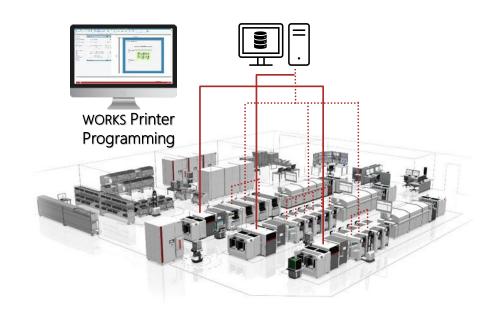




## Agenda



- 01 Introduction
- O2 Challenges in printer programming
- Our solution: WORKS Printer Programming
- 04 | Highlight features
- 05 | Prerequisites
- One more thing: WORKS Engineering Data Manager



### General challenges in printer programming



Job management Manage printer programs for multiple lines

Data maintenance Modify program settings in multiple jobs

Line control Download printing and placement jobs at once



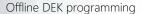
Line utilization
Online programming cause downtimes

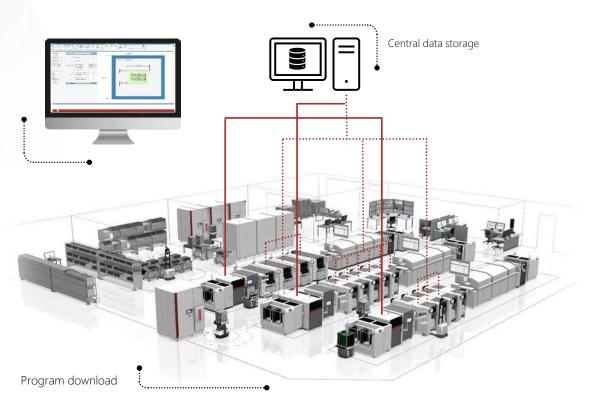
Process control Keep program changes under control

