# *Proposal for Asprova*

TOMAS TECH CO., LTD.

Proposal overview

What is production scheduler Asprova?

The production scheduler Asprova is equipped with time-based MRP and linking logic that connects "where" to "where" in addition to the landslide that has been good at it.
We connect people, goods, and resources in all processes from procurement to production and delivery, improve the flow, and realize inventory reduction and maximum utilization of resources.
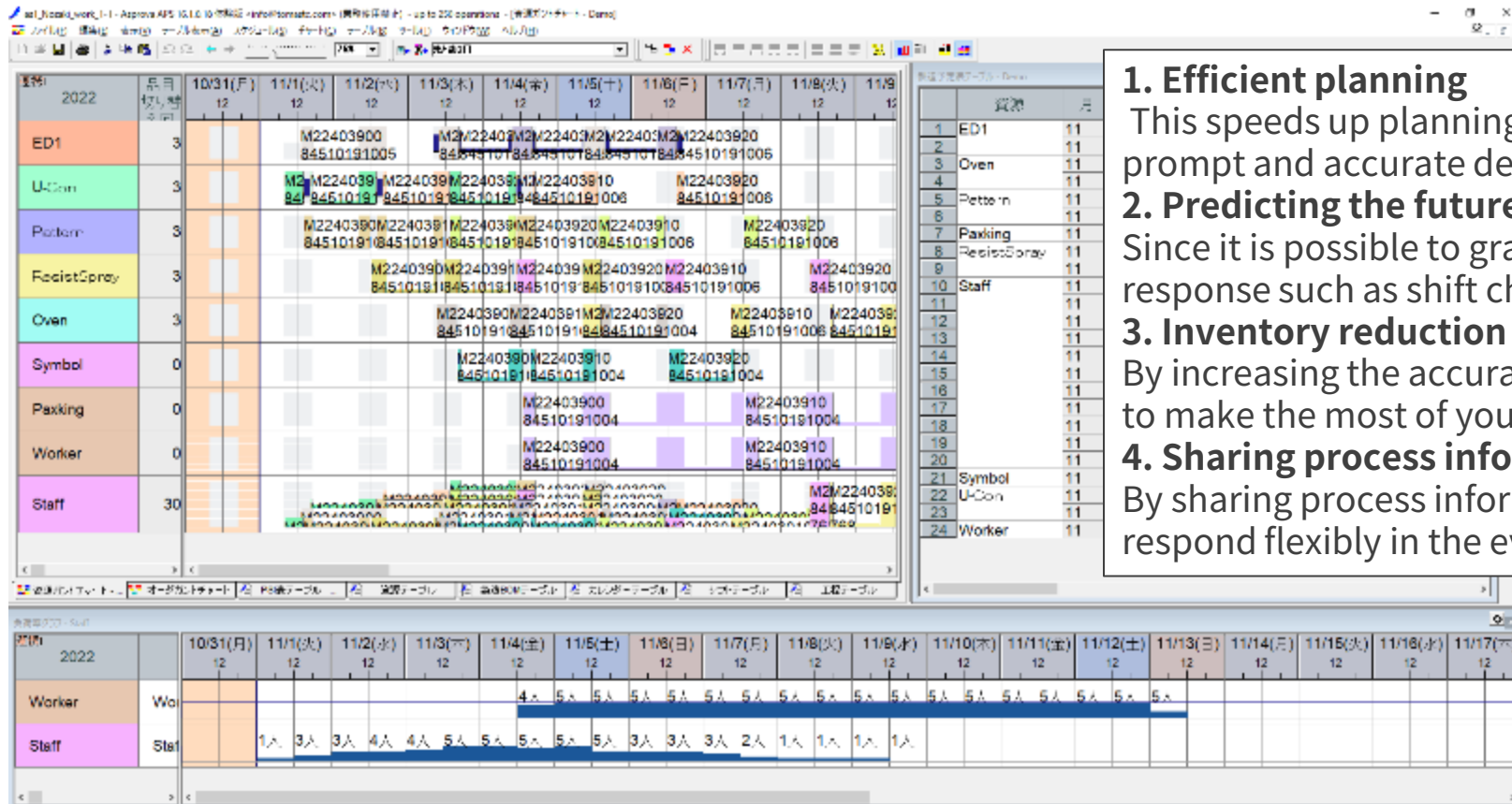
1. Efficient planning
 This speeds up planning and reduces opportunity loss through prompt and accurate delivery deadlines.
2. Predicting the future
Since it is possible to grasp the future equipment load status, early response such as shift change and outsourcing is possible.
3. Inventory reduction
By increasing the accuracy of production planning, you will be able to make the most of your resources.
4. Sharing process information
By sharing process information company-wide, it is possible to respond flexibly in the event of a problem.

