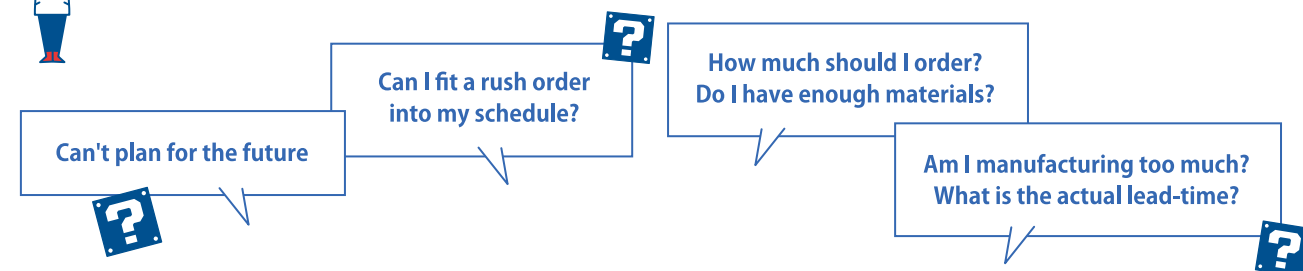# *Asprova APS*

Advanced Planning & Scheduling system
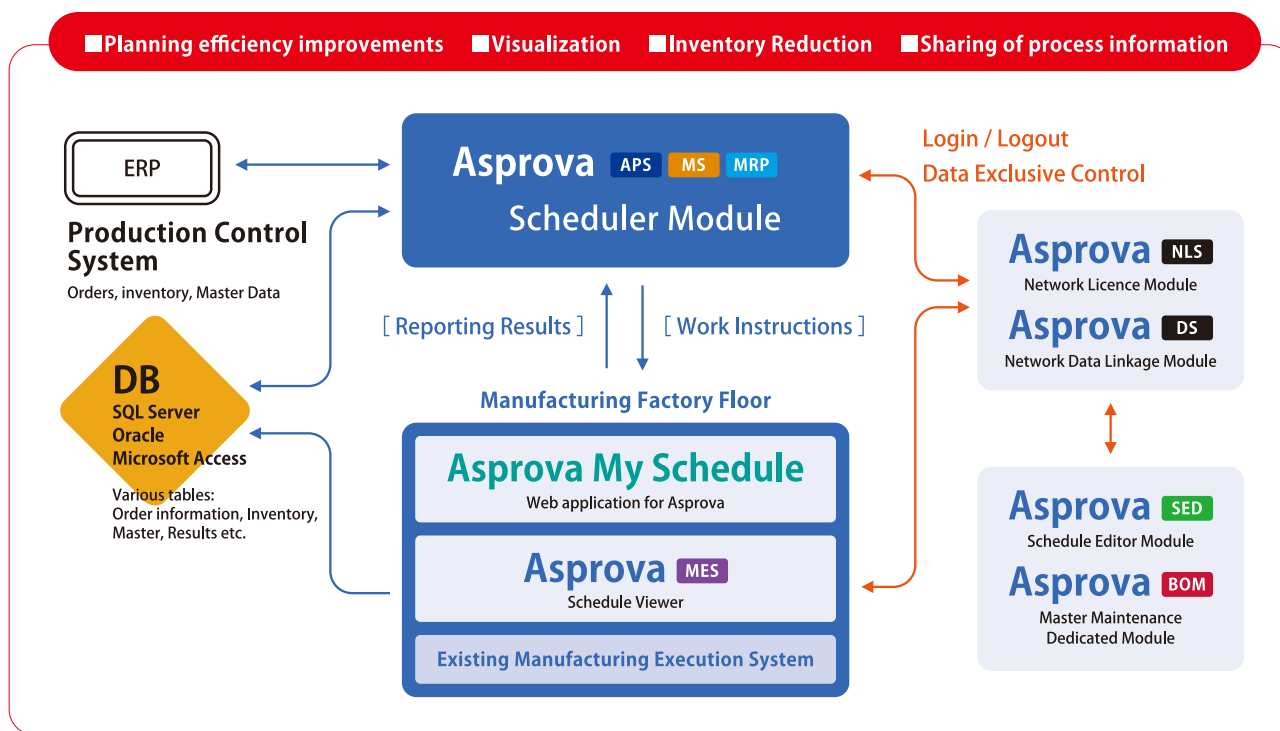
How can I deal with the problems that can't be handled with Production Management System or IoT?

Can I fit a rush order into my schedule?

How much should I order?
Do I have enough materials?

Can't plan for the future

Am I manufacturing too much?
What is the actual lead-time?

Asprova can solve them all!

No.1 market share in Japan. Equipped with a multitude of standard features and highly-flexible scheduling logic "Visualize" the manufacturing factory floor, and solve your "Product control" problems.

Solving all the problems with
Ultra High-Speed Scheduling Logic

■Planning efficiency improvements ■Visualization ■Inventory Reduction ■Sharing of process information

ERP

Production Control System
Orders, inventory, Master Data

DB
SQL Server
Oracle
Microsoft Access
Various tables:
Order information, Inventory, Master, Results etc.

Asprova APS MS MRP
Scheduler Module

[Reporting Results]   [Work Instructions]

Manufacturing Factory Floor

Asprova My Schedule
Web application for Asprova

Asprova MES
Schedule Viewer

Existing Manufacturing Execution System

Login / Logout
Data Exclusive Control

Asprova NLS
Network Licence Module

Asprova DS
Network Data Linkage Module

Asprova SED
Schedule Editor Module

Asprova BOM
Master Maintenance
Dedicated Module

Production Management System packages

SAP Certified	Microsoft Dynamics AX	EXPLANNER/Ja
SAP AG	Microsoft Corporation	NEC Corporation NEC Nexsolutions, Ltd.
TPiCS-X	R-PiCS V4	SCROM
TPiCS Laboratory, Inc.	JB Advanced Technology Corporation	EXA CORPORATION
PI-navi	IBM WebSphere software	AMMIC Corporation
TOTEC AMENITY LIMITED	IBM Corporation	AMMIC Corporation
EXEX	mcframe	JIPROS 中堅製造業向けERP
SystemEXE,Inc.	Toyo Business Engineering Corporation	Japan Information Processing Service Co., Ltd.
TECHS	Factory-ONE 電脳工場MF	GRANDIT グランディット
Technoa Inc.	EXcorporation	GRANDIT CORPORATION
ATOMS QUBE	J WALD	Y's-SF
QUALICA Inc.	Synapse Innovation Inc.	i3 DIGITAL CORPORATION

Production Management System packages or the existing Production Management System.

With success stories like these, it's no wonder Asprova is confidently solving everybody's problems.

