

**Senju Family**

Astellas Pharma Inc.	Reflecting on 20 years of history in system operations with Senju
Internet Initiative Japan Inc.	Solutions for the issue of internal system management faced by the internet pioneer company
INTELLIGENT WAVE INC.	Reduced maintenance costs by one-fourth without changing any operation
infoSense Corporation	Method that reduces error messages by 67% and strengthens direct sales of operations
Energia Communications	Explanation of operation method realizing automation of most advanced data center
NRI System Techno, Ltd. (formerly Ajinomoto System Techno Corporation)	Contributing to business innovation and the visualization/optimization of services at the service desk
NTT DATA CCS CORPORATION	Installed a service desk for JX Holdings for improved quality of operations
OTSUKA CORPORATION	Improved the quality level through "visualization" of service operations
OPTEX GROUP Co., Ltd.	Realized automation of operations via the Run Book Automation function
Kawasaki Shinkin Bank.	Implemented Senju Family for the integrated operating platform which supports the new public relations system
Kohnan Shoji Co., Ltd.	Implemented Senju Family for the reform of operations management in conjunction with the creation of an open system
Konica Minolta, Inc.	Implemented Senju Family for open system operations from SAP R/3 to EC site operation
CTC System Management	Auto sorting of 80,000 alerts, reducing operation work by 300 hours per month
Seven Bank	General reform of system management tools to reduce operating costs of accounting system
SoftBank Payment Service Corp.	Implemented operating platform infrastructure which supports 20 million monthly transactions with a total monthly transaction volume of 65 billion yen
DAIKIN INFORMATION SYSTEMS CO., LTD.	For accumulating renovation costs of independent systems, what is the deciding factor for package changeover?
Dai Nippon Printing Co., Ltd.	The decision to replace a foreign-owned tool with "Senju/SM"
DIVA CORPORATION	A problem occurred when linking systems Measures for supporting processing of patches that are too heavy
TO SOLUTIONS CO., LTD.	Realized internal government through unification/automation of release duties and visualization of progress status
Toyobo Information System Create Co., Ltd.	Realized monitoring of 1,000 computers at 110 group companies and standardization of operations at multiple locations
Nagano Prefectural Government	Vital point of system operations which supports large-scale payroll system for 30,000 people
Tata Consultancy Services Japan, Ltd.	Senju Family responsible for stable operations and improved service level of NIKKEI NET
Networld Corporation	Manages four operations stages by using an integrated monitoring server
Virtualex Consulting, Inc.	Realized an integrated monitoring service leading to new business
The Hyakugo Bank, Ltd.	Favorably evaluated the performance record of Senju Family and sequentially implemented the tool for operations of four systems
Fukuoka University	Realized integrated management of a system with more than 20,000 users. Reduced labor associated with operations and improved the service level.
Fuji Electric IT Center Co., Ltd.	Created an information-sharing mechanism to improve quality and reform into a support division contributing to business
Mitsubishi Chemical USA, Inc.	Used Senju Family to integrated management for SAP R/3 and peripheral systems, and realized a significant decrease in operations cost
Yamato System Development Co., Ltd.	Integrated management system which support ASP services for credit card companies and the creation of new business
Label Gate Co., Ltd.	What is the system management tool which realized distribution of 4.5 million songs via AWS and internal response to failure?
Example of use in human resource departments	Utilize "Senju/SM" for functions supporting HR inquiries

**mPLAT**

ITOKI CORPORATION	ITIL® compliance for automation and visualization of individualized incident management and change management
INTEC Inc.	Automation of incident calls eliminates labor shortages
SCSK	Important point is how to instantaneously share information with a large number of people and operate accurately
NRI Data iTech, Ltd.	Chronological assessment of incident support by mPLAT/SMP
NTT Data	The torrent of RPA inquiries, and an operational method to reduce number of man-hours.
OLGO (formerly Oita Local-Government Cooperative Outsourcing Center)	Reduced the increased load placed on the service desk following the merging of municipalities and implementing cloud services.
QUICK	About monitoring system for "systems that cannot be stopped," and value of automation of "emergency calls"
GLORY System Create Ltd.	Advanced awareness from registration in an ITIL® compliant "mPLAT/SMP" to system improvement
TOKYO KANTEI Co., Ltd.	Implemented mPLAT/SMP for the support foundation of 2,400 member corporations
Example of use in IT infrastructure management	What extent of high-level management rules have been implemented for a cloud infrastructure of financial institutions



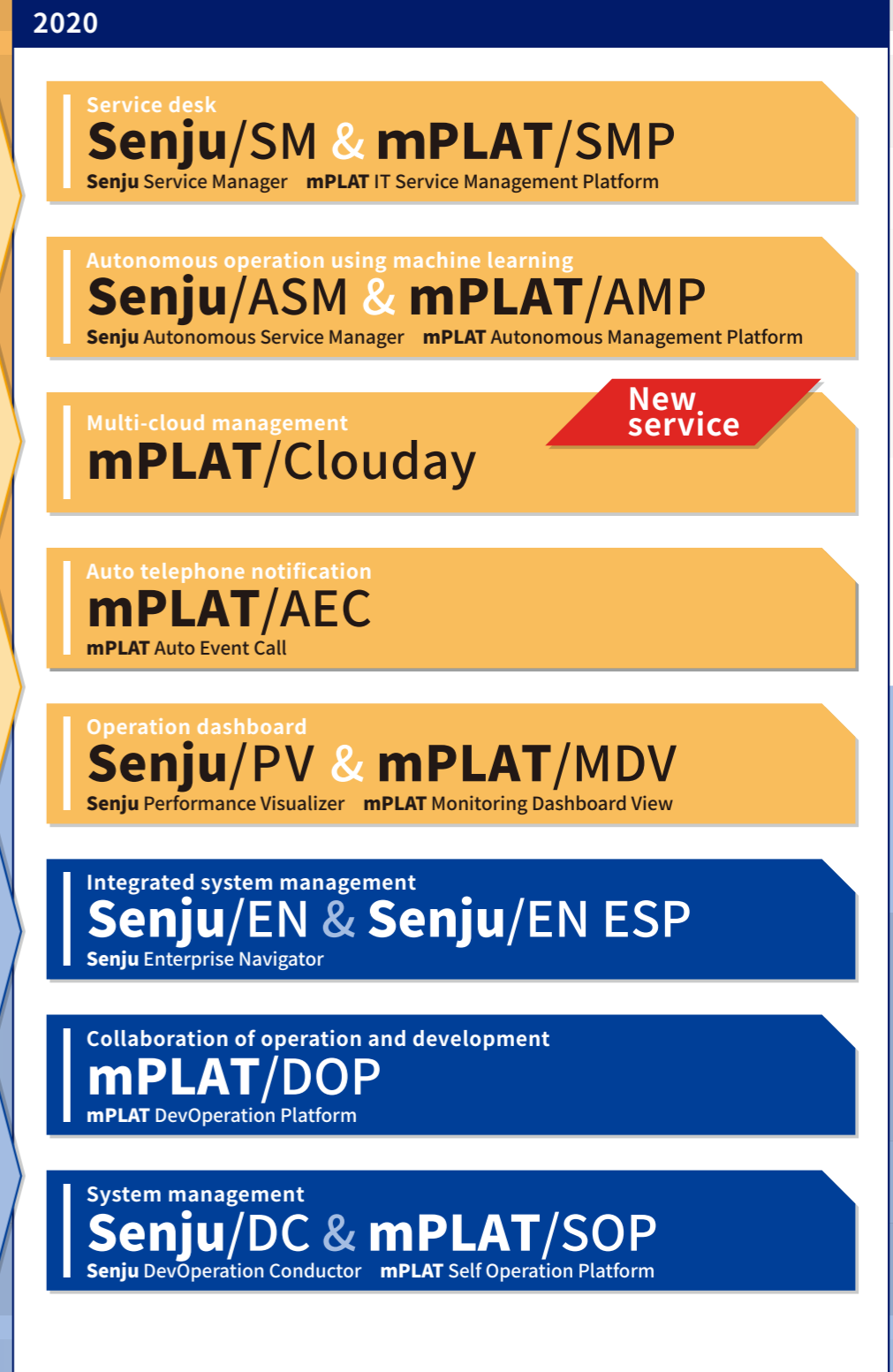
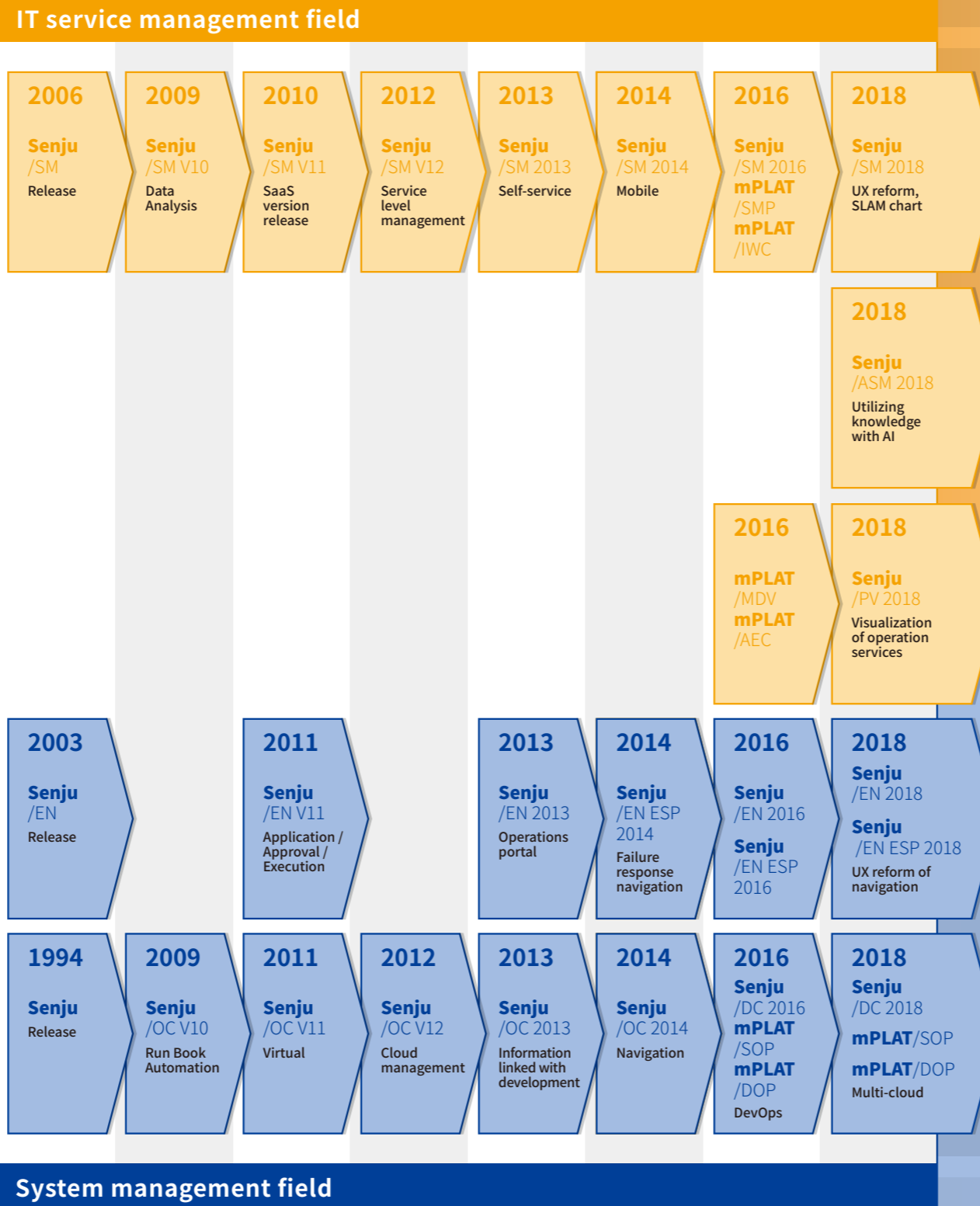
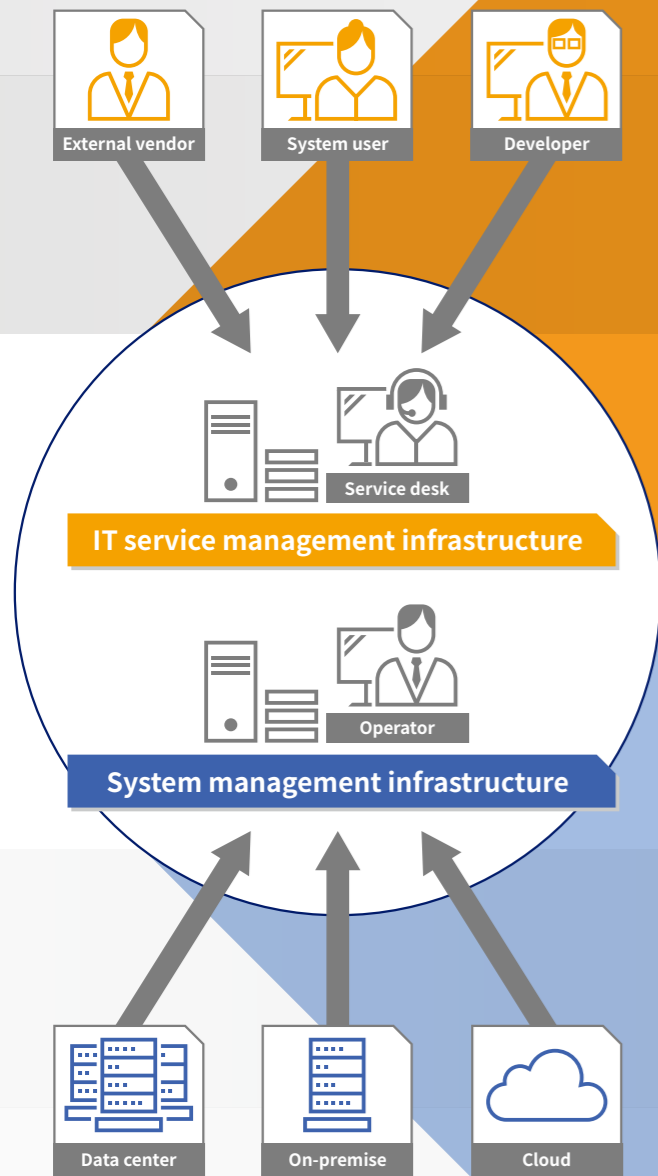
System management moves to the next stage