Proposal details

Proposal details | Proposal overview
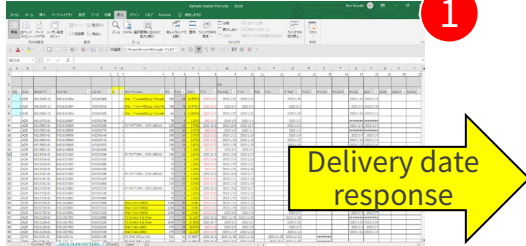
Current Operation (As-Is)

(1) Available to Promise **(2)** Difference between plan and actual result **(3)** Accurate delivery date response

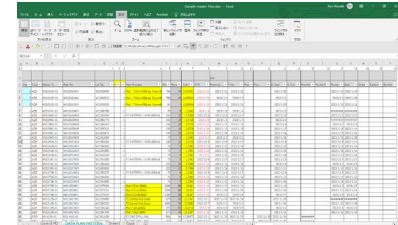**1 Receipt of orders**
Receipt of orders. Receive orders from customers.

2 Order planning and delivery date response
Inserting received orders into an existing plan (Excel). Confirm delivery date and reply.
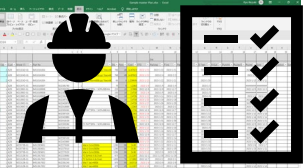
Delivery date response

3 Confirmation of production plan
Update the existing plan when the delivery date to the customer is answered and the order is confirmed.

4 Production
Production execution

5 Confirmation of production results, reflection of results
After the execution of production, check the performance of each process. Conducted comparison of planned and actual results. Performance reflected.
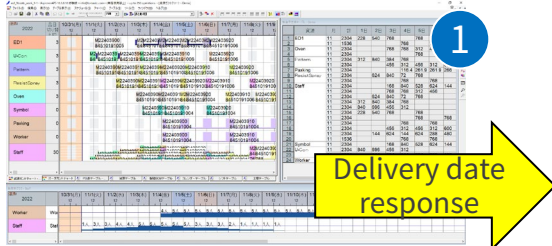
New Operation (To-Be)

(1)(2)(3) → **(1)(2)(3)(4)** Efficient planning **(5)** How many people it needs

1 Receipt of orders
Receipt of orders. Receive orders from customers.

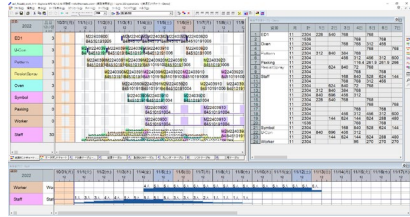**2 Order planning and delivery date response**
Input the received order to the existing plan (Asprova). Confirm delivery date and reply.

Delivery date response

3 Confirmation of production plan
Update the existing plan when the delivery date to the customer is answered and the order is confirmed.
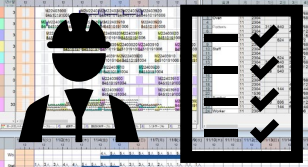
4 Production
Production execution

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After the execution of production, check the performance of each process. Conducted comparison of planned and actual results. Performance reflected.

Proposal details | Information needed for planning
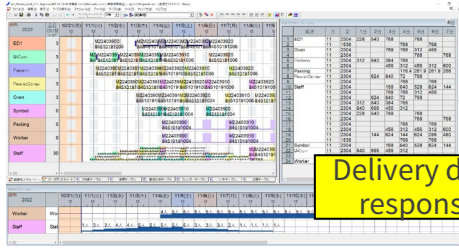
1

Receipt of orders
Receipt of orders.
Receive orders from customers.

2
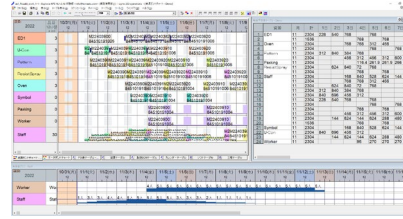
Order planning and delivery date response
Input the received order to the existing plan (Asprova). Confirm delivery date and reply.

Delivery date response

3

Confirmation of production plan
Update the existing plan when the delivery date to the customer is answered and the order is confirmed.

