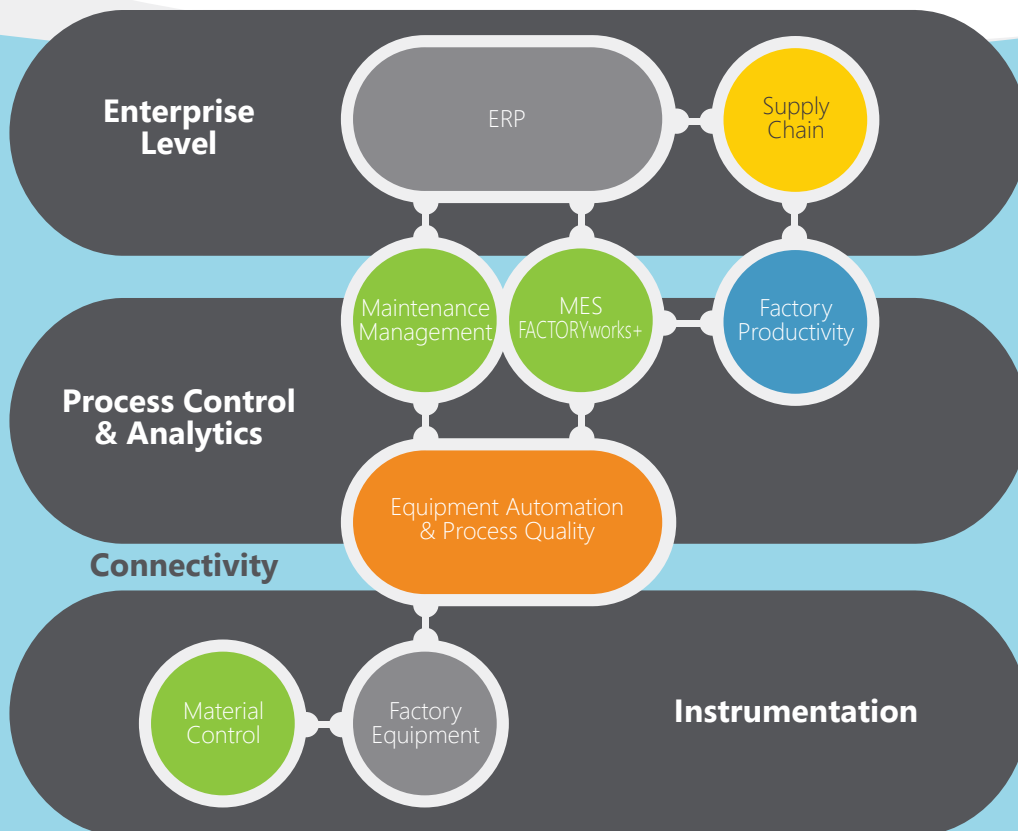


## INDUSTRY CHALLENGES

In many factories, production monitoring is managed through internally developed software or paper-based tracking systems, without a factory-wide automation framework. This makes it nearly impossible to efficiently track day-to-day product quality, output and cost.

As emerging technology factories grow in size, cost and technical level, the need to enable Industry 4.0 increases. The complexity of factory automation presents challenges that are typically insurmountable for internally-developed systems and impossible without a modern MES. In order to meet challenging yield and profitability targets, the following considerations must be examined: the ability to scale existing factory control systems to manage higher production levels across multiple lines, maintaining product quality and yield as business grows and the ease of implementing advanced automation functionality as growth occurs.