Details for user cases can be viewed at the Senju Family Website.

Senju Family

# Winning IT service management

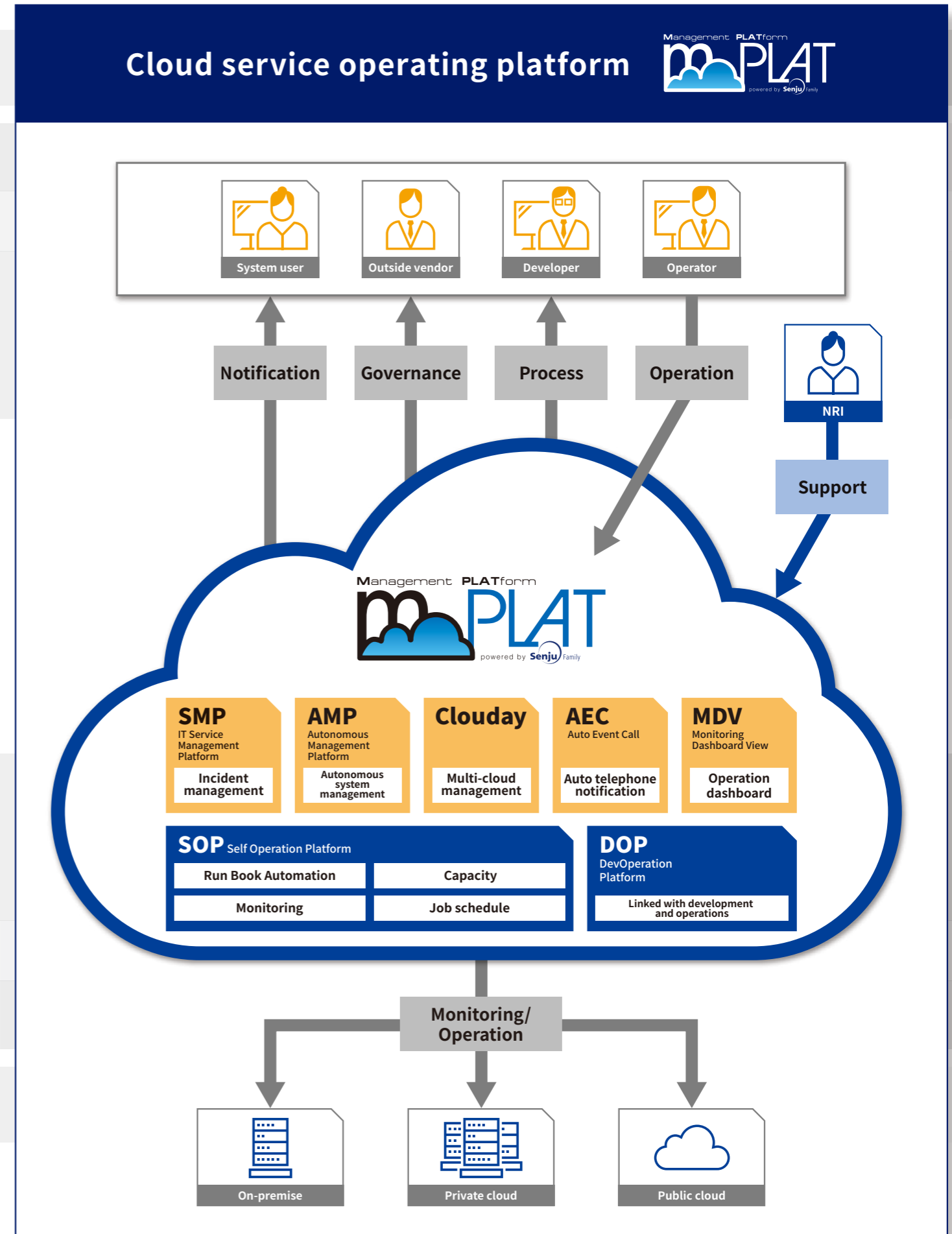
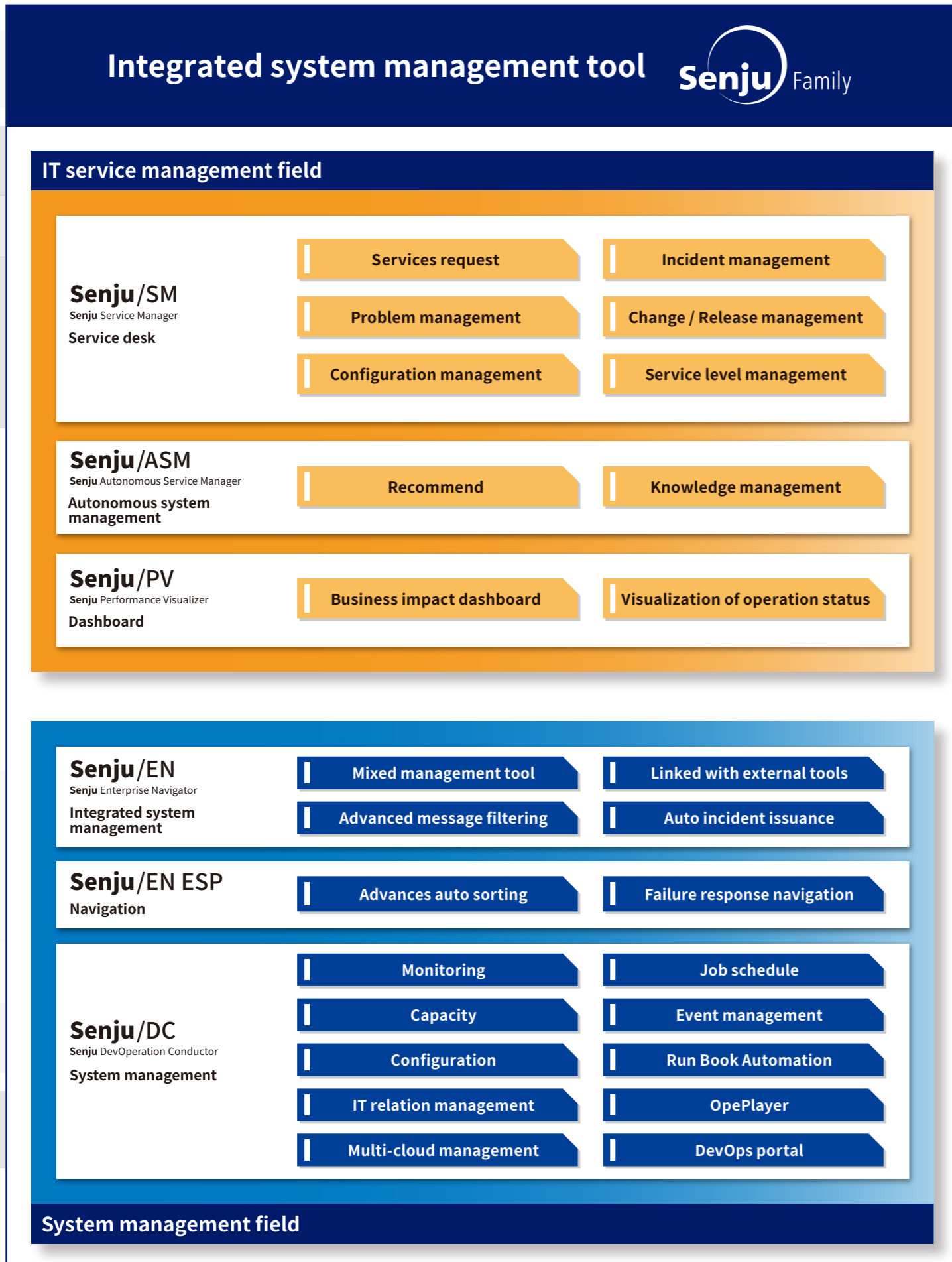
As the digital transformation (DX) trend accelerates, the importance of IT service management in speeding up business development and increasing flexibility is growing. ITIL4, the latest version of ITIL®, also focuses on speed and value creation. To meet such needs, we have released a new multi-cloud management service, "mPLAT/Clouday." By incorporating past achievements and the latest technology, we realize winning IT service management.



# Winning system management

25 years since release. In keeping with the drastic changes in the IT environment, we have pursued the evolution of system operation through "standardization" → "automation" → "visualization." The recent spread of the cloud has the potential to significantly change the way systems are operated, such as close collaboration between development and operation. The new version of 2020 supports cloud-native technologies such as containers and serverless architecture. By incorporating past achievements and the latest technology, we realize winning system management.

# By package. By SaaS. Flexible system operation that supports DX practice.

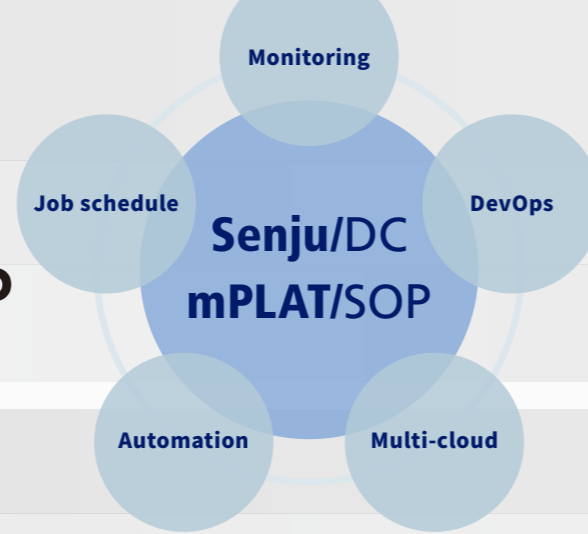




System management

# Senju/DC & mPLAT/SOP

Senju DevOperation Conductor  
mPLAT Self Operation Platform



25 years has passed since the first release.