4

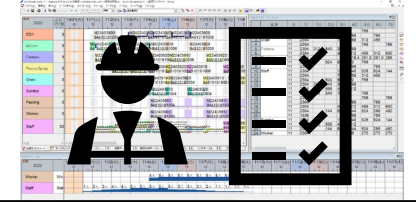### Production
Production execution

5

Confirmation of production results, reflection of results
After the execution of production, check the performance of each process. Conducted comparison of planned and actual results. Performance reflected.
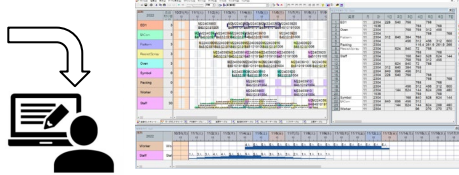

Order data   *Each time setting
It is necessary to input order data for schedule creation. When scheduling order data, if there is an update, it will be put in. Order data can be input to Asprova in formats such as CSV. The required data are as follows.
1. Order No(Lot no)
2. Item no
3. Qty
4. Delivery date
etc

Order data from ERP

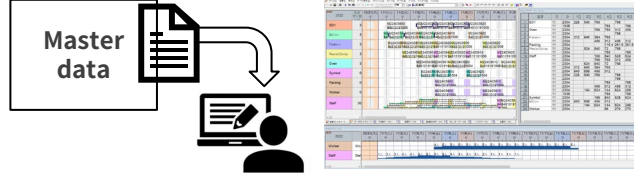1. Item A 10 pcs
2. Item B 10 pcs
3. Item C 10 pcs

Master data   *Preset
Master settings are required for automatic planning. After the master is set, it needs to be updated every time a change occurs. Master data can be input to Asprova in formats such as CSV.

Integrated Master Editor (BOM)
Resource
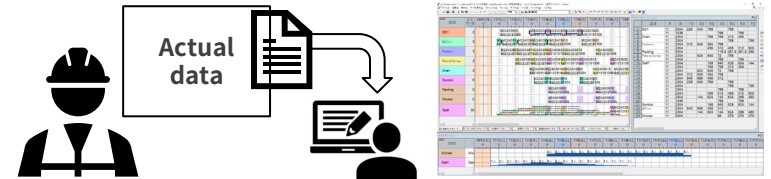Item
Calendar
Shift
Process
etc

Master data

Actual data   *Each time setting
After the execution of production, reflect the actual data in the plan.
By reflecting it in the plan, it will be excluded from the next schedule. Make a plan focusing only on the schedules that have not been started and those that have been started but not completed.
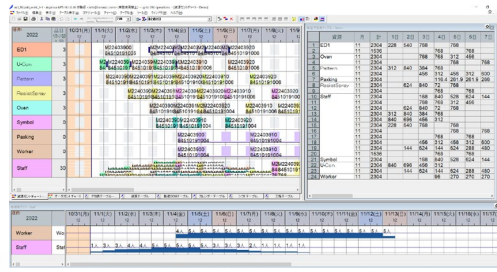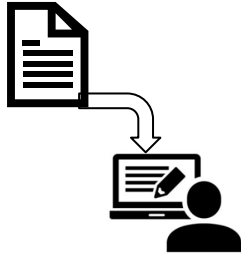
Actual data

Proposal details | Features of the scheduler

Automatic schedule/adjustment function

By setting transaction data and master data, Asprova can automatically create schedules.
Data created by the automatic schedule can be adjusted manually. Also, by changing the master settings (calendar, shift table), it is possible to adjust the delivery date.
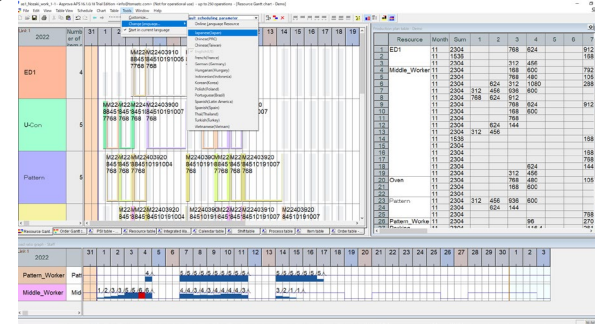

Multilingual setting

Asprova supports multiple languages such as Japanese, English, and Thai.
Since it is possible to change the settings for each user, anyone can make settings in their own language in an easy-to-understand manner.