Asprova has been brought into various factories around the world to solve a variety of problems faced in production planning. While many of them experienced the Planning Efficiency Improvements, Transparency, Inventory Reduction and Sharing of Process Information Asprova enables, these six examples are the most significant.

On-Time Delivery Case 1

Pentel Co., Ltd.

Coordination with ERP achieved significant improvements in on-time delivery and reducing stocks of unshipped inventory.

Pentel Co., Ltd. is known for its school stationery consumer products, while recently the company has expanded into the manufacture and sale of electronic devices and industrial robots. Pentel implemented Asprova APS to assist with production proposals related to sales planning. Pentel linked Asprova APS with other newly-introduced ERP solutions, resulting in a drastic reduction in unshipped inventory by 50 to 75 percent. The on-time delivery rate was also significantly improved.

Quicker Planning Case 2

Nishikawa Rubber Co., Ltd.

Production plan steps reduced by two thirds, while a better grasp of production capacity facilitated more flexible yield adjustments.

Nishikawa Rubber Co., Ltd. is a specialist manufacturer of automotive, residential, civil-engineering and medical/cosmetic products, while also producing various sealing materials. Asprova allowed it to reduce the number of steps required for production plans by two thirds, while also making it easier to adjust yield. Setting minimum inventory also allowed Nishikawa Rubber to achieve a 40 percent reduction in product inventory.

Transparency Case 3

Panasonic Appliances Air-Conditioning Malaysia Sdn. Bhd.

Made the global standard for its production planning system, improving efficiencies in product planning and reducing inventory across subsidiaries in several countries.

Panasonic Appliance Air-Conditioning Malaysia Sdn. Bhd. Was founded in 1972, today making and exporting air conditioner packages and parts to more than 120 countries. Asprova assists with production planning. At the same time, other units within the Panasonic group of companies experienced similar problems. Impressed by Asprova's local support network, Panasonic chose to make Asprova its global standard, working to expand implementations into the rest of its network.

Increased Production Case 4

Kobayashi Create Co., Ltd.

Factory transparency increased, with yield per planning time increased by 30 percent.

Kobayashi Create Co., Ltd., Which provides products and services centered on the printing of recording paper and business forms, The company's printing business operates entirely on a build-to-order basis, with each customer order unique to another, originally making short delivery times difficult. With optimized production proposals now possible however, Kobayashi Create was able to increase yield per planning time by 30 percent. Promised same-day delivery improved from 20 to 80 percent as well, reducing lost opportunities.

Reduced Inventory Case 5

Webasto Japan Co., Ltd.

Planning moved from a daily to hourly bases, drastically reducing warehouse inventory.

Webasto Japan Co., Ltd. Makes products such as car sunroofs, it's headquaters are located overseas. The company implemented Asprova as part of the boader group's drive to globalize, demanding manufacturing efficiency improvements and the ability to manage all processes, All assembly line production is now planned on an hourly basis, while related parts ordering and product shipping is now automated, delivering a dramatic reduction in inventory and necessary warehouse space. Personalization of production planning was also removed, eliminating experience and intuition from the process.

Information Sharing Case 6

Yamaha Corporation

Information sharing between production floor and management reduced proposal creation and manufacturing lead time by two thirds.

Yamaha Corp. has considerable global operations in the music and sound industries, producing musical instruments, A/V equipment and music classes. Asprova was brought in, introducing information sharing between production floor and management. Planning could now be updated with performance information in real-time, reducing time needed for proposals from 60 to 20 hours/month, as well as manufacturing lead time and WIP inventory by two thirds.

Connecting Peoples, Things, Resources With Production Scheduler

The environment surrounding the manufacturing industry is rapidly changing. It is required to improve the whole production process and production efficiency in the factory. Asprova provides work leveling (dispatching, resource load leveling), and time-based MRP and pegging logic that connects from where to where in additional. Improves the flow of connecting all peoples , things, resources in the whole processes from procurement , production to delivery, realizing inventory reduction and maximum resource utilization.

Inventory Constraints
STOCK
The scheduling takes into account existing inventory levels as well as future inventory fluctuations.

Combined Scheduling
SCHEDULING
Supply, demand, delivery, production, purchasing and delivery plans can be combined and run concurrently.

Schedule Evaluation
EVALUATION
Different scheduling scenarios can be evaluated in order to choose the most effective planning strategy.

Supply-Demand Balancing
BALANCE
Visualizes the balance between demand and supply for numerous items, gives information about demand, supply and inventory levels, making it easier to compare and evaluate possible adjustments.

Purchasing Plan
PURCHASE
Purchase rules, such as, purchase lot size are considered.The purchases for different orders and periods can be combined into a single purchase order.

Mold and Jig Restrictions
TOOL
The availability of sub-resources such as molds and jigs are considered in finite-capacity and assigned to individual machines to ensure there will be no shortages.

Batch Processing
BATCH
Operations with the same conditions can be processed as one batch, for example: items with the same furnace temperature, or items loaded onto the same truck to 100% capacity.

Eliminate excess inventory
USE UP
Production quantities and process times can be automatically specified so that all material is used and excess inventory avoided.

Lot Sizing
LOT
To optimize production flow the lots can be merged according to orders, periods or production volume.

Pegging Process
RELATION
Process pegging rules are customizable for automatic planning. If the delivery time or production volume changes then pegging can be used to manually adjust the production flow.

Dispatching Rule
DISPATCH
This function assigns operations based on performance criteria such as, due dates, order priority or manufacturing-process conditions. These rules are easily customizable, without programming.

Load Leveling
LEVELING
The load leveling function can be used to equalize the load levels of multiple resources and balance the resource load across the planning horizon.

Manual Adjustments
INTENTION
After the production schedule has been generated it is still possible to make adjustments manually and changes are maintained when the schedule is again generated automatically.

Operator Planning
PERSONAL
The scheduling takes into consideration both the number of operators and their skill levels.

Delivery Planning
DELIVERY
Takes into account the different delivery methods together with changing load capacities and delivery times.

Supplier
Parts Delivery
Confirmed unofficial forecast
One type of part in n locations
Parts supply instruction that anyone can do
parts inventory
Synchronous production planning of factories
production management
Automatic Production Scheduling
DEMAND
Confirmed unofficial forecast
Clients
DELIVER
Leveling
ASPROVA
Scheduled quantity of time unit
Delivery company
pre-process
post-process
Delivery on time
Transaction dispatch at the complete time
products inventory

All the features you need for production scheduling are in one package. Meets the client's needs without Customization.