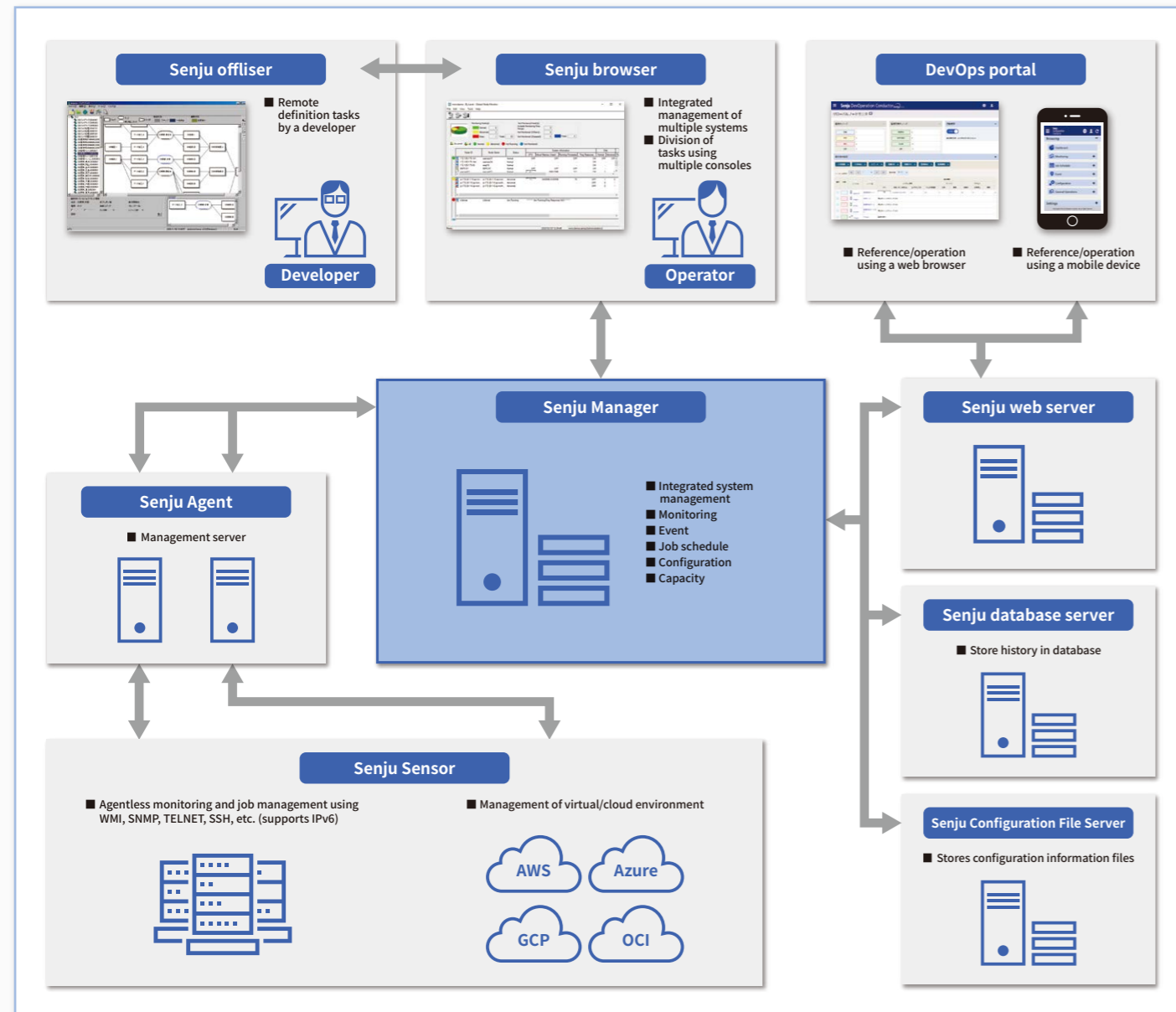
This system management tool was born based on NRI's many years of operation.

As the IT environment evolves, the challenges of system operation are changing.

In particular, seamless and flexible collaboration with development teams is an important theme in the cloud era.

In the new version of 2020, we have strengthened cloud management, including container and serverless architecture, and implemented predictive monitoring and impact/cause suggestion functions.

By incorporating a track record of performance and the latest technology, we realize winning system management.



## Monitoring

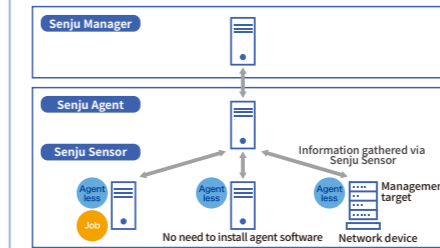
### Monitoring

System monitoring is performed using about 650 monitoring items. In the new version, monitoring accuracy is improved by monitoring definition by monitoring recipes and anomaly judgment and suspension functions. Further, predictive monitoring is performed by trend analysis based on historical data.



### Agentless (Senju Sensor)

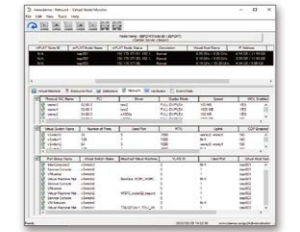
Enables monitoring and job management without installing agent software on the server. Enables efficient operation even with large-scale systems, distributed systems, virtual systems, and IPv6 environments.



Agentless monitoring and job management.

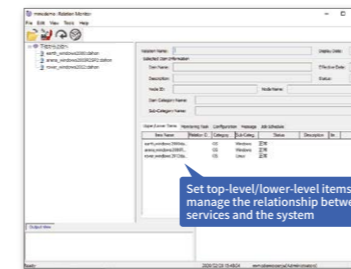
### Virtual node monitor

Manages the relationship between the host OS and guest OS. Perform comprehensive management of the relationship between the components (data store, network adaptor, virtual machine, etc.) which configure the virtual infrastructure and Senju Agent/Sensor, and the operating status. Enables instantaneous decision-making regarding impact on the virtual server in the case of insufficient resources, malfunctions, etc.



### IT relation management

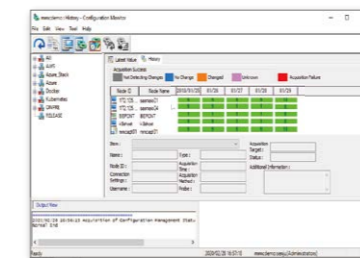
Visualization of the dependency relationship of the whole system from a service perspective. Can rapidly ascertain which services are impacted when failure occurs, and also manage relationships spanning multiple domains.



Set top-level/lower-level items and manage the relationship between IT services and the system

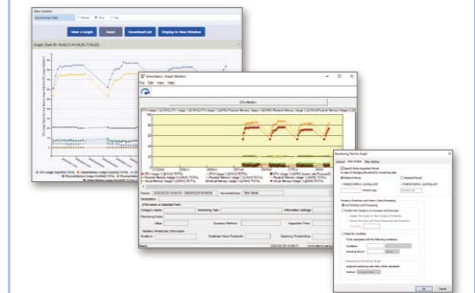
### Configuration

Performs automatic gathering and unified management of system configuration item. Also enables easy reference from a variety of perspectives, as well as easy assessment of the latest configuration items and change history. Visualization of the relationships between services and configuration items is also possible.



### Capacity

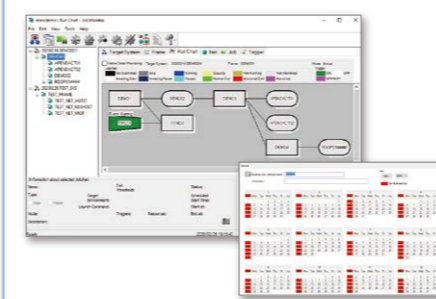
Enables graphing and analysis of trends and predicted values from data gathered during monitoring. This enables systematic resource management for virtual infrastructure, etc.



## Job schedule

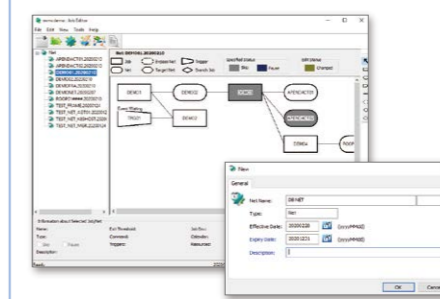
### Job schedule

Performs tasks such as defining/registering job flows, executing schedules, monitoring job progress status, and reporting. Agentless job management is also possible.



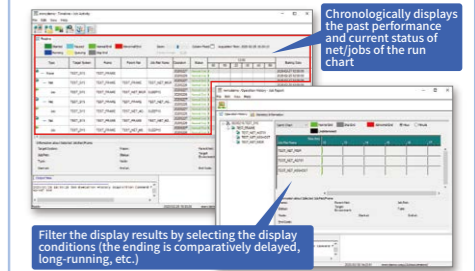
### Senju offliser

Definition data can be created in the GUI window on an offline PC. The operator simply registers definition data created by the developer. This increases work efficiency and prevents mistakes.



### Job activity

The job operation status and operation forecast are visualized chronologically. The operation performance of the specified operation date and current status are displayed in timeline format. Can intuitively ascertain which job is operated and when, and how the following job will operate.



Chronologically displays the past performance and current status of net/jobs of the run chart

Filter the display results by selecting the display conditions (the ending is comparatively delayed, long-running, etc.)

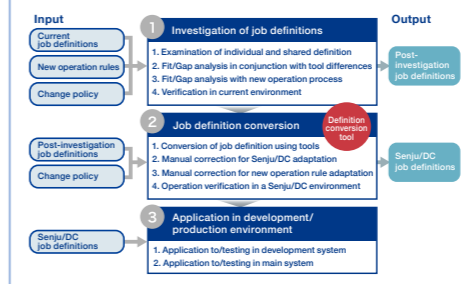
### Web connection (DevOps Portal)

Provides a web-based operation management function for developers. Supports multiple devices with responsive design. Realizes self-maintenance by developers and seamless communication with outside partners.



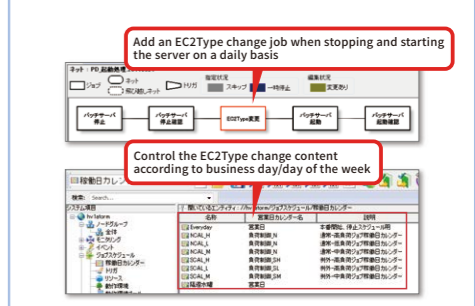
### Transfer from other jobs management tool

Uses automatic conversion tools to transfer the jobs from other tools to Senju/DC.



### Linkage template

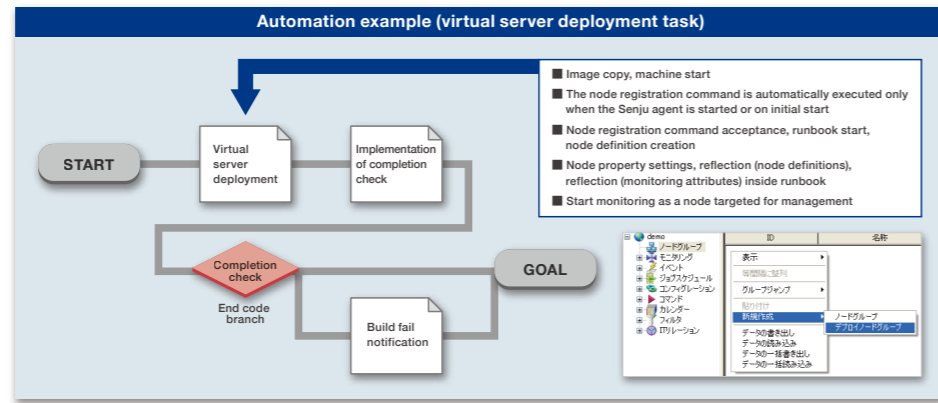
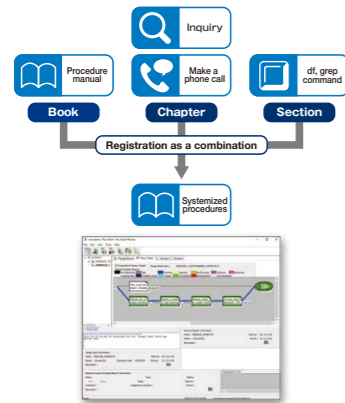
Centrally manages cloud and on-premises job scheduling using a template. In the new version, a linkage function for AWS Lambda, Azure Functions, and Durable Functions is also implemented.



