



# PULSE

Human Centered Solutions






# Human Centered Solutions

The PULSE product division focuses on human-machine interaction. The human being is always at the center of every PULSE technology.


## CONNECTIONS

**MESready**




To a MES

**M2M**



Machine to Machine

**External Sources**




To external sources


## DEVICES




Monitor




Tablet




Smart-phone




Smart-watch




Host-computer



Server



Charger



Transport Robot

## SOFTWARE





**Feel at Home Wherever You Are**

SIMPLEX is a unique human machine interface (HMI) for controlling and monitoring highly complex production machines. Complex input tasks can be completed intuitively on large touch or multi-touch displays.



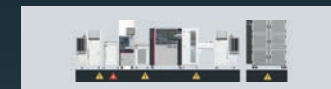


**Keep Your Line Running**

PULSEONE is an unique software solution to simplify and optimize daily tasks on the production floor. It can be upgraded with additional features (apps) at any time.

## PULSEONE

### LINE OVERVIEW



+

### APPS



## AVAILABLE & PLANNED APPS

- 

**Alerts&Info**

  - Messages about status, warnings or machine stoppages
  - Priorized task list
  - Support information
- 

**Statistic**

  - Line performance
  - Failure-pareto-analysis
  - Bottleneck-analysis
- 

**Support-Me Plus**

  - Extended support information
  - Machine-specific information
  - Service mail with log-file, image, video
- 

**Line-Settings**

  - Initiate product change-over remotely
  - Program new line recipes
  - Setting of program parameters with parameter backup (for VEGO Dynamic)
- 

**Operation**

Mobile control and operation of VEGO Dynamic handling modules.
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**File-Box**

  - Machine-specific documents, images and videos
  - List of documents freely expandable
- 

**Localization**

Localization of objects within a production hall. (e.g. components, PCB magazines)
- 

**Shift-Book**

Line information that can be completed with notes and pictures. (e.g. exchangeable to-do-list)
- 

**Material**

  - Control of autonomous transport robots
  - Enabling continuous material supply of production lines
- 

**User**

  - User administration and management of rights.
  - Assignment of operators to a machine or line segment.
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**Energy-Safe**

Automatic activation of energy saving measurements. E.g. oxygen and compressed air.

■ Available Apps     
 ■ Until now available as IC Run and IC Statistic     
 ■ Planned Apps

