ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

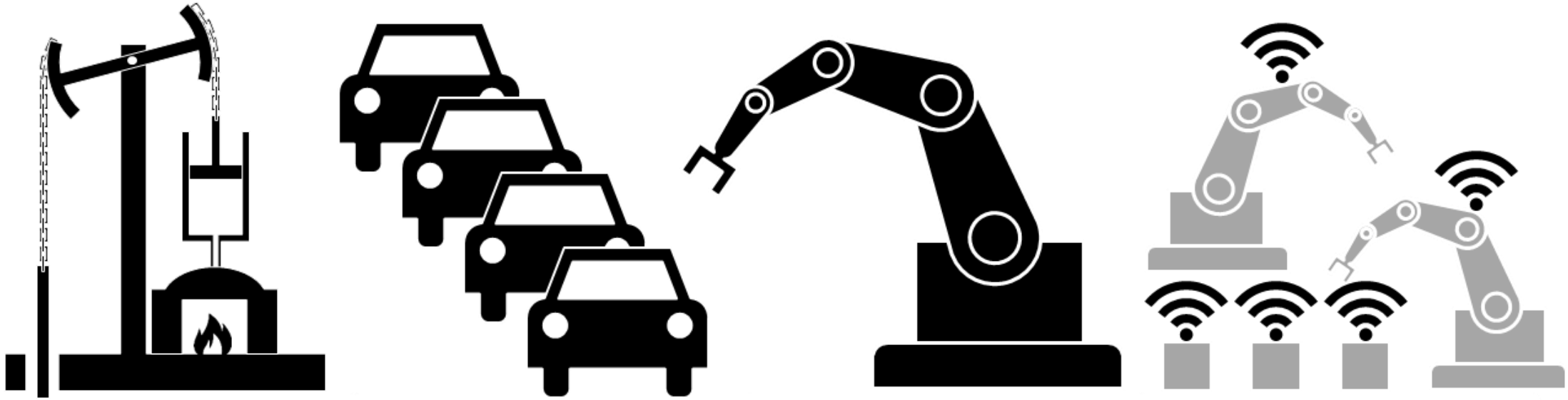
YAMAHA

INDUSTRY 4.0

Integration that will contribute to your bottom-line!

EUROPE SMT

KVMS
SMT EQUIPMENT | SERVICE | SPARE PARTS



1st	2nd	3rd	4th
Mechanization, water power, steam power	Mass production, assembly line, electricity	Computer and automation	Cyber Physical Systems

INDUSTRY 4.0

Industry 4.0. can be divided into 4 major components:

- The Internet of Things (and services)
- Intelligent machines
- Big Data
- Analysis

AOI Android
SMT platform
IT Server
Pioneer Option Tool

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 line - integration

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 line – level Software

Ideal R&D solution, for prototyping and New Product Introduction

First time right: fast, accurate, no part waste

Features:
- ✓ **Auto-teach function**
- ✓ **Automatic measurement and vision file generation**
- ✓ **Edit new of existing Component file (process, vision data)**

