

Smart Factory for Printing Industries



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Aging issues

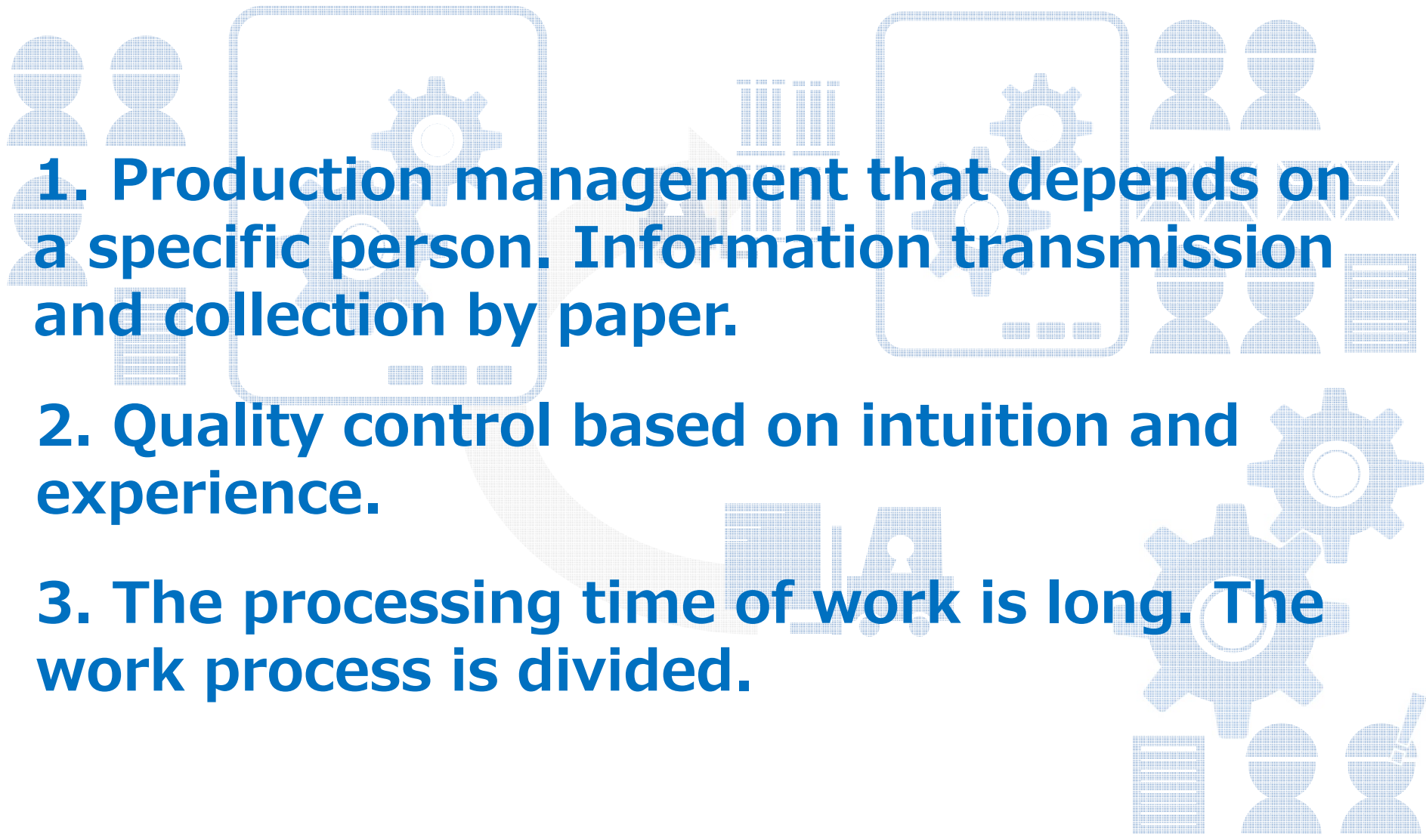
Manpower and skilled operator
shortage in the factory

Increase manufacturing costs
and decrease profits

Successor issues

Environmental
measures





1. Production management that depends on a specific person. Information transmission and collection by paper.

2. Quality control based on intuition and experience.

3. The processing time of work is long. The work process is divided.

◆ Development concept for high productivity

Connected Automation

Optimize the entire plant by connecting automated production equipment.
KP-Connect Pro is the core of the system.

