

# *Production Management System Pegasus*

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TOMAS TECH CO., LTD.

# *Introducing Production Management System Pegasus*

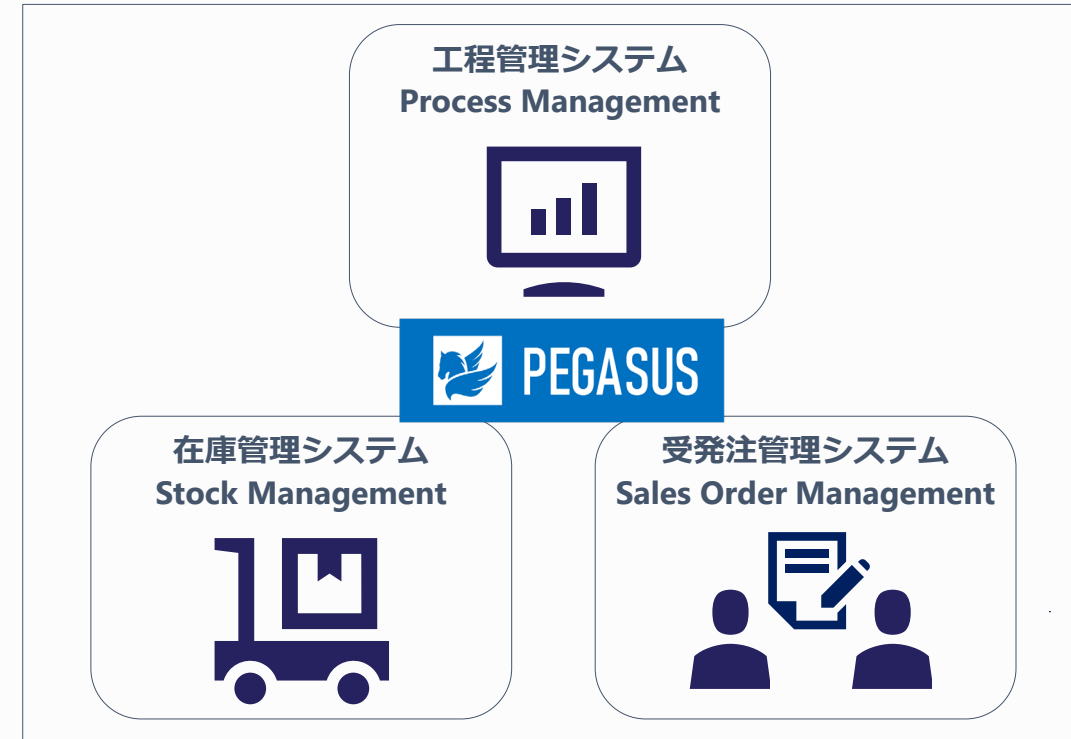
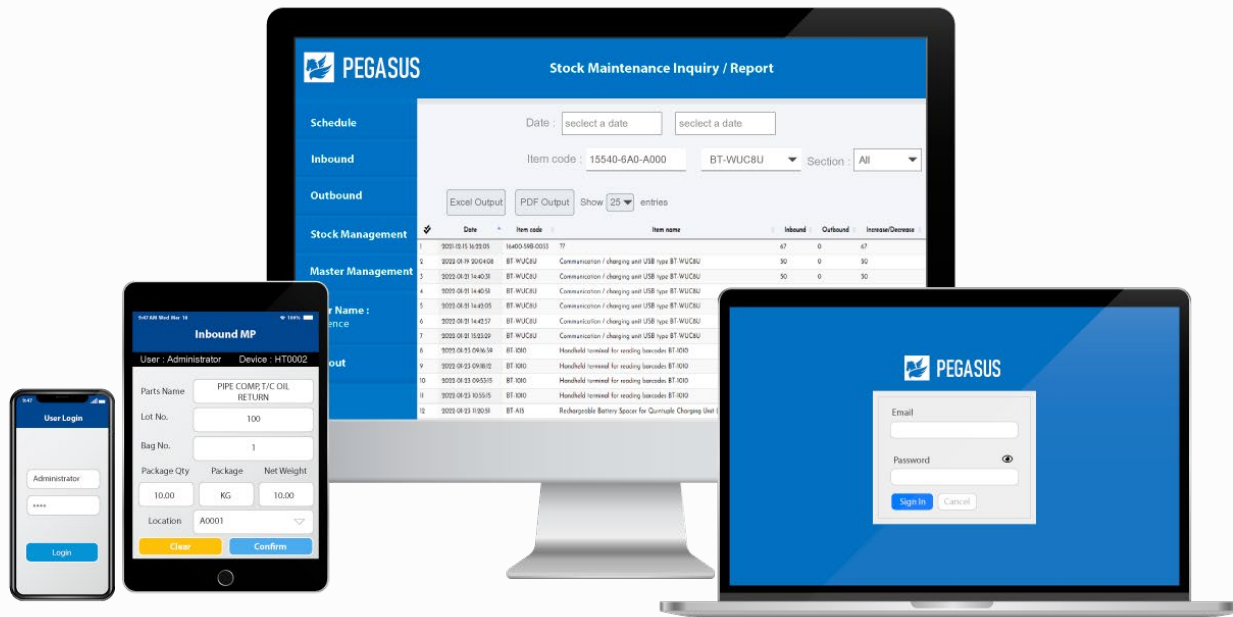
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# What is PEGASUS production control system?