Quality:
- ✓ **- Maintain central parts database**

Programming Tool

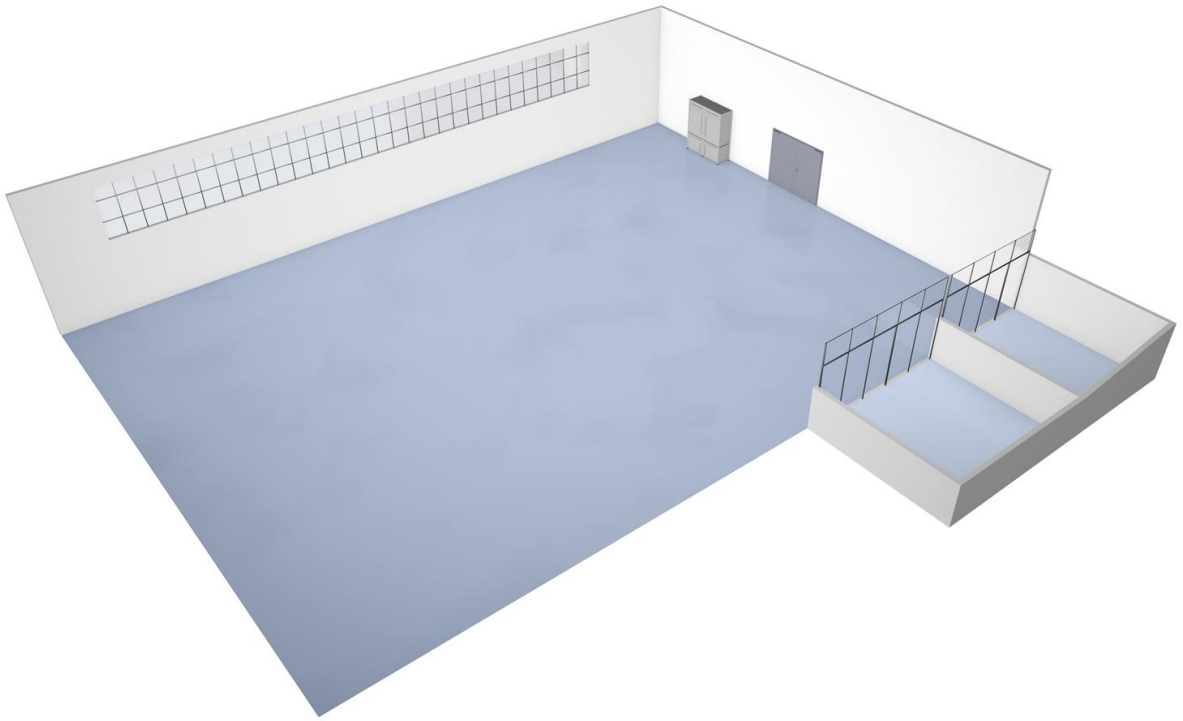
1. Basic function
2. ASCII Data conversion CAD-BOM data
3. Line balancer
4. Setup optimizer for multi PCB Production
5. Visual editor (Virtual Sticky Tape)

Benefits against Machine SW:

- ✓ **Improved and more accurate which increase cycle time improvement of 5-10%**
- ✓ **Grouping function which can improve change over time**
- ✓ **Production lot in stead of program names improve interdepartmental communication**
- ✓ **Improved standard functionalities**