# Automation

## Run Book Automation

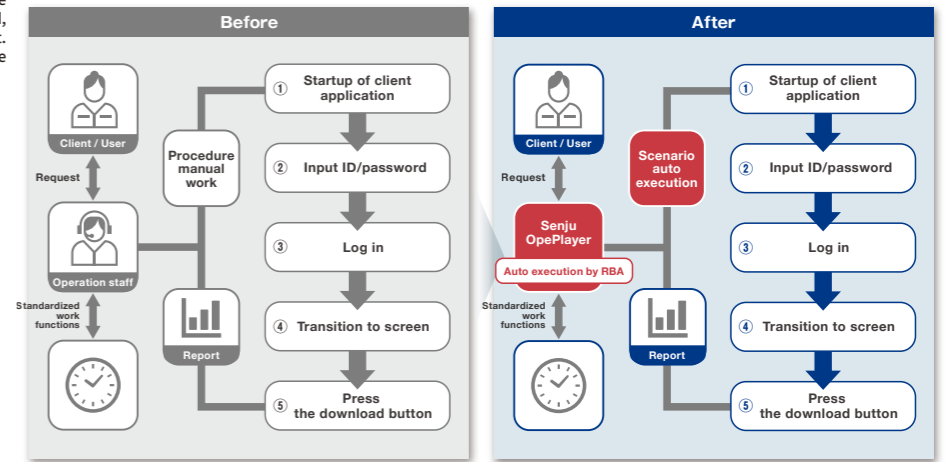
Automates direct operation tasks (parts requiring decisions by people) to be implemented in accordance with the procedure, such as diagnosis during system failure, recovery work, deploying of virtual nodes, etc. Automatic execution from message action, and manual execution from the Senju browser can be executed by command.



## Senju OpePlayer

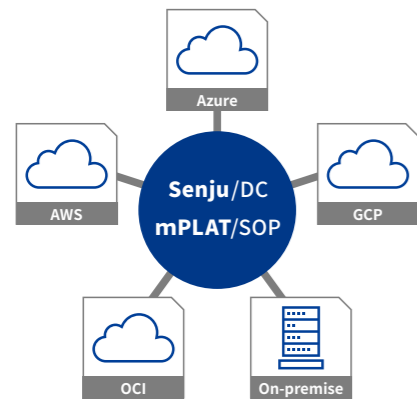
Automate GUI operation by recording operation of the mouse and keyboard. A large number of APIs are prepared, and GUI operation is reliably performed using VBScript. Advanced automation is realized by combining with the event function or run book automation function.

- Automation of normal tasks
  - Increase efficiency of routine work, nighttime work, etc.
- Automation of special tasks
  - The same GUI work as the test environment is reliably implemented in actual operation.
- Rapid failure support
  - Automate initial GUI response to failure alerts.
- Monitoring of user perspective
  - Detect decreased response in user operation.
- Digitization of procedures
  - Simplify maintenance of operation manuals.



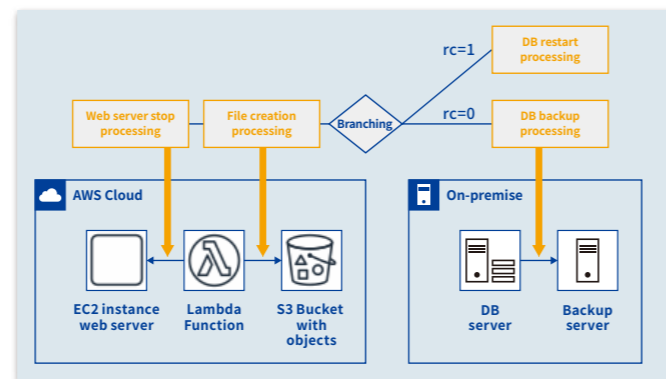
# Multi-cloud management

Centrally manages multi-cloud and on-premises. Linkage functions with each cloud enable operation without having to operate the tools provided by the cloud every time. Further, job schedules are managed across clouds. Containers and serverless architecture are also supported.



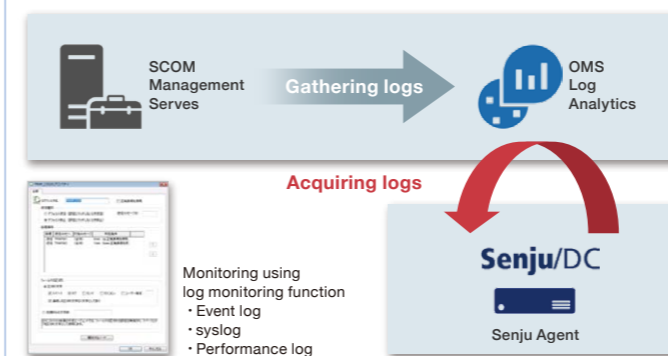
## Example of cooperating with AWS

By using AWS Lambda linked jobs, preference relations and branching of Lambda functions and on-premises environment jobs are controlled.



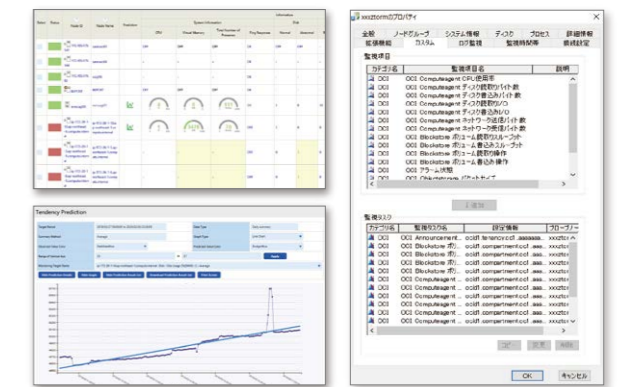
## Example of cooperating with Microsoft Azure

Link with log data accumulated in Microsoft Operations Management Suite (OMS), and monitor. Moreover, the incident information managed by Senju Family can be analyzed and shared by linking with OMS Log Analytics.



## Example of cooperating with Oracle Cloud

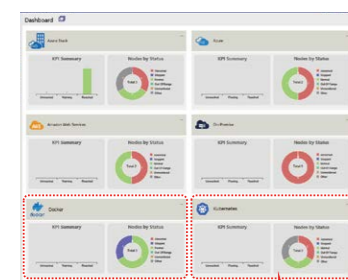
Monitoring and job management functions for the Oracle Cloud Infrastructure are provided. Clouds optimized for Oracle databases can be centrally managed.



# DevOps

## Container management

The container dashboard displays metrics for each container that can be obtained via Docker commands and resource information that can be obtained via Kubectl (API). An automated DevOps platform that utilizes job scheduling and runbook automation functions is provided.



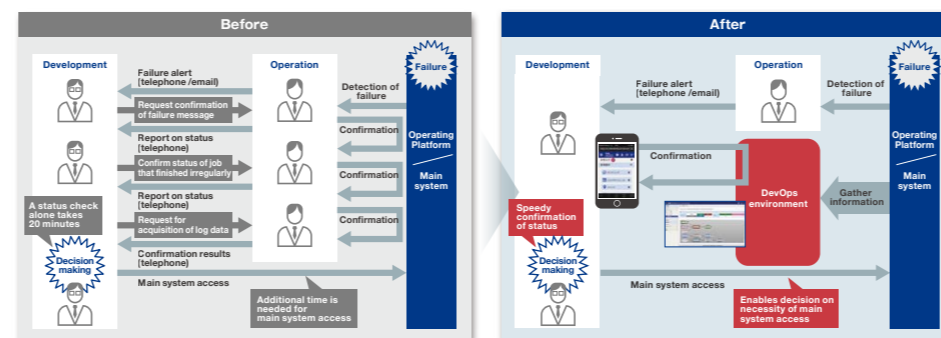
Docker monitoring items	
Docker: Total number of containers	
Docker: Number of working containers	
Docker: Number of paused containers	
Docker: Number of stopped containers	
Docker: Operation status by container	
Docker: CPU usage by container (%)	
Docker: Memory usage by container (%)	
Docker: Memory usage amount by container (MiB)	
Docker: Network bytes received by container (KBps)	
Docker: Network bytes sent by container (KBps)	
Docker: In-container process CPU usage (%)	
Docker: In-container process memory usage percentage (%)	
Docker: In-container process virtual memory usage amount	
Docker: In-container process physical memory usage amount	

Kubernetes monitoring items	
Kubernetes: Total number of pods	
Kubernetes: Number of working pods	
Kubernetes: Number of non-working pods	
Kubernetes: Operation status by pod	
Kubernetes: Memory usage by pod (%)	
Kubernetes: Memory usage amount by pod (MiB)	
Kubernetes: Network bytes received by pod (KBps)	
Kubernetes: Network bytes sent by pod (KBps)	
Kubernetes: Number of disk I/O bytes per pod (KBps)	
Kubernetes: Operation status by node	
Kubernetes: Number of working pods by node	
Kubernetes: CPU usage percentage by node (%)	
Kubernetes: Memory usage percentage by node (%)	
Kubernetes: Memory usage amount by node (MiB)	
Kubernetes: Operation status by component	

Information required for container support  
 -Number of failures in chronological order/Change in number of containers/Number of relocation occurrences

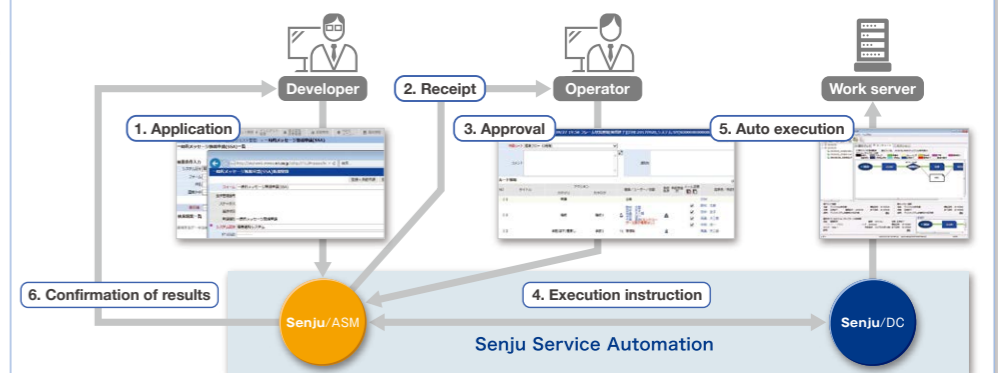
## Link the development and operation information

Access privileges for the production environment are restricted in enterprise systems. Therefore, it may take time to address unforeseen failures. If the DevOps environment of Senju/DC is used, failures can be addressed by oneself, without the development department having to make requests to the operations department, such as "investigate," "isolate," and "recover." A developer can rapidly address failures without having to access the production environment.



## Senju Service Automation

Manages the application, acceptance, and approval of service requests workflow for system changes, etc., and uses the Run Book Automation feature to automatically execute approved tasks. When a scheduled task is executed, a check is performed to see if the task has been completed normally. In addition to preventing operation errors and reducing the workload, the service level is improved by addressing issues rapidly, and failure can be prevented in advance using an accumulated history of past tasks.



