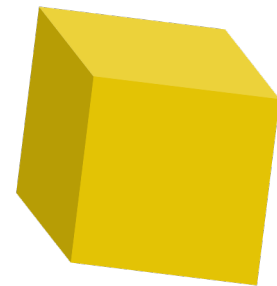




**TOMAS TECH**

***POKAYOKE System***  
***Pokayoke System Pegasus***

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Presentation by TOMAS TECH CO., LTD.

# AGENDA

- 1. POKAYOKE System Overview**
- 2. POKAYOKE System Details**
- 3. Appendix**

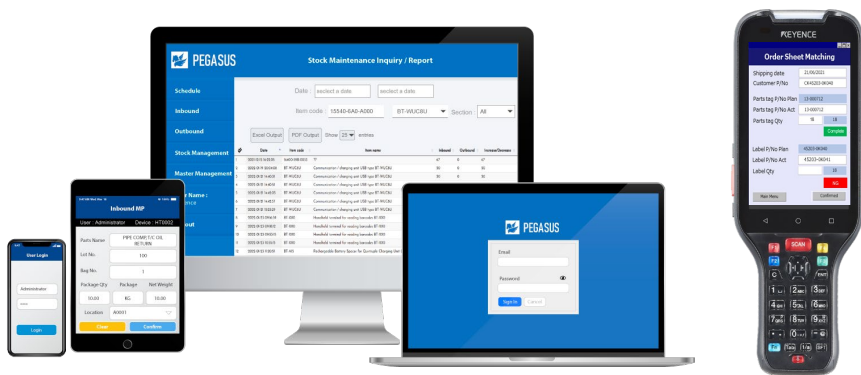
# **POKAYOKE System**

## **Overview**

PEGASUS is **an application designed to streamline complex management operations.**

In recent years, the manufacturing / logistics industry is required to adapt to the diversifying changes in market needs, with growing demand for **"small-lot, high-mix production"** and **"shorter lead times"**. In many sites, mass production and small-lot production run in parallel daily, making management operations increasingly bloated and complex, and **detailed schedule management and inventory management are required.**

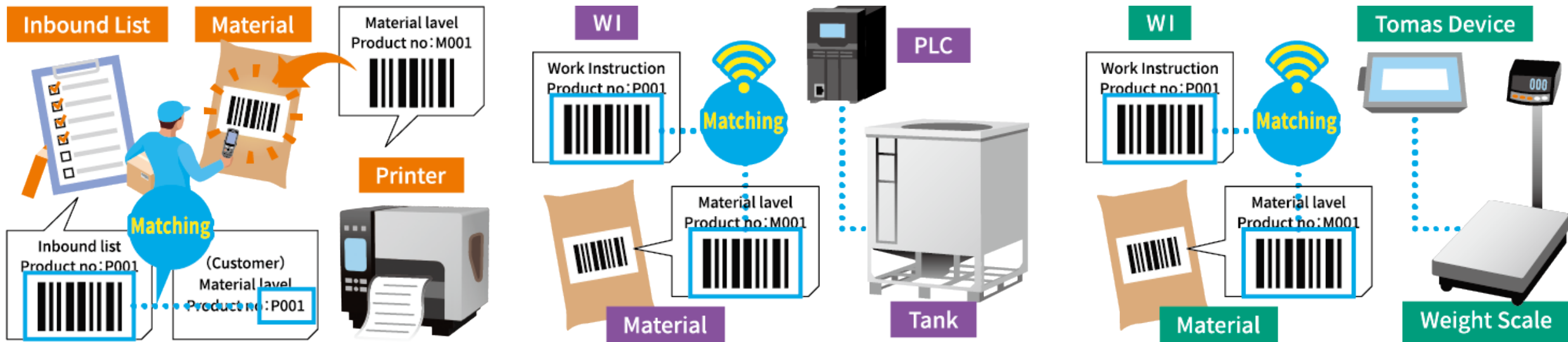
manufacturing / logistics industry, developed to improve on-site performance — PEGASUS enables you to **leverage handheld computers** to digitalize the cumbersome management work previously done on whiteboards or Excel, providing **full digital visualization and substantial cost reduction.**



<b>Stock Management</b> Stock Management	<b>Process Management</b> Process Management	<b>Sales Order Management</b> Sales Order Management	<b>Fixed assets management</b> Fixed assets management
			