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

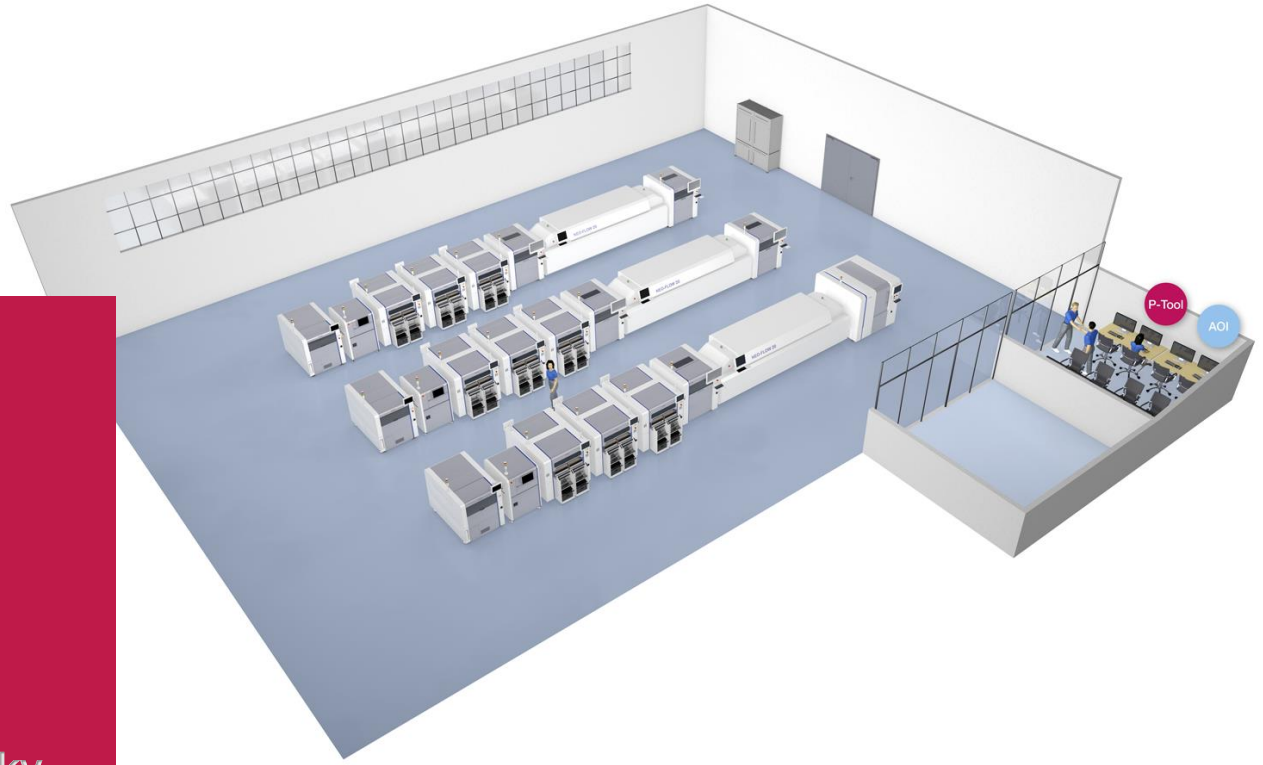


ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

First Step Integration

Programming Tool
AOI Offline controlling
Offline Vision Creation



Programming Tool

1. Basic function
2. ASCII Data conversion CAD-BOM data
3. Line balancer
4. Setup optimizer for multi PCB Production
5. Visual editor (Virtual Sticky Tape)

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

First Step Integration
PROGRAMMING-TOOL
AOI Offline controlling
Offline Vision Creation
Family & Grouping SW

Second Step Integration

Programming Tool + **Setup Tool**
SET-UP Navigation
MOB/USB BC reading

Setup Tool

1. Setup navigation
2. Mobile Barcode Reader / USB Barcode Reader

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

First Step Integration
Programming Tool
AOI Offline controlling
Offline Vision Creation
Family & Grouping SW

Second Step Integration

Programming + Setup Tool
SET-UP Navigation
MOB/USB BC reading

Monitoring Tool

1. Line control
2. Centralized Component Remain
   Monitor

Third Step Integration
P+S-TOOL + M-TOOL
Line control
Component QTY manager
Storage Cabinet Interface

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

First Step Integration
Programming Tool
AOI Offline controlling
Offline Vision Creation
Family & Grouping SW

Second Step Integration

Programming + Setup Tool
SET-UP Navigation
MOB/USB BC reading

Monitoring Tool

1. Line control
2. Centralized Component Remain
   Monitor

Third Step Integration
P+S-TOOL + M-TOOL
Line control
Component QTY manager
Storage Cabinet Interface

