

Pegasus
Manufacturing / Logistics Management system

TOMAS TECH CO., LTD.

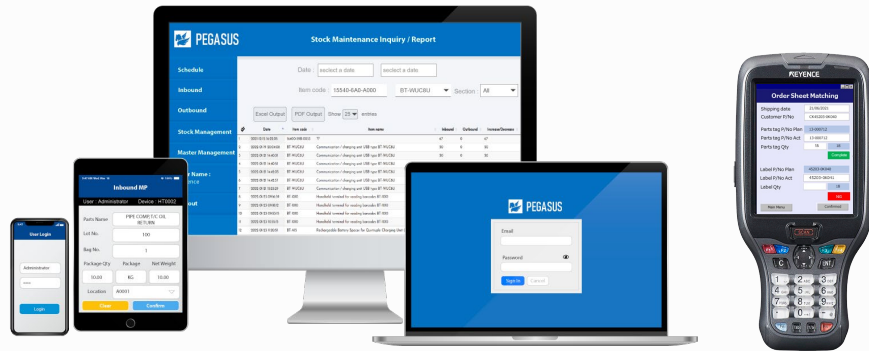
Introducing Manufacturing / Logistics Management system Pegasus

PEGASUS Manufacturing / Logistics Management system

Make complex management tasks smoother. This is an application that utilizes a handy terminal.

In the manufacturing / logistics industry in recent years, there is an increasing demand for "Small quantity and high variety" and "Short delivery time" in order to adapt to diversifying changes in market needs. In addition, at many sites, daily mass production and small lot production are carried out in parallel, so the management work is becoming more bloated and complicated, and precise schedule management and inventory management are required.

Developed to improve on-site performance in the manufacturing / logistics industry, PEGASUS uses a handy terminal to digitally visualize the complicated management work that was previously done with whiteboards and Excel. It can cut costs significantly.



<p>在庫管理システム Stock Management</p> 	<p>工程管理システム Process Management</p> 	<p>受発注管理システム Sales Order Management</p> 	<p>固定資産管理システム Fixed assets management</p> 
<p>棚卸管理システム Stocktaking system</p> 	<p>入出荷検品システム POKA Inspection system</p> 	<p>トレーサビリティシステム Traceability system</p> 	<p>ロック解除システム Unlock system</p> 
<p>稼働管理システム Operation monitoring system</p> 	<p>重量計測支援システム Weight checker system</p> 	<p>ラベルプリントシステム Label printing system</p> 	<p>RFIDシステム RFID system</p> 

| Features of PEGASUS series



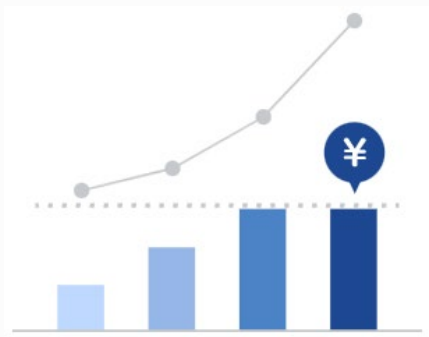
1. Quick

Installation is OK from one! Can be introduced in a minimum of 1 month
Generally, the more multifunctional a system is, the longer it takes to deploy.
Since PEGASUS has separate modules according to its function,
It is possible to install only the required system.
It can be installed in a minimum of one month from ordering to installation.



2. Easy

Even staff members who have been assigned to the site from today can easily use it.
If it is a difficult system, it will not be mastered and the number of people who can use it
in the company will be limited.
PEGASUS is a system that can be operated intuitively and is easy for anyone to use.
It can also be used by staff members assigned to the site from today.
We can support you in Japanese, Thai, and English, so it can use it with confidence.



3. Cheap

The initial cost starts from 100,000 Baht! No running costs are required.
If the business system is an expensive system, we hesitate to introduce it.
PEGASUS can be installed at low cost.
In addition, since it can be customized, it can be arranged according to the customer's
request while using it. No running costs other than server usage fees are required.

Benefits of introducing the system

By utilizing the Pegasus series, it is possible to solve various problems and obtain effects. It plays a very heavy role in achieving digitization.

Inefficient work

By managing with paper and Excel, it takes time to "collect", "organize", and "analyze" information.

- Printing of paper data from data
- Classification and sorting of paper data
- PDF scanning and storage of paper data
- Work is personalized in a black box.



Management cost

"Cost" is created by analog management.

- Cost for "paper". Printing machine, paper, management, etc.
- With the conventional production method, work efficiency cannot be expected, and labor costs due to work improvement cannot be reduced from the current level.
- Education costs will be incurred because the person in charge will be personalized.



Data black boxing

The work status is not visualized due to personalization of work and analog management.

- We do not know the progress of the process.
- We do not currently know the stock quantity in real time.
- Operations related to operations have become personalized, and operations cannot be leveled.



Improvement of business efficiency

By digitization, management man-hours can be reduced and efficient "Collection", "Organization", and "Analysis" can be realized.

- Data can be viewed and modified from devices (PCs, handy terminals, tablets).
- Since real-time information sharing is possible, work mistakes and duplicate work can be prevented.
- As PDF data, it can be shared with the company and end users.

Reduction of management costs

By digitizing, "cost" can be reduced by reducing the management man-hours.

- Printing man-hours can be reduced because printing is not required. Paper fee, printing machine, ink fee, printing labor cost
- Work can be improved by analyzing data by systematization.
- Anyone can easily operate by supporting the work such as data entry.