Parallel Makeready

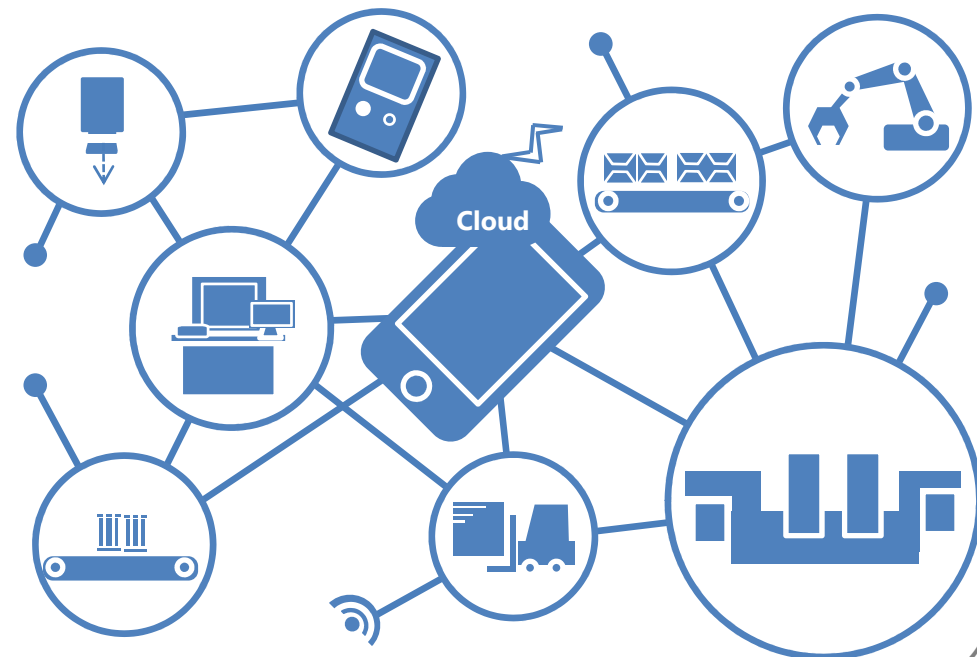
The automatic switching devices are operated in parallel as much as possible to achieve a significant time saving.
Build an optimal switching flow for each printing application.

Autopilot

This function improves work efficiency without using human work.

Connected Automation

The concept of maximizing labor productivity and building Smart Factory by automating and saving labor in each process using Internet technology.



Smart factory created by Connected Automation

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Quality control based on intuition and experience

**Standardize quality and
arrange automatic inspection.**

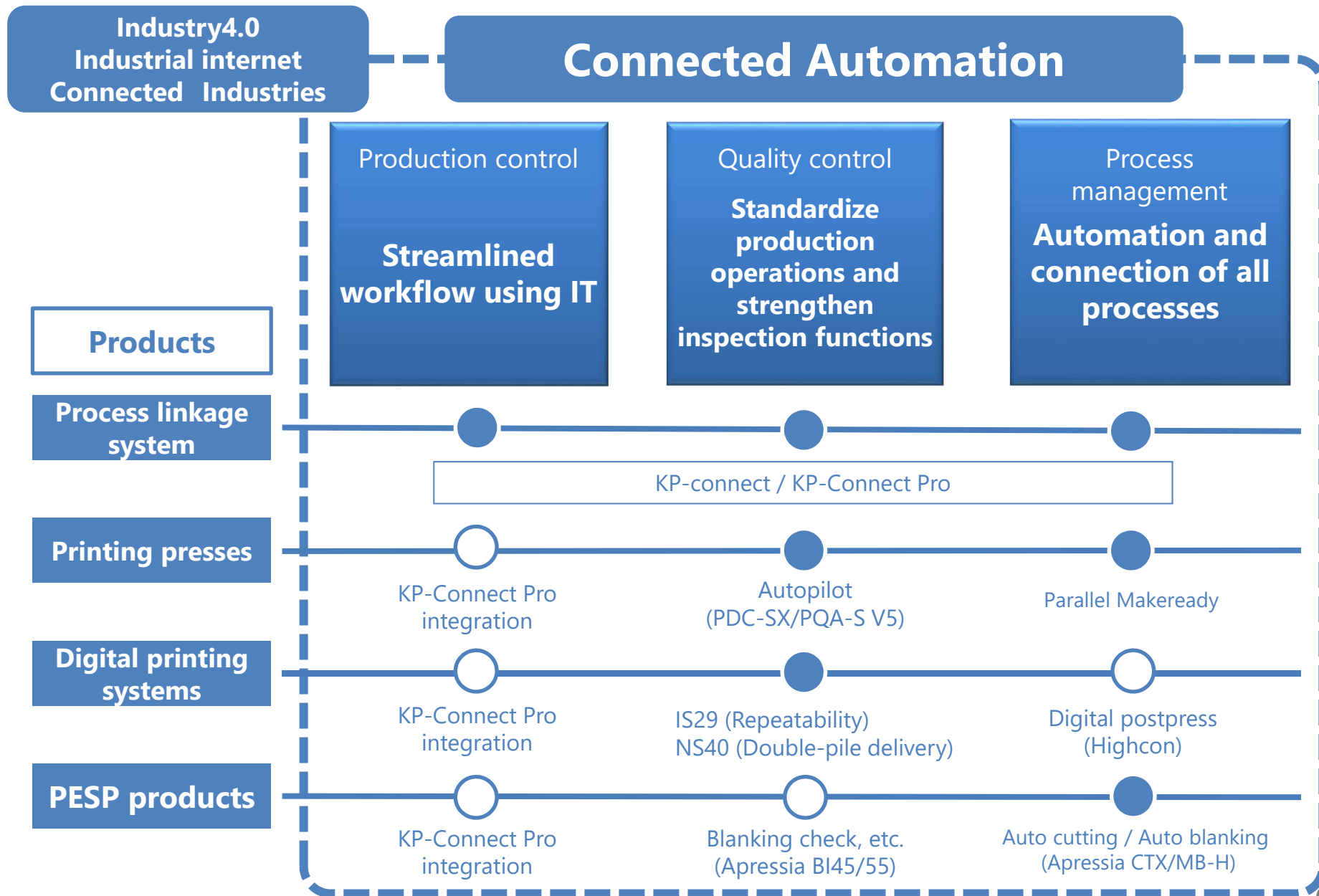
Production management that depends on a specific person. Information transmission and collection by paper.

