

Promotion of DX in the Human Resources Development & General Administration Department: Acquiring skills for digitalization

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Summary

The Human Resources Development & General Administration Department digitalized peripheral operations of legacy core systems while making full use of the systems. That was done to respond flexibly to operating environment changes within and outside the company and to the changing needs of JATCO employees who are the Department’s customers. The activities undertaken increased the number of team members capable of promoting digitalization themselves and led to a further advance in DX promotion throughout the entire Department.

1. Present situation

1.1 Background

The Human Resources Development & General Administration Department aims to provide more timely and higher quality services in order to respond flexibly to operating environment changes within and outside the company and to the evolving needs of the employees, referred to here as our customers.

However, employee data, forming the basis of such services, was being circulated mainly through legacy core systems that had been in place for a long time since launching (Fig. 1). When creating an employee list or other documents, much manual work had to be done every time such as adding and deleting information after

downloading the data. Among the operations performed by the Department, creating and providing data for customers involved many man-hours and long lead time, so numerous improvements were necessary.

The Department previously formed an internal digital transformation (DX) promotion team and was making vigorous efforts to implement work process improvements from various perspectives. However, the way in which basic employee data was kept, among other things, stood out again as an issue preventing substantial efficiency improvements.

1.2 Digitalization policy

To deal with the issue above, it was decided to strive for business reforms (DX) using information and

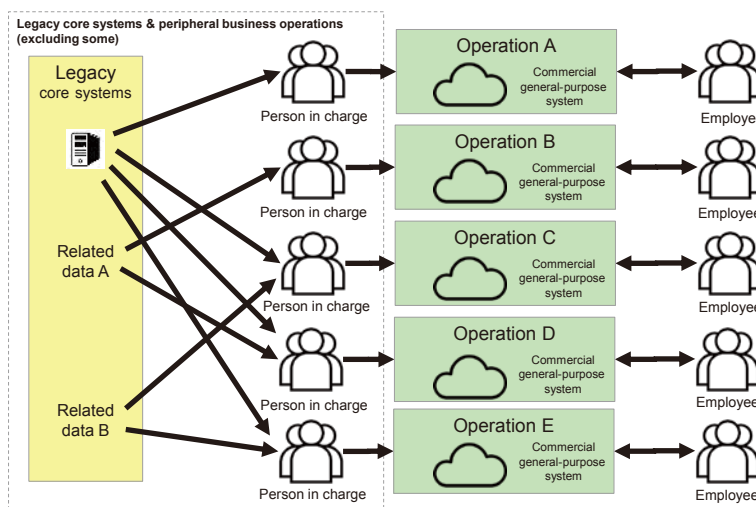


Fig. 1 Legacy core systems

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communications technology (ICT) tools. Two major policy proposals were examined in this regard.

- Proposal 1: To implement a large-scale system

Implementation of a new system that would encompass the existing legacy core systems and all the peripheral business systems.

- Proposal 2: Collaboration based on multiple small-scale systems

Digitalization of peripheral operations while making use of the legacy core systems and implementation of commercial general-purpose systems for each specific purpose.

After examination, Proposal 2 was adopted for the following three reasons:

- (1) Able to implement it ourselves
- (2) Able to shorten lead time
- (3) Able to respond to internal needs in an agile fashion

In trying to digitalize the peripheral operations handled by the legacy core systems, there were various things that could not be easily covered by one commercial general-purpose system because the types of operations involved were so numerous. Due to the ongoing implementation of commercial general-purpose systems in each business process, the volume of requests to the peripheral operations of the legacy core systems for data downloads and other tasks increased sharply. Therefore, it was decided to put priority on shortening lead time and being able to make improvements by ourselves, with the DX Promotion Teams in the Department playing a central role. The details of the improvements are described in the following section.

2. Improvements

2.1 Purposes

The improvements made this time had two main purposes:

- To make the work of producing data more efficient, and
- To shorten the lead time for providing data.

2.2 Approach

The approach taken consisted of three steps, based on QC story. First, efforts were made to thoroughly ascertain the current situation, visualize the current process and to eliminate all waste. After that, ICT tools for advancing digitalization were selected, and then digitalization was carried out.