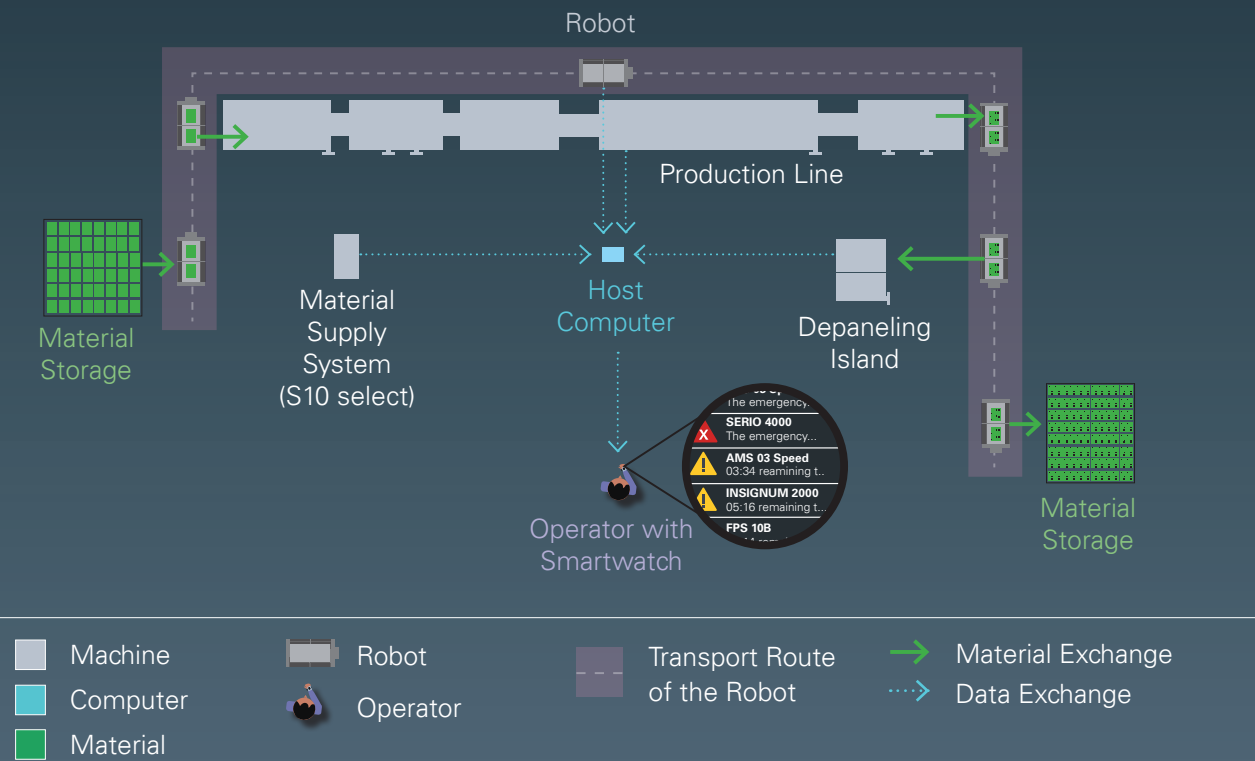


# Pioneers in Terms of Industrie 4.0



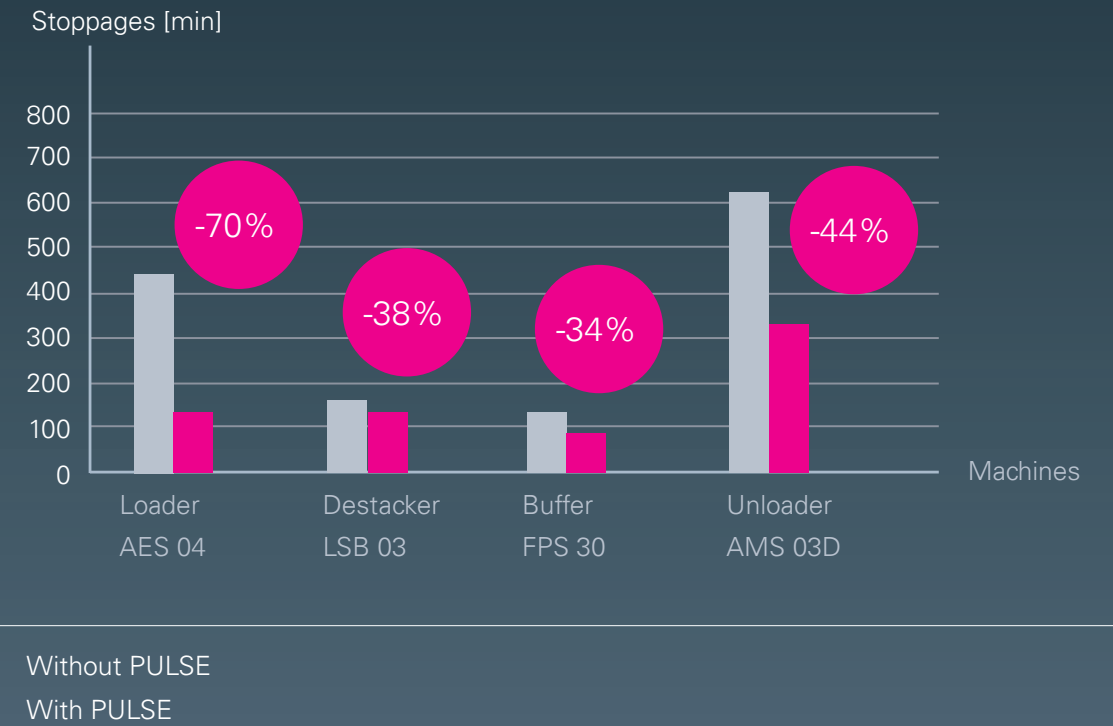
## A Really Smart Production

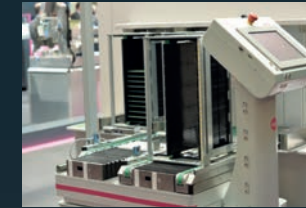
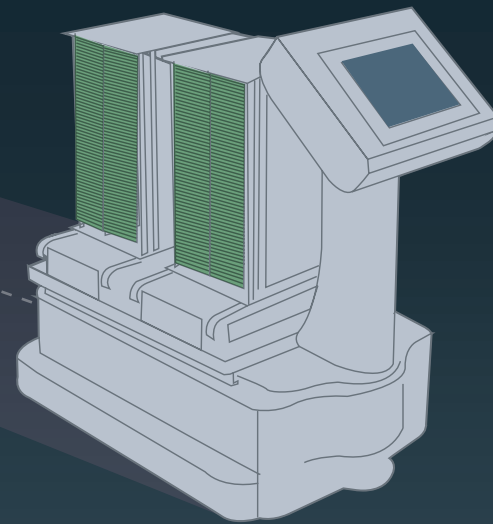
The operator is always aware of the line status. He can use both hands for tasks, while having all information available on the smartwatch. A robot supplies the SMT line continuously with new material.



## First Customer Evaluation Resulted:

- Significant reduction of machine stoppages due to PULSE
- Time improvement for changing magazines and refilling of destackers

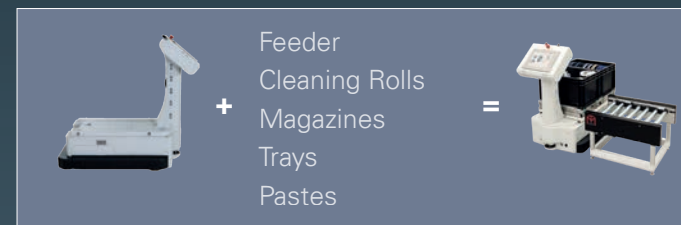




## With a little help...

The transport robot supplies the SMD line continuously with new material. Intelligent VEGO loading and unloading systems can communicate with the mobile robot via PULSE.