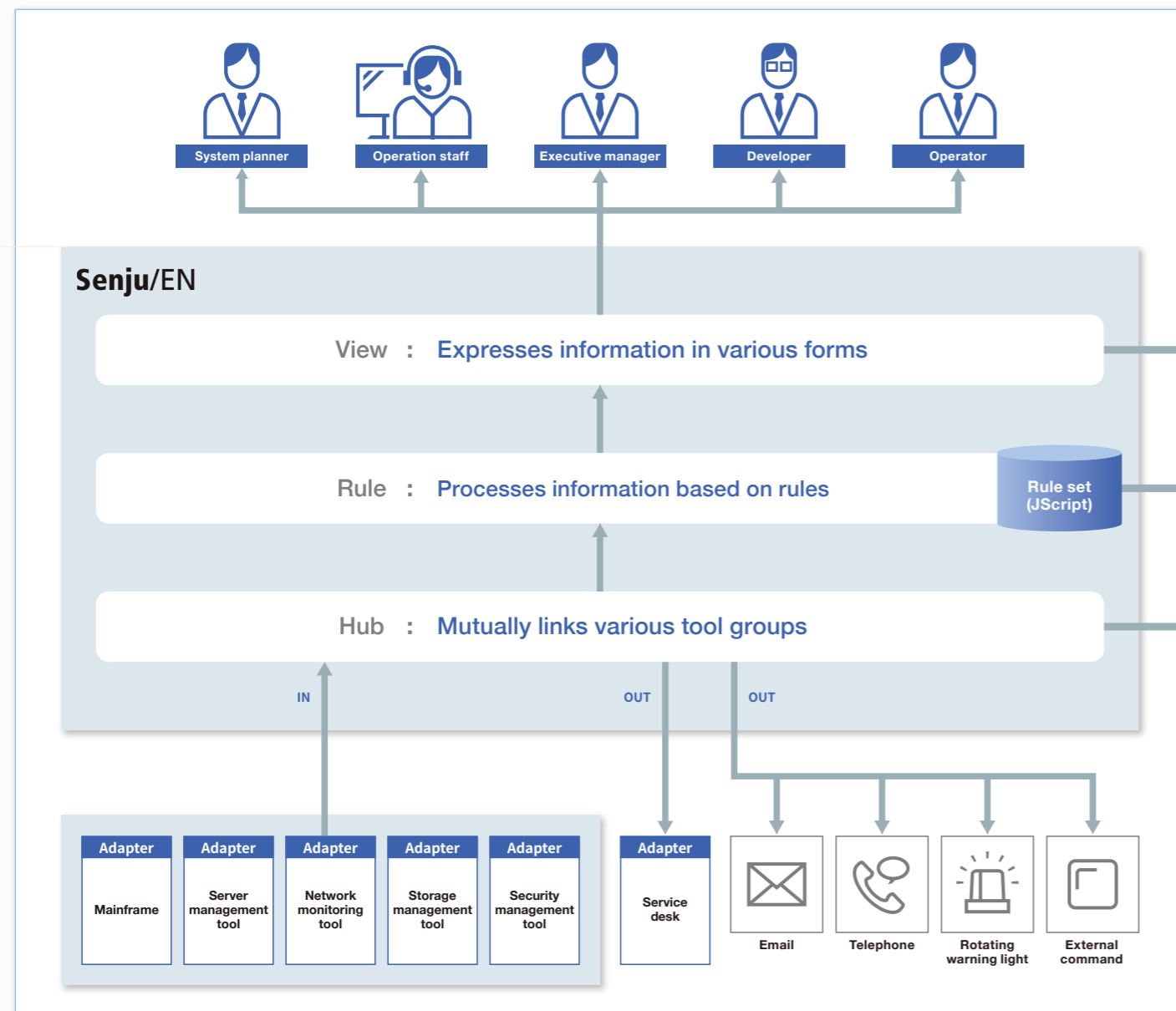


Integrated system management

# Senju/EN & Senju/EN ESP

Senju Enterprise Navigator

Performs integrated management of various system management tools without making changes.  
 Messages from numerous management tools are collected using the "Hub engine."  
 Advanced filtering is performed at various stages using the "Rule engine,"  
 so only the necessary information is extracted. Furthermore, the necessary information for each role is displayed in real time using an easy-to-understand design in the "View engine."  
 The three engines can also be used separately, and can supplement functions that are lacking in the existing operation management environment.



## Senju/EN Basic Functions

### View engine

Provides required information in the optimal format for each role



#### Main view

This view can be flexibly designed in accordance with user roles, task content, system configuration, or other factors. While using items such as shapes, images, and lists, realizes an easy-to-understand screen display which focuses on "people."

#### Event view

This screen shows a centralized display of information from tools. In addition to viewing by chronological order, information type, or content, it is also possible to hide information from unauthorized users.

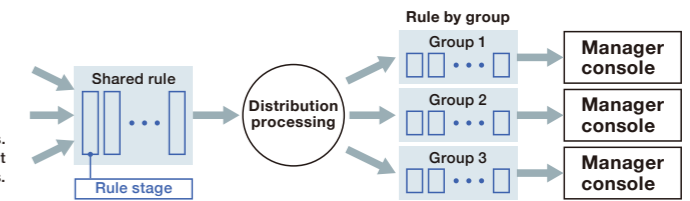
#### Know-how view

This view makes it possible to gather, organize, and efficiently utilize the information, knowledge, and response methods for received events. Know-how is created for each group. A total of 5,000 instances can be registered and referenced.

### Rule engine

Automation of operation by extracting information based on rules

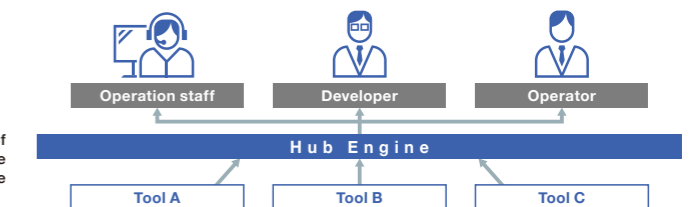
Autonomously judges complicated information and automatically executes actions for events. Rules are easily created even for complex decisions. It is also provided for setting different rule pipelines for each user and for conducting a preliminary operations check for rules. Furthermore, action templates have been prepared to reduce the burden of rule creation.



### Hub engine

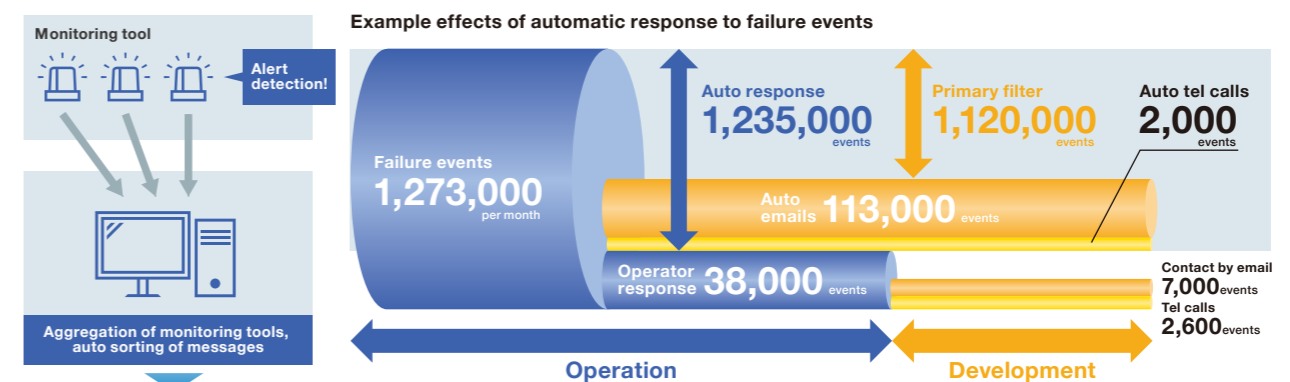
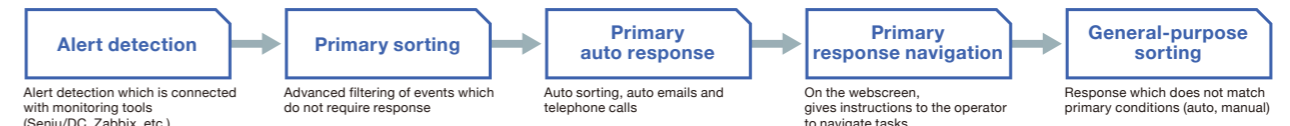
Centralization of system management information

Mutually connects multiple tools and conducts central gathering and distribution of information from each type of tool. Moreover, through a link with an outside service desk, the engine supports incident registration and escalation of failure information. It is also possible to execute arbitrary external commands when certain conditions are fulfilled.

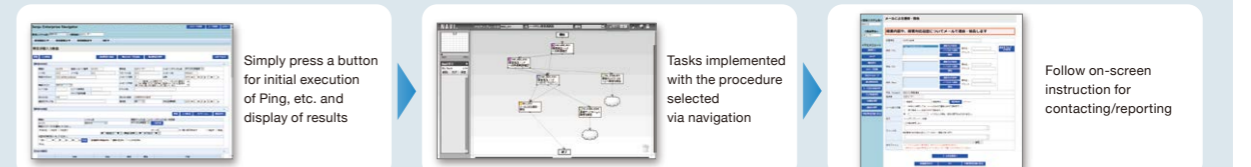


## Senju/EN ESP Navigation

A large volume of messages issued from multiple systems including the cloud are collected, and only the necessary information is isolated using the advanced filtering function. For events requiring support, "automatic support", "navigation", and "automatic escalation" are determined/executed. In addition to the speeding up of operation functions, the accumulation of knowledge and proactive utilization are realized.



After automatic sorting, failure response navigation starts!