Asprova is equipped with a multitude of standard features covering everything you need on the production floor. Over the years we've listened to user's feedback and release updates on a regular bases, adding the features requested by factory operators. Most companies using Asprova have been able to take advantage of the rich, practical feature set, operating in a non-customized manner.
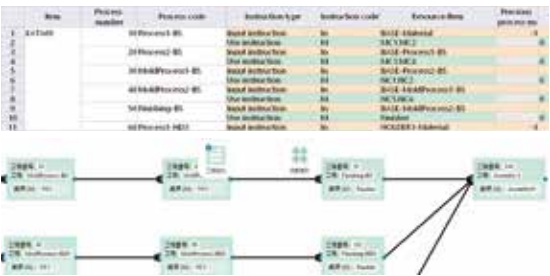
Resource Gantt Chart

Orders, production, purchasing and inventory can be displayed in threaded format.

Integrated Master Editor table

Two different windows are available to display master data: a spreadsheet view for easy editing and graphical version for quick reviewing.

Load Graph

Load discrepancies can be viewed by day, week or month for each resource.

POINT
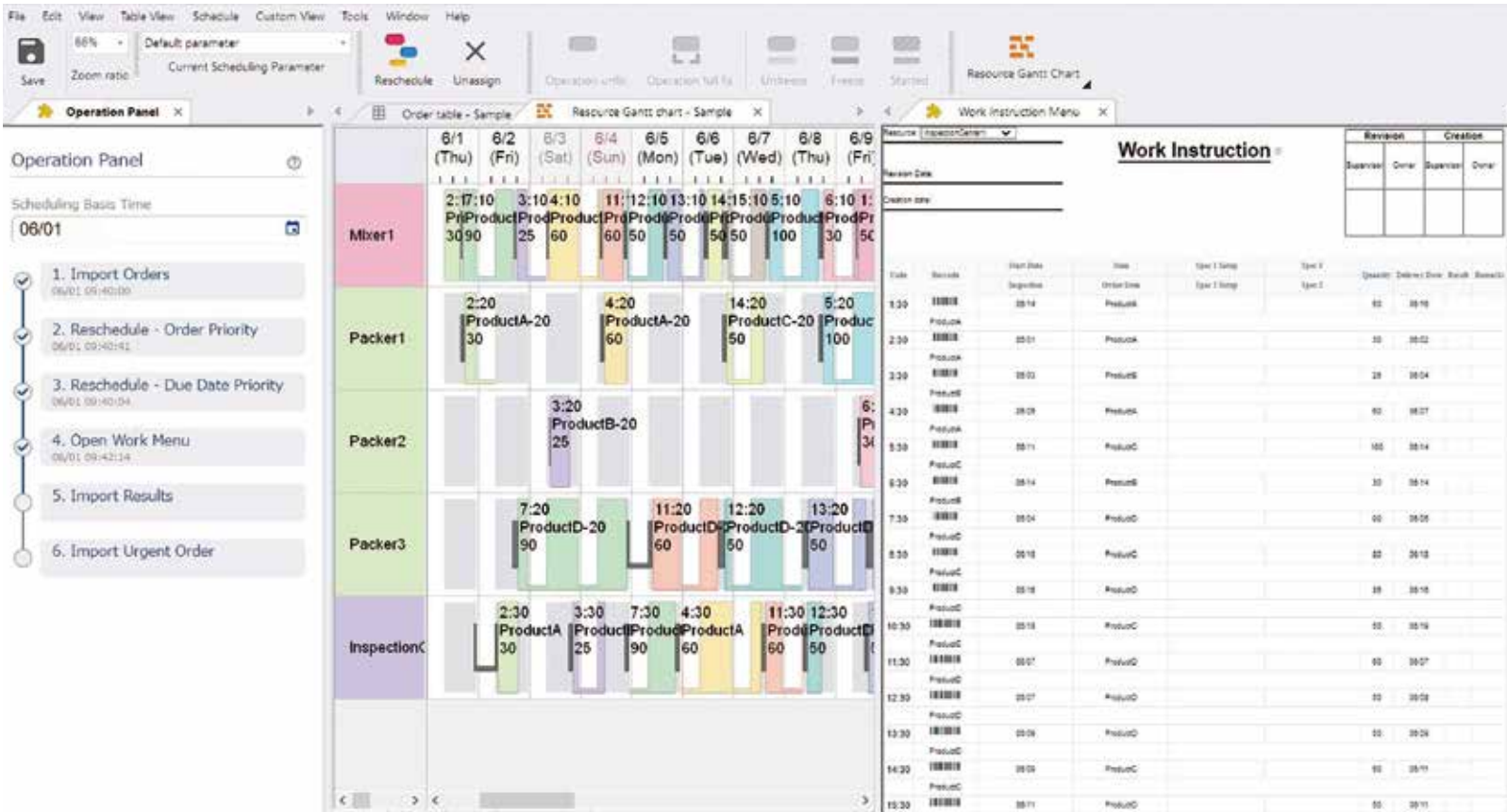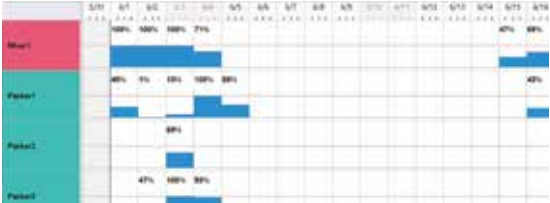
Order Gantt Chart/Operation Table

Useful for working out tasks instructions, delays in delivery or replying to delivery time requests.

Dispatching View

Allows you to confirm required tasks for the day by facility and operator. Use the mouse to quickly make changes to the order, facility or worker involved.

PSI

Calculates movements in demand, supply and inventory in day, week or month or adds your own calculation fields as necessary.

An extensive set of essential features

Support for plans synchronizing multiple processes
Save several steps when building master data, creating proposals synchronizing each step of the plan.

Support for plans by the second, based on standard time
Capacity can be noted per item, process or machine, enabling highly-accurate proposals.

Support for individual machines, molds and personnel
Production plans can take machine, mold and personnel restraints into account.

Backing efficient proposals

Develop plans that take note of your progress
When you run ahead of schedule or encounter delays, your entire plan can be rescheduled as necessary.

Support for multiple planning scenarios
This functionality, included as standard, allows for scenarios based on delivery time, product and other sequences.

Modifiable planning results (manual adjustment)
Previously created plans can be partially adjusted manually before being rescheduled.

Improving usability

GUI makes overloaded lines and delivery delays visible
Pick line overloads and delayed deliveries instantly using charts and graphs.

Flexible support for complex configurations
A variety of constraints can be shown using formulas, such as for using alternate facilities when deliveries might be delayed.