Japanese
English
Thai
Chinese
*
*
*
*

Bulk production schedule possible

By default, the schedule is executed in compliance with the due date.
If there are schedules with close delivery dates, it is possible to carry out collective production.
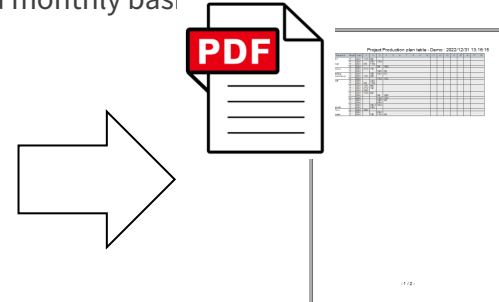The summary date can also be set freely. It is possible to formulate a plan in consideration of the setup t...

Schedule output

It is possible to output in a form that can be shared with others, such as PDF.
After planning, it becomes possible to easily share with the manufacturing site.
In addition, you can output in the format you are currently using, and you can output reports in the format summarized on a monthly basis.
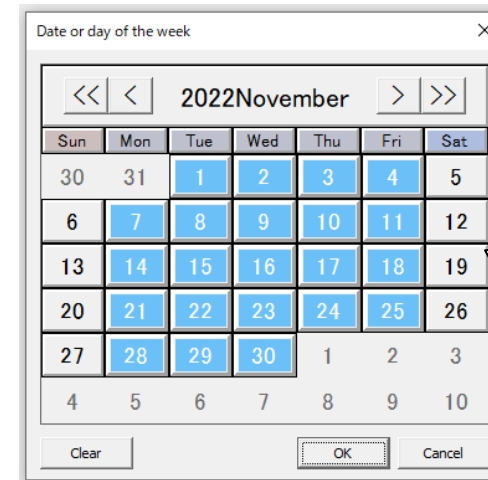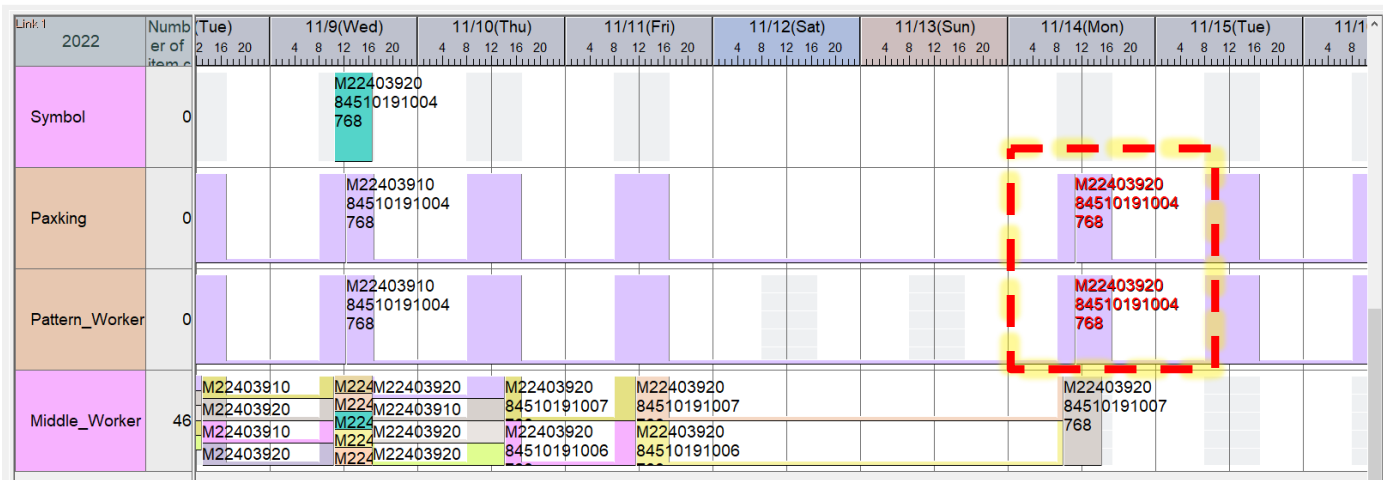
Proposal details | Automatic schedule/adjustment function

By setting transaction data and master data, Asprova can automatically create schedules.
Data created by the automatic schedule can be adjusted manually.
Also, by changing the master settings (calendar, shift table), it is possible to adjust the delivery date.

By operating Calendar and shift, it is possible to change the scheduling conditions. It is also possible to use options such as outsourcing. Scheduling by sudden orders is easily possible.