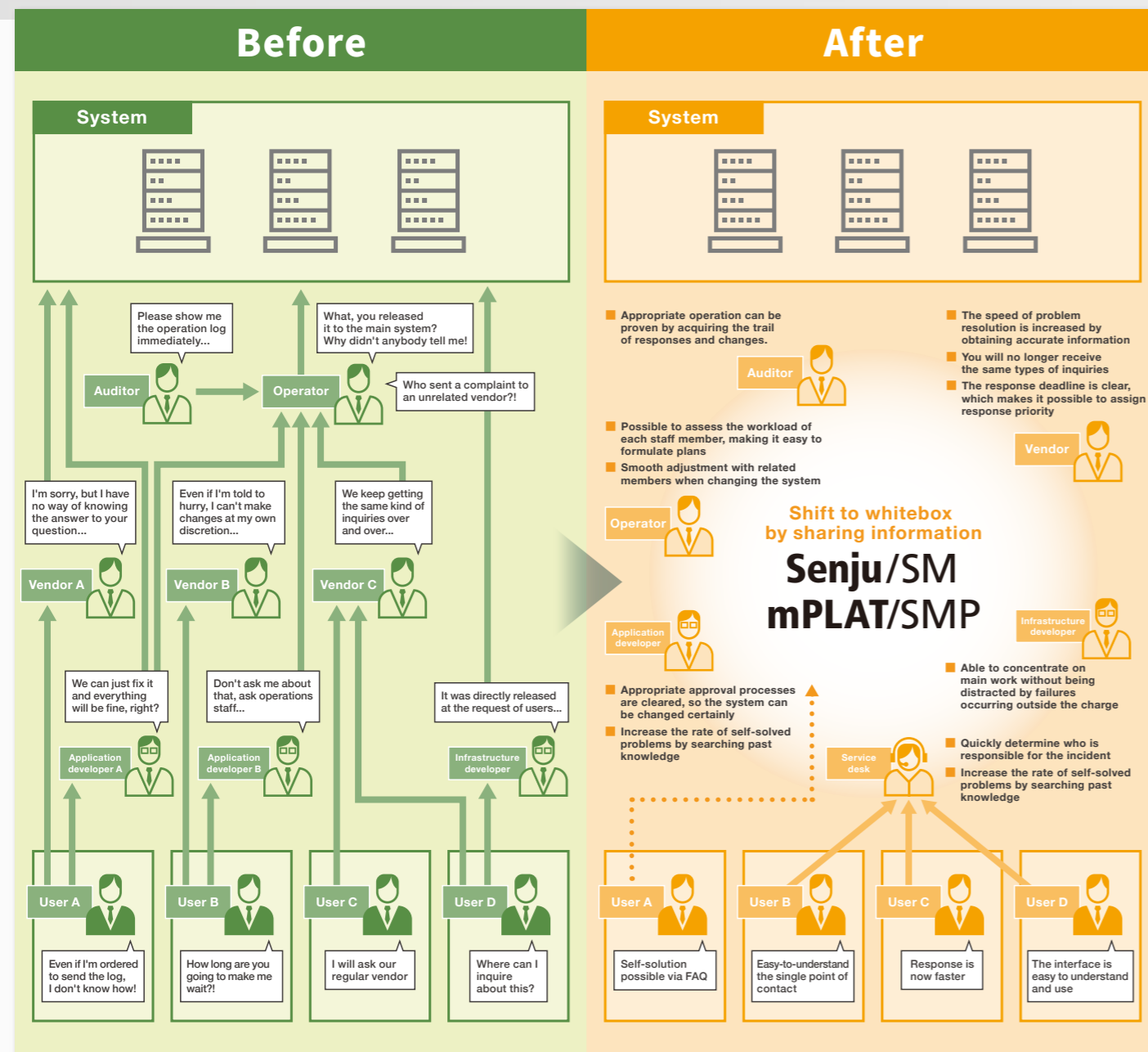
Service desk

# Senju/SM & mPLAT/SMP

Senju Service Manager  
mPLAT IT Service Management Platform

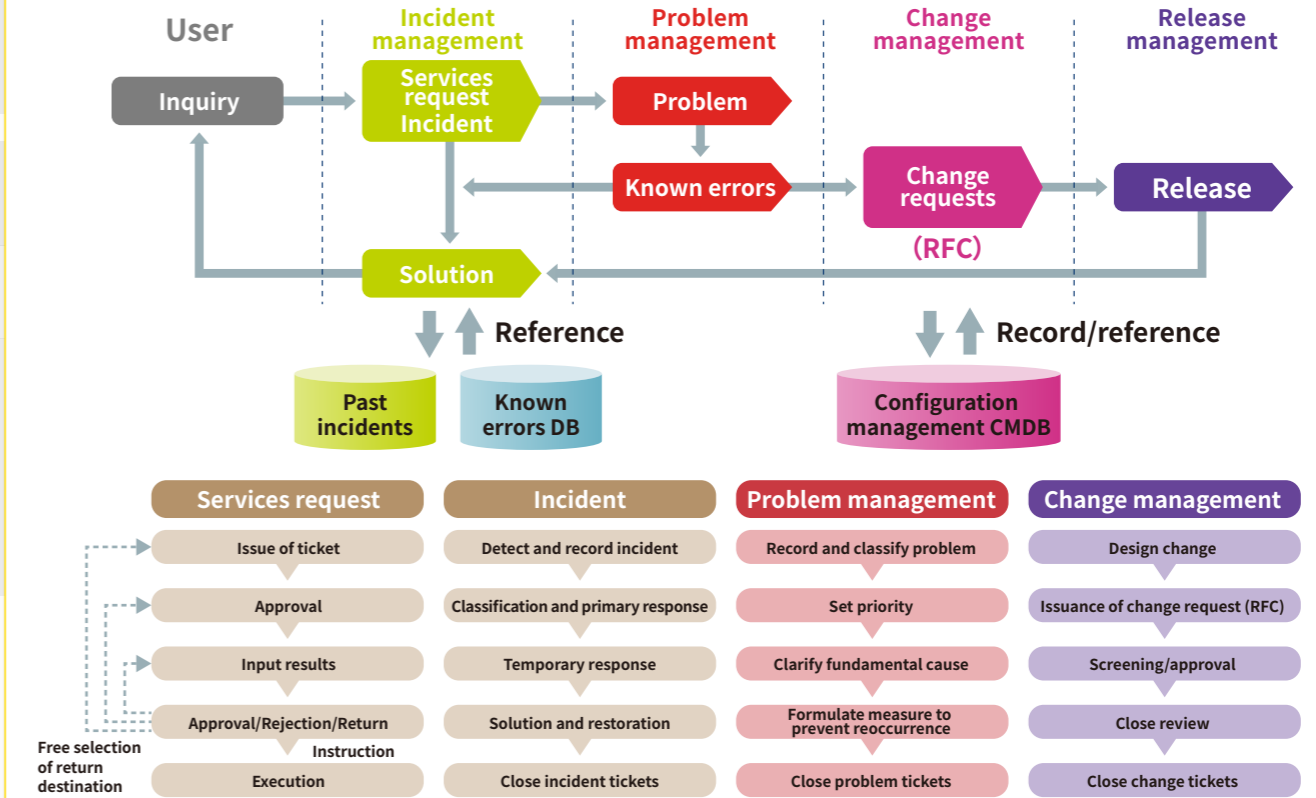
It is a service desk tool of the top share in Japan\* that realizes the operation processes required by ITIL® and ISO 20000 (ITSMS). It collects the huge amount of scattered knowledge at a service desk and breaks free from personalized operations by proactively utilizing this knowledge. It realizes accurate and speedy response while reducing the work load, improving the satisfaction of system users.

\* Source: ITR "ITRMarketView: Operation Management Market 2019" Service Desk/Incident Management Market: Share of sales by vendor (FY2017-2019 forecast), for mPLAT and Senju Family.



## Basic Functions

### Basics of ITIL® processes



## Basic Screens

**Home Screen**

- Only tags which can be used for each work duty are displayed
- Intuitive operation from the icon
- Notify new incidents by icon
- Effective utilization of knowledge through 5 consecutive classification

**Incident Management console**

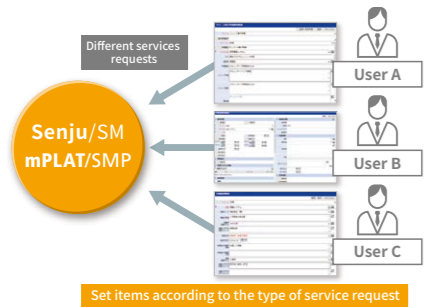
- Display task status list
- Grasp understanding of correspondence history page by page
- Automatic documentation of information from the system is possible
- Automatic determination of checklist according to incident contents



## Distinctive features

### Multi-Data

Inquiry screens can be created according to the type of service request. Efficiency is increased for both the applying side and the receiving side through accurate input of the required information.



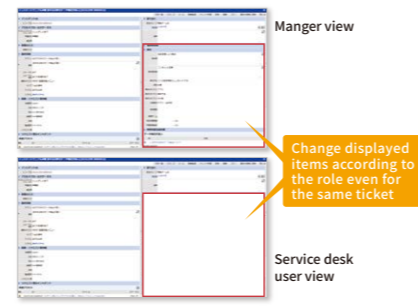
### Checklist Required items for Each Status

The efficiency and standardization of the service desk is improved through a checklist function which automatically navigates the next response to be performed based on registered incident content, and through a function which changes the required items for each ticket status.



### Multi-View

Multiple screen policies for incident management can be set according to the work duties and team role. This increases the confidentiality of information and clarifies items for response by each staff member.



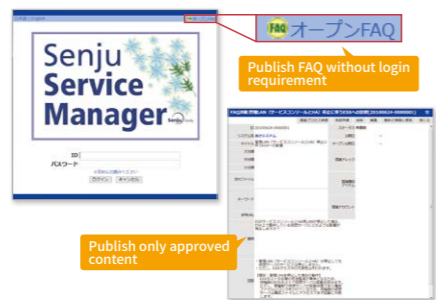
### Multi-Browser/ Multi-Device

Access from mobile terminals such as Google Chrome, Firefox, and iOS-Safari is possible.



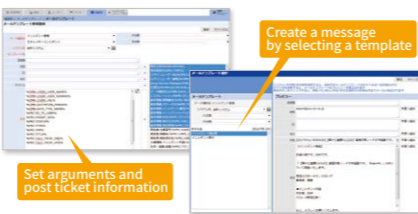
### Open Knowledge

Even users without a Senju/SM account can refer to FAQ information. Direct access from a separate site is possible by embedding this link in the web page.



### Email Template Remind Email

Email template is automatically generated by transcribing from the ticket content, thus increasing the efficiency and standardization of email. Also, the remind email function prevents work delays by sending email notifications to staff members regarding stagnated approval applications or items for which the response deadline has passed.



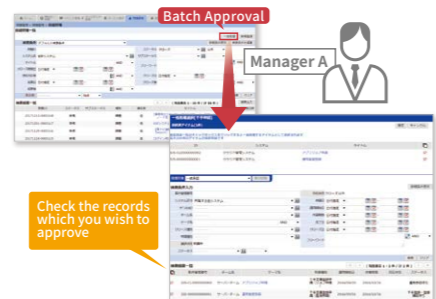
### Multi-Language

For each user, it is possible to switch to a foreign language display for labels, screen names, and messages. This realizes a greater range of use for the tool, including use at overseas offices.



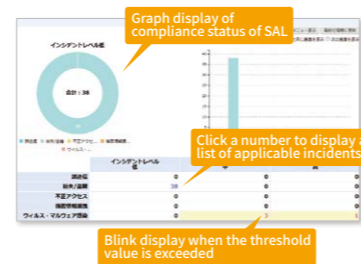
### Batch Approval

Batch approval from a list during process management is possible. This reduces the workload on supervisors and increases process efficiency.



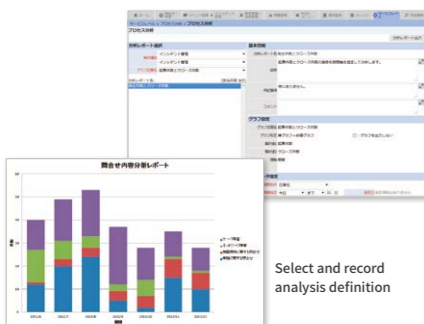
### SLAM chart

Tabulates incidents based on conditions defined in the SLA (Service Level Agreement) and displays a variety of charts. Comprehensive assessment of service level is possible by batch retrieval of multiple processes and display of the result by list.



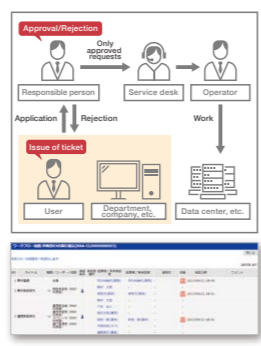
### Data Analysis

By using the data analysis, it is possible to graphically analyze data for incident management, service requests, problem management, change management, etc.



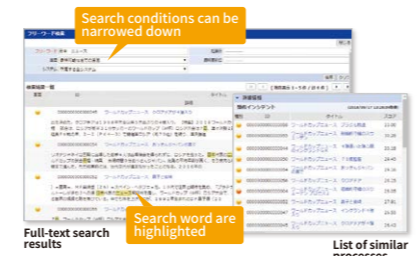
### Workflow/ End-User Approval

Uses a workflow which supports multi-stage approval to process service requests from users and developers. Through the end-user approval function, approval or rejection is performed by the responsible person within the end-user department. Only an "approved request" is sent to the service desk, thus reducing the workload of the service desk.



### Full-text/ similarity search

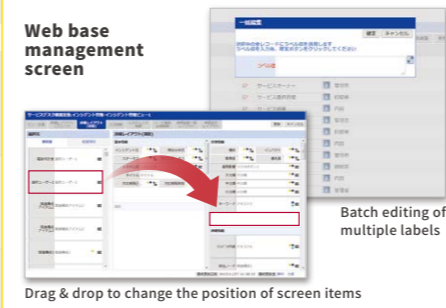
Performs advanced full-text searches across processes and searches for similar incidents based on data similarity. Similar records are displayed in descending order of score.