<b>Stocktaking system</b> Stocktaking system	<b>POKA Inspection system</b> POKA Inspection system	<b>Traceability system</b> Traceability system	<b>Unlocking system</b> Unlock system
			
<b>Operation monitoring system</b> Operation monitoring system	<b>Weight checker system</b> Weight checker system	<b>Label Printing System</b> Label printing system	<b>RFID system</b> RFID system
			

# POKAYOKE System Overview

POKAYOKE System PEGASUS is **an application that leverages handheld computers to solve every on-site challenge**. Developed to improve on-site performance in the manufacturing/logistics industry, PEGASUS leverages handheld computers to take the cumbersome management work previously done on whiteboards or Excel and **fully digitalize and visualize these operations, achieving cost reduction**. We propose the best solution tailored to each customer's needs, including "Incoming/outgoing management system," "Label Printing System," "Unlocking system," and "Weight measurement support system."



1

## Difficult to grasp on-site status in real time

Managing processes and inventory with whiteboards or Excel makes it difficult to grasp the latest on-site status in real time. Because work history is also recorded manually, it is hard to link this data to current situation analysis or improvement activities.



## Real-time status visibility (Visualization)

By using handheld computers, you can check process progress and shipping/receiving status in real time. Daily work history, processes, and working hours are also recorded automatically, allowing you to grasp on-site status accurately at any time.

2

## Productivity loss from work errors and personalization

With analog operations at the core, work errors such as mis-shipments, picking and packing mistakes, and incorrect material input occur easily. Operations also tend to become personalized and dependent on veteran workers, which can result in large variations in quality and productivity.



## Streamlined operations and uniform quality (Productivity improvement)

Digitalization enables efficient data "collection," "organization," and "analysis." Mechanisms such as barcode matching and weight checks prevent work errors before they occur, allowing anyone to perform operations with the same level of quality.

3

## Rising management workload and cost burden

Management operations such as printing paper slips and labels, and entering data into Excel manually require significant workload and cost. Manual double-checks and rework also increase indirect costs, making it difficult to focus resources on the work that should truly take priority.



## Cost reduction through lower management workload

Going paperless eliminates the need for printing and handwritten work, and the system supports data entry. By removing dependence on individuals and dramatically reducing management workload, indirect costs are lowered and the burden on the field is eased at the same time.