**Make the production process
smooth and visible.**

The residence time of work is long. The work process is divided.

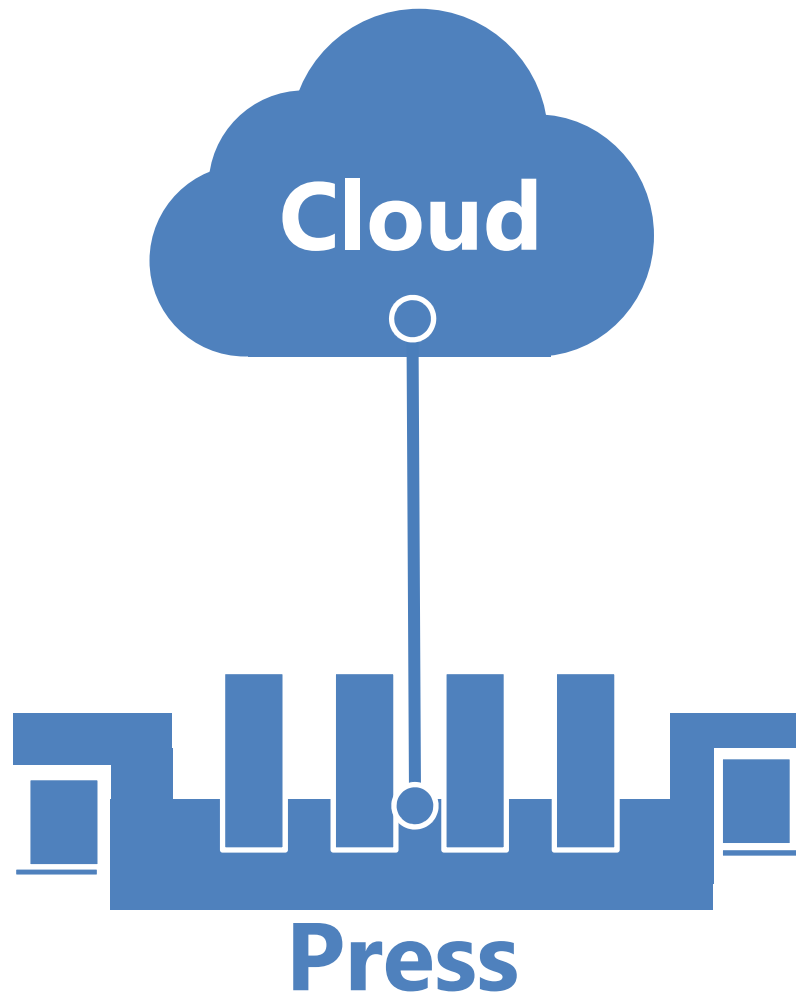
**Promote automation and labor saving,
and operate with the smallest and
optimal number of people.**