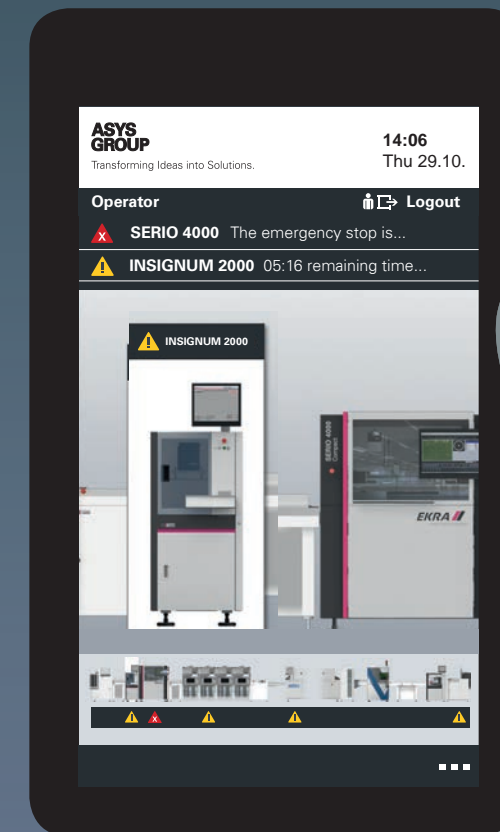
- Seamless integration of robot route into the existing infrastructure (vision based teaching)
- Modules available for various different material packages
- Fully automated module change (module-changing station)



## Big Data, Smart Devices

Most important tasks are prioritized. Quick glance at the smartwatch indicates next action for the operator:

- Check the latest notifications
- Automatic priority management
- Clear indication of remaining time to complete a task



## The Fab in Your Hand

PULSEONE provides an overview of the entire production floor. Drill down to each individual tool, plan production, review service information and monitor important statistics.