Visualization of the entire business

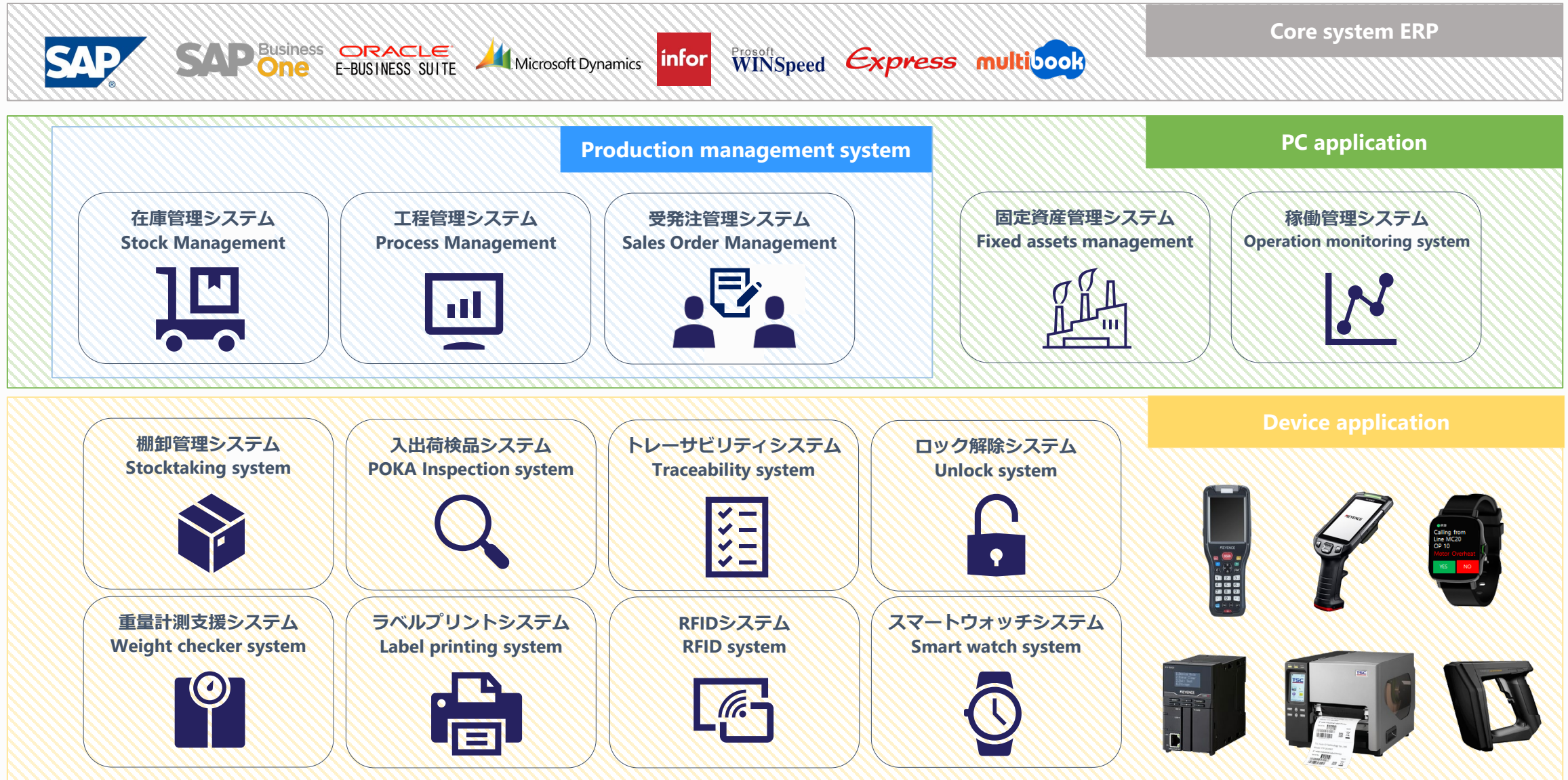
By digitizing, the business situation can be visualized.

- We can check the process progress in real time.
- Daily work, process, and work time are recorded.
- By semi-automating the work with the system, anyone can carry out the operation with the same quality.

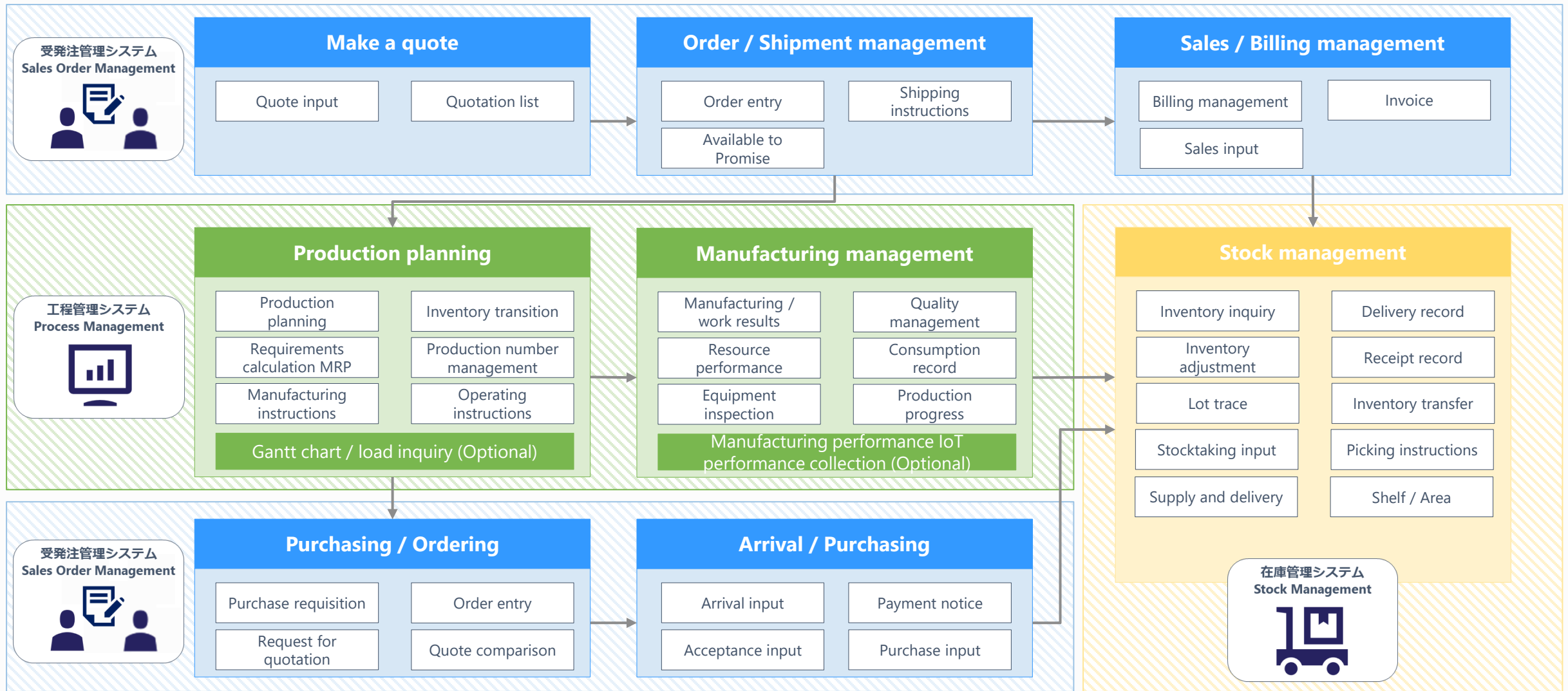
Function of Manufacturing / Logistics Management system Pegasus