**Make complex management tasks smoother. This is an application specialized for the manufacturing industry.**

In the manufacturing industry in recent years, there is an increasing demand for "Small quantity and high variety" and "Short delivery time" in order to adapt to the 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.

With the PEGASUS production management system dedicated to the manufacturing industry, which was developed to improve the on-site performance of the manufacturing industry, the complicated management work that was previously done with whiteboards and Excel can be visualized digitally, resulting in a large cost. Customer can cut Cost.



# Benefits of PEGASUS production control system

By utilizing the production control system, 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.



## Business black boxing

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

- I don't know the progress of the process.
- I don't know the current stock quantity in real time.
- Operations related to operations have become personalized, Business leveling is not possible.



## 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

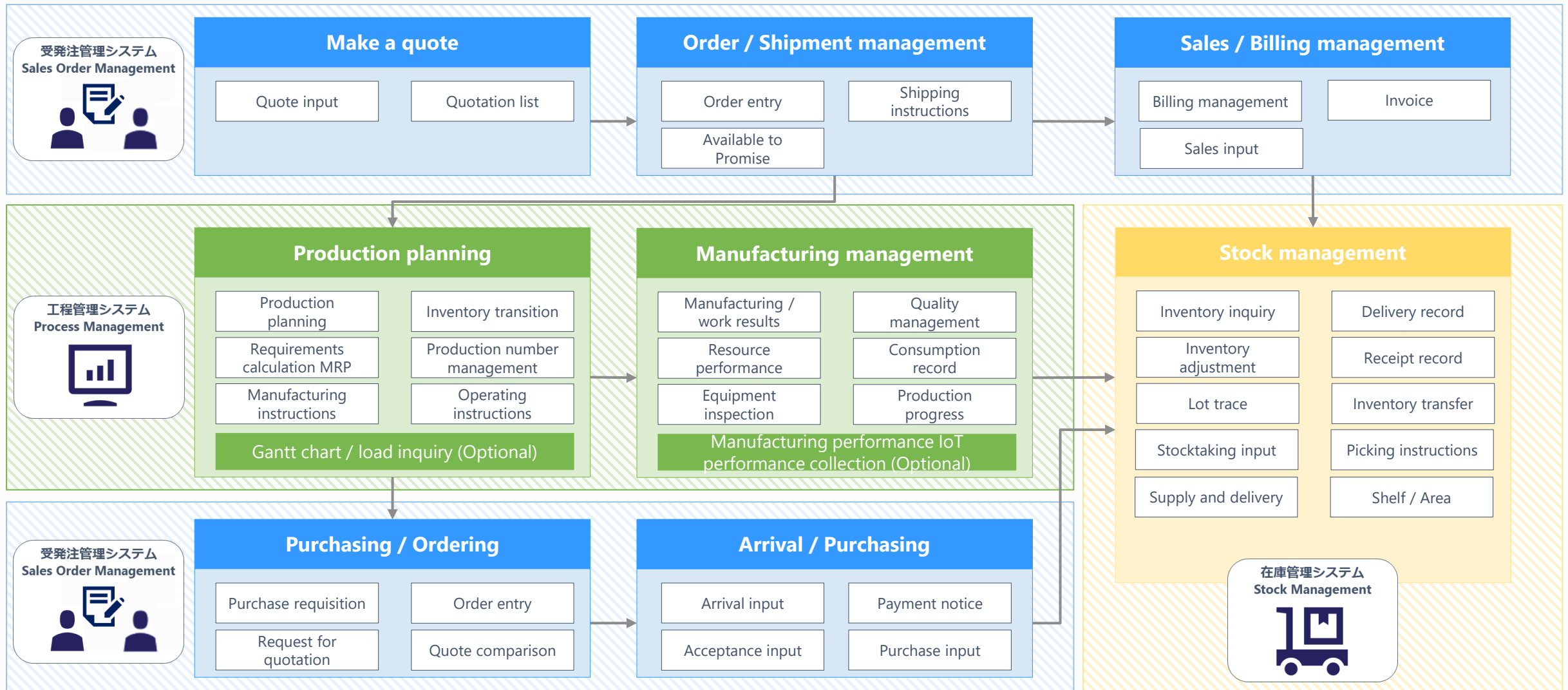
By digitizing, the business situation can be visualized.

