

NEC Global Business Process and IT Innovation Project <Stage 5>

Accelerating group business management using the 2-Tier ERP model

Challenges

- Need to grasp business management information on the more than 200 companies along the supply chain.
- Need to ensure homogeneous global business management indicators by applying standard systems, rules, processes and codes.
- Need to deploy a business management platform to support the entire group's business quickly and cost effectively.

Solution

- Adopted SAP Business ByDesign because it is highly compatible with the SAP ERP already implemented for large-scale companies.
- SAP Business ByDesign complies with NEC's standard systems, rules, processes and codes that were implemented under SAP ERP.
- Enables cost reductions and fast deployment thanks to 35 built-in business scenarios and cloud services.

Results

- Using a 2-Tier ERP approach, it will be possible to deploy a business management platform system to all overseas group companies in a short time and at low cost.
- NEC has established a platform to enable future utilization of NEC Group business management information on a consolidated basis to support decision-making at the executive level, the management level, and in the operation.
- NEC has established a system to accumulate and share the rich and practical expertise and insight gained in the 2-Tier ERP deployment project, which will be used for new measures in the future.

Grasping corporate information from all the NEC Group's more than 200 companies using the 2-Tier ERP model.

Powerfully advancing business management on a global scale.

Overview

Grasping information on all NEC Group companies is key to global business management.

Since July 2008, NEC has been advancing innovations in business processes to enable speedy response to changes in the market environment and to obtain a competitive advantage in the global marketplace. To this end, NEC has constructed a "SAP ERP" platform for common systems to support business processes and has been deploying this system to NEC divisions as well as Group companies. Since 2010, the system has been deployed to a total of 56 companies, comprising 39 companies within Japan including head office, as well as 17 companies overseas.

This has resulted in various benefits such as a 20% or more reduction in IT operations costs and back-office division costs, a shortening of the group management cycle and improvements in the accuracy of group results management. While the initial target for deployment of this system was companies with high consolidated net sales, NEC understood that to realize a One NEC system in the true sense, it needed to quickly and economically deploy a business management platform to support business of the more than 200 companies comprising the NEC Group supply chain. NEC therefore decided to use SAP's cloud services to implement an entirely new platform known as 2-tier ERP. NEC plans to deploy the new system to all overseas group companies with the future goal of all NEC Group companies sharing business information via a single consolidated platform.

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Challenges

"Faster, wider, lower cost" deployment of ERP

Since 2008 NEC has been reforming its business processes with the goal of establishing a One NEC system to be used by all NEC Group companies. Specifically, NEC has been standardizing operations processes such as sales, procurement and accounting, which had previously been individually optimized. The company has also constructed a "SAP ERP" platform for common systems to support business processes and has been deploying this system to group companies in Japan and overseas. The system has already been deployed to a total of 56 companies—39 companies within Japan including head office, as well as 17 companies overseas. This has resulted in many benefits such as a 20% or more reduction in IT operations costs and back-office division costs, a shortening of the group management cycle and improvements in the accuracy of group results management. However, considering the original purpose of this project, issues still remain to be solved.

"The initial target for deployment of this system was companies with high consolidated net sales," explains NEC's Takehisa Sekime. "However, to realize a One NEC system in the true sense, we need to collect business management information based on the same definitions, the same granularity and the same items from all of the more than 200 companies along the supply chain, so that we can grasp the situation of the NEC Group's entire supply chain end-to-end."

NEC therefore decided to deploy the business management platform system to all consolidated subsidiaries within the group

and to implement standardized systems, rules, processes and codes. However, the SAP ERP for large-scale systems (SAP ECC) that NEC had been deploying to its major companies was not the best choice for smaller companies from the perspective of cost and implementation period.

"The method of deploying SAP ERP to the remaining companies was not a good match in terms of ROI," says Sekime. "Another major issue was that it would require large amounts of time and manpower to implement. We needed to devise a new method."