PEGASUS system configuration diagram

* Core system that can be linked • Has a track record of collaboration



PEGASUS Production control system configuration diagram

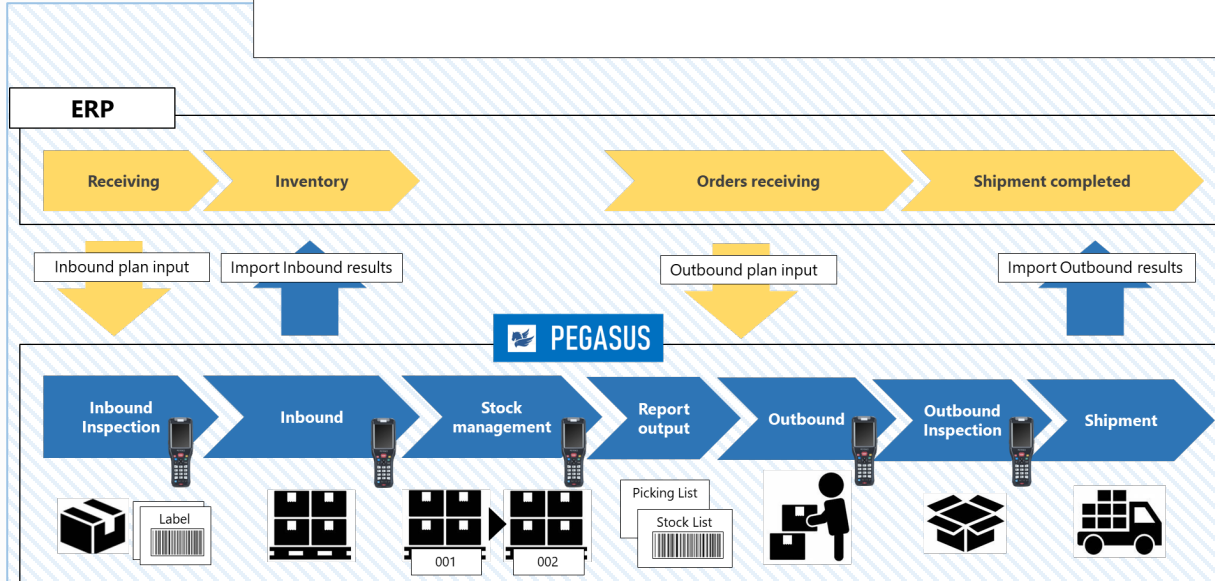
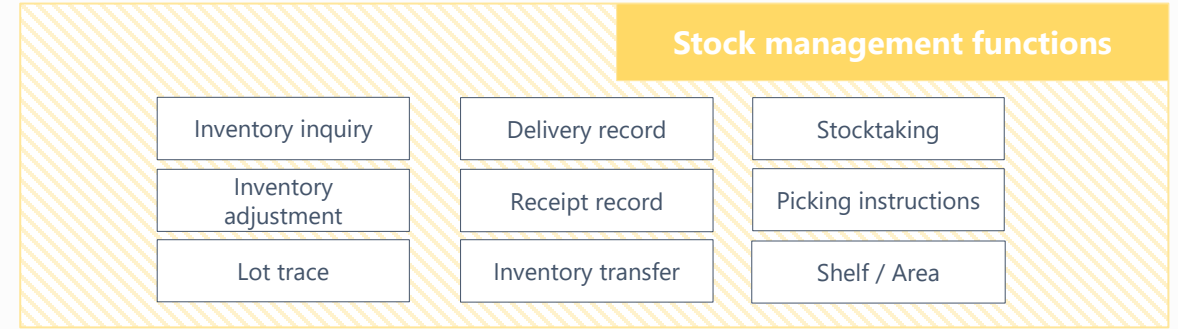


PEGASUS Stock Management System

The PEGASUS Stock management system is a system that maximizes customer profits by improving operational efficiency.



The PEGASUS inventory management system is equipped with support functions to realize accurate and fast work according to the business flow of arrival (inspection), storage (location management / inventory), and shipping (picking / inspection / packing). By linking with barcode readers, handy terminals, and various logistics equipment, we can significantly improve productivity.



Product configuration image

Fix Inbound

User: Ryo Nozaki
 Date: 30/Dec/2020
 Product Code: C12345-199
 Battery 12V type A
 Location: A001
 Package: Case
 Package Qty: -1
 P/S Qty: -4

Main Menu

User: Ryo Nozaki
 Inbound
 Outbound
 Stock Management
 Data Sync

Windows Embedded CE android

It is possible to customize the function according to the customer's business. Customers can extend the base Stock management system and use it as a WMS. There is a free demonstration, so please contact the staff.

PEGASUS Process Management System

The PEGASUS process control system supports manufacturing from ordering to shipping.

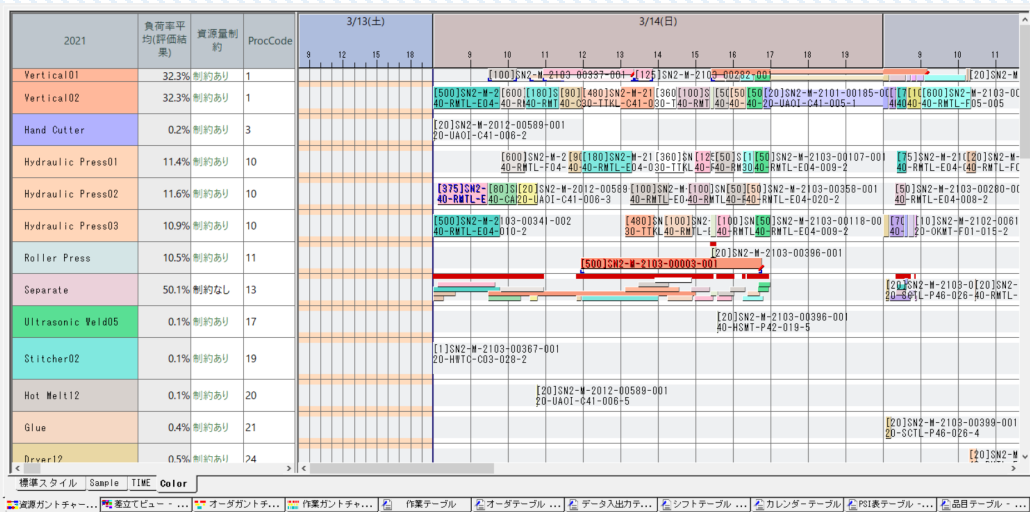


The PEGASUS process control system can formulate production plans, collect results, and manage production progress from order data. In addition, by linking with the stock management system, it is possible to realize inventory management of work-in-process and semi-finished products. Customers can manage production progress in real time, so they can quickly respond to delays in progress. Since quality information can be managed, it is possible to track the points of change in quality.

Process control functions

Production planning	Inventory transition	Manufacturing / Work results	Quality management
Requirements calculation MRP	Production number management	Resource performance	Consumption record
Manufacturing instructions	Operating instructions	Equipment inspection	Production progress

Product configuration image



It is possible to customize the function according to the customer's business. By using the production scheduler it can make a future outlook. There is a free demonstration, so please contact the staff.

PEGASUS Sales Order Management System

The PEGASUS ordering management system supports office operations from ordering to ordering.