KOMORI products that realize Connected Automation KOMORI



Connected Automation / Printing press and IoT

KOMORI

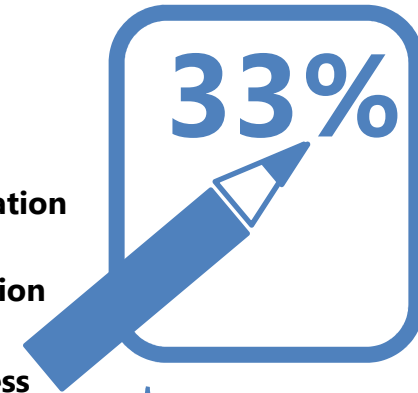


Visualization

Visualization of production information

Automated production data collection

Real-time monitoring of job progress



Automation

Automation of press settings

Automated operation (unmanned factory)



Optimization

Predictive maintenance from error information

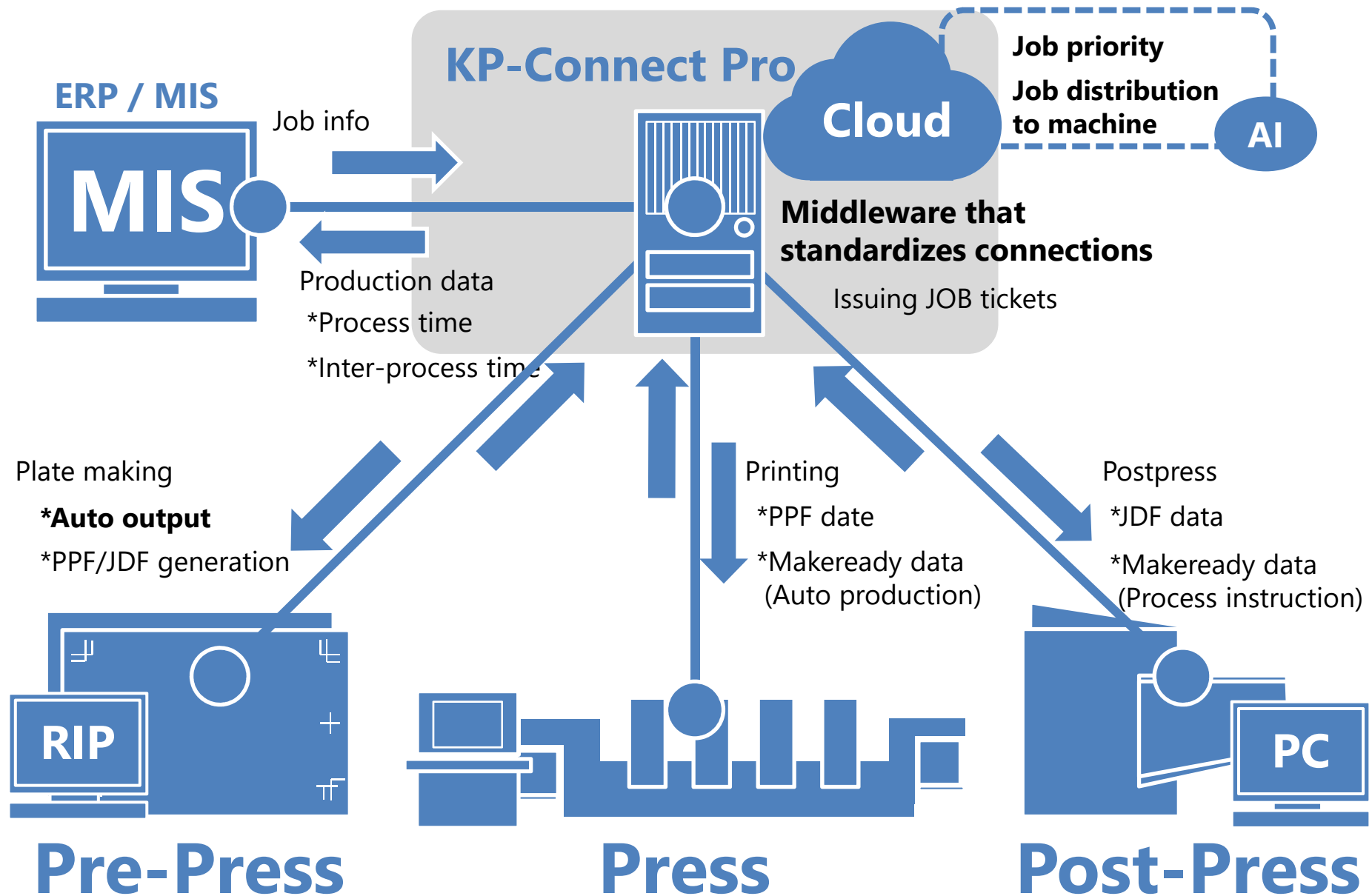
Job optimization

Cost management



Connected Automation | KP-Connect Pro

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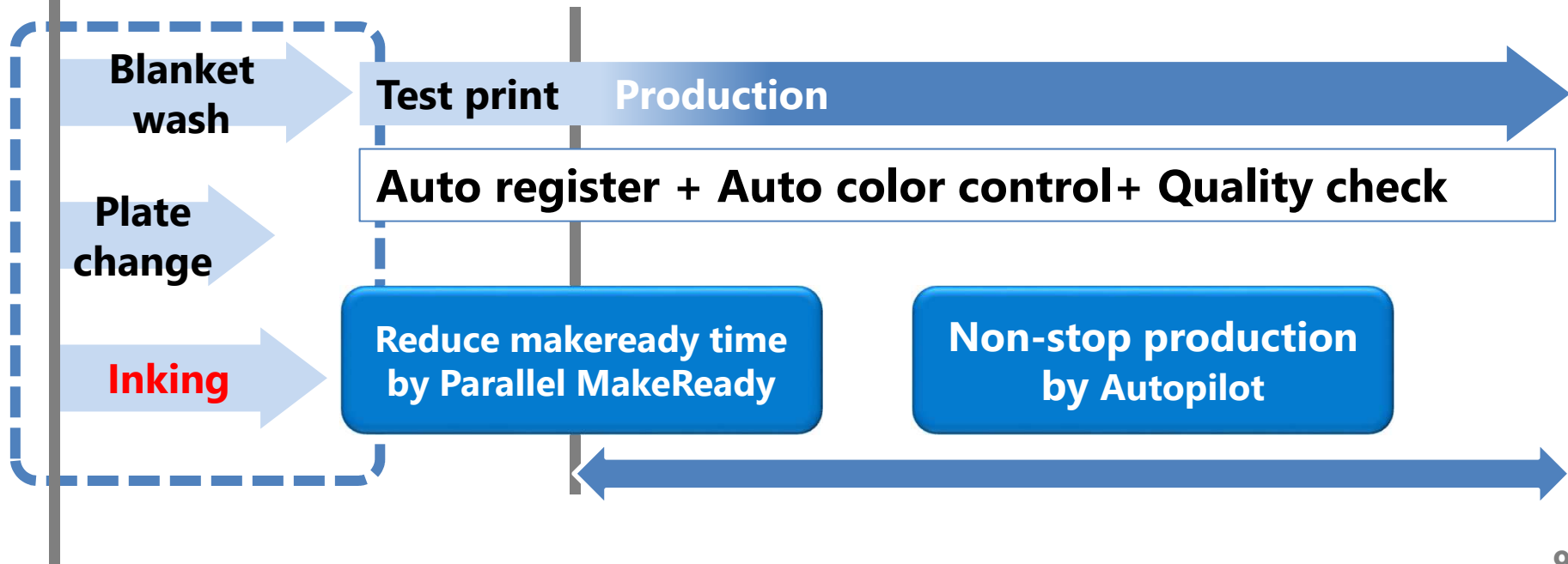


Parallel Makeready + Autopilot

Traditional automation : Serial Makeready



Parallel Makeready + Autopilot