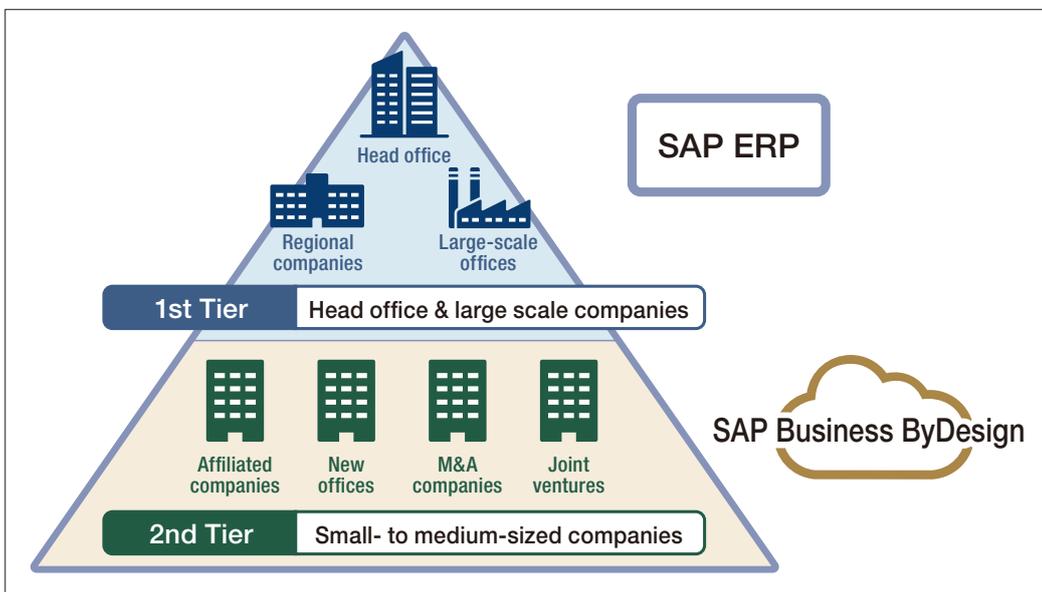
NEC examined the best way to deploy ERP based on the three conditions of "faster, wider, and lower cost," in the end going with the "2-Tier ERP" approach. Two-Tier ERP is an ERP deployment model that is increasingly being adopted by global companies particularly in Europe and America. With this approach, companies select and deploy the optimum ERP system for their small- to medium-sized companies separate to the large-scale ERP (core ERP) deployed at their head offices and major branches. The systems are not completely separated, however, as their data can be linked. Two-Tier ERP takes its name from the "2nd Tier" of ERP which targets small- to medium-sized companies, in contrast to the "1st Tier" of core ERP.

Two-Tier ERP brings three major benefits. The first is enhanced governance. Because 2nd Tier ERP has been developed specifically for small- to medium-sized companies, it can be deployed quickly and at low cost. The second is flexible response to changes. Companies that are currently trying to implement ERP may look to expand their business, or may even pull out of their field in

the future. If 2-Tier ERP is implemented, it is possible to start small and then transfer smoothly to 1st Tier ERP once the business expands.

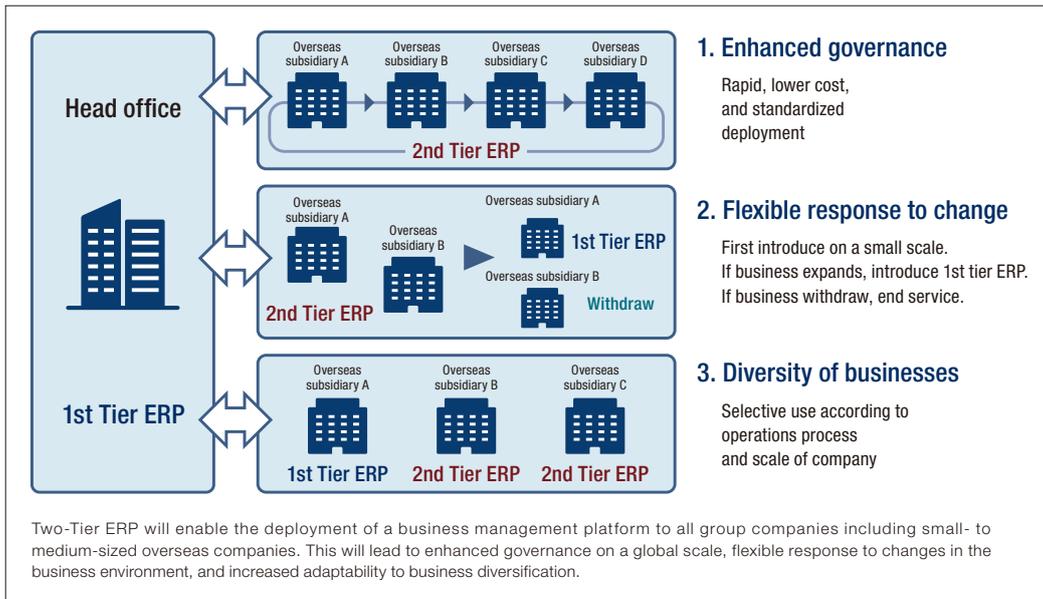
The third is adaptability to business diversification. There is considerable diversity in the businesses of each NEC office. Network devices might be the main business in one region and solution services in another. Having two types of ERP makes it possible to flexibly select the one that is best suited to the scale and operations of each company.

• 2-Tier ERP model



Accelerating group business management using the 2-Tier ERP model

• Three Benefits of 2-Tier ERP



Solution

An ERP system compatible with previously implemented systems, rules, processes and codes

Selecting the most appropriate ERP for the 2nd Tier was vital to fulfill the three requirements of “faster, wider and lower cost.” After conducting exhaustive examinations, NEC decided to go with “SAP Business ByDesign,” which is positioned as a cloud ERP for medium-sized companies.