The PEGASUS ordering management system can support a series of office operations from order data to ordering operations. In addition, by linking with an inventory management and process management system, data can be managed and shared by both parties, so we can provide a more convenient solution. Since it also has a function to digitize the approval process of various documents, it is possible to write a signature by hands-free.

Sales Order management functions

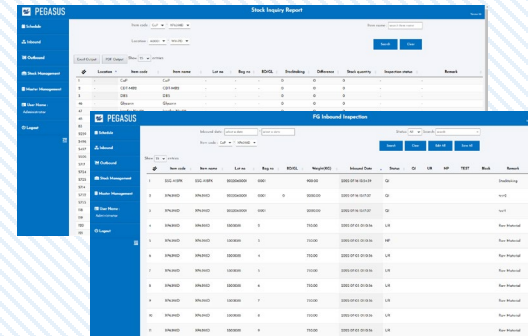
Quote input	Quotation list	Order entry	Shipping instructions
Purchase requisition	Order entry	Arrival input	Billing management
Request for quotation	Invoice	Acceptance input	Purchase input

Product configuration image

#	Invoice date	Invoice no	IV Type	Order no	Customer code	Customer name	Group	Route	Type	Status	Short ship	Photo
1	01/09/21	192201	AR INV	192746	LC000140	Kai Nee	D	D10	IV Soft	UNDELIVERED	01 Feb 2022 09:07:27	

#	Item no	Description	Quantity	Unit	Subtotal	Tax Code	Tax	Total	Secondary Qty	Secondary UoM	Primary Qty	Primary UoM
1	22490	Sweet Rice Wine (Honmirin) 18lt	1								1	Ea
2	18054	Soy Sauce Koikuchi Yamasa 18lt	1								1	Ea
3	94171	FRZ Potato Croquette 60g X 100pc	1								1	Ea

Item no	Description	Pack	Qty Each	Secondary Qty	Primary Qty	UoM	LoM
1	FRZ Sweet Shrimp Ama Ebi PFD 50pc (LA)	20 / 50pc	20			Ea	
2	FRZ Miso Soup 1lt (137-20g)	12 / 50pc	5			Ea	
3	FRZ Choice Pork T-LON	100g(Ave 6pc(C))	51			100g	
4	FRZ Chicken Wing with Sesame 20pc Ajinomoto	2 / 6 (20pc)	3			Ea	
5	FRZ Simmered Radish (Koroboshi) Darken 1kg (Oven)	2 / 6 (1kg)	1			Ea	
6	FRZ Oyster Cream Croquette 20pc**	2 / 6 (20pc)	2			Ea	
7	L-Roasted Seaweed (Kizami) Nori(2.8mm)	50 / 100g	1			Ea	
8	Miso White MisoChan 1kg Shirohumi	10 / 1kg	2			Ea	



It is possible to customize the function according to the customer's business. The form format can be designed according to the current format. There is a free demonstration, so please contact the staff if.

PEGASUS Fixed assets Management System

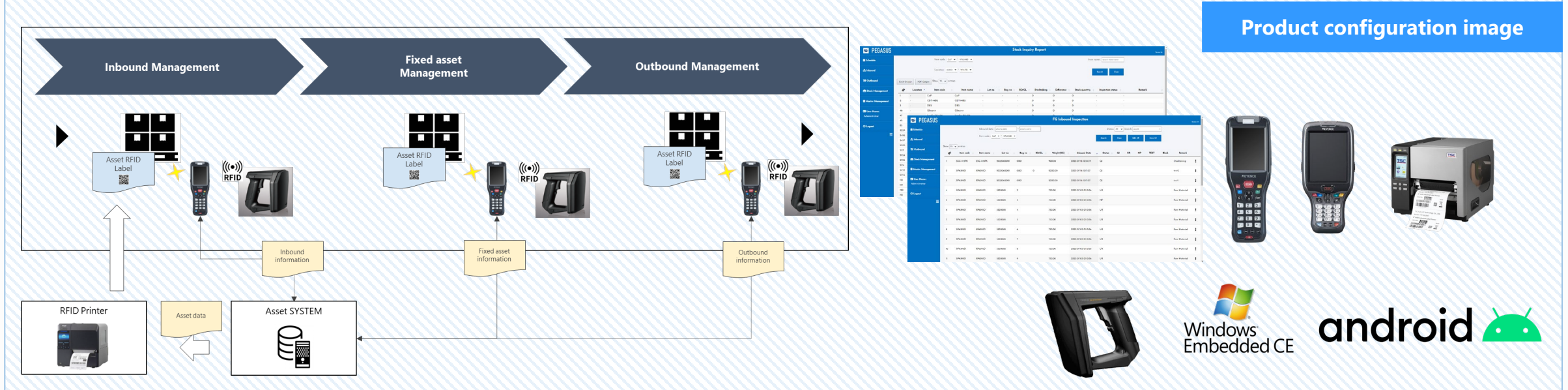
The PEGASUS fixed asset management system supports your asset management operations.



The PEGASUS fixed asset management system manages and amortizes the fixed assets acquired by the customer. The standard amount of fixed asset certification in Thailand is lower than that in Japan, and it is said to be "1,000 to 5,000 baht". Depreciation is mainly done by the "straight-line method", which is the so-called "daily calculation". Since the work is more complicated than in Japan, system management and depreciation calculation are required. At PEGASUS, we can realize reliable business execution by supporting the business of our customers.

Fixed asset management functions

- Quote input
- Impairment treatment
- Depreciation forecast
- Purchase requisition
- Idle processing
- Various reports



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Operation Monitoring System

The PEGASUS Operating asset management system "Visualizes the situation at the site".



The PEGASUS operation management system can collect traceability data such as equipment operation information, abnormal ALARM, and measured values by collecting site information as data. In addition to operation control, by installing various measuring instruments, equipment frequency, temperature and humidity control, cutting oil and water pipes. It can manage various information such as power consumption management.