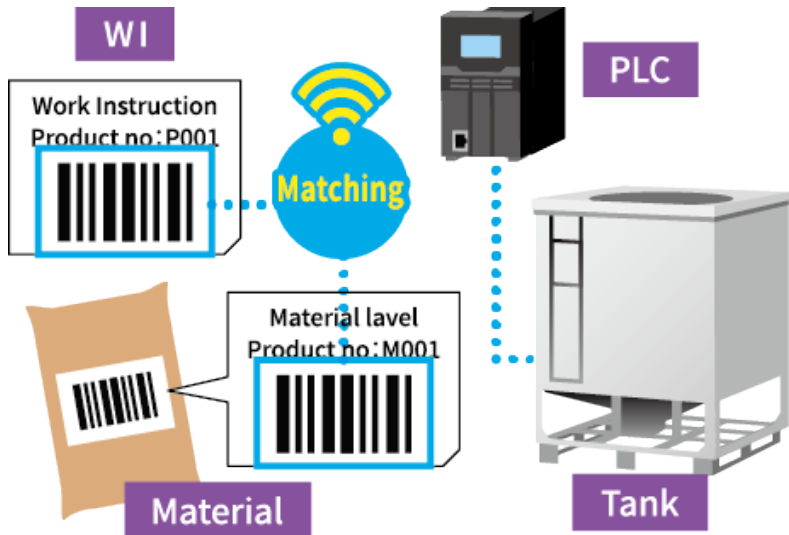
# **POKAYOKE System**

## **Details**

01

## Unlocking system

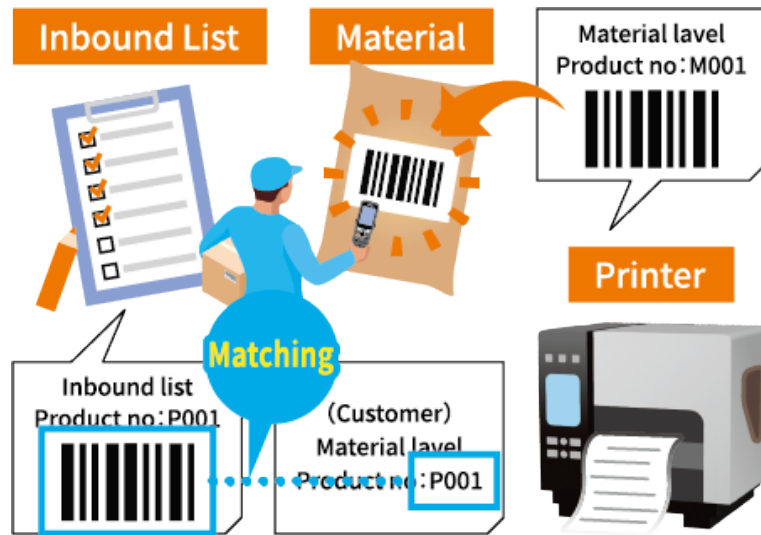
The Label Printing System issues labels required at incoming receipt, picking, and process management, with a choice of fixed or mobile printer types. The Unlocking system links with PLC I/O signals to physically prevent the input of incorrect materials.



02

## Label Printing System

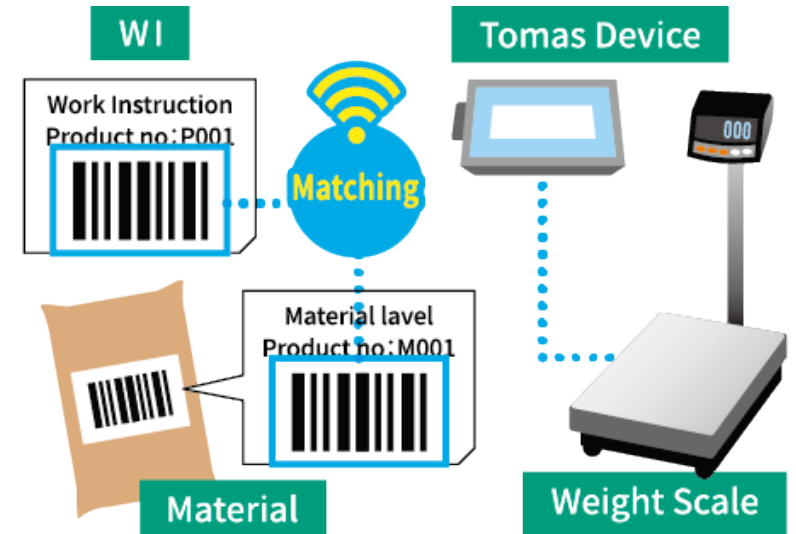
By matching QR codes, barcodes, and OCR with handheld computers, you can prevent wrong items or wrong quantities at receiving and shipping, ensuring smooth inbound/outbound operations. The built-in OCR function also enables matching verification at sites where QR codes or barcodes are not applied.