Data I/O capable of linking data using mapping only
Data can be input or output specifying any field from external databases, including production management systems.
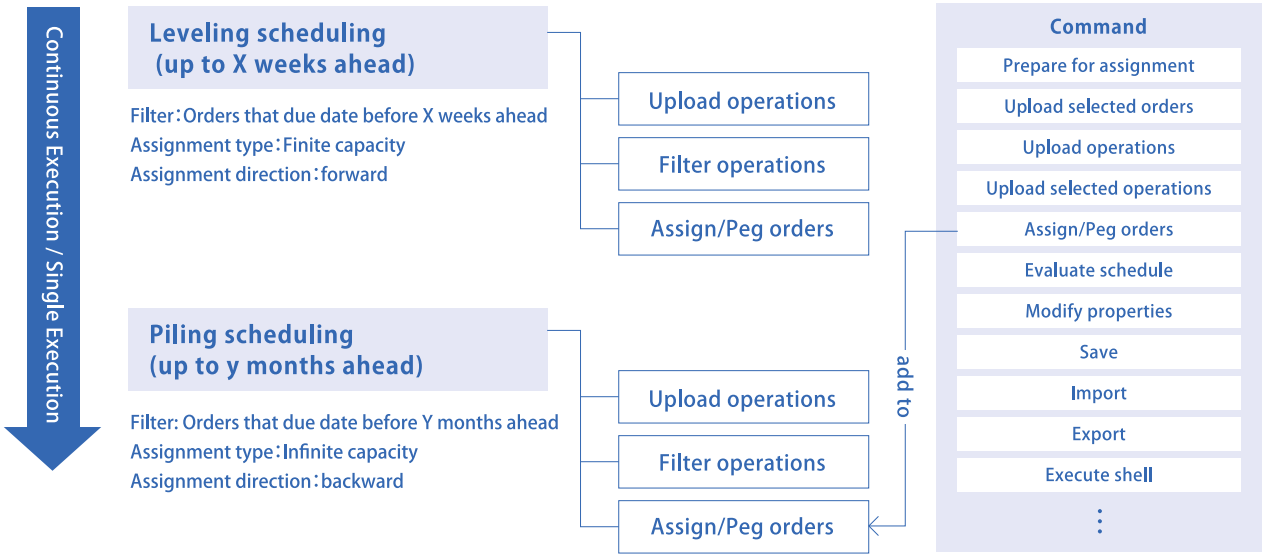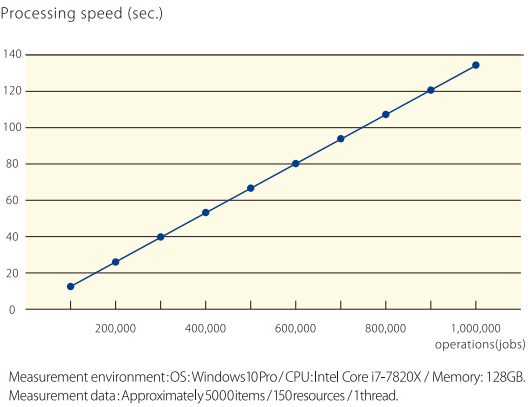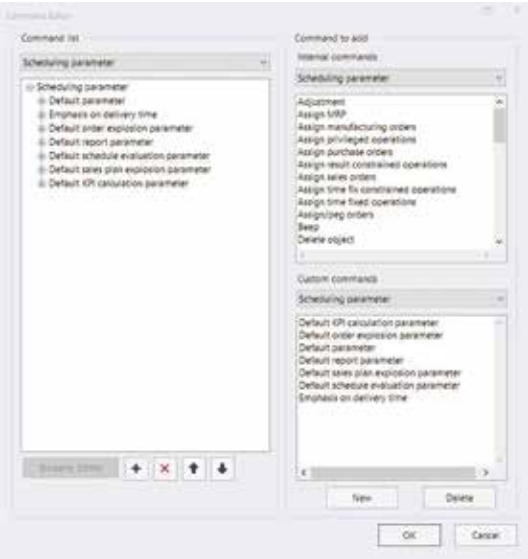
Asprova FCS Turbo Engine

≫ Advanced Scheduling Engine Multi-function, High-performance Scheduling engine reflecting a multitude of unique customer requirements

[Main Specification and Functionality]

①Automatic operation split / ②Load leveling assignment / ③Setting up of resource priorities / ④Calculation of the necessary number of workers required / ⑤Setting of sub-resources such as molds, employees, tools etc / ⑥Assignment of merging and branching processes / ⑦Validity period of resources can be set in the master data / ⑧Restrict what resources can do the next process with the Next Resource Constraint / ⑨Function to customize the evaluation selection of candidate resources / ⑩Set upper limit to suspension time for setup and production time / ⑪Dispatching Rule can be set to assign in the order of highest priority / ⑫Able to prepare numerous parameters to execute various simulations / ⑬Item grouping to reduce the amount of setup time for each process / ⑭Filter the assignment of one part of the orders, processes, resources and items / ⑮Forward/ Backward scheduling takes buffer time into consideration / ⑯Resource constraints take into account period specific safety stock and inventory pegging / ⑰Furnace setting allows various specifications of conditions for simultaneous processing / ⑱Skill Map allows specification of which workers can use which resources and their skill at using those resources / ⑲Automatic pegging functionality allows consideration of complex assignment conditions between orders / ⑳Numerous setup time settings including external setup, teardown and setup change time / ㉑Rough scheduling that allows you to balance the workload without fixing the order of the orders / ㉒Automatic replenishment of orders that flexibly adjusts the volume by taking into account current inventory levels / ㉓During rescheduling possible to remember the assignment position and do various processing such as modification of master and data input/ output / ㉔Generate production orders from customer forecasts and, taking into account the safety stock, group lots of intermediate products for each unit period of time

◎Command Editor

Processing speed (sec.)

Measurement environment：OS：Windows10Pro / CPU：Intel Core i7-7820X / Memory：128GB.
Measurement data：Approximately 5000items / 150resources / 1thread.

Continuous Execution / Single Execution

Leveling scheduling (up to X weeks ahead)
Filter：Orders that due date before X weeks ahead
Assignment type：Finite capacity
Assignment direction：forward

- Upload operations
- Filter operations
- Assign/Peg orders

Piling scheduling (up to y months ahead)
Filter: Orders that due date before Y months ahead
Assignment type：Infinite capacity
Assignment direction：backward

- Upload operations
- Filter operations
- Assign/Peg orders

add to

Command
- Prepare for assignment
- Upload selected orders
- Upload operations
- Upload selected operations
- Assign/Peg orders
- Evaluate schedule
- Modify properties
- Save
- Import
- Export
- Execute shell
- ⋮

≫ Optional features for even more advanced scheduling

Sales
MS **MRP**
included by default in Asprova APS

Linking sales information and production planning
Application: Automatic compilation of production orders from sales information, backward planning and assignment for required date.
● The production plan and sales orders can be linked in order to predict delivery time.
● Compilation of a sales plan from yearly or monthly production plans.
● Links directly with raw material and purchase orders.

