Reduce Workloads, Human Errors, and Lead Times by Automating Service Request Reponses
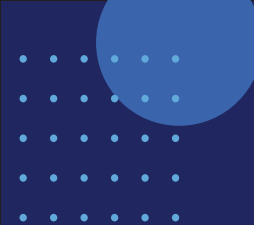
—How ITSM tools can flexibly link to external services to support various business logics—

Nomura Research Institute

NRI

More companies are confronting the growing demand for IT services by expanding or diversifying their businesses, undertaking DX initiatives. When it comes to lightening their immense workloads, preventing human errors, and shortening lead times, automation using highly flexible ITSM tools can be effective.

Ever-increasing service requests pose many challenges

The IT services have now become crucial elements supporting business, and their quality can have a significant impact on business performance. Providing seamless IT services and enhancing the quality will only become more important going forward.
An example of the best practices in the IT services is called the ITIL (Information Technology Infrastructure Library). The ITIL contains definitions for various business processes and functions that are involved in IT services. As business grows more diversified and IT services become more complex, responding to "service requests" in a way that directly leads to the satisfaction of system users and developers will become more vital.

Handling service requests entails managing and responding to various kinds of requests. As IT services become increasingly

sophisticated, the volume of service requests will continue to grow and become more diversified in nature. Relying on manual labor to handle these requests will only increase the workload and the chance for human error in information system departments.

Furthermore, the users making the requests will also increasingly find themselves having to wait for a response, and these trends more broadly will end up degrading the quality of IT services overall.

Focusing on flexible automation adapted to various kinds of business logic

Automation is an effective way of reducing problems. If more kinds of work can be automated, there could be many benefits including reduced workloads for operators and related personnel, lower risk of human error, more uniform response quality, and also speedier responses.

However, the content of service requests is wide-ranging. Not only are there significant differences between companies and systems, but with supervisors frequently having to give their approval and other related departments often needing to get involved along the way, the operational flow can tend to get complicated. Moreover, some service requests can necessitate linkages with

various systems, which along with other factors has made this a difficult field for automation. While numerous ITIL-compliant tools do exist, there are currently few tools capable of flexibly automating the complex operational flows involved with service requests.

NRI has updated its "Senju/SM" service desk tool, which is ITIL-compliant and has an extensive proven track record, as well as the SaaS version of it known as "mPLAT/SMP", to include a new "Business Logic Add-on". This feature flexibly creates business logic and operational flows, and even facilitates linkages with external services, enabling companies to check the content of requests that have been made in keeping with their operational rules and to truly drive the automation of their operations.

Below, we discuss four usage examples featuring this new Business Logic Add-on.

Example 1: Automated approval of routine tasks means reduced workload for approvers

The request and approval process accompanying release work tends to be common but complex. At production release time, various risks can occur, which makes it essential to have a workaround that involves obtaining approval from one's supervisors. When managers are consistently required to give approval, the process of checking and

giving approval becomes a heavy workload, and the requesters themselves also tend to lose time waiting for that approval to come. The Business Logic Add-on makes it possible to create operational workflows so that low-risk routine tasks and the like can be approved by the system, instead of by people. This automatic approval process for routine tasks means that companies can spend more time examining releases that do require human judgment. As a result, it prevents increased risk while it reduces the workload for those giving approval, which also shortens the wait time for requesters.
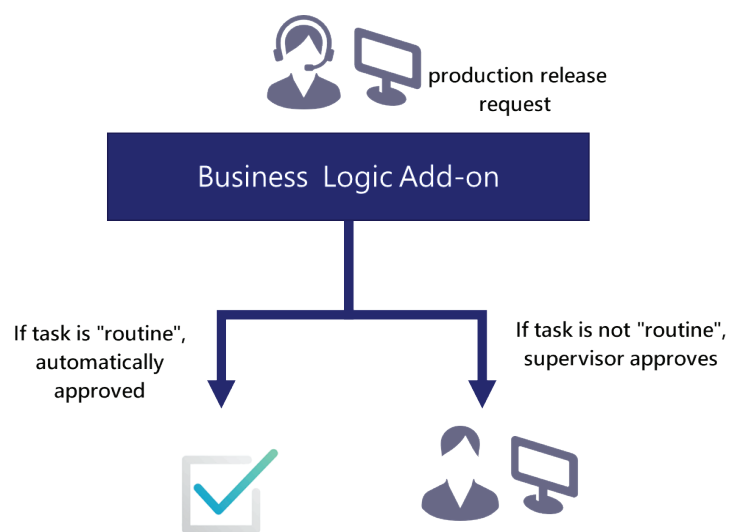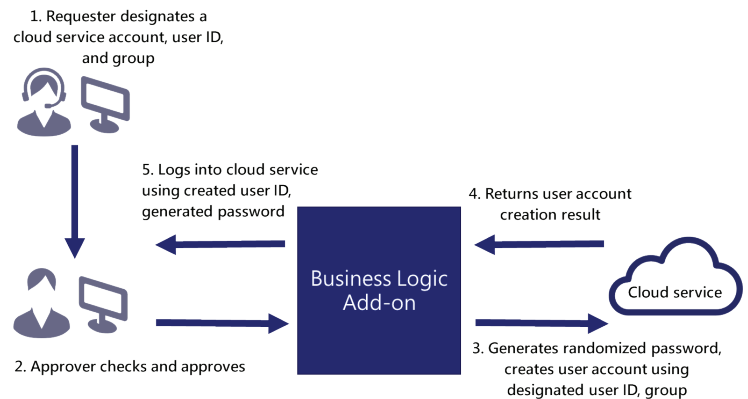