03

## Weight measurement support system

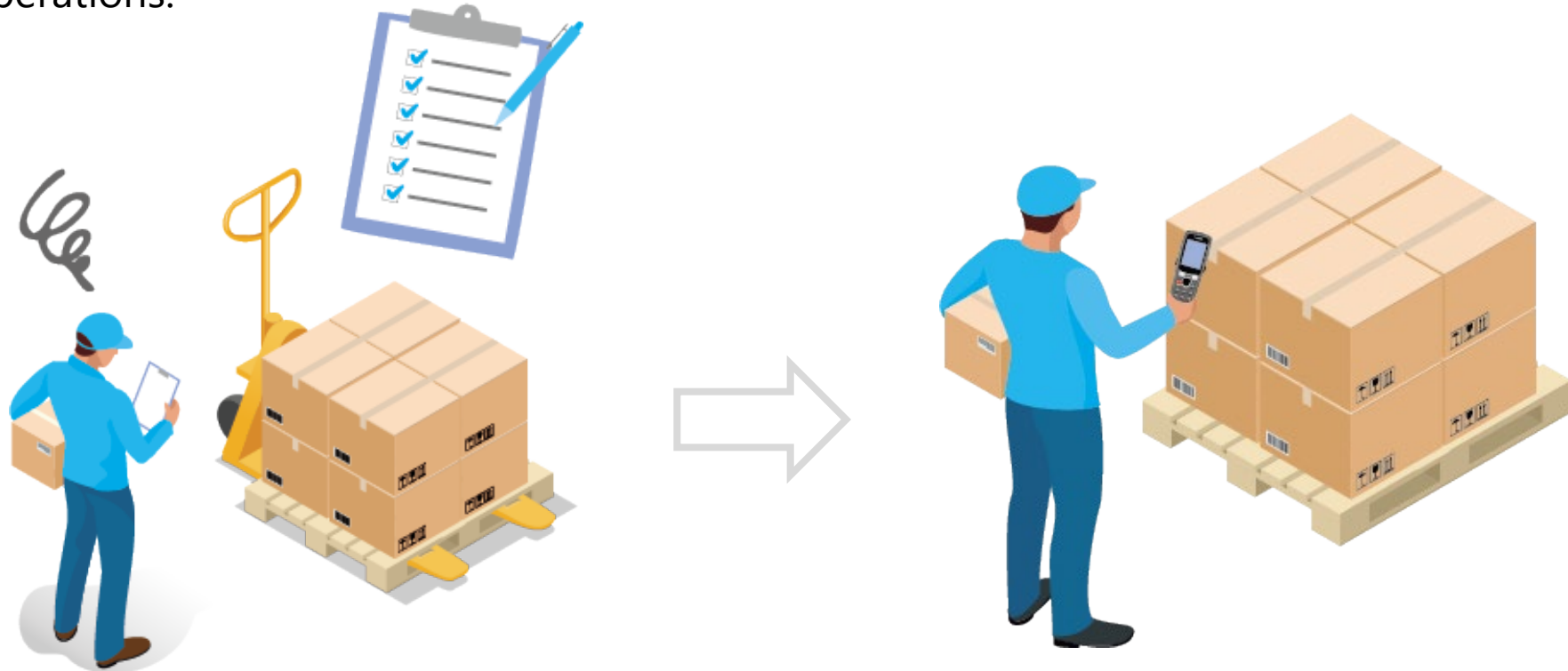
The Weight measurement support system wirelessly transmits weight data from the scale to the handheld computer, preventing measurement errors and improving work efficiency.



By reading QR codes, barcodes, and OCR with handheld computers, wrong items and wrong quantities can be prevented in real time during incoming and outgoing operations.

Even at sites where QR codes or barcodes are not applied, **the OCR function can read printed text and verify it against the product** .

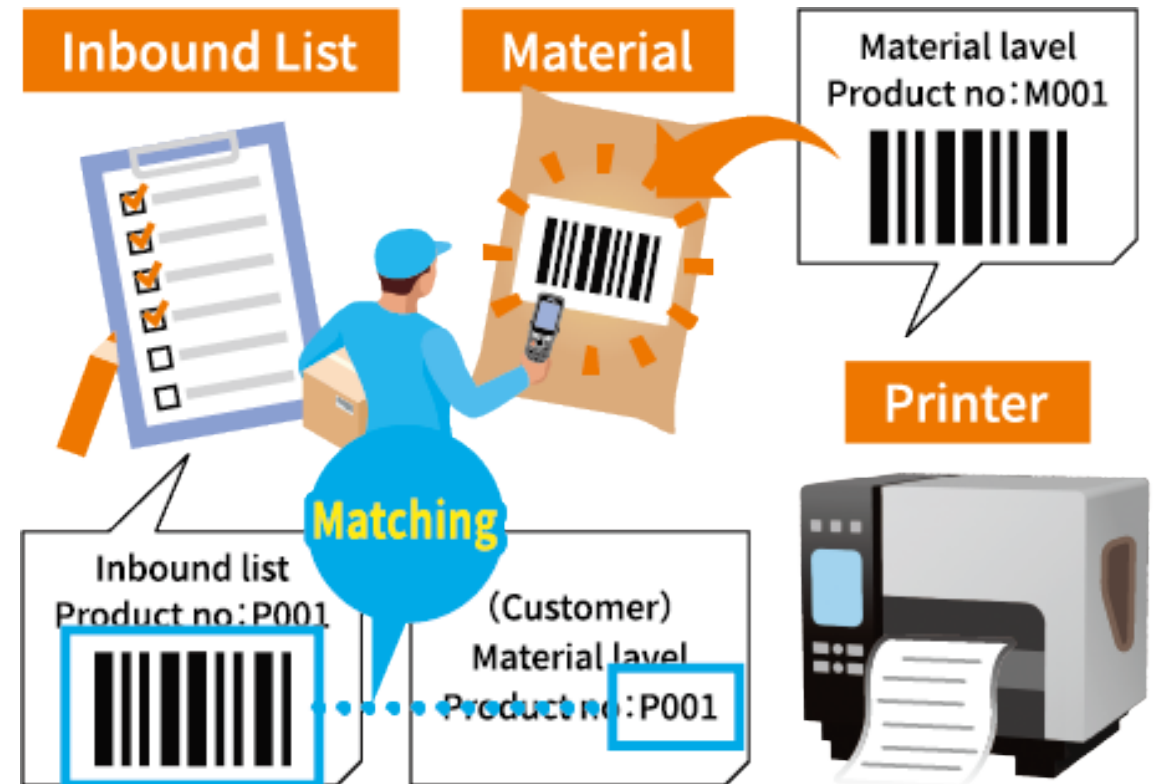
Daily work history, processes, and working hours are recorded automatically, enabling full traceability of incoming and outgoing operations.