Usability Fast and easy programming

### Our solution: WORKS Printer Programming



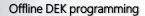


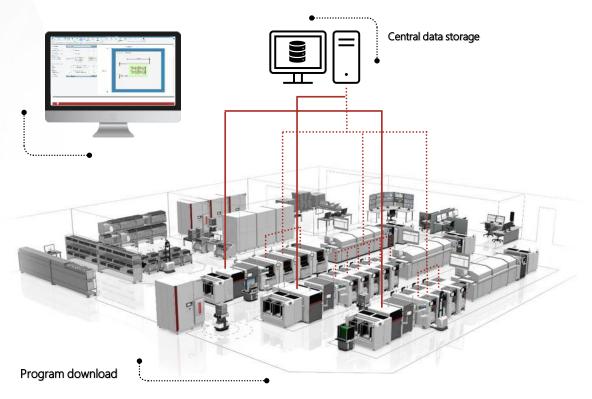




# Our solution: WORKS Printer Programming













Efficient program management



Enhanced process control

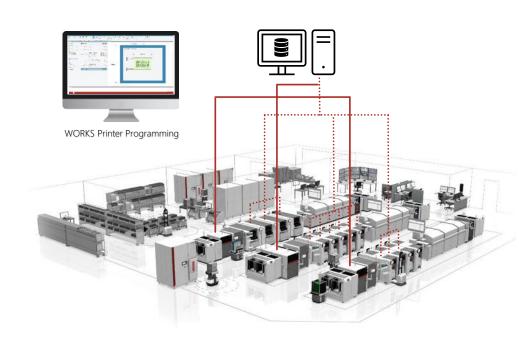


Unified line control



Easy programming









### Efficient program management



Enhanced process control

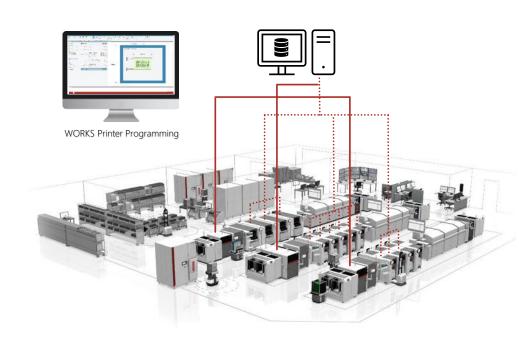


Unified line control



Easy programming

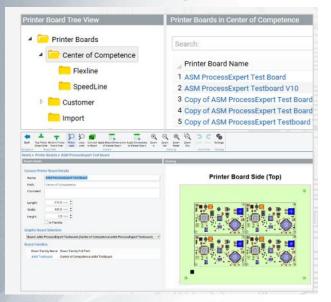




### Efficient program management



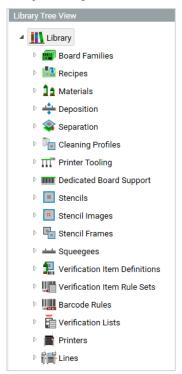
#### Central data storage

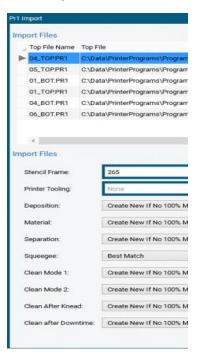


#### Overview of all printer boards

- Name
- Path
- Comment
- **Board dimensions**
- Date created / modified
- Link to board or board family in SIPLACE Pro

#### Library with object based structure Batch import function





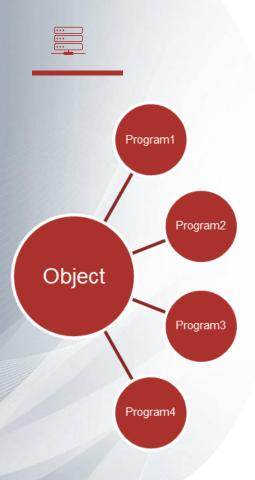
#### Difference editor



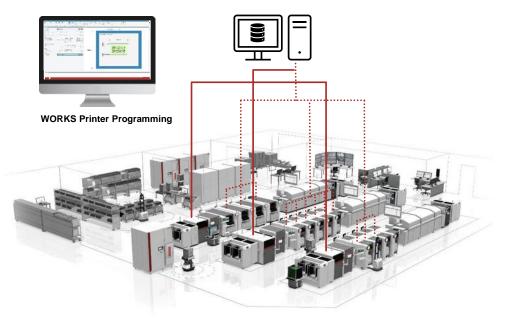


# Efficient program management





- Central data storage
- Overview of all printer boards
- Library with object based structure
- Batch import function
- Difference editor
- Easy data maintenance







Efficient program management



**Enhanced process control** 

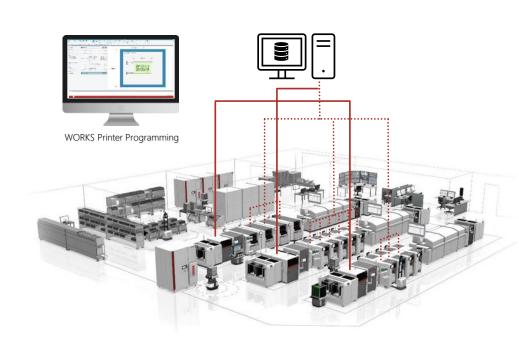


Unified line control



Easy programming

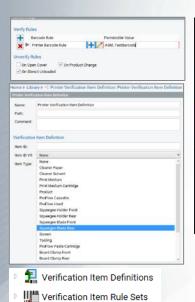


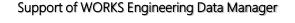


### **Enhanced process control**

### SDG Surface Mount Technology

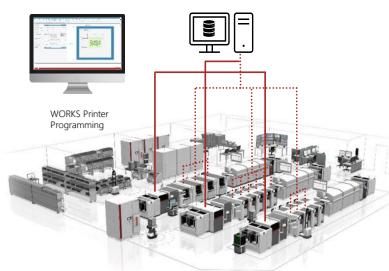
#### Setting for local verification











- Setting for local verification
- Support of WORKS Operations Information Broker User Management
- Support of WORKS Engineering Data Manager
- Integrity check prior to download