[Daily Sales Plan Table]

Purchase
MS **MRP**
included by default in Asprova APS

Linking and synchronization of the production plan and purchase information
Application: Automatic compilation of purchase plan from the production plan. Creation of middle or long term purchase plans. Use already existing materials purchase plan as constraint when making the production plan.
● Compile a purchase plan   ● Specify purchase lot-sizes
● Link between the current stock levels and sales orders

[Purchase Plan Table]

KPI
APS **MS** **MRP**

KPI（Key Performance Indicators）evaluated for a whole project or specific orders, resources or products, and then saved in history.
Main KPI (from a total of 51 kinds):
● Turnover ● Material costs ● External labour costs ● Personnel costs
● Total costs ● Profit ● Rate of profit ● ROI Return on investment
● Degree of delivery reliability ● Delivery reliability of suppliers
● Total/finished and intermediate goods in piece numbers

[KPI for Entire Project]

Resource Lock
APS **MS**

After completing the production a resource can be locked for a certain amount of time
Example: Tank facilities etc.
● Locking the resource until the succeeding process begins.
● Locking the resource until the succeeding process ends
● Locking the resource for a certain time period after the start of the succeeding process

[Resource Lock（End of the post-process）]

Time Constraint MAX
APS **MS**

Maximum time between processes can be preset
Example: Perishable WIP such as food and beverages, chemicals and medicines etc.
● The time between the end of the previous process and the start of the next process can be restricted.
● Time between the start of the previous process and the start of the next process can be restricted.

[Time Constraint MAX]

Group Assign
APS **MS**

Grouping operations, assigning them either simultaneously or consecutively
● The production start time is the same for the same resource.
● The production start time is the same for different resources.
● Operations are linked consecutively according to the specified order.
● Simultaneous start and consecutive start can also be combined. (Requires plug-in)

[Group Assign（Same Time）]

Event
APS **MS**

Set event conditions for each resource and generate event
● Automatic planning of one-day maintenance after a specified amount of use.
● Automatic planning of half-hour equipment cleaning after a specific length of time in use.
● Automatic insertion of set-up times before/after/during specific orders.

[Generated Event]

Solver
APS **MS**

We will optimize the schedule using AI.
After specifying requirements, a schedule equivalent to or better than what a person would create in several hours can be created in just a few seconds.

Examples of scheduling requirements include:
● Minimizing late deliveries   ● Minimizing setup/changeover times
● Determining the optimal overtime hours   ● Implementing production leveling

[Before applying options]
[After applying options]

Asprova Solver Option

» AI can help us generate an optimized schedule!

With the Solver option, better and advanced schedules can be created using intuitive and simple settings with the power of AI. Instead of building complex scheduling logic, by deciding on scheduling requirements such as "minimizing late deliveries" or "minimizing setup time," the AI will select the optimal schedule from millions of automatically generated possibilities.

◎**Optimizing scheduling with Solver.**

Minimizing both of setup times and late deliveries

Solver

1 mollion time's continuous improvement
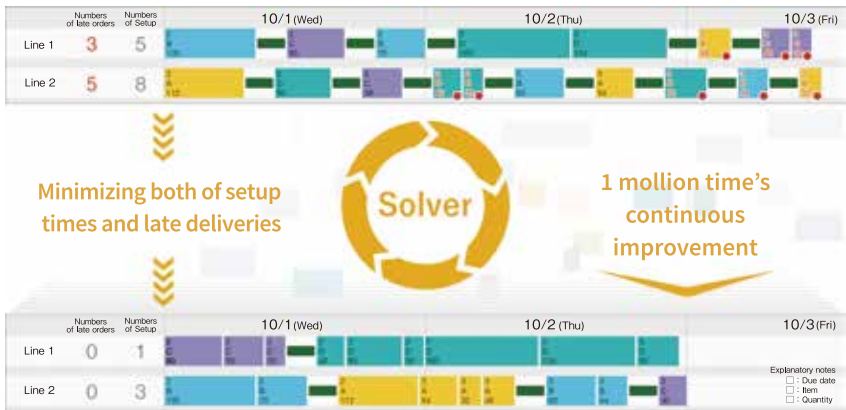
[**Main scheduling requirements that Solver can handle**]

・Minimizing late deliveries
・Minimizing setup time
・Minimizing inventory while avoiding out of stock
・Reschedule the batch cycles.
・Optimize the master production schedule.
・Optimize the input sequence for line production.
・Optimize the input sequence for continuous batch processes.
・Implementing production leveling
…

*Additional scheduling requirements that can be handled may be added in the future.

Asprova Custom View

» Create beautiful, easy to use UI!

Custom UI can be created using programming languages such as HTML and JavaScript to be shown within Asprova.
End users can access Asprova's data and display scheduling results, operations with user friendly designs.
Source code for numerous sample screens are provided. Some of the samples can be used directly for business purposes.

◎**CustomView**
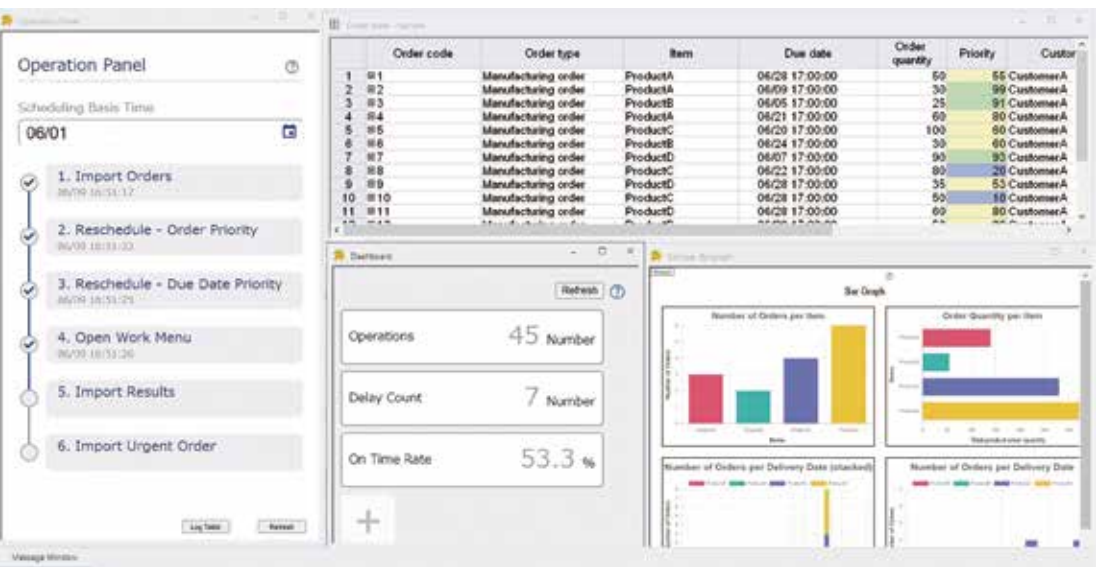
Asprova My Schedule

» A dedicated web application for Asprova that bridges the gap between production scheduling and the shop floor.