- It 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 Production Management System Pegasus*

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# PEGASUS Production control system configuration diagram



# PEGASUS production system function list

<b>Process plan management</b>	It is possible to create a plan for the contents of the process design simply by entering the delivery date and work-in-process date. It is also possible to realize planning using the Gantt chart as an optional function.	<b>Component management BOM</b>	It can easily manage component parts such as child part numbers that accompany the parent part number.
<b>Centralized management of ordering</b>	It can centrally manage a series of processes from quotation, ordering, acceptance inspection, shipping, and billing.	<b>Out of stock prevention</b>	Standard inventory is automatically calculated from the receipt / delivery status, and it is automatically detected to prevent shortages. Since the calculation includes the arrangement lead time, it is possible to detect shortages early.
<b>Matter status management</b>	It can check the status of the matter in a list. Since it has a search and filter function, it is possible to check by incorporating the matter for each status such as ordered and arranged.	<b>Product man-hour analysis</b>	Manufacturing analysis such as work man-hours and in-house production costs for each matter / product is possible. You can see at a glance the data you want to know, such as rankings by project.
<b>Sales / Cost analysis</b>	Sales / Cost analysis is possible. There is a function to narrow down by matter, order date, and billing date, so it can check the data you care about.	<b>ERP cooperation</b>	It is assumed to be automatically linked with the ERP system. The file formats are EXCEL, CSV, TXT, XML.
<b>Cloud environment operation</b>	We support various cloud environments such as AMAZON AWS and Google Cloud Platform.	<b>Real-time management</b>	By simply registering the work results for the process plan, it can see in real time from anywhere, such as which product is in the factory and which process is currently in progress, and the inventory status.

# PEGASUS production system Function

## Matter status management

It can check the status of the matter in a list.  
 Since it has a search and filter function, it is possible to check by incorporating the matter for each status such as ordered and arranged.

PC screen

The screenshot displays the PEGASUS Production Schedule interface. It features a sidebar with navigation options: Schedule, Inbound, Outbound, Stock Management, Master Management, User Name (Administrator), and Logout. The main area contains a 'Production Schedule' header with various filters and controls. Below the filters is a table with 10 rows of production orders. The table columns include: #, Order no, In/Out, Parts no, Parts Name, Level, Ref.Part no, Qty ratio, Qty of same parts, Order Qty, Order Date, In.Plan Date, In.Act Date, In.Act Qty, Pro.Plan Date, Pro.Act Date, Pro.Act Qty, Out.Plan Date, Out.Act Date, Out.Act Qty, Filename, and Status. The status for all items is 'IMPORTED 04 Jul 2022'.