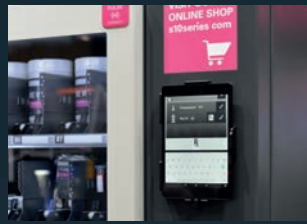




PULSE Smartwatch



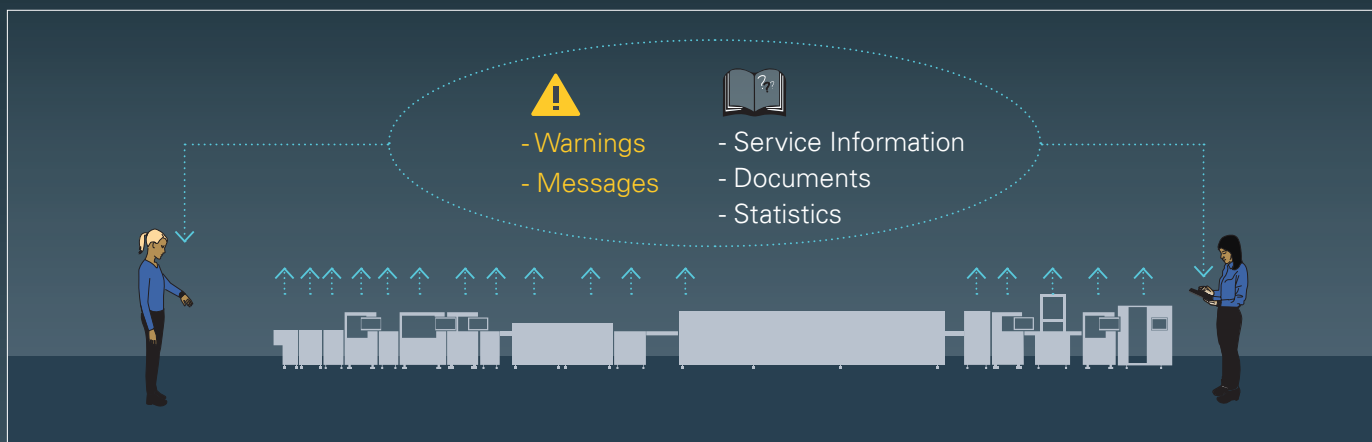
PULSE Transport robot



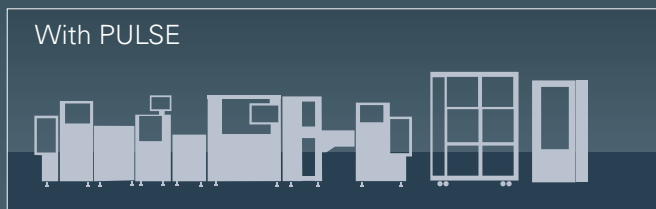
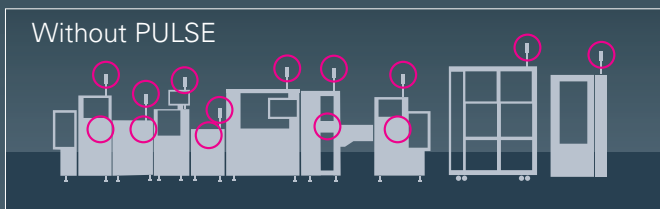
The Material Supply System, S10 select, is operated via tablet and can be connected to PULSE.



ASYS machines can be operated via the intuitive interface of SIMPLEX.



PULSEONE offers an overview over the whole production line.



Thanks to PULSE warning lights and operation panels for handling modules are no longer required.

# ASYS GROUP

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