This is an optional feature that allows you to view production plans created in Asprova via a web browser , and also enables input of results and adjustment of equipment capacity values.
With Asprova alone, scheduling could only be done from a PC, limiting access to information.
By using Asprova My Schedule, not only the production management department but also each operator in the manufacturing and inspection processes can access the latest schedules and input data in real-time using mobile devices.
Asprova My Schedule facilitates smooth communication of production-related information and improves overall factory operations.

◎**Asprova My Schedule**

[**Main Specification and Functionality**]
・View schedules via web browser regardless of the device
・Timely registration of production results from each device
・Edit capacity values of the manufacturing BOM (Bill of Materials)

Asprova Database Fieldmapping

» Linking with OLE DBs like SQL Server and Oracle or text files without programming!

◎**Field Mapping Window**

[**Main Specification and Functionality**]
・Master data/Planning results can be imported/exported
・Table elements for export/import can be selected
・Field name and sequence can be defined at will
・Differential import and export functionality
・Individual adjustment for each table
・Data change function when importing/exporting
・Text files supported are CSV, Tab-separated or unicode
・The sequence of data in the data base is irrelevant
・Primary keys can be adjusted
・Record filtering

DB
SQL Server
Oracle
Microsoft Access

Asprova Module Information

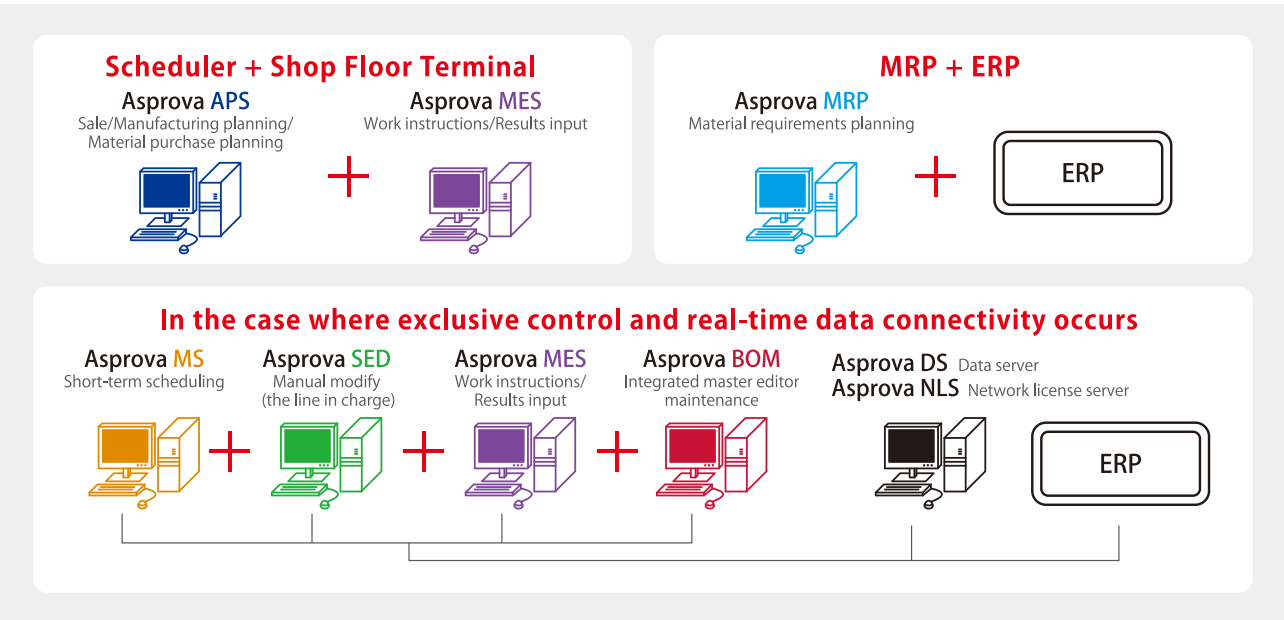## ≫ Choose the scheduler and supplementary modules that matches your needs

SCP
Supply Chain Planning

Rough scheduler for supply chain planning of multiple factories and distribution centers

Simulate the order's movement in the supply chain using different planning scenarios, while considering the production capacity of each factory and the delivery options between them

APS
Advanced Planning & Scheduling

An APS scheduler based on MS with the Sales option and Purchase option provided as standard.

Performs scheduling right the way through from sales to purchase.
MRP functionality is built in as standard. So it can do the material requirements planning as well

MS
Manufacturing Scheduler

Production scheduler for factory which produces production plan of multi-products, multi-processes at high speed

Performs finite-capacity assignment of manufacturing orders for a factory
Can make both short term plans for actual work instructions,
and long term plans to simulate resource load. Contains MRP functionality

MRP
Material Requirements Planning

A scheduler that executes MRP (Material requirements planning)

Scheduling capable with fixed lead-time set for item table and parts list.
Master data can be shared with other modules, so upgrading to APS or MS is easy.

SED
Schedule Editor

A editor module for modifying the scheduling result

Sequencing functionality that modifies the scheduling result
or arranges operations manually is provided as standard.

BOM
Bill Of Material

Specialized module for the creation and maintenance of the master data (Integrated Master Editor)

By combining with DS it is possible to update the master whilst in the middle of scheduling.
Also can be used to input results since the functionality of MES module is built in it.

MES
Manufacturing Execution System

A scheduler viewer suited for the manufacturing shop floor

Display all the various charts, graphs and table windows as well as input results.

NLS
Network License Server

A module to handle the administration of all the Asprova licenses together on one PC. Licenses can be recognized across the network.

*At least one scheduler module (APS/ MS/ MRP) is required for each project.

DS
Data Server

A module to integrate scheduler data amongst all modules on the network

By using a check-in/check-out system exclusive control will be applied when a user checks out the project file Results, orders, masters etc, will have their different data integrated into DS by transaction.
When the data is updated in DS it notifies all the other modules
and their respective users are aware of the data update in real-time and can download the newest data.

≫ Module Option Structure

● Standard Functionality
● Functionality that can be added

	GUI / Result input	Bom Input	Order Schedule edit	Material Requirements Planning	Sequencing (Operation arrangement)	Infinite Schedule	Finite Capacity Schedule	Multi-site rough scheduling	Sales	Purchase	KPI	Resource Lock	Time Constraint MAX	Group Assign	Event	Solver	Planned Inventory
SCP Supply Chain Planning	●	●	●	●	●	●		●	●	●	●(add)						●(add)
APS Sales/Purchase Scheduler	●	●	●	●	●	●	●		●	●	●(add)	●(add)	●(add)	●(add)	●(add)	●(add)	
MS Standard Scheduler	●	●	●	●	●	●	●		●(add)	●(add)	●(add)	●(add)	●(add)	●(add)	●(add)	●(add)	
MRP Fixed lead-time infinite piling of assignment	●	●	●	●		●			●(add)	●(add)	●(add)						
SED Schedule Modifier for Production Planner	●	●	●	●	●							*	*	*			
BOM Maintenance functionality	●	●															
MES Viewer + Result input	●																
NLS Network License server	Licenses are managed centrally on a single PC. Client PCs connected via NLS undergo license authentication.																
DS Data Server	Schedule data is managed to allow sharing among multiple users.																