# Label Printing System - Introduction to functions

Beyond basic label issuance at receiving, it covers a wide range of uses such as label updates during picking and label issuance for process management.

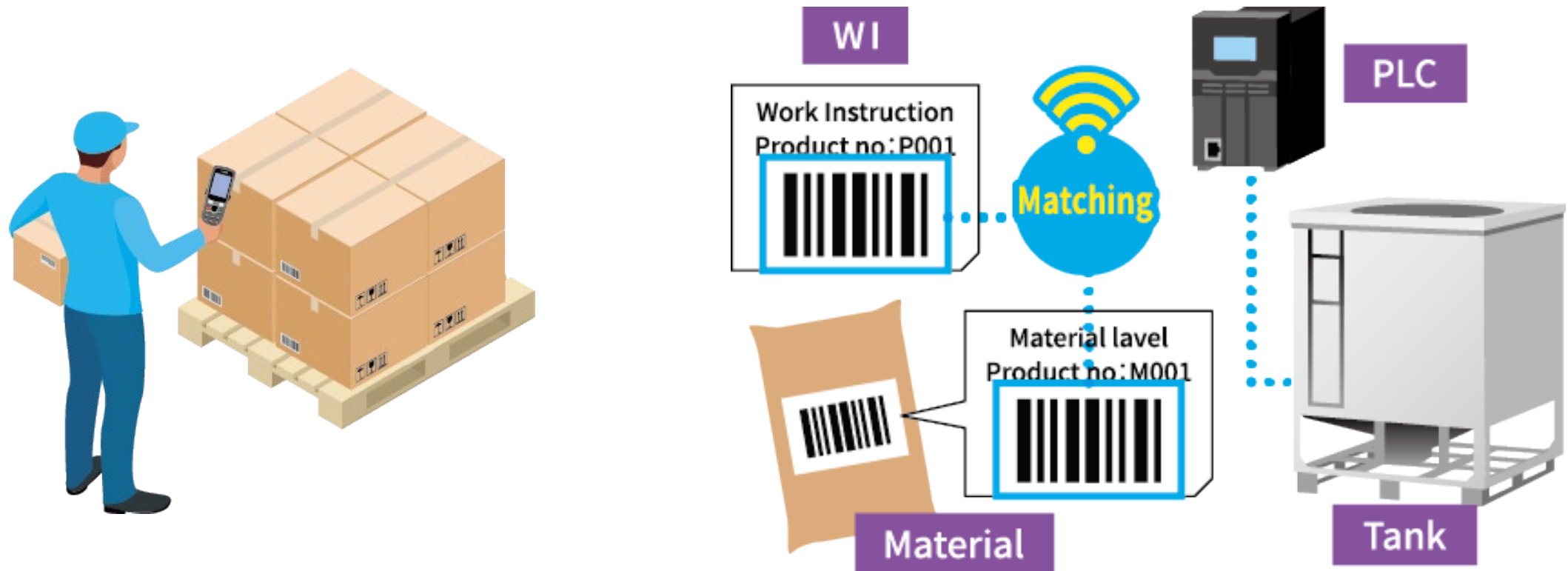
The label printer can be chosen from two types — fixed or mobile — and we propose the best solution tailored to the customer's operations.