#	Order no	In/Out	Parts no	Parts Name	Level	Ref.Part no	Qty ratio	Qty of same parts	Order Qty	Order Date	In.Plan Date	In.Act Date	In.Act Qty	Pro.Plan Date	Pro.Act Date	Pro.Act Qty	Out.Plan Date	Out.Act Date	Out.Act Qty	Filename	Status
1	222610057966	Out	1553B-6AO-Z001		1				150	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
2	222610057966	Out	15530-6AO-A000		2	1553B-6AO-Z001	1:1		150	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
3	222610057966	Out	15533-59B-0030		2	1553B-6AO-Z001	1:1		150	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
4	222610057970	Out	1710A-64A-Z001		1				120	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
5	222610057970	Out	16400-59B-0033		2	1710A-64A-Z001	1:1		120	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
6	222610057970	Out	17100-64A-0040		2	1710A-64A-Z001	1:1		120	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
7	222610057970	Out	17132-59B-0001		2	1710A-64A-Z001	1:1		120	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
8	222610057970	Out	10742-59B-0000		2	1710A-64A-Z001	1:1		120	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
9	222610057970	Out	17830-5AA-A020-M1		2	1710A-64A-Z001	1:1		120	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022
10	222610057970	Out	91502-59B-0030		2	1710A-64A-Z001	2:1		240	2022-07-14 14:00				2022-07-13			2022-07-13			ODB06241.txt	IMPORTED 04 Jul 2022



# PEGASUS production system Function

## Out of stock prevention

Standard inventory is automatically calculated from the receipt / delivery status, and it is automatically detected to prevent shortages. Since the calculation includes the arrangement lead time, it is possible to detect shortages early.

PC screen

The screenshot displays the 'Pinch List' interface in the PEGASUS system. The interface includes a sidebar with navigation options like Schedule, Inbound, Outbound, Stock Management, Master Management, and User Name. The main area shows a table of inventory items with the following columns: #, Item ID, Item Name, Division, Stock, Total number of orders, and Difference. The table lists 25 items, with some showing negative differences indicating shortages.

#	Item ID	Item Name	Division	Stock	Total number of orders	Difference
1	15530-6A0-A000	PIPE COMP, T/C OIL FEED	1	675	150	525
2	15533-59B-0030	FILTER ASSY,T/C OIL FEED	1	3445	150	3295
3	15538-6A0-Z001	PIPE COMP, T/C OIL FEED	1	0	150	-150
4	15540-59B-0003	PIPE COMP, T/C OIL RETURN	1	180	30	150
5	15540-59B-0003(Sub)	PIPE COMP, T/C OIL RETURN	1	690	30	660
6	15540-6A0-A000	PIPE COMP, T/C OIL RETURN	1	469	120	349
7	15540-6A0-A000(Sub)	PIPE COMP, T/C OIL RETURN	1	617	120	497
8	15542-59B-0031	HOSE, T/C OIL RETURN	1	300	30	270
9	15542-6A0-A010-M2	HOSE, T/C OIL RETURN	1	246	120	126
10	15544-59B-0032	GSKT, T/C OIL RETURN PIPE	1	3561	150	3411
11	16400-59B-0033	ELECTRONIC CONTL, THROTLBODY	1	3520	240	3280
12	17010-64D-P000	MANIFOLD ASSY, INT	1	120	30	90
13	17100-5PA-0040	MANIFOLD COMP, INT	1	499	120	379
14	17100-64A-0040	MANIFOLD COMP, INT	1	1208	90	1118
15	1710A-5PA-Z003	MAINFOLD ASSY IN	1	0	120	-120
16	1710A-64A-Z001	MANIFOLD ASSY, INT	1	0	90	-90
17	1710C-64A-Z001	MANIFOLD ASSY, INT	1	0	30	-30
18	17131-59B-0002	TUBE, PCV	1	0	120	-120
19	17131-59B-0002(Sub)	TUBE, PCV	1	1188	120	1068
20	17131-64A-A010	TUBE, PCV	1	388	120	268
21	17131-64A-A010(Sub)	TUBE, PCV	1	607	120	487
22	17132-59B-0001	STAY ASSY, IN MANIFOLD	1	3881	240	3641
23	18900-5PA-A011-M3	TURBOCHARGER ASSY	1	210	30	180
24	18900-64A-A010-M1	TURBOCHARGER ASSY	1	827	120	707
25	1890A-5PA-Z001	TURBOCHARGER ASSY	1	0	30	-30

# PEGASUS production system Function

## Component management BOM

It can easily manage component parts such as child part numbers that accompany the parent part number.