	Order code	Order class	Item	EST	Due date	
1	⊞M22403900	Register	84510191004		2022/11/14 00:00:	
2	⊞M22403910	Register	84510191004		2022/11/15 00:00:	
3	⊞M22403920	Register	84510191004		2022/11/16 00:00:	
4	⊞M22403900	Register	84510191005		2022/11/14 00:00:	
5	⊞M22403910	Register	84510191005		2022/11/15 00:00:	
6	⊞M22403920	Register	84510191005		2022/11/16 00:00:	
7	⊞M22403900	Register	84510191006		2022/11/14 00:00:	
8	⊞M22403910	Register	84510191006		2022/11/15 00:00:	
9	⊞M22403920	Register	84510191006		2022/11/16 00:00:	
10	⊞M22403900	Register	84510191007		2022/11/14 00:00:	
11	⊞M22403910	Register	84510191007		2022/11/15 00:00:	
12	⊞M22403920	Register	84510191007		2022/11/16 00:00:	

	Shift code	Patterns
1	All day	0:00-24:00
2	Holiday	
3	S1	8:00-17:00
4	S2	20:00-29:00
5	S1+1h	8:00-18:00
6	S1+2h	8:00-19:00
7	S1+3h	8:00-20:00

Proposal details / Multilingual setting

Asprova supports multiple languages such as Japanese, English, and Thai.
Since it is possible to change the settings for each user, anyone can make settings in their own language in an easy-to-understand manner.
A plurality of workers can operate easily.

Proposal details | Bulk production schedule possible

By default, the schedule is executed in compliance with the due date.
If there are schedules with close delivery dates, it is possible to carry out collective production.
The summary date can also be set freely. It is possible to formulate a plan in consideration of the setup time.
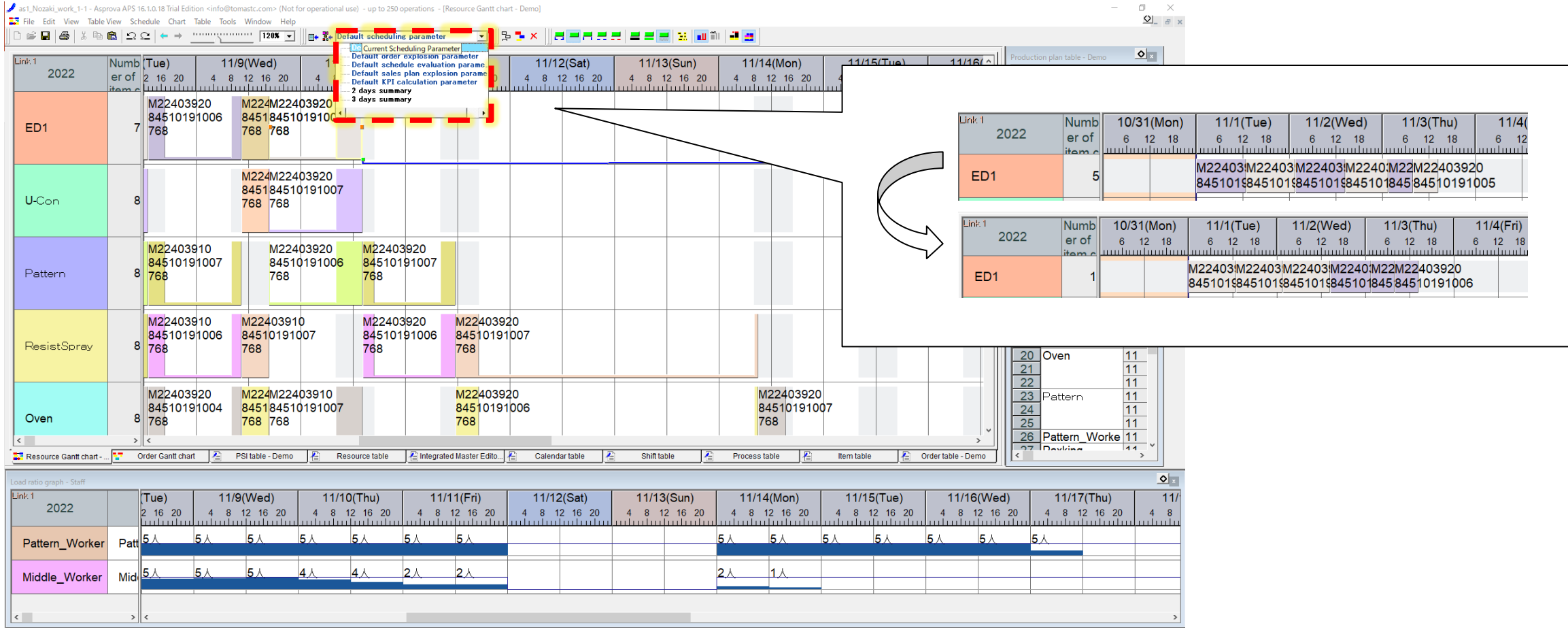
Proposal details / Schedule output