Example 1: Automated approval of minor requests

The Business Logic Add-on can automate the approval of routine tasks. The add-on determines whether or not a task is routine, and branches the request off for automated approval or human-based approval depending on the conditions involved.

Example 2: Automated creation of public cloud user accounts

For many companies that use public clouds, one of the operations with the heaviest operational workload is managing user accounts. Although the SaaS applications used by nearly all employees of such companies are becoming increasingly automated, when it comes to IaaS or PaaS applications used exclusively by development teams or operations teams, more than a few companies still rely on manual procedures. With manual procedures, every time a user setting request arises, the person handling it has to log in to his or her cloud service-based console and set a user ID and user permissions and such, which takes considerable time and effort. In addition, setting-related errors are also a concern, and they can even lead to security risks.

The Business Logic Add-on makes even this kind of operation easy to automate. For any service request that has been made and approved, this feature automates the entire series of operations ranging from creating user IDs, generating randomized initial passwords, and giving feedback to the requesters on the results. Consequently, the add-on offers three major benefits in reducing workloads, preventing operational errors, and shortening lead times up to completion.

1. Requester designates a cloud service account, user ID, and group

5. Logs into cloud service using created user ID, generated password

2. Approver checks and approves

Business Logic Add-on

4. Returns user account creation result

Cloud service

3. Generates randomized password, creates user account using designated user ID, group

Example 2: Automated cloud service account creation

This image shows the creation of an external cloud service account using the Business Logic Add-on. Account creation, changes, and other configuration settings can be automatically performed without having to log into a cloud service console.
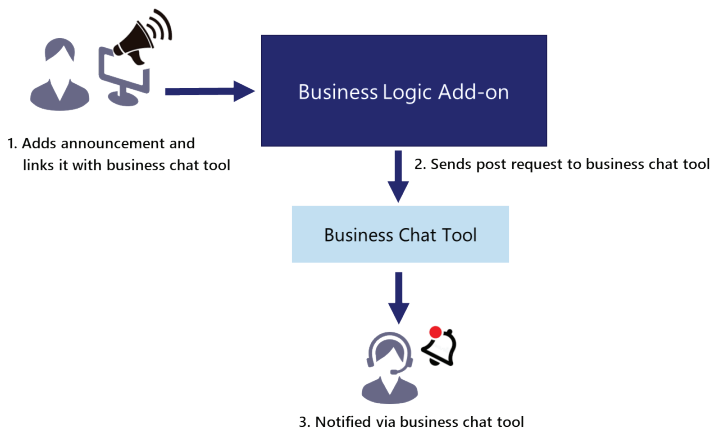
Example 3: Notifications to business chats regarding irregular interruptions

IT infrastructure-related problems or circumstances in end user departments could lead to temporary but unavoidable workflow interruptions. In such cases, to communicate the situation in a timely manner to those concerned, rather than make the requesters awaiting approval is ideal.
That said, automation is tricky for irregular situations. While notifying the whole team via email or messages is easy, it could invite confusion for persons other than the requester. Meanwhile, trying to notify each individual requester via messages or phone would require a tremendous amount of time and effort.