Operation management functions

Collect / Aggregate

Sensor collection

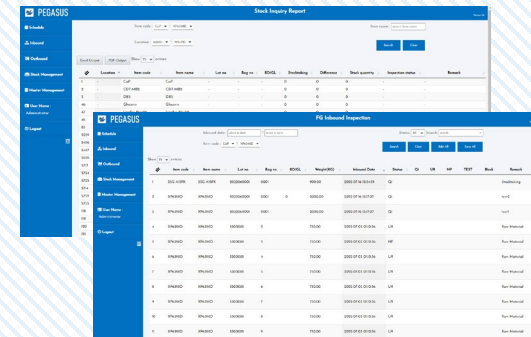
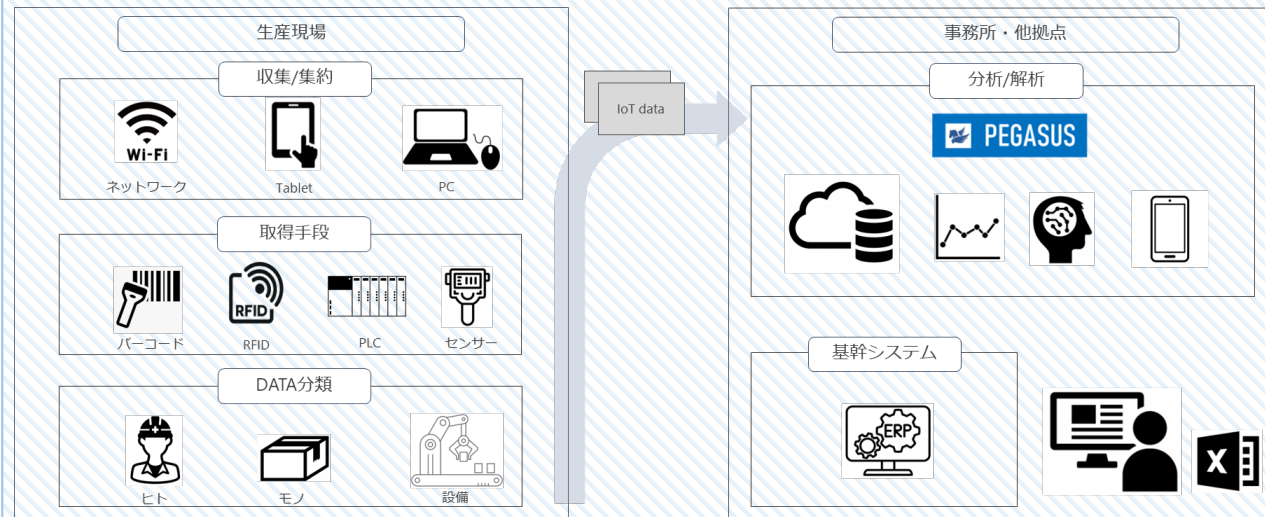
RFID

Barcode collection

PLC collection

Various reports

Product configuration image



Information can be collected according to various machines and equipment. It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Stocktaking System

The PEGASUS inventory management system eliminates inventory differences and improves work efficiency.



The PEGASUS inventory management system supports inventory operations. It can be used for daily, weekly, monthly, and yearly inventory operations. Conventionally, by inputting the information entered in the paper ledger into Excel, We think customer were collecting information, but by using PEGASUS inventory management, customer can do "Easy" and "Quick" work.

Stocktaking system functions

Schedule management

Regular stocktaking

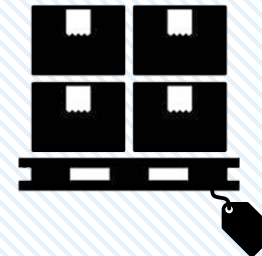
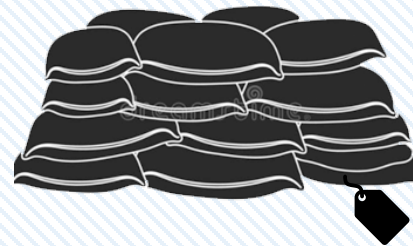
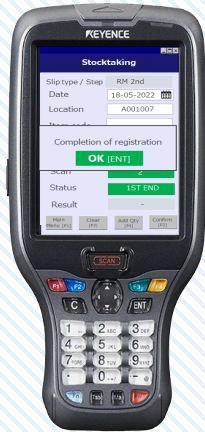
Sampling

QR / Barcode collection

History management

Various reports

Product configuration image



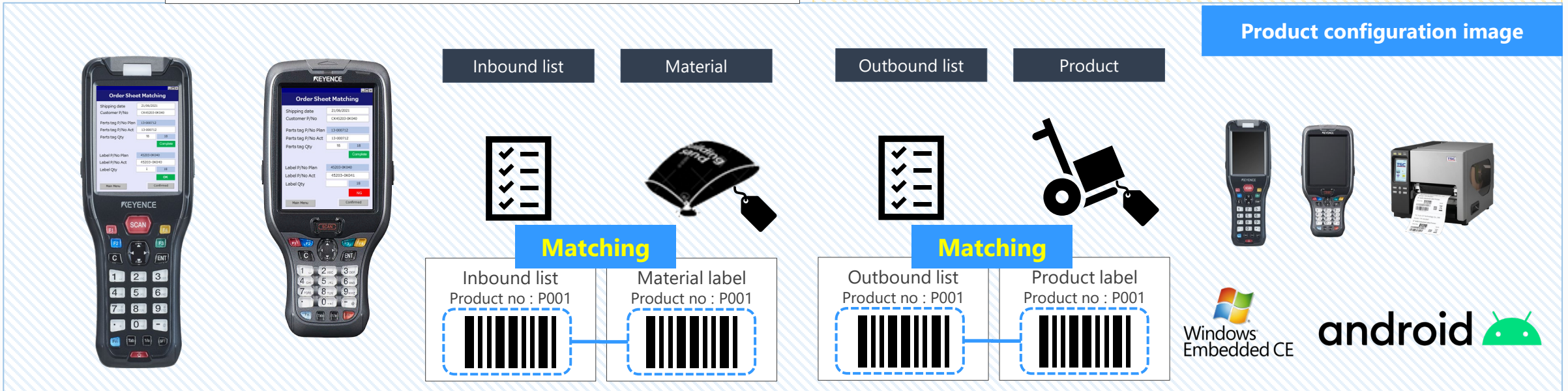
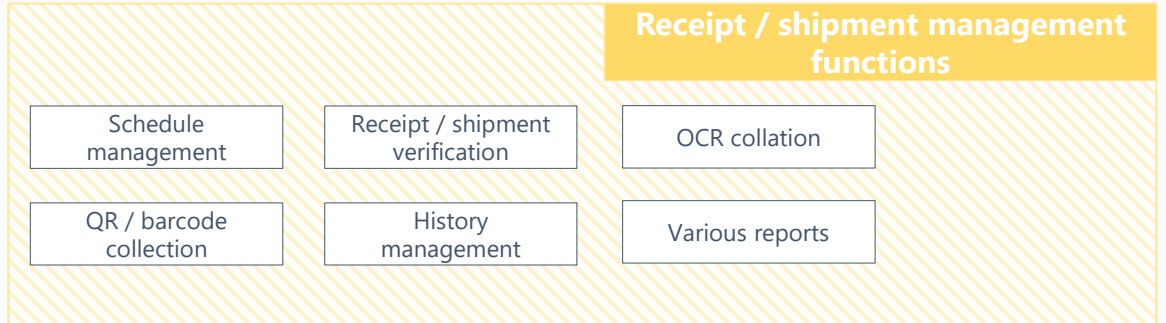
It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS POKAYOKE Inspection System

The PEGASUS Receipt / Shipment management system eliminates Receipt / Shipment errors and improves work efficiency.