It is possible to output in a form that can be shared with others, such as PDF.
After planning, it becomes possible to easily share with the manufacturing site.
In addition, you can output in the format you are currently using, and you can output reports in the format summarized on a monthly basis.

Proposal example

Proposed example

Business challenges

☒ Simulating manufacturing forecasts to quickly grasp accurate delivery dates
☒ Prompt restructuring of plans and personnel assignments for sudden orders and vacancies of workers on the day
☒ Abolition of personalization of manufacturing planning work / Simplification of creating work instructions and automatic linking of results to the core system

Proposed solution

☑ Simulate manufacturing forecasts to quickly grasp accurate delivery dates
☑ Achieving optimization of staffing
☑ Reduction of management man-hours by breaking away from manual work

Accelerating production plan reorganization due to urgent orders and vacancies, and for ever-changing production processes
Creation of a mechanism for building a system flexibly

Simulate manufacturing forecasts to quickly understand accurate delivery dates

Asprova can simulate the production plan,
It can respond instantly to sudden or urgent orders.
It is possible to adjust other orders and judge whether the order can be accepted or not, so you can reduce machine loss and increase sales.

inquiry **Business**

As-Is

・Manual management using Excel.
・Check other schedules to see if you can place an order. It takes time.
・Mistakes may occur due to manual confirmation. There is also an impact on other orders.

Product A

Product B

Result

Product C

Possibility of delay due to miscalculation

Complaints from customers

Miss the chance

To-Be

・Management by Asprova. Immediate simulation is possible.
・Rescheduling is possible at this time.
・Because it is processed by the system, the possibility of mistakes occurring is low. In addition, since anyone can easily execute it, it is possible to prevent dependence on individual skills.

Result

Exact answer

Effortless production planning

Reduce chance loss, increase sales

Simulate manufacturing forecasts to quickly understand accurate delivery dates
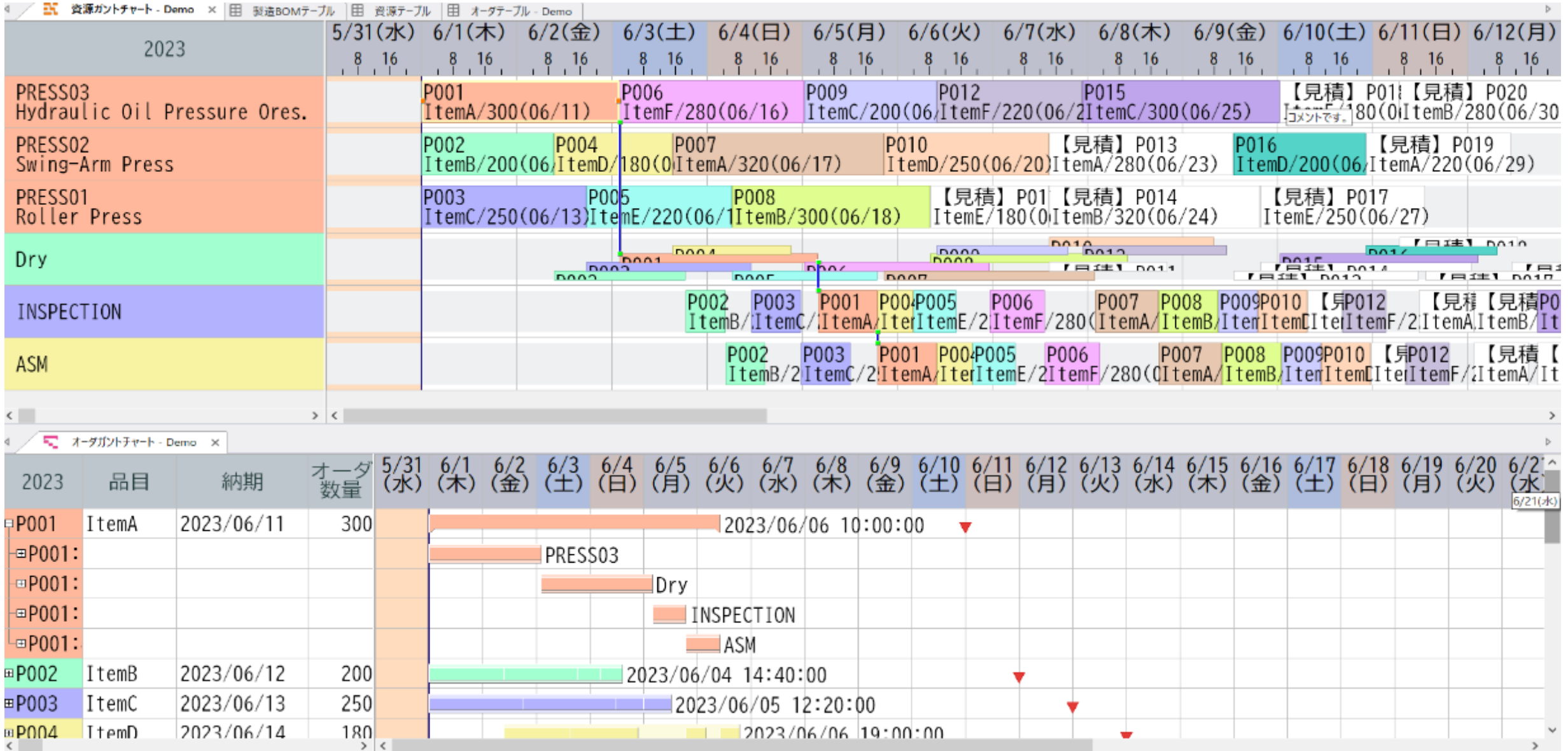
Realization of optimization of personnel allocation - worker planning for assembly process