PC screen

The screenshot displays the PEGASUS Bill of Materials (BOM) management interface. The interface includes a sidebar with navigation options: Schedule, Inbound, Outbound, Stock Management, Master Management, User Name (Administrator), and Logout. The main content area shows the BOM for Product No. 1553A-6AO-Z000. The table lists 10 entries, each with a checkmark, Product No, Ref.Parts No, Parts No, Sec, Sub, Parts Name, Qty Ratio, Level, Section, Delivery date count, Revision, Period From, and Period To. The table is paginated, showing 1 to 10 of 406 entries.

#	Product No	Ref.Parts No	Parts No	Sec	Sub	Parts Name	Qty Ratio	Level	Section	Delivery date count	Revision	Period From	Period To
190	1553A-6AO-Z000		1553A-6AO-Z000	1	0	PIPE ASSY T/C OIL FEED		L0	Out	0	1	1900-01-01 00:00:00	2999-12-31 23:59:59
191	1553A-6AO-Z000		1553A-6AO-Z000	1	0	PIPE ASSY T/C OIL FEED		L1	Out	-3	1	1900-01-01 00:00:00	2999-12-31 23:59:59
192	1553A-6AO-Z000	1553A-6AO-Z000	15530-6AO-A000	0	0	PIPE COMP. T/C OIL FEED	1:1	L2	In	-4	1	1900-01-01 00:00:00	2999-12-31 23:59:59
193	1553A-6AO-Z000	1553A-6AO-Z000	15533-59B-0030	0	0	FILTER ASSY,T/C OIL FEED	1:1	L2	In	-4	1	1900-01-01 00:00:00	2999-12-31 23:59:59
194	1553B-6AO-Z001		1553B-6AO-Z001	1	0	PIPE ASSY T/C OIL FEED		L0	Out	0	1	1900-01-01 00:00:00	2999-12-31 23:59:59
195	1553B-6AO-Z001		1553B-6AO-Z001	1	0	PIPE ASSY T/C OIL FEED		L1	Out	-3	1	1900-01-01 00:00:00	2999-12-31 23:59:59
196	1553B-6AO-Z001	1553B-6AO-Z001	15530-6AO-A000	0	0	PIPE COMP. T/C OIL FEED	1:1	L2	In	-4	1	1900-01-01 00:00:00	2999-12-31 23:59:59
197	1553B-6AO-Z001	1553B-6AO-Z001	15533-59B-0030	0	0	FILTER ASSY,T/C OIL FEED	1:1	L2	In	-4	1	1900-01-01 00:00:00	2999-12-31 23:59:59
205	1710A-SPA-Z003		1710A-SPA-Z003	1	0	MAINFOLD ASSY IN		L0	Out	0	1	1900-01-01 00:00:00	2999-12-31 23:59:59
206	1710A-SPA-Z003		1710A-SPA-Z003	1	0	MAINFOLD ASSY IN		L1	Out	-3	1	1900-01-01 00:00:00	2999-12-31 23:59:59

# PEGASUS production system Function

ERP cooperation

It is assumed to be automatically linked with the ERP system. The file formats are EXCEL, CSV, TXT, XML.

PC screen

The screenshot displays the 'Invoice list' interface in the PEGASUS system. The interface includes a navigation sidebar on the left with options like 'Invoice', 'Master Management', 'User Name: Administrator', and 'Logout'. The main area features search filters for 'Invoice date', 'Group', 'Route', 'Type', and 'Status', along with buttons for 'Search', 'Clear', 'D/L PDF', 'Import', 'Confirm', and 'Delete'. Below the filters, there are options for 'Excel Output' and 'PDF Output', and a 'Show 10 entries' dropdown. The central part of the screen is a table listing 19 invoices. Each row contains columns for Invoice date, Invoice no, IV type, Order no, Customer code, Customer name, Group, Route, Type, Status, Short ship, and Photo. The status column includes icons and text indicating the invoice's state, such as 'COMPLETED' or 'UNDELIVERED', along with specific timestamps. The 'Short ship' column shows the number of short shipments, and the 'Photo' column has a small icon representing a photo.