## Distinctive management functions

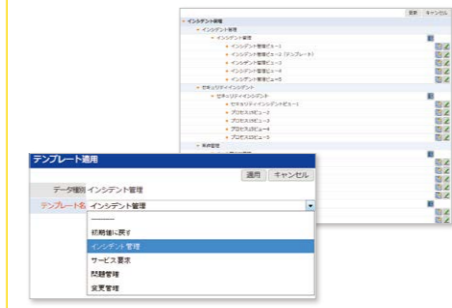
### Screen Customization

A web-based management screen is used to perform tasks such as changing the screen layout and specifying user settings. This enables division of maintenance authority and reduces the workload of the manager.



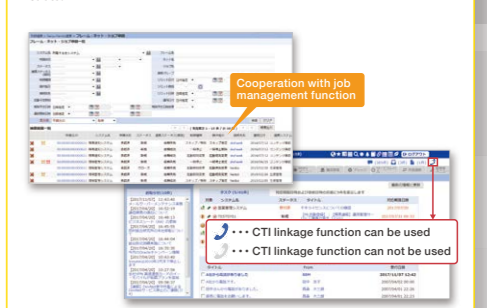
### Extensive Templates

Basic layouts for ITIL® of "incident management," "service request," "problem management," and "change management" are provided as templates. Templates are also provided for ISO 20000.



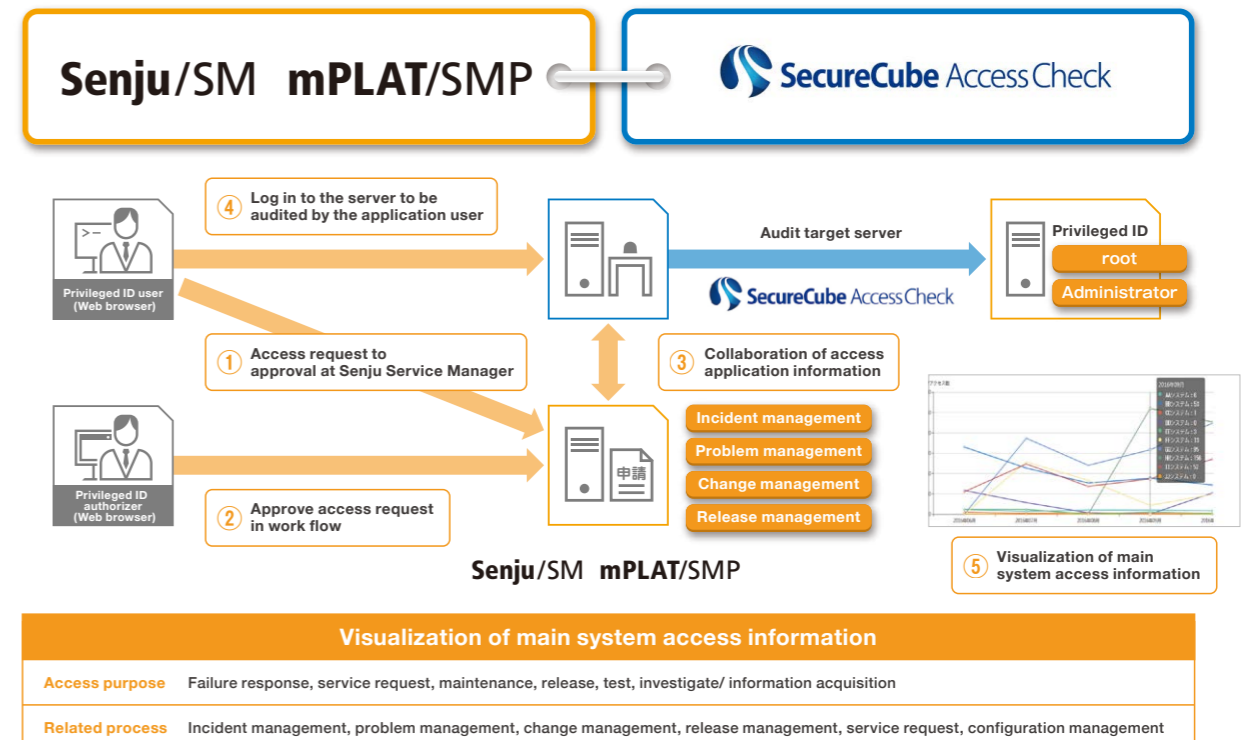
### External Link

It is possible to link with a variety of systems, including automatic email loading, alert links from monitoring tools, and links with CTI tools. Database information is disclosed in a view format, and it is easy to perform tabulation, analysis, and data linking with other tools.



## Linking privileged identity management with ITIL® processes

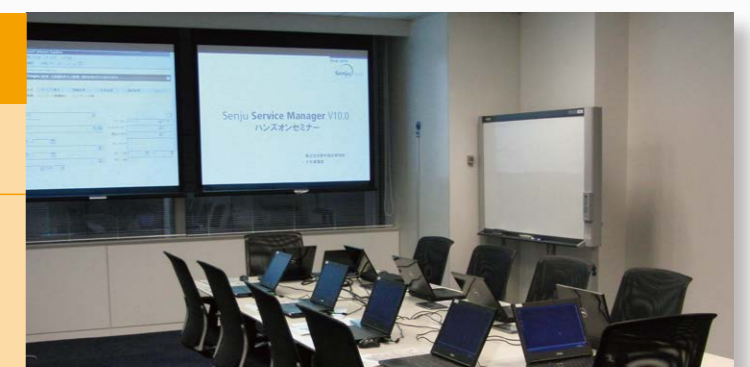
SecureCube AccessCheck is a proxy server type privileged ID management tool that doesn't require agent, which has the No. 1 domestic market share. Combined with Senju/SM and mPLAT/SMP, ITIL® processes such as change management, release management and so on, and unifying access application management, it visualizes the purpose of main system access and related processes, and enables analysis.



### Eliciting the potential of the Senju Family

## Hands-On Seminars

NRI holds hands-on seminars for each product. By experiencing the series of operations for the work flow performed by each member, it is possible to acquire an even more concrete image of using the tool. Also, even more practical use is possible through a deep knowledge of each function. We recommend these hands-on seminars for customers who are considering the implementation of system management tools, and for customers who want to utilize their system management tools more effectively.





Autonomous system management

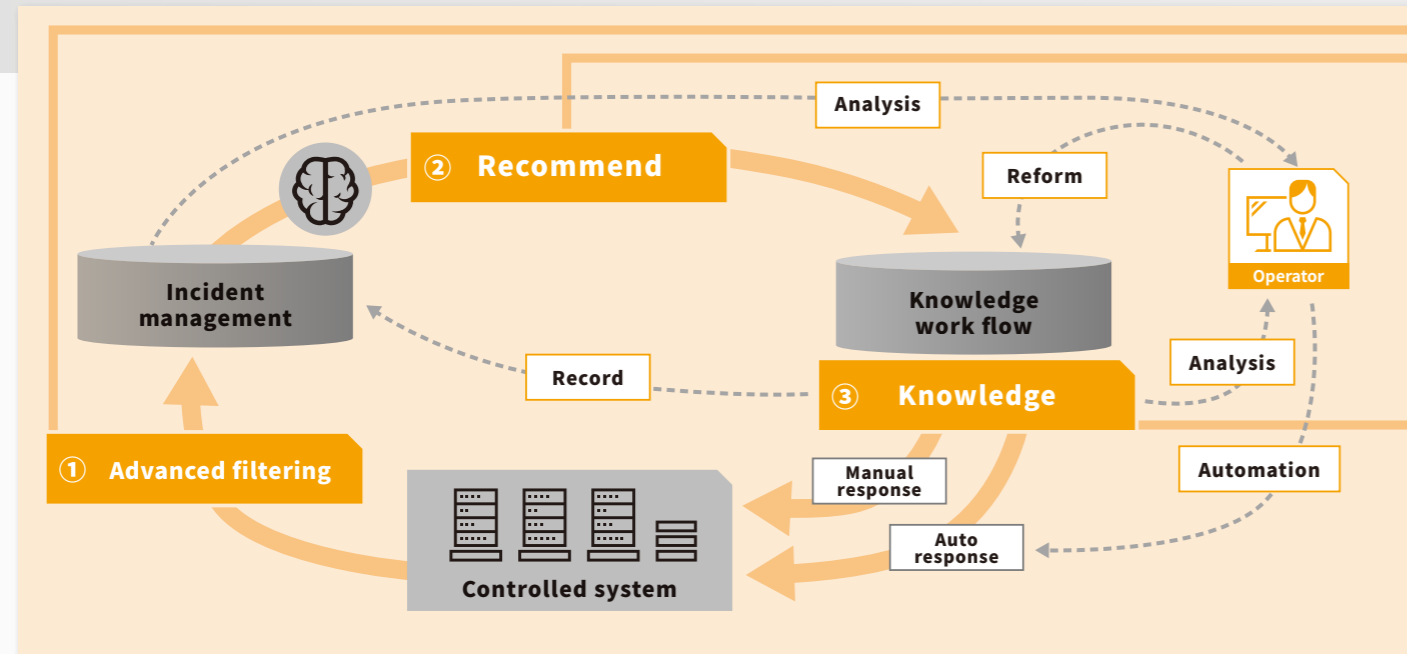
# Senju/ASM & mPLAT/AMP

Senju Autonomous Service Manager  
mPLAT Autonomous Management Platform

In addition to messages from the system, operation history, etc., the operation site gathers various information such as the request from the user, the correspondence history of the person in charge of the operation, and the status of the request to the external vendor.

Senju/ASM and mPLAT/AMP collect this huge amount of information, turn it into knowledge, and realize autonomous operation using machine learning.

Through a service desk, advanced message filtering, automatic execution functions, and so on, the operational processes required by ITIL® and ISO 20000 (ITSMS), along with higher operation efficiency and operation quality, are achieved.

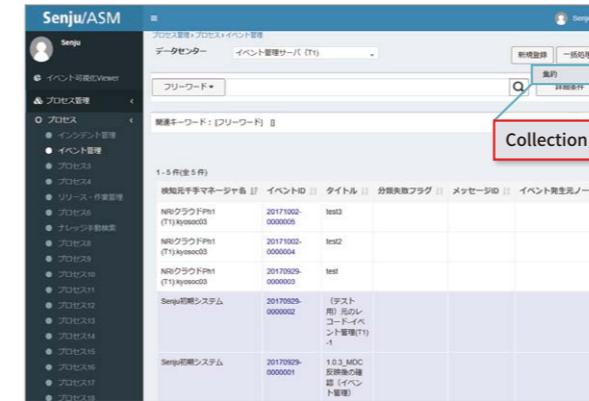


## (1) Advanced filtering

- Performs advanced filtering of events from the system in three stages: "single processing," "correlation processing," and "automatic response."
- Multiple occurrence events can be collected.
- Processes related to events that occur can be dynamically linked to each failure.