By utilizing Asprova, it is possible to optimize personnel allocation.
It is possible to calculate the required number of workers based on the number of manufacturing orders, processes, and workers.
In addition, since the ability value can be set separately for each worker, it is possible to schedule by applying work efficiency and work constraints.

Calculation of required number of people for process

As-Is

・Manual management using Excel.
・Placed in each process based on the number of shift workers.
・Since it is not possible to manage work capacity, etc., all workers are managed as a fixed number of workers.

| Open | Open | Open | Close |

To-Be

ASPROVA
look ahead, Accurate

・Scheduling can be done instantly using Asprova.
・The required number of workers can be calculated from the order information.
・Ability values can be set for each worker. By setting numerical values, the optimum placement plan can be calculated.

2	2	2	1 1
Open	Open	Open	Open
2	2	2	1

Realization of optimization of personnel allocation - worker planning for assembly process

Reduction of management man-hours by breaking away from manual work

By using Asprova and i-Reporter, it is possible to reduce management man-hours.
Current operations are mainly based on scheduling using Excel, printing paper, circulating paper in the factory, and entering results.
By registering planned data in Asprova, giving instructions to the site on a display or tablet, and inputting performance data on the i-Reporter side, it is possible to increase work efficiency and reduce management man-hours. is.

Calculation of required number of people for process

As-Is
・Manual management using Excel.
・Print the plan on paper. Distributed to manufacturing sites. Circulate and record the results for each process.
・After entering the results, transfer the data to Excel. Plan planning for the next day.
・It depends on the individual, and other people cannot make plans.

Plan — Paper — Process1 / Process2 / Process3 — Paper / Paper
sick leave — Re-Plan STOP — Actual

To-Be
・Scheduling can be done instantly using Asprova.
・After planning, the work details are displayed on the TV screen of each process.
・Records are entered in i-Reporter. No need to input on paper or transfer to PC.
・Because scheduling is easy, it prevents personalization.

Plan — Process1 / Process2 / Process3
sick leave — Re-Plan — Actual (i-Reporter)