- 1) Work process visualization and elimination of waste

The first things that were tackled were to visualize

the current situation of work processes and to identify issues. The following activities were carried out with the representatives of each team in the Department.

A list was made of the frequency report preparation for customers and the outputs of peripheral operations of the legacy core systems were visualized. As an example, Employee Basic Data Report #1 was being created once a month.

Next, a list was made of the data and related information downloaded from the legacy core systems for creating the various outputs, and the inputs of each operation were visualized. For example, Employee Directory A and Employee Contact List B were needed to create Employee Basic Data Report #1.

A flow chart was then created and visualized to show the work steps involved in creating the outputs from the inputs. For example, in creating Employee Basic Data Report #1, Employee Directory A was downloaded and combined with Employee Contact List B. Unnecessary data fields were deleted, half-width and full-width characters were unified, and the results were saved for use by subsequent processes.

The final activity was to identify redundant tasks in the flow chart and to eliminate waste by applying the concept of eliminate—reduce—combine—simplify. For example, Employee Directory A was used for both Employee Basic Data Report #1 and Employee Basic Data Report #2 and was downloaded twice under the procedure used at that time. The number of downloads was reduced to one time and the Directory was shared with others.

The most difficult aspect here was to accurately ascertain the frequency of manual tasks and the number of hours required. Until the results were finalized, it was necessary to repeat the above-mentioned activities numerous times and to have lengthy discussions. In contrast, by thoroughly carrying out Step 1), the processes needing to be digitalized could be clarified.

- 2) Determination of digitalization items and selection of ICT tools

In determining the digitalization items, the same members as the step above carried out the following activities.

The optimized flow chart from which waste had been eliminated was re-evaluated, and the processes team member tasks required long lead times or many hours of work were analyzed to clarify the factors involved.

The functions and features of ICT tools were investigated by gathering information from inside and

outside the company. For example, one of the ICT tools investigated was robotic process automation (RPA), which records the PC operations performed by an employee in downloading data from a system. The operations are later reproduced making it possible to automate them.

With regard to each factor, each ICT tool was evaluated in terms of two criteria—effectiveness and practicality. The most effective tools were then selected. For example, RPA was rated as being highly effective for downloading data from legacy core systems, but its practicality was rated low because special skills are needed to actually use it.

The final activity was to summarize the factors and the tools adopted to digitalize them into “digitalization items.” A diagram was then created to illustrate the items before and after digitalization.

Based on the investigations mentioned above, a total of five digitalization items were selected.

3) Implementation of digitalization items

One of the people responsible for promoting DX in the Department and the person in charge of the business operation pertaining to each item worked together as a pair in carrying out the following activities to implement digitalization.

The details of the target data of each item and the proper handling procedure in terms of data security were confirmed, and the process for proceeding with digitalization was determined. For example, Employee Basic Data Report #1 contains personal information that must be treated carefully. Accordingly, only designated members were allowed to access the data during the digitalization process.

Next, prototypes with 10% completion were developed for each digitalization item in around one week. Their

feasibility was confirmed in relation to the diagram created in the previous step illustrating the items before and after digitalization. For example, several thousand rows of data must be processed when creating Employee Basic Data Report #1. At the prototype stage, however, the scope of the data was made more compact and a trial run was conducted to see if it could actually be processed as expected.

The next task was to arrange each of the digitalization items into a rough schedule outline, after which it was incorporated into a detailed work-based schedule, keeping the following two points in mind.

- i. Assigning of time for acquiring skills.
- ii. Determining the frequency of progress checks based on each item level of difficulty.

Time for acquiring the necessary skills for digitalization was assigned through both off-the-job training (Off-JT) and on-the-job training (OJT). Fundamental knowledge of ICT tools (10%) was acquired through the below two Off-JT methods, and practical skills (90%) were acquired in OJT based on communication with in-house experts.

- In-house training sessions.
- Watching online videos.

The frequency of progress checks was determined according to the level of item level of difficulty. For example, the progress checks for high difficulty items was handled by daily casual meetings lasting around 20 minutes; that of medium-level items was handled in once-a-week meetings of one hour as a general yardstick.