Barcode Rules

Verification Lists





Efficient program management



Enhanced process control

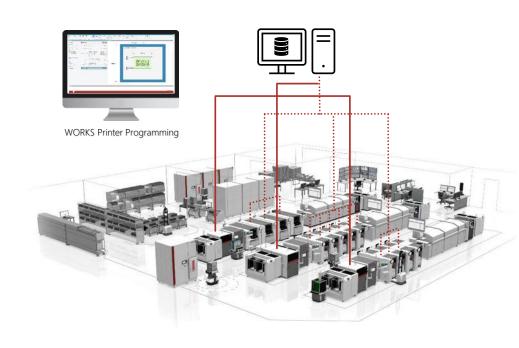


Unified line control



Easy programming





### Unified line control



#### One recipe for DEK and SIPLACE

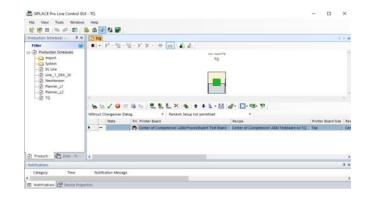


#### Direct download to DEK printer

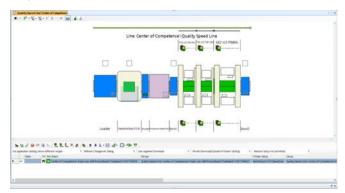


# </>

# Download program without SIPLACE



#### Separate download button for DEK and SIPLACE







Efficient program management



Enhanced process control

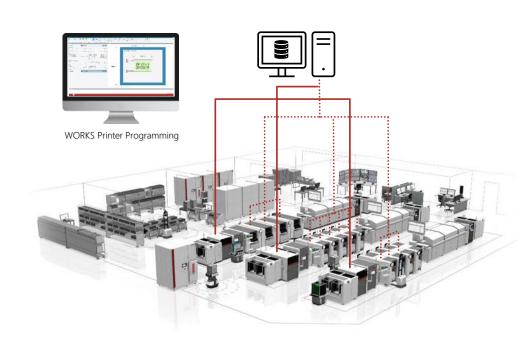


Unified line control



Easy programming

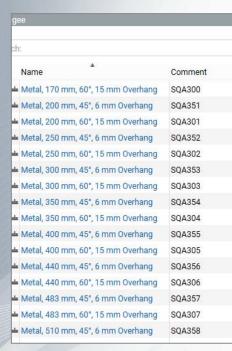


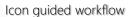


### Easy programming



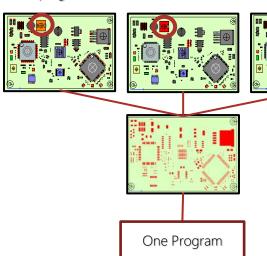
#### Standard library



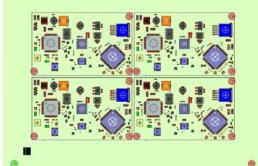




#### One program for different board variants



Connection to SIPLACE Pro



Fiducials Dimension Board family









Efficient program management



Enhanced process control

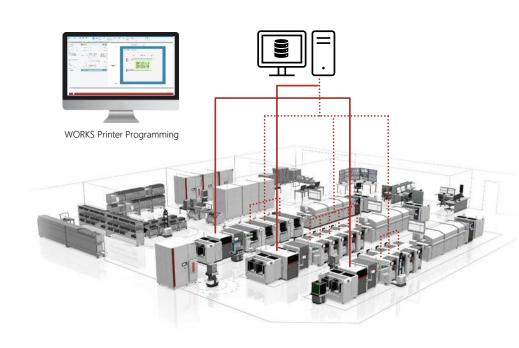


Unified line control



Easy programming

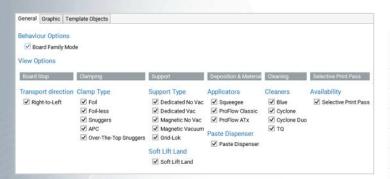




# User-friendly operation



#### User-defined user interface

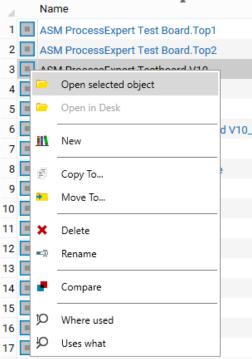




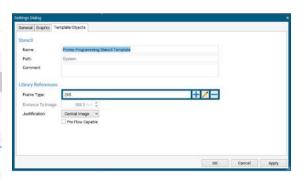


Comprehensive help documentation

#### Smart right mouse menu



#### Template for new object



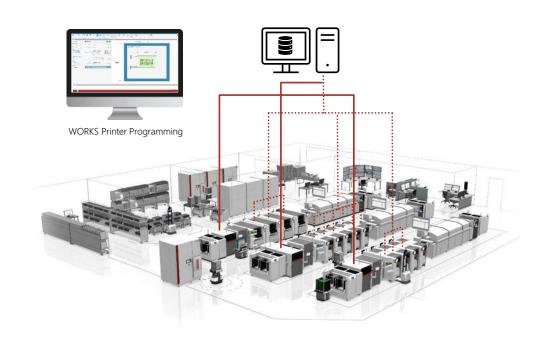


### SDG Surface Mount Technology

#### Download of PCB barcode

→ better usability and flexibility

- The barcode position defined on a SIPLACE Pro board will be downloaded to the printer together.