The PEGASUS receipt / shipment management system supports inbound and shipping operations. We respond to requests such as "I want to check if the product arrives according to PO" and "I want to check if it ships according to Invoice". Matching is confirmed by scanning the QR code and barcode for receipt and shipment with a handy terminal. Since it has an OCR reading function, even customers who are not QR or barcoded can perform collation match confirmation.



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Traceability System

The PEGASUS traceability system can record receipt / shipment history and manufacturing history.



For traceability in the manufacturing / logistics industry, keeping a history in each process is the first step. Product traceability can be realized by expanding each history to all processes of manufacturing process and distribution process. Waste can be eliminated by managing the trace of the usage record of raw materials. By linking information between processes and managing the entire process, it can be used to identify the cause of defects.

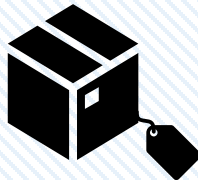
Traceability system functions

- Schedule management
- Traceability
- OCR collation
- QR / barcode collection
- History management
- Various reports

Product configuration image



Inbound



Inbound
Material no : M001



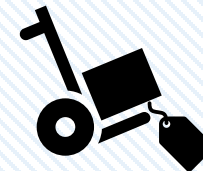
Production



Work Instruction
Product no : P001



Outbound



Outbound
Product no : P001



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Unlock System

The PEGASUS unlock system prevents manufacturing loss due to picking mistakes.

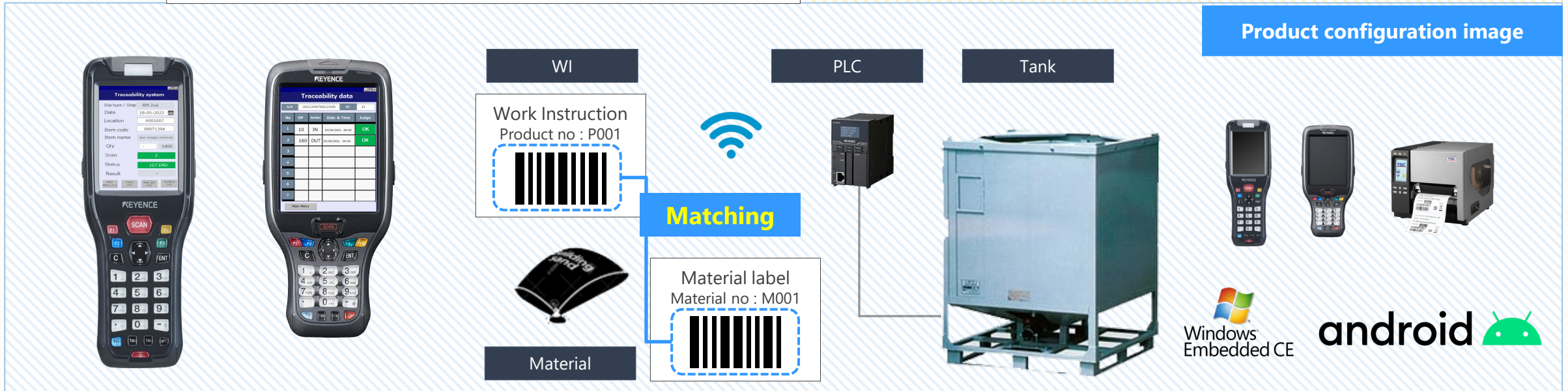


Prevents input mistakes due to material picking mistakes in the manufacturing industry. When the molding material is put into the molding machine, the tank is locked so that the lock can be released by the I / O signal. As a result of collating the information of the materials to be input against the finished product data, if the amount of material is correct, the lock will be released, and if the data is incorrect, the collation will not match and the lock will not be released. Since the lock is not released, it is possible to physically prevent the wrong material from being input. PLC is used to control the lock.

Unlock system functions

- Schedule management
- Unlock function
- OCR collation
- QR / barcode collection
- History management
- Various reports

Product configuration image



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Weight Checker System

The PEGASUS weight measurement support system prevents manufacturing loss in measurement work.

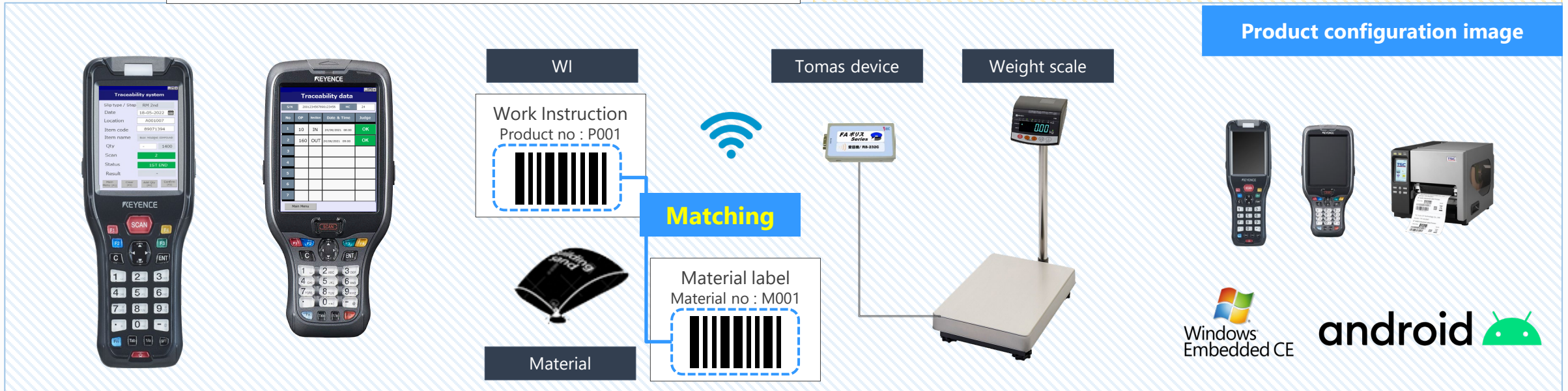


The weight measurement support system wirelessly transmits the measurement data of the weight measurement device to the handy terminal. This eliminates the work of posting weight information after measurement work and improves workability. For heavy equipment, it is assumed that information will be collected by serial communication or Ethernet communication. Improve customer's workability by using a dedicated device or PLC.