*the option functionality can be used in SED if the data was saved by the scheduler module with the option

≫ Configuration Example

Scheduler + Shop Floor Terminal

Asprova APS
Sale/Manufacturing planning/
Material purchase planning

＋

Asprova MES
Work instructions/Results input

MRP + ERP

Asprova MRP
Material requirements planning

＋

ERP

In the case where exclusive control and real-time data connectivity occurs

Asprova MS
Short-term scheduling

＋

Asprova SED
Manual modify
(the line in charge)

＋

Asprova MES
Work instructions/
Results input

＋

Asprova BOM
Integrated master editor
maintenance

Asprova DS Data server
Asprova NLS Network license server

ERP

Installation Record

| Industry	Details
Electric / Electronic	LEDs, connectors, solderless terminals, microprocessors, printed circuit boards, silicon wafers, air conditioner cases (plastic molding), speakers, ceramics, watches, semiconductors, lead frames, CD-ROMs, CD-R / DVD / CD-ROM drivers, electric wires, LCDs, stereos, photo masks, WF cables, sockets, mobile phones, connectors for mobile-phones, IC packages, aluminum electrolytic capacitors, photoresists, TFT modules, piston rings, needles, piano wires, printer pins, automotive meters, photoelectric boards, digital cameras, car navigation systems, refrigerators, light fixtures, sensors, signal controllers, solar-powered battery modules, vacuum fluorescent displays, batteries, multipolar connectors, power cables, mainframe computers, projection equipments, quartz transmission equipments, desktop PCs, carbon electrodes, projectors, printers, power boards, heating equipment controllers, solar cell wafers, medical electrical equipments, SD cards, portal media players, connectors, bar code readers, electronic instruments, pro audio products, optical dirves, automotive electronics, polymer
Automotive	Engine parts, doors, chassis, interiors (plastic molding), metal molds, shock absorbers, vehicle inspections, pipes, tubes, engines, cranes, rubber, aircraft parts, test bodies, brake parts, high-pressure hoses, seat fabrics, wire ropes, transmissions, camshafts, crankshafts, cases, wire harnesses, motorcycles, bicycles, railway carriages, external parts for ships, anti-vibration
Machinery	Looms, kitchen appliances, machine tools, agricultural machinery, industrial machinery, optical instruments, light fixtures, air conditioners, heating appliances, plastic parts for office equipments, control computers, material handling equipments, power transmission equipments, power-driven hand tools, internal combustion engines, in-line instrumentation systems, wafer visual inspection equipments, centrifuges, sewing machines, heat treatment equipments, tanks, water tanks, turbines, condensers, model engines, vacuum pumps, wafer precision equipments, food products machineries, electric facilities, gas and water-related tools, water supply-related instruments, electric welders, stage lighting fixtures, sewing machine parts, pumps, ultrasonic diagnosis equipments, CNCs, robot transfer machines, nuclear equipments, crystal units, rubber hoses, fire alarm
Metal	Drills, screws, cannons, wires, plumbing fixtures, guard rails, pipes, magnet wires, steels, sheet metal parts, fences, metal bridge parts, blades, connecting rods, nuts, industrial precious metal products, drawing alloys, aluminum for beverage cans, blades for cutting machines, gears, metal springs, timer parts, precision gears, aluminum foils, sheet coppers, ship plates, drawn copper products, specialty steel products, cutting tool tips, lubricating oil packagings, beverage cans, magnets, seamless pipes, large
Non-metal	Corks, packagings, textiles, papers, shipping blocks, camera films, rubber products, ABS resins, synthetic resins, UV inks, gravure inks, printing of packing materials, coated abrasives, resin hoses, coating materials, film sheets, ceramic bases for electronic parts, tiles, firebricks, new ceramics, catalysts, paper clays, fasteners, glasses for LCD displays, packing tapes, stencil papers for wigs, sensitized resins, natural resins, cosmetics materials, inorganic pigments, nonwoven fabrics, aluminum foils, man-made leather, aluminum cans, resin molds, automotive sealings, watch bands, product elastomers (synthetic rubber),
Consumer goods	Detergents, plastic bags, plastic food containers, plastic models, office goods, fishing reels, microwave dinners, wood processing, socks, cans, cosmetics, rubber stamps, ballpoint pens, shampoos, shopping bags, cardboards, home exterior products, entranceways, underfloor storage units, fixture components, shoes, toy parts, necklaces, stockings, office furniture & fixtures, labels, envelopes, stationeries, steel furnitures, toner cartridges, curtains, food trays, lens, recording papers,
Food	Fermented soybeans, Coffee beans, black teas, drinking waters, whiskies, coffees, candies, gummies, fruit jellies, seasonings,
Medical	Medical products, test drugs, medical equipments, laboratory testing reagents, granulated powders, tablets, endoscopes, dental
Chemical	Adhesives, plastic materials, asphalts, silicons, motor oils, polyethylenes, polypropylenes, rubbers, fluorine chemical products, polyvinyl chlorides, polyvinyl chloride pastes, plastic paint products, make up products, chemical substances, nuclear fuel rod

Investigation Guide

■ Feasibility investigation period ／ 1 to 3 months (about half a year on a large scale)
■ Project structure ／ Planning staff, production management, manufacturing department, system staff
　(Depending on the scale, SCM related department, sales department, purchasing department, logistics department, etc.)