Summary of proposals

Summary of proposals

☑ Simulate manufacturing forecasts to quickly grasp accurate delivery dates
☑ Achieving optimization of staffing
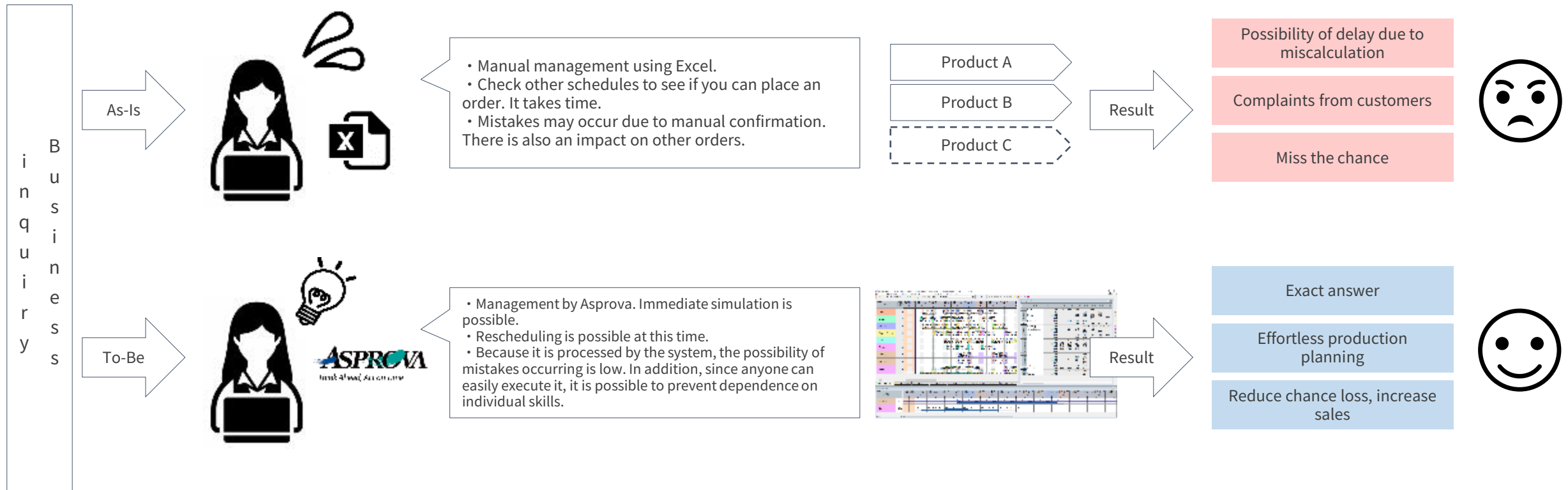☑ Reduction of management man-hours by breaking away from manual work

Reorganization of production plans due to urgent orders and vacancies
For faster and ever-changing production processes
**Creation of a mechanism for building a system flexibly**

ASPROVA
Think Ahead, Act on Time

Plan
Based on the report, identify the processes and lines that are bottlenecks. From the current figures, calculate the figures that should be improved and set targets.

Action
Evaluate the results after improvement. Evaluate whether improvement measures are reflected in numerical results and whether there are any deficiencies.

Do
Based on the target numerical values, the points to be improved are examined with reference to other lines and other work. After consideration, the operation will be carried out.

Check
After a certain period of time, output a report and collect data. Analyze under the same conditions as the previous time and check the points that have changed.

Appendix

Maintenance

#	Software maintenance		Standard / Option
1	Operational support/restoration support	We will open a support window to provide operation support by phone and email, and recovery support in the event of a software failure.	Standard*1
2	Provide upgraded software	We will provide an upgraded version when we improve the functions of the software. We provide the latest software for the latest OS free of charge. You can reduce the customer's life cycle cost by eliminating the need to purchase software when updating the server.	Standard*1
#	Software reset		
1	Software reset	If it needs to re-setup the software after repairing the server, Carry out restoration work. (Restoration of inventory data is not included in software reset)	Standard*1

*1) Service is provided at the system purchase fee for the first year of the contract. From the second year onwards, the contract is for one year

Schedule | Go live schedule Asprova

Phase	Description	Duration
1. Current situation analysis	We will conduct a hearing of the current business and the system being used, confirm the requirements, and analyze the current situation of the customer. We will create a quote based on your requirements.	**Within sales**
2. Requirement definition	Based on the analysis of the current situation, we will define detailed requirements. We will check the detailed requirements so that the system can be realized in line with actual operation.	**12 weeks**
3. Design	While holding a process meeting, based on the requirements, we will perform basic design, detailed design, and transition preparation.	**6 weeks**
4.Development /Test	Do the work that fits the job and start the test. We will consider the migration method for smooth introduction.	**12 weeks**
5. Introduction support	We will hold an operation training session when introducing the system that is currently in use or operating in parallel with the business, and after confirming the feeling of use, etc., we will conduct the final acceptance inspection.	**8 week**
6. Production operation	Operation start. We provide long-term support for safe and comfortable system operation through operation and maintenance support, help desk, information provision, and provision of revisions.	**38 weeks**