# Unlocking system - Introduction to functions

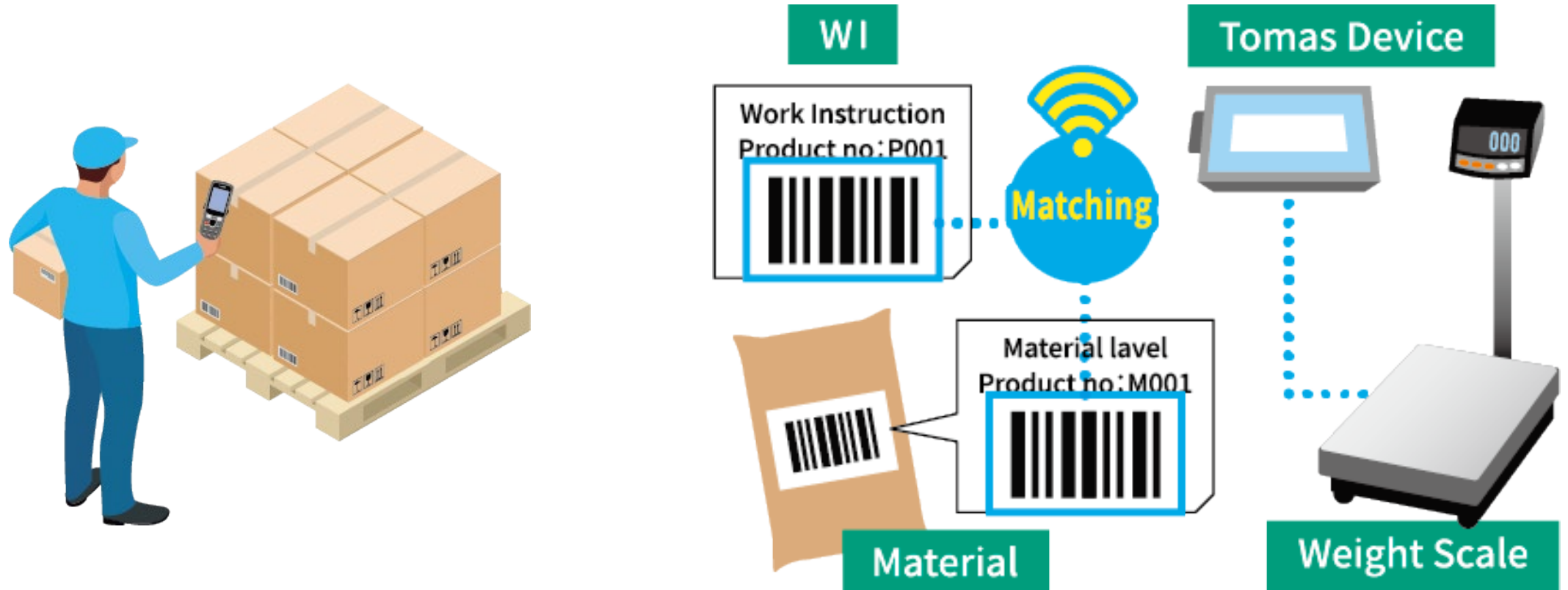
Material information read by the handheld computer is matched against the plan data. If the material is correct, the lock on the tank or input port is released via an I/O signal.

If the material is incorrect, the lock will not release, physically preventing wrong-material input and contributing to stable manufacturing quality.