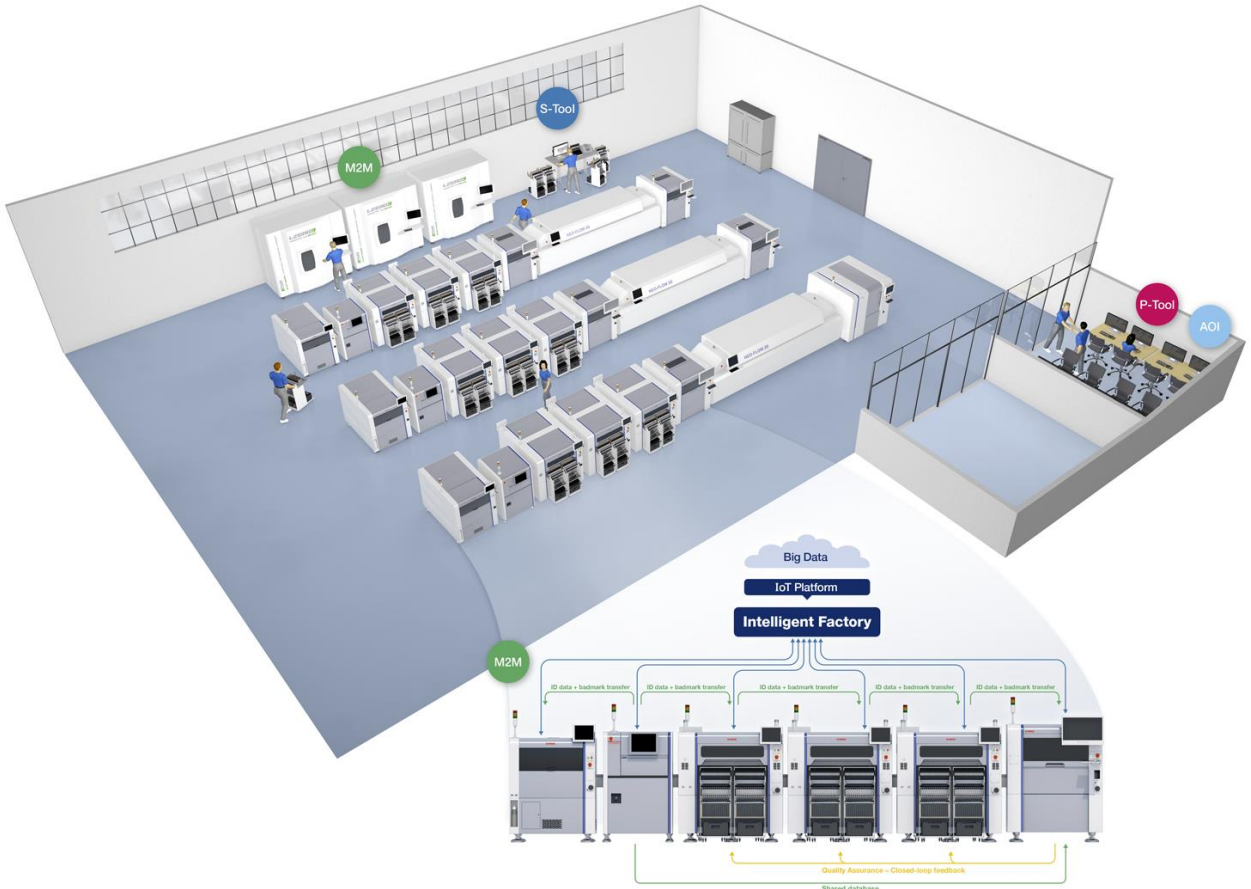
ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

First Step Integration
Programming Tool
AOI Offline controlling
Offline Vision Creation
Family & Grouping SW

Second Step Integration

Programming + Setup Tool
SET-UP Navigation
MOB/USB BC reading



Third Step Integration
P+S-TOOL + M-TOOL
Line control
Component QTY manager
Storage Cabinet Interface

THE IT SERVER NOW CONTROLS ALL DATA TO MANAGE THE INTELLIGENT FACTORY

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Factory Integration

First Step Integration
P-TOOL
AOI Offline controlling
Offline Vision Creation
Family & Grouping SW

Second Step Integration

P-TOOL + S-TOOL
SET-UP Navigation
MOB/USB BC reading

Third Step Integration
P+S-TOOL + M-TOOL
LINE - Control
Component QTY manager
Storage Cabinet Interface

THE IT SERVER NOW MANAGES ALL DATA TO MANAGE THE INTELLIGENT FACTORY

WLAN IOT Devices manage line control functions in real time

ELECTRONICS & APPLICATIONS
T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0 Full Factory Integration

First Step Integration
P-TOOL
AOI Offline controlling
Offline Vision Creation
Family & Grouping SW

Second Step Integration
P-TOOL + S-TOOL
SET-UP Navigation
MOB/USB BC reading

Third Step Integration
P+S-TOOL + M-TOOL
LINE - Control
Compt. QTY manager
Storage Cabinet Control

THE IT SERVER NOW MANAGES ALL DATA TO MANAGE THE INTELLIGENT FACTORY
WLAN IOT Devices manage line control functions in real time

FINAL Step Integration
P+S+M+S-TOOL +
T-TOOL
TOTAL traceability upto single component level.
INTEGRATED CONTROL!

ELECTRONICS & APPLICATIONS
14 T/M 16 MEI 2019 JAARBEURS UTRECHT

INDUSTRY 4.0

Integration that will contribute to your bottom-line!