### Event collection function

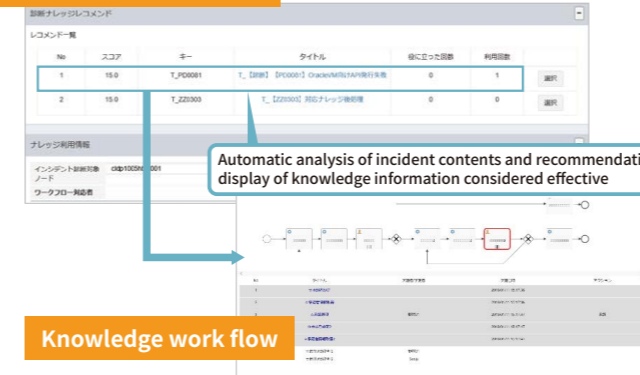
The collection of multiple occurrence events allows them to be treated as a single incident



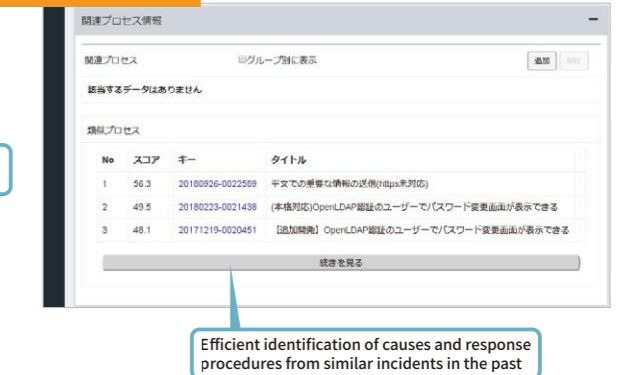
## (2) Recommend

- Recommends appropriate response (knowledge) based on past incidents for tickets that have been escalated because they could not be solved by auto response of the advanced filtering function.
- Lists similar incidents and knowledge in order of relevance.
- In addition to similarity, frequency of use and the number of times response have been useful can be checked to make a multifaceted use decision.

### Recommend knowledge



### Similar incidents

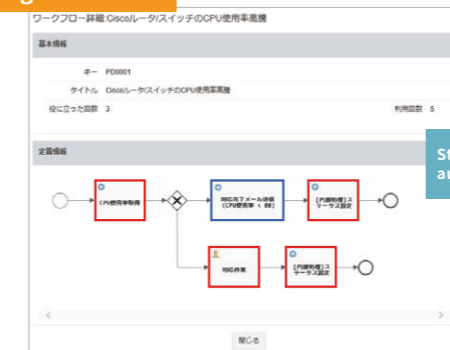


## Basic screens

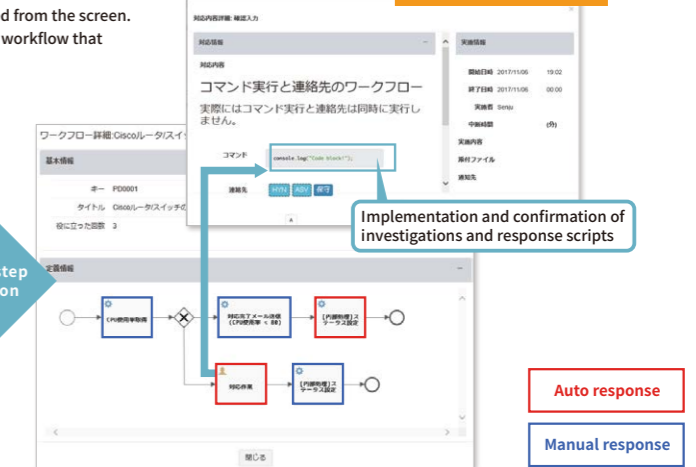
## (3) Knowledge

- Executes the recommended response procedure (knowledge).
- Even complicated procedures are displayed in a flow that is easy to understand, and execution instructions such as investigation commands can also be performed from the screen.
- Tasks that require human judgment can be handled manually, enabling a flexible workflow that combines automatic and manual processing.

### Knowledge work flow



### Knowledge tasks



Auto response

Manual response

## Multi-Cloud Management mPLAT/Clouday

The new service "mPLAT/Clouday" performs integrated management of billing status and KPI management for each department in addition to the usage status and failure status of the multi-cloud environment. Developed as a cloud-native service, it can be easily customized to allow flexibly coping with the rapidly changing multi-cloud environment.

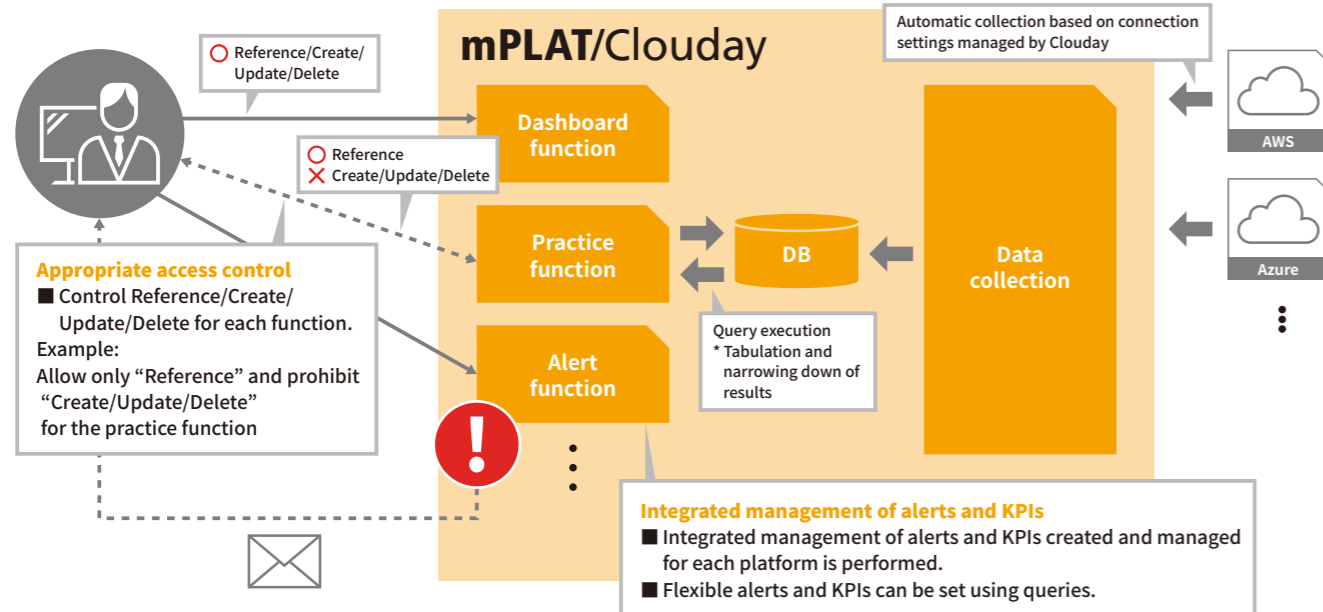
### Centralized management across multi-cloud environments

- Flexible dashboards allowing management across multi-cloud environments using queries
- Integrated management of alerts and KPIs across multi-cloud environments
- Appropriate access control for each function



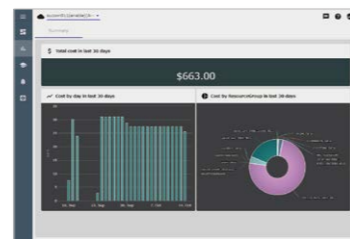
### Flexible dashboards

- Automatically collected multi-cloud information can be obtained flexibly by executing tabulation (sum/max/min/count, etc.) and narrowing down (filtering) with queries.
- Query results are visualized in various panel formats (line/bar/pie/map, etc.).
- The arrangement and size of panels can be changed easily by drag-and-drop operation, allowing the creation of original dashboards.



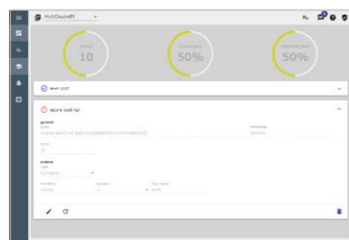
### Dashboard

- Visualize multi-cloud information such as AWS and Azure on the same dashboard
- Create original dashboards by adding panels and editing dashboards (changing panel positions and sizes)



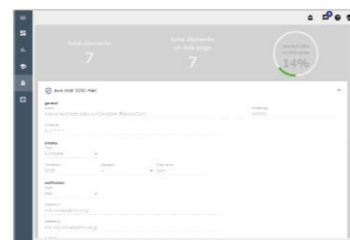
### Cost analysis

- Analyze costs based on information collected for each platform such as AWS and Azure/AzureCSP
- Support of referencing of total cost, daily cost changes, cost information for each resource group, etc.



### Optimization: Practice

- Aggregation of multi-cloud operation-related know-how as "practice" and setting of multiple KPIs in the practice
- Quantification of multi-cloud operation-related know-how by setting achievement/non-achievement standards and scores when creating KPIs



### Alert

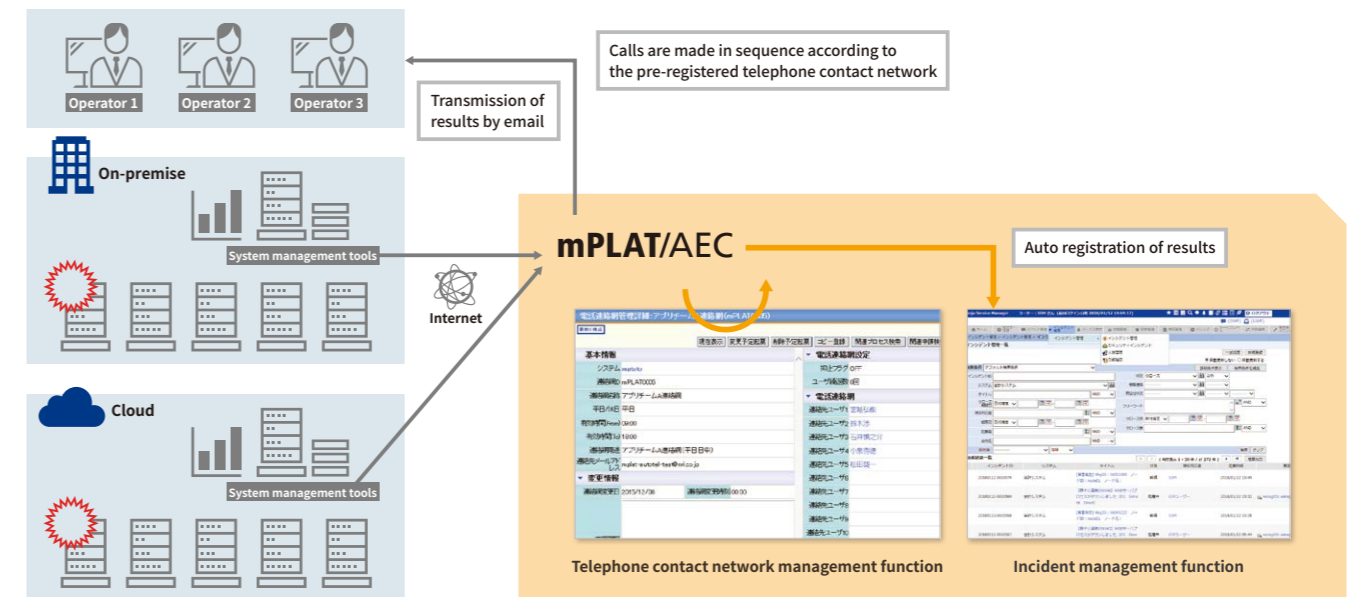
- Setting what needs to be notified during multi-cloud operation as "Alerts"
- Setting alert criteria and notification method (email/SMS, etc.) when creating alerts

## Auto telephone notification mPLAT/AEC

Telephone notification of alerts detected by the monitoring tool in order according to the telephone contact network. In addition to email, notification is also done by telephone. In addition to the management functions of the telephone contact network, auto registration of tickets, auto registration of response results, dashboards for each work responsibility, etc., help improve the efficiency of operation work.

### Automation of notification upon incident occurrence

- Automatic telephone calling triggered by email sent by system management tools
- Management of telephone contact network setting and update
- Auto issuance of incident tickets and update of response results
- Available regardless of whether on-premise or cloud



## Collaboration of operation and development mPLAT/DOP

This is a service that allows the person in charge of the development department to grasp the status of the system without having to access the main system. This eliminates the need to check with the operators when a failure occurs or when performing a release operation, making it possible to respond quickly and appropriately. Access from mobile devices can reduce nighttime rushes.

### Streamlining of operations and development communications

- Ensure appropriate control (access control, data control)
- Smart device access from outside
- Services easy to use without affecting the production environment