Weight checker system functions

- Schedule management
- Weight information linkage
- OCR collation
- QR / barcode collection
- history management
- Various reports

Product configuration image



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Label Printing System

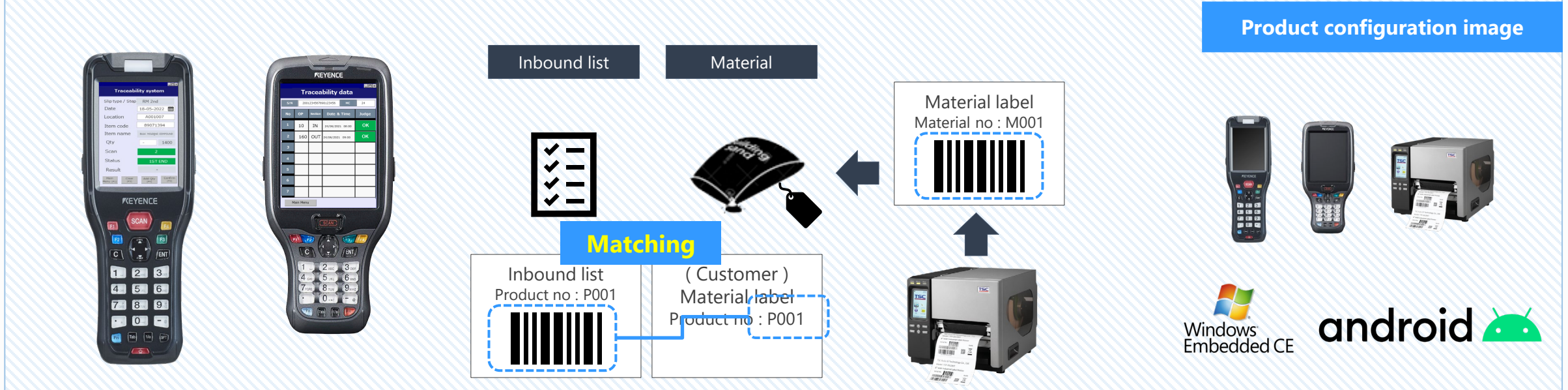
The PEGASUS label printing system improves work efficiency in quantity management.



The label printing system is available as an option for all handy terminal applications. Based on the label issuance at the time of receiving the arrival of goods, there are various uses such as label renewal at the time of picking and label issuance for process control. It can choose between two types of label printers: fixed type and mobile type. We can propose the best solution according to the business operation.

Label printing system functions

Schedule management	Label issuance	OCR collation
QR / barcode collection	History management	Various reports



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS RFID System

The PEGASUS RFID system is a mechanism that simplifies the reading process.



RFID systems can be streamlined in the process of reading product information by using RFID tags and RFID readers. Since RFID tags can read multiple tags at once, warehousing / delivery and inventory work can be simplified. By combining a handy type RFID reader and a handy terminal, it is possible to check the read information on the spot and further improve work efficiency.



It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

PEGASUS Smart watch System

PEGASUS smartwatch system is a mechanism that simplifies calling workers.



By linking the server application and the Smart Watch device, it can be used as a "call system" for workers etc. from the site. In addition, drivers such as forklifts can issue instructions for transportation work by wearing Smart Watch. Since the call operation uses a touch display, it is possible to flexibly respond to changes in the call destination.

Smart watch system function

Schedule management

Call function

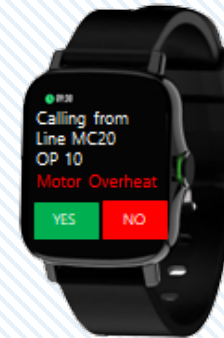
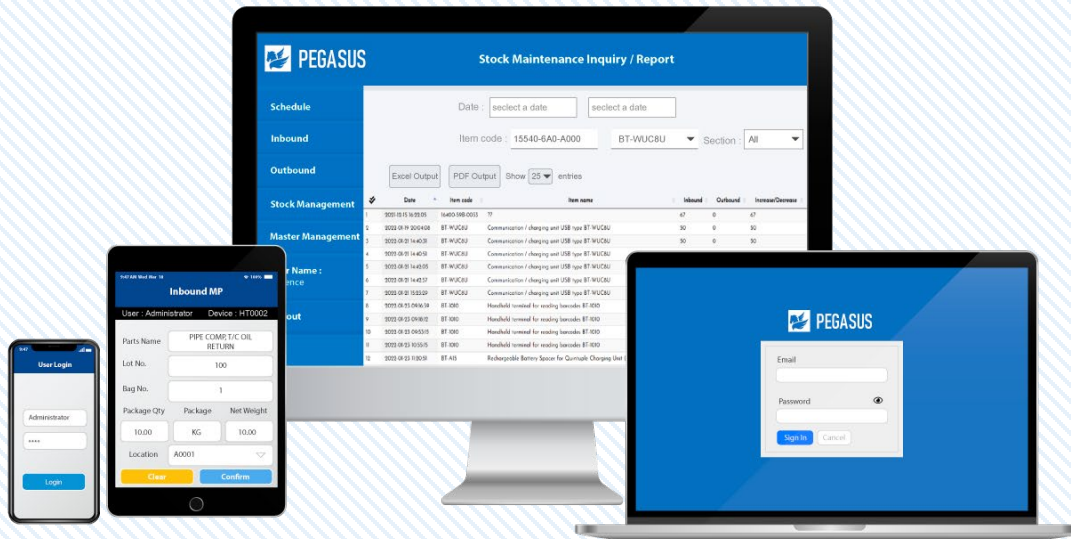
Response function

Message function

History management

Reports output

Product configuration image



android 

It is possible to customize the function according to the customer's business. There is a free demonstration, so please contact the staff if.

Case study of introduction effect

Case Study –Pegasus Production management system -

The time and stress required to visualize and quantify the manufacturing progress and confirm it have been greatly reduced.

Thai car battery case molding company. By digitizing the management of work plans on the whiteboard, the time required to confirm manufacturing progress has been reduced by 70%.



Task

- Because the work was highly personal, the site was confused by the sudden leave of the person in charge.
- Because of the management by the whiteboard, there were many mistakes in writing, writing, and reading.
- The daily manufacturing progress was not updated in a timely manner, resulting in a black box, and the progress could not be grasped.

Solution

- All business operations related to manufacturing can now be realized within the system.
- All the forms used in business have been converted into data so that they can be converted to PDF from the system.
- When there is progress in the manufacturing schedule, the progress is managed by changing the status.

Effect

- By using the system, we were able to standardize the work, which made it possible for employees to share
- By converting business data, we were able to reduce human error and man-hours.
- Since the status can be monitored in real time, the manufacturing status can be visualized.

Country	Thailand
Scale	51-500 peoples
Industry	Plastic molding company
Purpose / effect	Reduction of work man-hours and improvement of manufacturing efficiency

Case Study –Pegasus Stock management system -

It was possible to manage a series of flow of warehousing, inventory, and warehousing, and all "Waste" was eliminated.

Material arrival / receipt management, manufacturing process, work-in-process management, delivery / shipment management,
Solved by utilizing the BOM management function of the inventory management system PEGASUS.

Task

- Because the work was highly personal, the site was confused by the sudden leave of the person in charge.
- Shortly after the new factory was built in Thailand, the management system has not been introduced yet.
- Although the ERP system is in operation, it was not possible to manage fine-grained data, so it was managed using paper and Excel. Therefore, information could not be shared within the company.