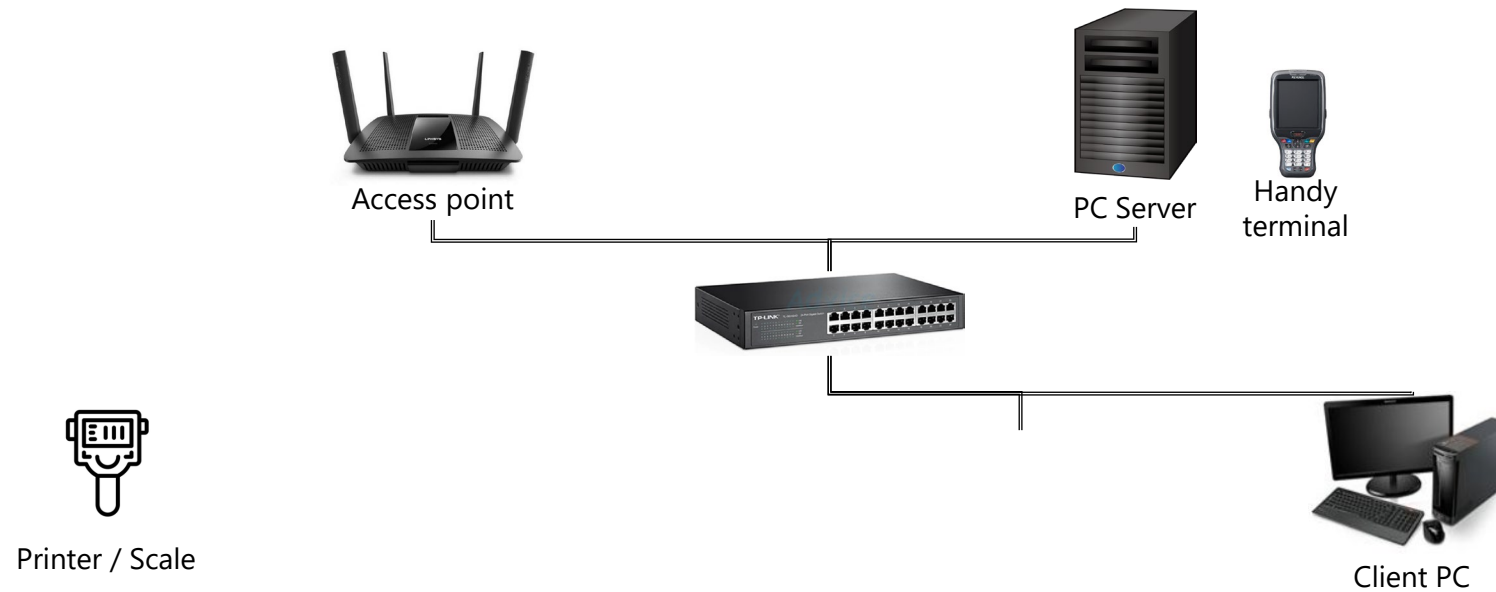


Weight data from the scale is collected via serial or Ethernet communication and wirelessly transmitted to the handheld computer.

By using a dedicated device or PLC, measurement errors are reduced and work efficiency is improved at the same time.



# Appendix



No	Item	Recommended specifications and models
1	PC Server	OS: Windows Server 2019R2 Standard / Memory: 8GB or more / Hard disk: Free space 50GB or more / Display: Resolution 1366×768 or more / Browser: Google Chrome (latestVer) ※Server machine meeting or exceeding the recommended specifications
2	Client PC	OS: Windows 7/8.1/10/11 / Memory: 4GB or more / Display: Resolution 1366×768 or more / Browser: Google Chrome (latestVer) ※A PC meeting or exceeding the recommended specifications
3	Handy terminal	KEYENCE BT series (Windows OS type / Android OS type)
4	Label printer / Scale	Selected based on application (optional)

<b>1. Current situation analysis</b>	We interview your current operations and systems, confirm requirements, and analyze the customer's current situation. Based on the requirements, we prepare a quotation.	<b>Within sales</b>
<b>2. Requirement definition</b>	Based on the current situation analysis, we conduct detailed requirement definition. We confirm the detailed requirements so the system aligns with actual operations.	<b>1-4 weeks</b>
<b>3. Design</b>	While holding process meetings, we carry out basic design, detailed design, and migration preparation based on the requirements.	<b>1-3 weeks</b>
<b>4. Development / Test</b>	We perform customization to fit your operations and then move into testing. We also examine the migration method to ensure a smooth rollout.	<b>1-20 weeks</b>
<b>5. Introduction support</b>	Running the new system in parallel with your existing system or operations, we hold operation training sessions during introduction. After you have confirmed usability, you carry out the final acceptance inspection.	<b>1 week</b>
<b>6. Production operation</b>	Operation begins. We provide long-term support for safe and comfortable system operation through operation/maintenance support, help desk, information provision, and revised versions.	<b>Minimum : 4 weeks Maximum : 28 weeks</b>