Automation from test print to OK sheet



JOB1

300 sheets



JOB2

600 sheets



JOB3

300 sheets



**Complete 3 print jobs within 10 minutes
with automatic operation**

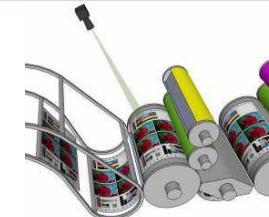
Support system for quality stability

Print Management Solutions

Job change and Test print

Quality control and adjustment

Quality maintenance



KHS-AI

PDC-SX

PQA-SV5

High precision preset

Pre-inking

Color control

Auto register

PDF verification

Quality check

Color control

Auto register

Job1

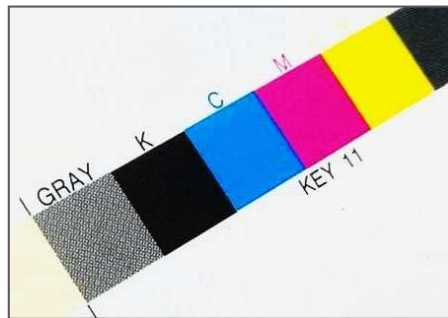
Job2

Minimize job change over time and waste paper

Minimizing quality maintenance load

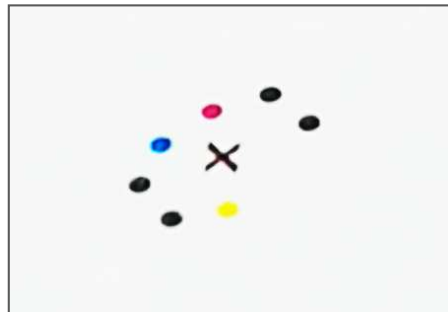
High-end model with automatic register adjustment function