Solution

- All business operations related to manufacturing can now be realized within the system.
- The handy terminal has been used to enable inspection of receipts and shipments and location management.
- The work status can be managed in detail according to the process.

Effect

- By using the system, work can be standardized, and work can be shared among employees. It became.
- By utilizing the handy terminal, human error could be reduced and man-hours could be reduced.
- Since the status can be monitored in real time, the manufacturing status can be visualized.
- Since it became possible to manage FIFOs and ordering points, it was possible to reduce muri, unevenness, and waste in the factory.



Country	Thailand
Scale	51-500 peoples
Industry	Chemical manufacturer
Purpose / effect	Location management, prevention of receipt / shipment mistakes, visualization of manufacturing process

Case Study –Pegasus Process management system -

Prevention of misassemble and traceability of assembly. "Visualization of the work status of each process"

By linking schedule information to the handy terminal and collating the part code with OCR scan, it is possible to prevent misassemble, acquire traceability data, and manage process progress.

Task

- There were many misassemble such as incorrect assembly of similar parts.
- Since the assembly work was carried out while checking the paper work instructions, uneven work occurred depending on the person.
- Because the check sheet was managed by paper, it was difficult to improve the accuracy.

Solution

- Elimination of human error by collation scanning at the handy terminal.
- Strengthen product risk management and improve reliability through collation traceability system management.
- Realization of work visualization and progress management by collation scan.

Effect

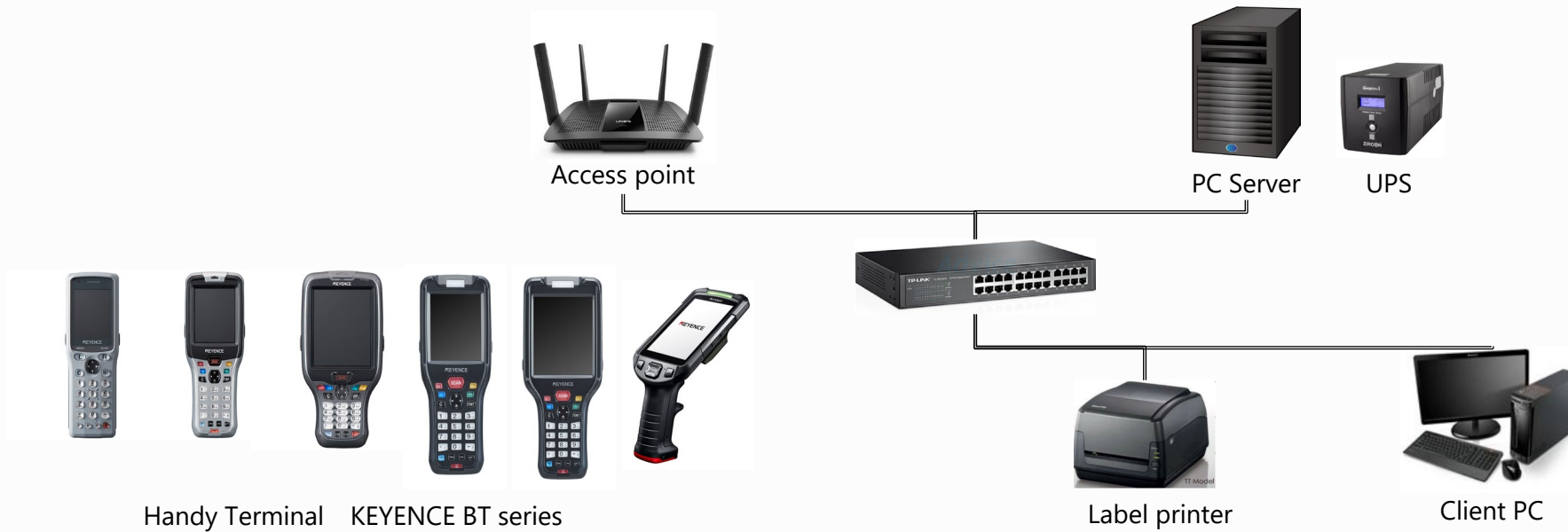
- By utilizing the handy terminal, human error could be reduced and man-hours could be reduced.
- Since the status can be monitored in real time, the manufacturing status can be visualized.
- Since all logs can be saved as traceability data, it was possible to improve the quality.



Country	Thailand
Scale	1,000 peoples -
Industry	Completed car manufacturer
Purpose / effect	Location management, prevention of receipt / shipment mistakes, visualization of manufacturing process

Appendix

System configuration



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 x 768 or more / Browser: Google Chrome (latest Ver) * Server machine with recommended model specifications or more
2	Client PC	OS: Windows 8.1 / 10 / 11 / Memory: 4GB or more / Display: Resolution 1366 x 768 or more / Browser: Google Chrome (latest version) * PC machine with recommended model specifications or higher
3	Handy terminal	KEYENCE BT series (Windows OS type, Android OS type)
4	Access point	IEEE802.11a/b/g/n
5	Label printer	WIFI / Bluetooth compatible model/Material: Art Permanent/Size: 50 x 100 mm.
6	UPS	UPS shutdown signal type

Maintenance

#	Software maintenance		Standard / Option
1	Operation support / recovery support	We will open a support window and provide operational support by phone and email, and recovery support in the event of a software failure.	Standard*1
2	Upgraded software provided	We will provide an upgraded version when the software functions are improved. We provide the latest software compatible with the latest OS free of charge. It can reduce your life cycle cost by eliminating the need to purchase software when updating the server.	Standard*1
#	Software re-setup		
1	Software re-setup	If it need to re-set up the software after repairing a server failure Perform restoration work. (Repair of inventory data is not included in software re-setup)	Standard*1

* 1) Service is provided at the system purchase fee in the first year of the contract. Contract on a yearly basis from the second year onwards

Schedule | Go live schedule

1. Current situation analysis	We will inspection the current business and the system being used, confirm the requirements, and analyze the customer's current situation. And will make an estimate based on customer requirements.	Within sales
2. Requirement definition	Detailed requirement definition will be performed based on the analysis result. Check the detailed requirements so that the system can be implemented in a manner that matches actual operation.	1-4 weeks
3. Design	While a process meeting, we will perform basic design, detailed design, and preparation for transfer based on the requirements.	1-3 weeks
4. Development / Test	Perform the test that fits with customer work and start the test. We will consider a transfer every method for let smooth working process.	1-20 weeks
5. Introduction support	We will have an operation training to introduce the system that is currently being used or work in parallel with the work, and after confirming the usability, etc., And the final acceptance will be continue to process.	1 week
6. Production operation	When start operation. We will provide a long-term support for safe and comfortable system by providing operation maintenance support, information provision, and revision edition.	Min : 4 weeks Max : 28 weeks