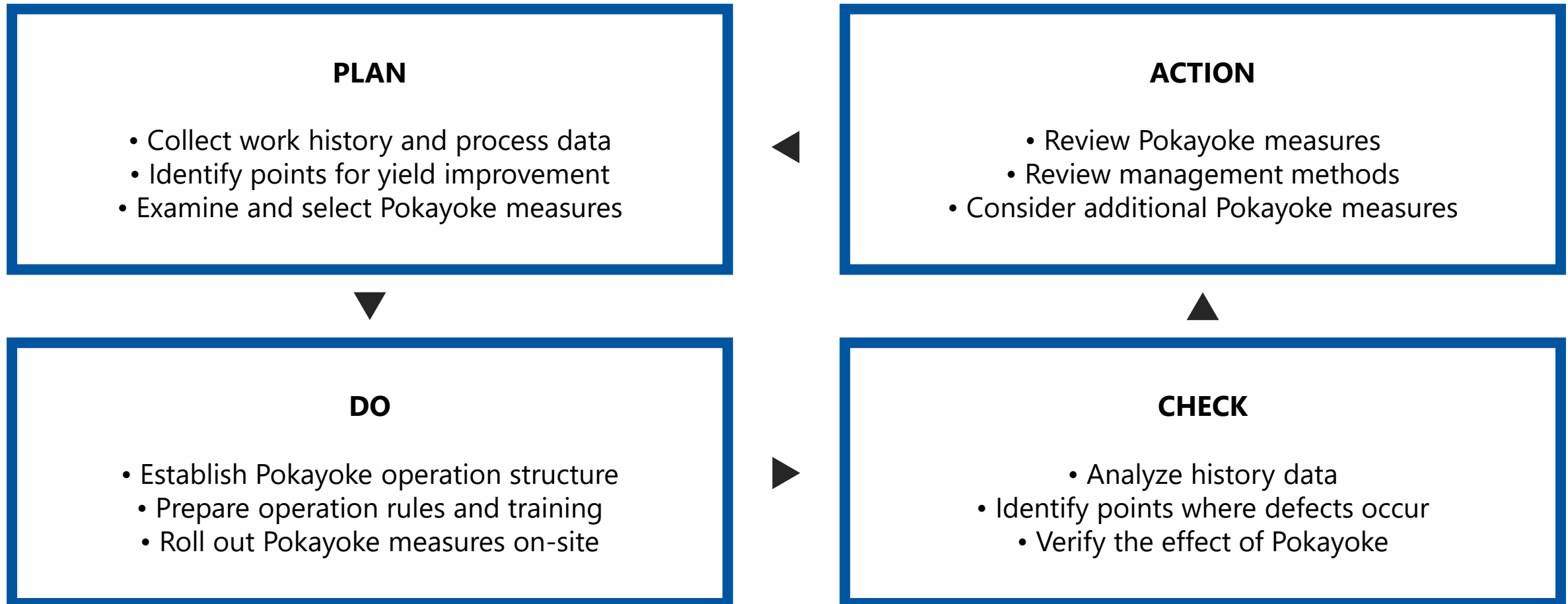
#	Software maintenance		Standard / Option
1	Operation support / Recovery support	We provide a support desk offering operation support by phone and email, and recovery support in the event of a software failure.	Standard*1
2	Software version upgrade	When functional improvements are made to the software, we provide upgraded versions. The latest software compatible with the latest OS is provided free of charge. Software purchase costs at server renewal become unnecessary, reducing the customer's lifecycle cost.	Standard*1
#	Hardware maintenance		
1	Hardware maintenance	In the event of a server failure, we or the hardware manufacturer perform on-site repair, including parts replacement.	Option*2
#	Software re-setup		
1	Software re-setup	After repairs to a failed server, when software re-setup is needed, we perform the restoration work. (Restoration of inventory data is not included in software re-setup.)	Standard*1

\*1) Service is included in the system purchase fee for the first contract year. From the second year onward, contracts are renewed annually.

\*2) Service is provided only when the hardware is purchased from us.

Quality improvement cannot deliver the expected results unless you can identify where waste and variation occur in the work — and may even lead to major losses such as defect outflow or rework.

What matters here is managing work history and process data, running the quality improvement PDCA cycle, and taking countermeasures based on root causes.





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