Reduced registration time and waste by adding an automatic registering function to the original



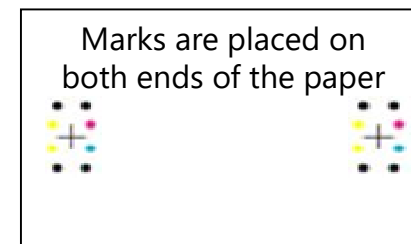
Color control

- Center color bar measurement is possible by X-Y scanning
- Spot measurement of important points is possible
- Supports ISO12647-2, G7 and JapanColor compliant reports
- Supports M0 to M3 light sources



Auto register

- Unit by unit
- Front and back
- Circumferential direction control
- Sideways direction control



Shorten makeready time and reduce waste

PDC-SX PDF Comparator System

PDF Comparator System, an offline verification function, is integrated into PDC-SX.

Color control



Measure color bar



Register



Misregistration calculation

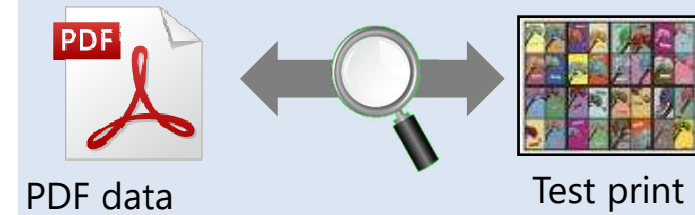
Comparator system



Equipped with high resolution scanner (full scan)

Compare with PDF data (test print)

Plate making mistakes, scratches, etc.



Compare with OK sheet (production)

Print defect detection

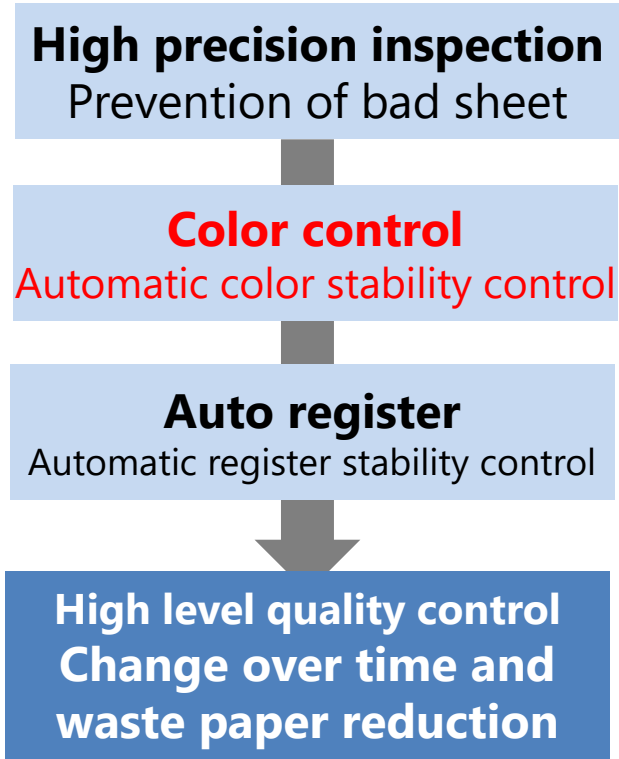
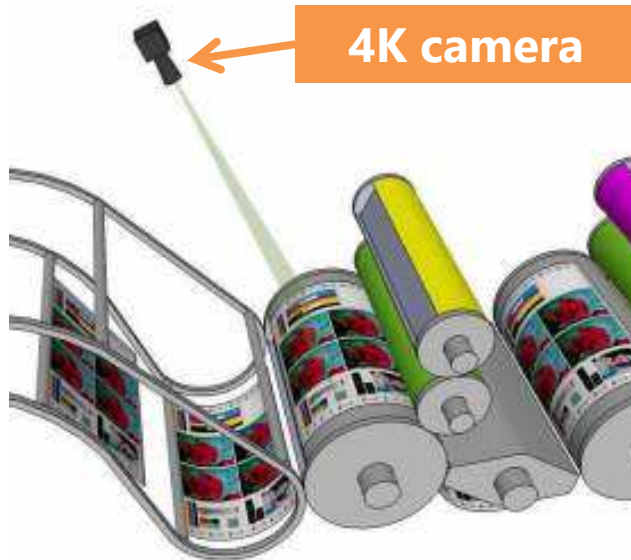