While personnel data in the legacy core systems served as the basis of the activities described above, peripheral operations that previously had to be done manually were digitalized (Fig. 2). As a result, a shared data platform was constructed through which necessary data can be obtained

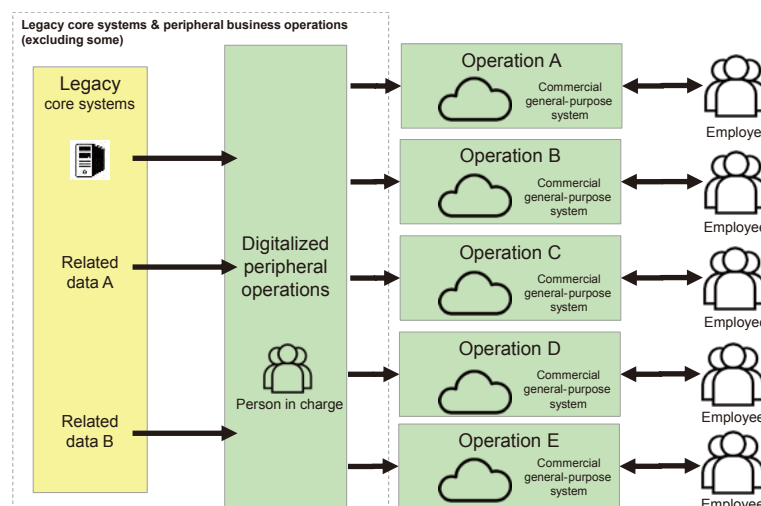


Fig. 2 Digitalization of peripheral business operations of legacy core systems

Table 1 Effects of improvements

Aim	Impact
① To make the work of producing data more efficient	Reduced man-hours by about 70%
② To shorten the lead time for providing data	Reduced response time by about 95%

according to needs at hand.

The benefits of these improvements are described in the following discussion.

2.3 Effects of improvements

Figure 2 illustrates the status of the legacy core systems after digitalization of the peripheral operations.

The effects of the improvements regarding the two main purposes of digitalization are shown in Table 1.

2.4 Secondary benefits

In addition to the effects noted in the table, the digitalization efforts mentioned here also provided an opportunity to obtain the following secondary benefits.

1) Employee development

One of the secondary benefits is that these activities led to further development of the Department's employees. The following benefits were confirmed in this regard.

A passive attitude toward using ICT tools was improved through the improvements made to our business operations. Many of the Department's employees gained their first experience with digitalization through the work of promoting the digitalization items. As a result, their anxiety about using unfamiliar ICT tools decreased after the activities compared with before undertaking them. A positive attitude now exists regarding consideration of implementing ICT tools in future efforts to improve business operations.

The activities led to the development of digitally capable employees, thereby increasing the number of Department employees able to promote digitalization. The digitalization items undertaken this time provided an opportunity for employees to improve their skills to the extent that approximately 70% of them are now able to develop related tools. It is likely that the horizontal deployment of such tools and further improvements can be completed within the Department in the future.

2) Synergies toward further digitalization

Another secondary benefit is that it heightened the

motivation of other Department employees not directly involved. In the course of implementing the digitalization items, interest in the activities rose within the Department. Department employees and teams that had not been involved in the activities initially also joined in the efforts under way, which had the synergistic effect of employees motivating each other. That produced additional improvements which had not been originally planned.

2.5 Reflections and conclusions

The policy adopted this time was to utilize legacy core systems combined with the implementation of commercial general-purpose systems for different purposes. Under this policy, efforts were exerted to improve operational efficiency and to shorten response time by digitalizing peripheral operations of legacy core systems.

Digitalization was not something that was easy to accomplish, but the members of the Human Resources Development & General Administration Department undertook the challenge of doing it with a spirit of wanting to make improvements by themselves. They succeeded in improving both operational efficiency and customer response time. Considering that the activities also resulted in secondary benefits such as further development of Department personnel, it is conceivable that this 3-step approach could be one useful reference for others promoting workplace-initiated DX efforts in the future.

3. Going forward

The Human Resources Development & General Administration Department reduced manual operations and quickened customer response time though the digitalization items implemented this time. Going forward, we want to advance DX toward further service improvements by making skillful use of the time gained through improving efficiency together with the digitalization knowhow accumulated to date.

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