Step	Contents	Point	Reference information
01 Current state analysis (As Is)	① Identify issues in current scheduling ② Classify and specify issues by factor ③ Organize information related to scheduling ④ Confirm management policy and business strategy ⑤ Check changes in external environment ⑥ Understand the overall function of scheduler	• Prioritize issues • Hearing from management and other departments • Existence and accuracy of master data • Issues with existing systems	• Knowledge Center • Product introduction seminar
02 Goal setting (To Be)	① Setting the purpose of implementation ② Setting business improvement goals ③ Clarification of scheduler usage scope	• Scheduler is a support tool • Set realistic goals	• Knowledge Center
03 Prototype	① Learning the functions of the scheduler ② Prototyping ③ Examining the feasibility of the goal ④ Examining issues with using the scheduler	• Confirmation of planning / execution / results • Confirmation of operability • Identifying planning requirements • Identifying operational requirements • Check by the planner	• Knowledge Center • Product experiential seminar • Asprova experiential tour • prototype experience course • e-Learning • Free trial version • Prototyping support[free / paid]
04 Trial Implemented for complicated planning requirements and large-scale projects	① Assuming business operation ② Verifying key planning requirements ③ Verifying system requirements	• Verification of business scenarios • Verification of abnormal processing • Evaluation of feasibility • Verification with standard functions • Verification by schedule planner • Confirmation of system requirements	• Trial set [paid] (request Resellers) • Prototyping support [paid] (request Resellers) • Practical training [paid] (request Resellers)
05 Systemization	① Determining the scope of using the scheduler ② Cooperation with other systems / determination of peripheral development contents ③ Calculation of investment effect ④ Creation of requirement specifications ⑤ Determining solution ⑥ Determining implementation partner	• Calculation of investment effect • Minimizing development • Prior negotiations with people concerned • spiral and step implementation • Package selection • Selection of implementation partner	• Knowledge Center • Distributor

*You can also see the details of steps and the other useful informations in the knowledge center (need to be a member.)
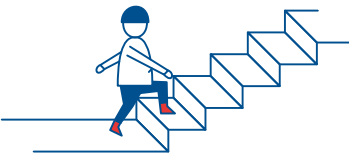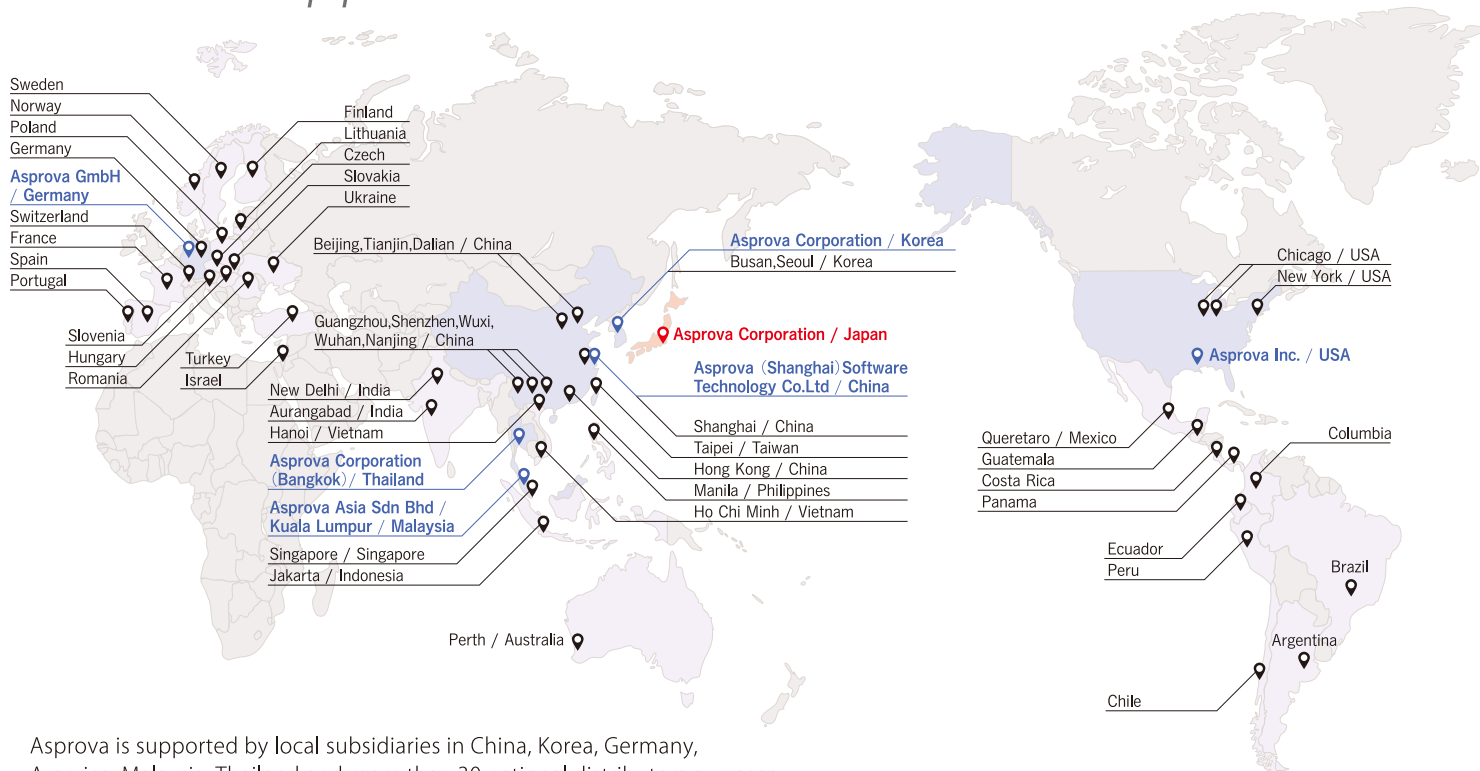
Welcome Asprova

When carrying out a project, things often do not go as planned. The reasons can vary from underestimated estimates to unexpected events. The same thing happens in factories. Demand fluctuates, and people, materials, and information are constantly moving around the production site. When people work together during production, a reliable schedule is necessary.

As with the trains in Japan that run on time and quickly respond to any trouble, rational reschedules in factories can make everyone's work easier. Although there are many issues to be resolved before reaching that stage, we believe that having easy access to a rational production schedule is the "future" of factories. This will increase productivity and richness for everyone in the factory, and ultimately contribute to the happiness of their families and those around them.

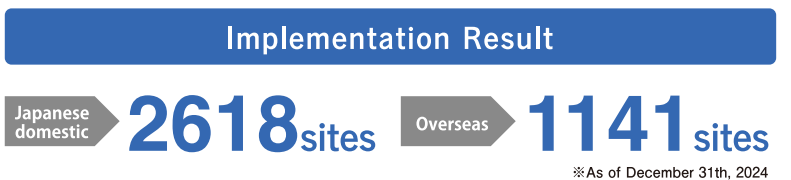Tomohiro Tanaka
President & CEO
Asprova Corporation

Global Support Network

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Norway
Poland
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Asprova GmbH / Germany
Switzerland
France
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Lithuania
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Asprova is supported by local subsidiaries in China, Korea, Germany, America, Malaysia, Thailand and more than 30 national distributors overseas

Headquarter   Branches   Distributors

Multiple Languages	Japanese	English	Korean
Chinese (simplified)	Chinese (traditional)	Thailand	Indonesian
Vietnamese	German	Polish	Hungarian
French	Spanish	Turkish	Portuguese

Operating Environment **Microsoft Windows OS** *Please refer to our website for detailed information.

Implementation Result

Japanese domestic **2618**sites   Overseas **1141**sites

※As of December 31th, 2024

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Inquiries

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