The Business Logic Add-on makes it possible to post comments to chat tools via Webhook, enabling timely notifications to be sent to those who need them even in such irregular situations. Even operators awaiting a request who are not viewing the Senju/SM or mPLAT/SMP screen can immediately be notified of what is happening through chat notifications.

1. Adds announcement and links it with business chat tool

Business Logic Add-on

2. Sends post request to business chat tool

Business Chat Tool

3. Notified via business chat tool

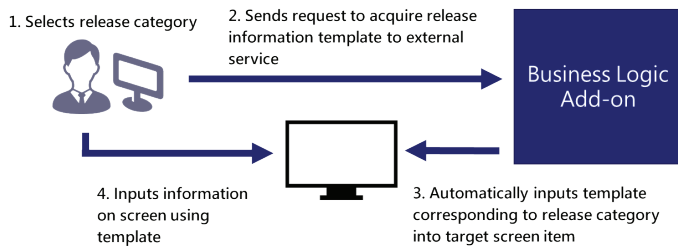### Example 3: Information notification during workflow implementation

The Business Logic Add-on can also respond to irregular notifications caused by interruptions. Webhook enables linkages with chat tools, and registering this process as an approver action, etc. allows information to be shared immediately.

Example 4: Templates tailored to the request content mean fewer requests get sent back

There are some cases where even with the same kinds of service requests, the particular details involved will mean that different fields need to be filled out. Take production release requests as an example. there are various categories including "New/Change", "Internal/

External", and more, which means that the details that have to be inputted will likely vary depending on the categories. With a standard template, the requester may overlook something or make an error, and requests can be prone to getting sent back because of incomplete information. Preparing templates for each category and having the requester select the right one will also readily lead to confusion. Furthermore, no matter the method used, the requester will be forced to spend a great deal of time and effort in the process.

One possible way of dealing with this problem would be having a wizard that lets the requester initially choose a category or classification, reflect it in your input screen. Simply by inputting content corresponding to the template, you can reduce the chance of requester error or omissions. In addition, having the right templates already prepared means that the specific content that a requester needs to input can be uniformized, which also reduces any discrepancies among operators.

1. Selects release category

2. Sends request to acquire release information template to external service

Business Logic Add-on

4. Inputs information on screen using template

3. Automatically inputs template corresponding to release category into target screen item

Example 4: Different input assistance for different requests

This example shows how to use the Business Logic Add-on to prepare input templates for different types of requests. By acquiring templates tailored to your chosen content externally, this feature can reduce the risk of input errors and omissions, as well as discrepancies between operators.

Fewer man-hours; request form version control also unnecessary

As can be seen from the four examples shown here, the Business Logic Add-on feature can freely create logic and can also be linked to external services, meaning that a little bit of design ingenuity can enable it to be utilized in a variety of ways. It is already being utilized for a number of operations inside NRI as well, and its effects have been verified.

In addition, user companies that have already rolled out Senju/SM or mPLAT/SMP can add on this feature without any impact to their current operations, which gives them the option of considering how to use it to address their own individual challenges and needs, and in fact some of these companies have already begun putting it to use. Let us look at the following examples.

- **Case No. 1:** Communication permission operations used to take 160h/week, but by using the Business Logic Add-on to automate the work of checking request content (such as matching with existing network definitions), this workload has been reduced to 120h/week (a nearly 25% reduction, or 40h/week less).

- **Case No. 2:** The creation of the Business Logic Add-on means no more complicated Excel request forms. More specifically, this means being free from Excel version control, and no longer needing to release the latest version of requesters or send back requests made using old versions. In addition, whereas the complexity of version control made minute improvements a challenge, now updating request forms is a cinch to do.

- **Case No. 3:** Data is directly recorded in Senju/SM or mPLAT/SMP, which means that aggregating the number of processes is easy (whereas Excel requires the user to open one at a time and then aggregate them, and to use Excel macros, etc.).

For any company struggling with workloads, human errors, and lead times in handling service requests, this feature offers a promising solution to those challenges.

Nomura Research Institute, Ltd.

Senju Information Center

E-mail: senjuinfo@nri.co.jp

Visit us at https://senjufamily.nri.com/mplat/

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