## MES FACTORYworks+ in the Manufacturing Ecosystem

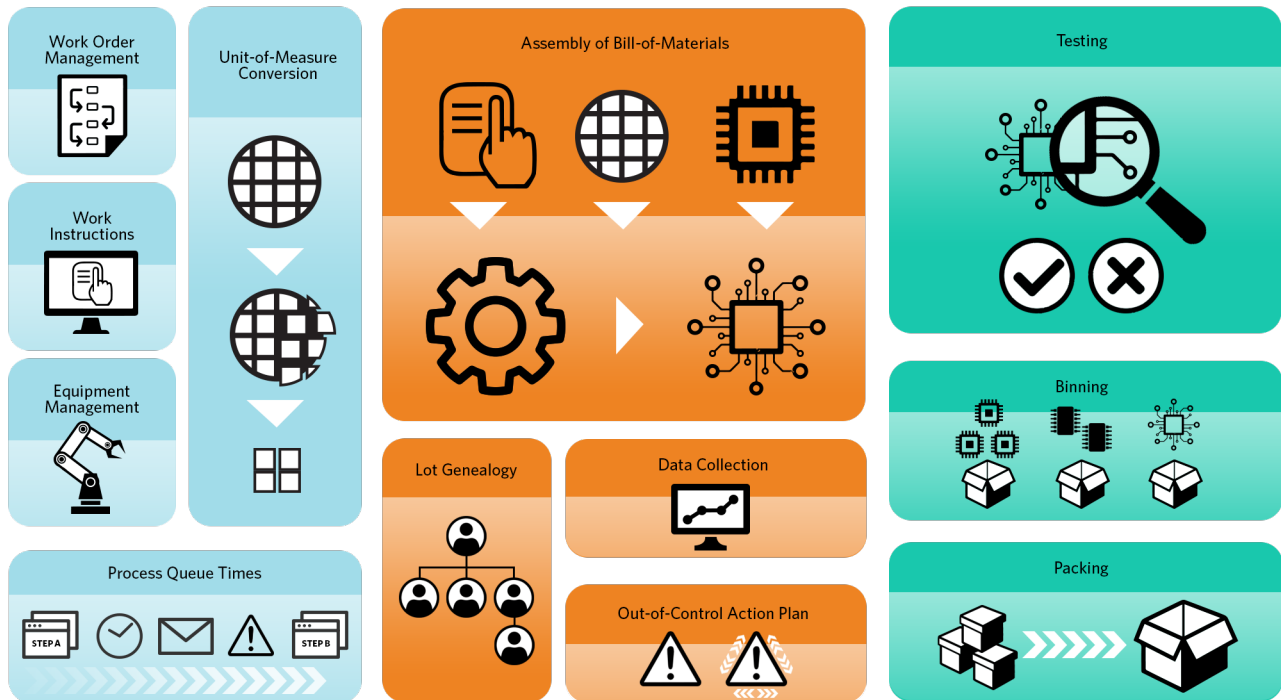


Interface Between ERP, Equipment & Common CIM Modules



## SOLUTION DESCRIPTION

SmartFactory MES FACTORYworks+ is an out-of-the-box manufacturing execution system developed for semiconductor back-end and semiconductor-adjacent industries. Based on Applied's leading FACTORYworks MES technology proven in semiconductor and semiconductor-adjacent manufacturing facilities worldwide, FACTORYworks+ is a versatile manufacturing execution solution that can be augmented using several modules from Applied's SmartFactory CIM portfolio.



SmartFactory Solutions with **ENGINEEREDworks®**

Pre-built automation logic that executes on a proven Applied platform, increasing speed-to-value for customers and provides quicker deployment times.

Learn more about  
Applied SmartFactory



## PACKAGE CONTENTS

MES FACTORYworks+ includes MES FACTORYworks 3 modules to enable:

- WIP tracking
- Equipment Management
- Operator Access Control
- Bill-of-Materials Management including Inventoried Parts
- Enterprise Integration Gateway
- Site-specific Customization (server-side business rules and custom data tables)

## SOFTWARE

- SmartFactory MES FACTORYworks 3
- SmartFactory MES FACTORYworks+
  - FACTORYworks+ Solution Features with Sample Data
  - FACTORYworks+ Runtime User Interface
  - FACTORYworks+ Modeling Loader/Extractor

## SERVICES, TRAINING & SUPPORT

- On-site deployment
- Training provided for process engineers, operators, and IT engineers