Print Quality Assessment System PQA-S V5

KOMORI

Print quality assessment system with high precision inspection, color control and automatic register adjustment

Increased reliability through 100% inspection of defects and color control



High precision inspection



Color control



Auto register



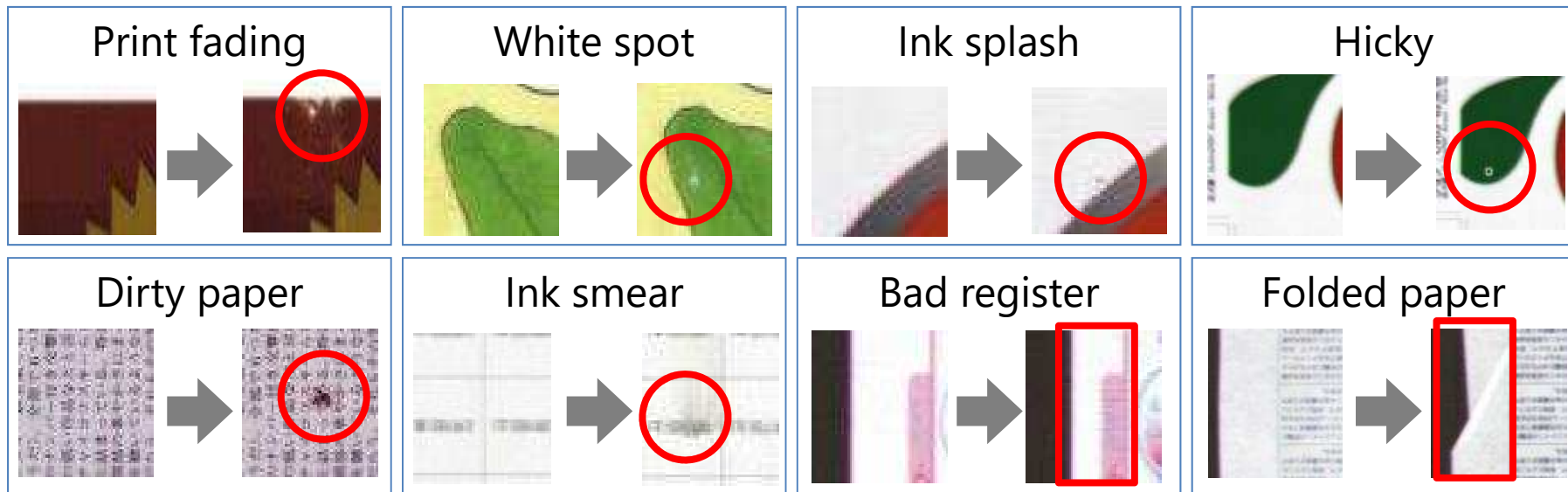
Auto register is available only for 4-color process printing

Print Quality Assessment System PQA-S V5

- **A system that realizes high-level quality control that inspects all sheets, such as ink splashes, dripping, smudges, hickies, color variations, and paper defects**

When a defect is detected, the operator is notified with a horn or a warning light, and the delivery tape inserter prevents bad sheets from being mixed into the subsequent process.

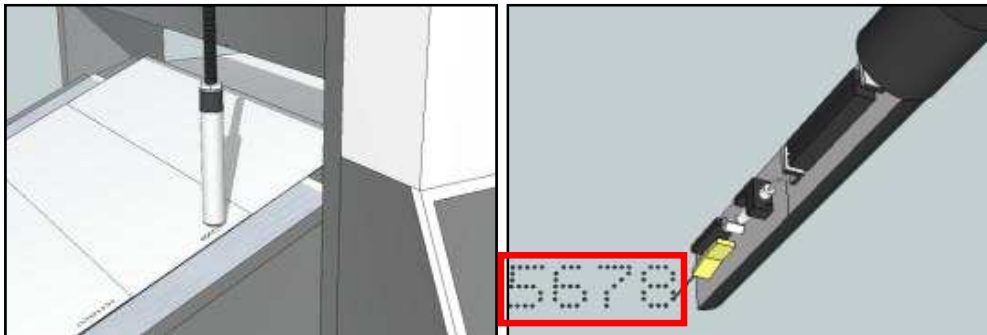
- **Reduce operator workload for quality checks**
- **Prevents bad sheets from being mixed, ensuring client trust and reducing loss**