#	Invoice date	Invoice no	IV type	Order no	Customer code	Customer name	Group	Route	Type	Status	Short ship	Photo
1	01/09/21	192273	AR INV	192818	LC000029	[blurred]	F	F12	IV Soft	COMPLETED 21 Mar 2022 18:35:26	SHORT SHIP 21 Mar 2022 18:35:26	6
3	01/09/21	192315	AR INV	192860	LC000046	[blurred]	B	B01	IV Soft	UNDELIVERED 03 Apr 2022 12:02:49	-	1
5	01/09/21	5800	AR Credit	5800	LC000059	[blurred]	-	-	IV Soft	COMPLETED 06 Feb 2022 09:12:15	-	-
7	01/09/21	192357	AR INV	192902	LC000061	[blurred]	B	B22	IV Soft	UNDELIVERED 21 Feb 2022 19:21:02	SHORT SHIP 21 Feb 2022 19:21:02	-
9	01/09/21	192294	AR INV	192839	LC000067	[blurred]	C	C15	IV Soft	COMPLETED 08 Mar 2022 10:08:12	-	1
11	01/09/21	192346	AR INV	192891	LC000110	[blurred]	G	GO4	IV Soft	COMPLETED 25 Feb 2022 10:53:40	-	-
13	01/09/21	192326	AR INV	192871	LC000128	[blurred]	C	C02	IV Soft	COMPLETED 10 Feb 2022 18:26:18	-	-
15	01/09/21	192365	AR INV	192910	LC000131	[blurred]	A	A01	IV Soft	COMPLETED 10 Feb 2022 18:25:46	-	-
17	01/09/21	192201	AR INV	192746	LC000140	[blurred]	D	D10	IV Soft	UNDELIVERED 01 Feb 2022 09:07:27	-	-
19	01/09/21	192340	AR INV	192885	LC000181	[blurred]	G	GO9	IV Soft	COMPLETED 25 Feb 2022 10:44:59	-	-

# PEGASUS production system Function

## Invoice issuance

By inputting the necessary data to the form from ERP, you can output forms in various formats such as "invoice", "Delivery Order", and "Delivery Note". Since it supports the sign form of the image sign, various sign methods can be adopted depending on the situation.

### Output form

Page : 1 / 1

## TAX INVOICE

<b>Invoice #:</b>	192273
<b>Invoice Date:</b>	01/09/21
<b>Order #:</b>	192818
<b>Customer PO/Djk #:</b>	
<b>Due Date:</b>	31/10/21
<b>Payment Term:</b>	30Days after EOM

Truck Route: F12  
Stop Code:  
Sales Rep: Nicholas, Tan

**Total Due Amount** SGD


Invoice Note:

#	Item no.	Description	Pack	Qty (Each)	Secondary		Primary	
					Qty	UoM	Qty	UoM
1	90222	FRZ Sweet Shrimp Ama Ebi PTO 50pc (LA)	20 / 50pc	20		Cs	20	Ea
2	88265	FRZ Mongo Ika (S) Wild SK (17-20g)	12 / 500g	5		Cs	5	Ea
3	85035	FRZ Choice Pork T-LOIN	100g(Ave.6kg/Cs)	51		Cs	51	100g
4	593006	FRZ Chicken Wing with Sesame 20pc Ajinomoto	2 /6 /20pc	3		Bdl	3	Ea
5	87408	FRZ Simmered Radish (Kiriboshi Daikon Ni) 1kg Ohori	2 /6 /1kg	1		Bdl	1	Ea
6	85510	FRZ Oyster Cream Croquette 20pc***	2/6/800g(20pc)	2		Bdl	2	Ea
7	51706	L-Roasted Seaweed (Kizami Nori)2.0mm	50/ 100g	1		Cs	1	Ea
8	27880	Miso White MikoChan 1kg Shinshuichi	10 / 1kg	2		Cs	2	Ea

Remark:  
That's it. This's a dog. That's a plane. Hello AWS.

Tax Code	Subtotal	Tax 7%	Total Amount
GST			
Total			

Payment method :   
Remittance Payment :   
Cheque Payment :