- The downloaded recipe includes a SIPLACE Pro board with PCB barcode on the highest-level panel for the same conveyor lane as is intended for the printer board.



### SDC Surface Mount Technology

### **Smart Pin Placement**

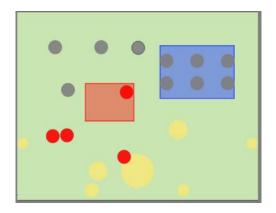
→ process automation

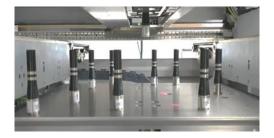
- Easy programming per drag&drop
- Red marked of possible collision
- Board exclusion zones can be defined
- High Priority zones can be defined













### HawkEye programming

→ process automation

- Automatic deposit verification for DEK V09 printers
- Simple programming with intuitive drawing
- General parameter Post Print Analysis







#### **Data Maintenance**

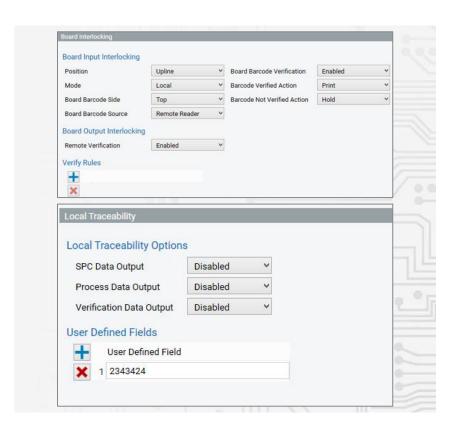
→ efficient data management

- Apply the same settings of selected parameters
- Apply referenced objects to a set of objects in one go

# Support of other options from station software

- → reduced manual work at station
  - Local traceability settings
  - Board interlocking settings





# **Prerequisites**



### **WORKS Printer Programming**

Prerequisite software	Software Version (R21-1)
DEK Station Software	V9.21.2 / V1.21.2
SIPLACE Pro	19.0
WORKS Operations Information Broker (optional)	6.3
WORKS Engineering Data Manager (optional)	3.13

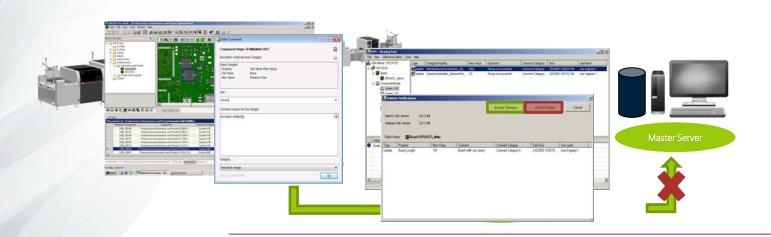


### WORKS Engineering Data Manager (EDM)



### WORKS EDM buffers and traces all data changes on the entire shopfloor

- Data changes are described in a comment dialog box on the line server
- All change notifications are displayed on the EDM Clearing Pool
- Change notifications by e-mail
- Responsible personnel can decide wether the changes should apply to the entire production or only to a specific line



### One more thing: ASM WORKS