PQA-S sheet numbering system

- Print serial numbers on all sheets to enhance quality control

Print serial number on each sheet on feeder board



↓ Link with serial number

PQA-S



Defect image with serial number

PDC-SX



Record serial number

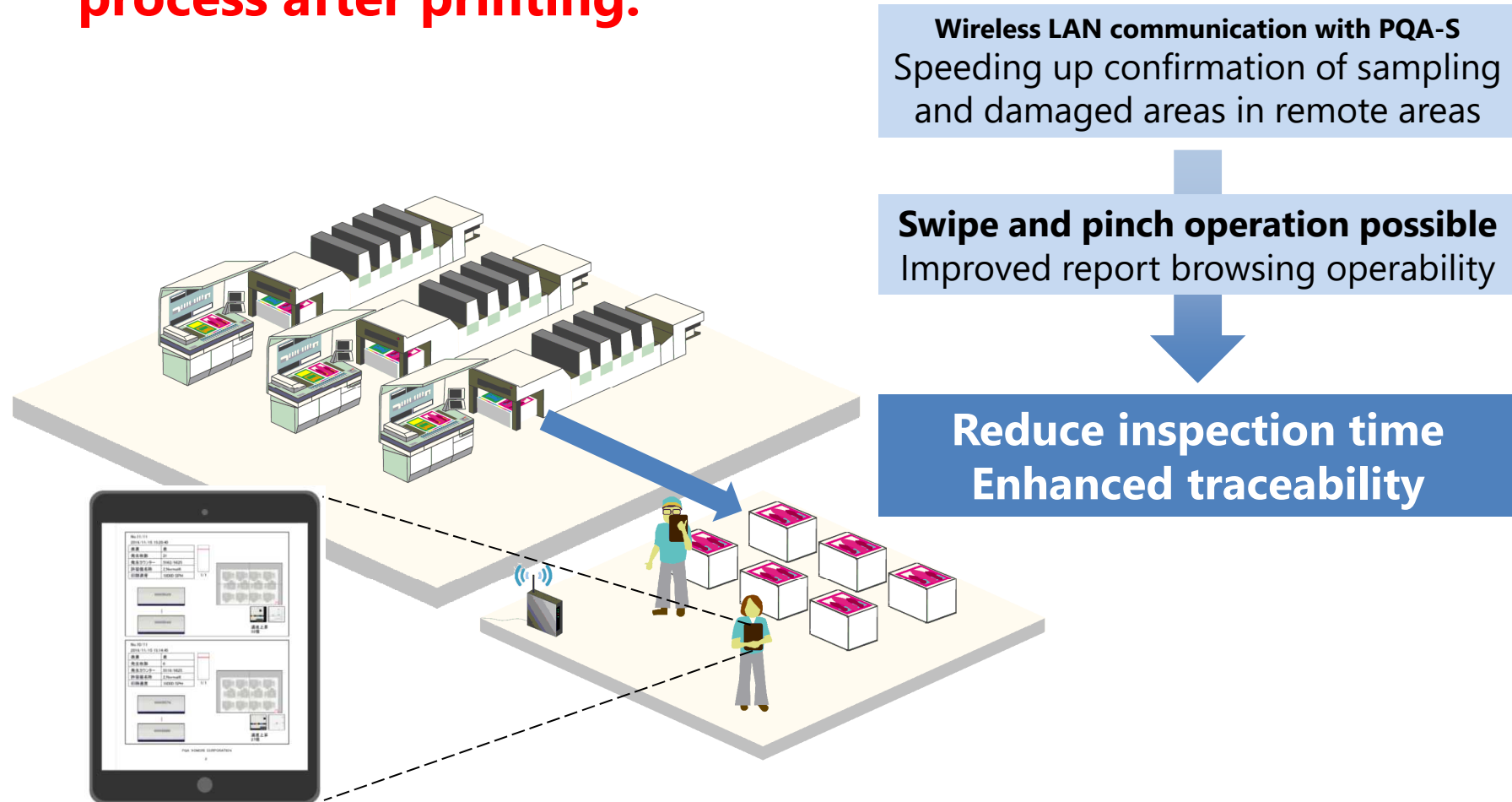
Link with PQA-S
Prevention of contamination of bad sheets
by reliable verification with inspection

Link with PDC-SX
Enhance quality control

Hi-level quality control
Enhance traceability

PQA-S Report viewing tablet

- The output error report can be easily viewed on a tablet.
→ Improved efficiency when sorting waste in the process after printing.



State-of-the-art LITHRONE GX40 : The core of the smart factory

- **LITHRONE's highest model: GX series**



6-color LITHRONE GX40 with coater, automatic non-stop feeder and delivery

In order to realize a smart factory in the printing market, KOMORI offers a printer that combines all the functions and connectivity described above!



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