Signature	Date
	16-Feb-22

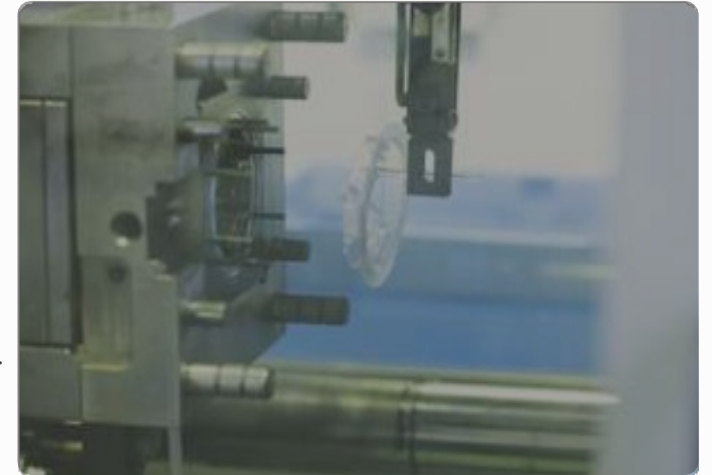
## *Case study of introduction effect*

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# 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

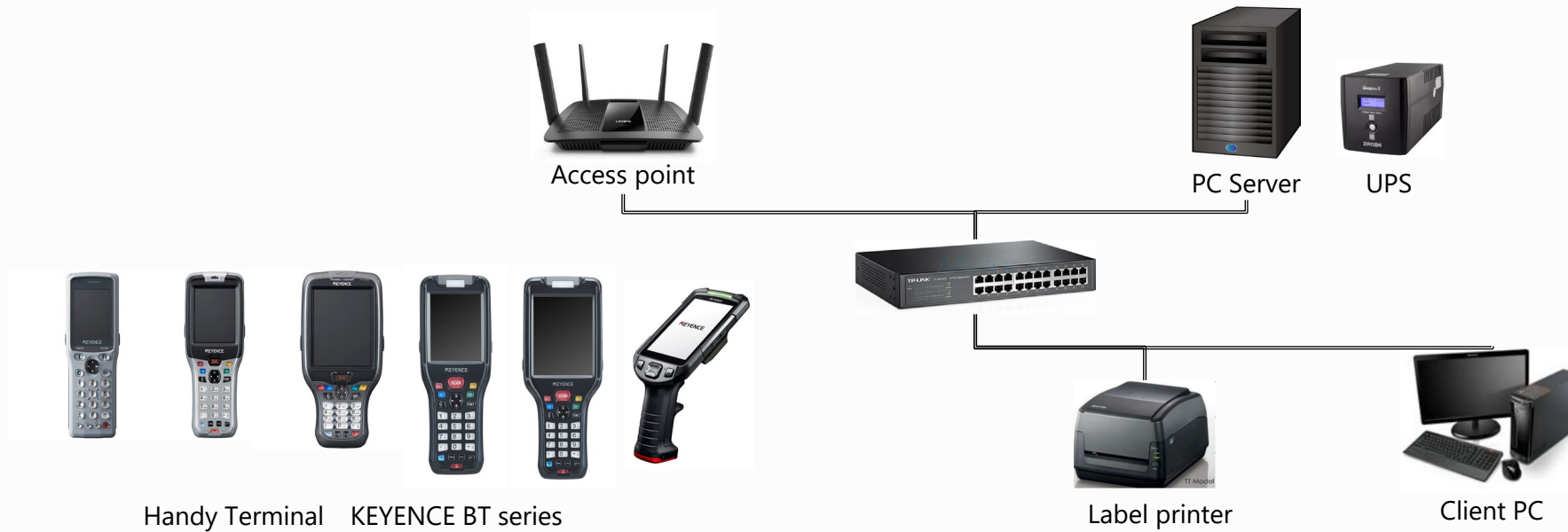
- By using the system, we were able to standardize the work, which made it possible for employees to share
- By converting business data, we were able to reduce human error and man-hours.
- Since the status can be monitored in real time, the manufacturing status can be visualized.

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

# *Appendix*

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# 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

<b>1. Current situation analysis</b>	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.	<b>Within sales</b>
<b>2. Requirement definition</b>	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.	<b>1-4 weeks</b>
<b>3. Design</b>	While a process meeting, we will perform basic design, detailed design, and preparation for transfer based on the requirements.	<b>1-3 weeks</b>
<b>4. Development / Test</b>	Perform the test that fits with customer work and start the test. We will consider a transfer every method for let smooth working process.	<b>1-20 weeks</b>
<b>5. Introduction support</b>	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.	<b>1 week</b>
<b>6. Production operation</b>	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.	<b>Min : 4 weeks Max : 28 weeks</b>