“We went with this solution because it is made by the same company as SAP ERP, which we had already implemented in our head office and large- scale companies, and is highly compatible with this system,” says NEC’s Hiroshi Sudo.

This SAP solution makes it possible to use the standard systems, rules, processes and codes that were previously constructed under SAP ERP and that have already been applied to NEC’s business management platform system.

The new solution also fulfilled NEC’s requirements for a system that could be deployed quickly and at low cost; NEC has estimated that the deployment project period can be shortened compared to SAP ERP while achieving significant reductions in deployment costs.

One factor enabling the shortened deployment period is that SAP Business ByDesign is equipped with 35 business scenarios for standard business processes such as “Receive order,” “Dispatch order,” and “Send invoice.” These scenarios can be tuned according to their relevance and NEC attributes added as necessary to produce

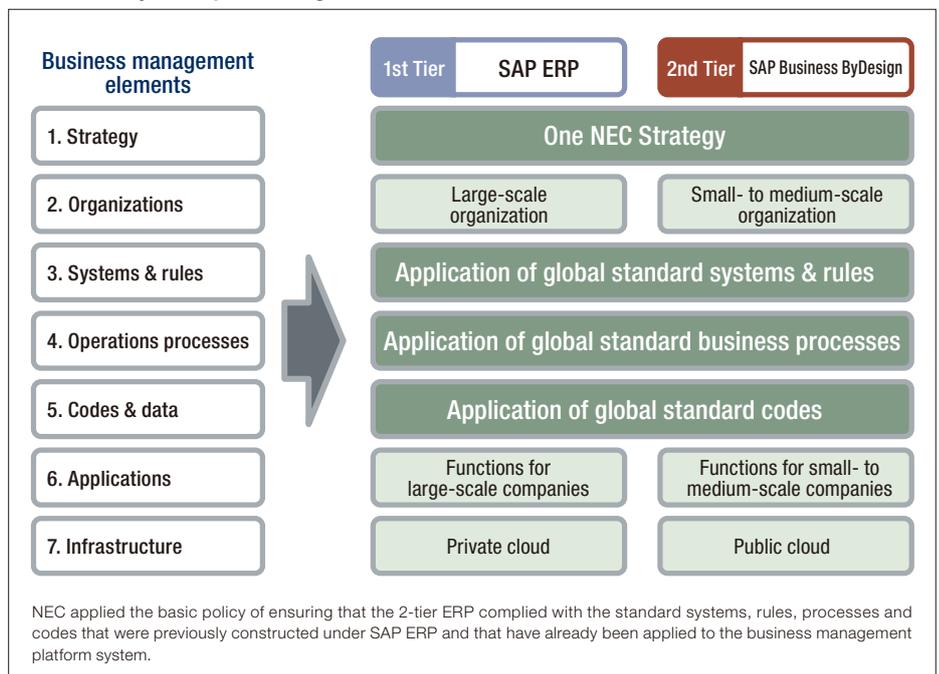
an optimal scenario.

Additionally, the new solution is provided as a cloud service which also contributes to a shortened deployment period and cost reductions.

“For NEC it was a prerequisite that the 2-Tier ERP system to be deployed must be a cloud service,” explains Sudo. “This was because only about 100 companies in the NEC Group are able to connect to the NEC Intranet, which leaves around 120 companies that don’t have access to it. Unlike SAP ERP, which is provided via a group intranet, we needed a system that could be implemented via the Internet.”

SAP Business ByDesign also provides related functions based on the tax system and other localization at the country of deployment.

• Basic Policy on Implementing 2-Tier ERP



Results

Visualization of business management information for all companies along the supply chain

NEC deployed SAP Business ByDesign for the first time at its New Zealand company, completing the deployment in September 2016. This is just the first step. “When 2-Tier ERP is implemented at all companies in the NEC Group in the near future, business management information for all companies along the NEC Group’s supply chain will be visualized end-to-end,” explains Sekime. “This will enable us to grasp off-balance-sheet information as leading indicators of performance, to confirm the budget progress of each division, or to collect material price information to promote centralized procurement opportunities. We can then use this information at the executive level, at the management level, and in the operation to make appropriate decisions. The next step will be to digitalize all business information to further accelerate the realization of NEC’s unique vision for Digital Transformation.”

There have also been some unanticipated effects, such as how local companies have responded favorably to ERP. The company in New Zealand originally operated accounting and man-hour control on separate systems. “With the implementation of ERP, these operations could be completed using just one system. Linkage between these systems meant that entry was no longer necessary, reducing staff workloads. Staff have also praised the intuitive and

easy-to-understand user experience,” says Sudo.

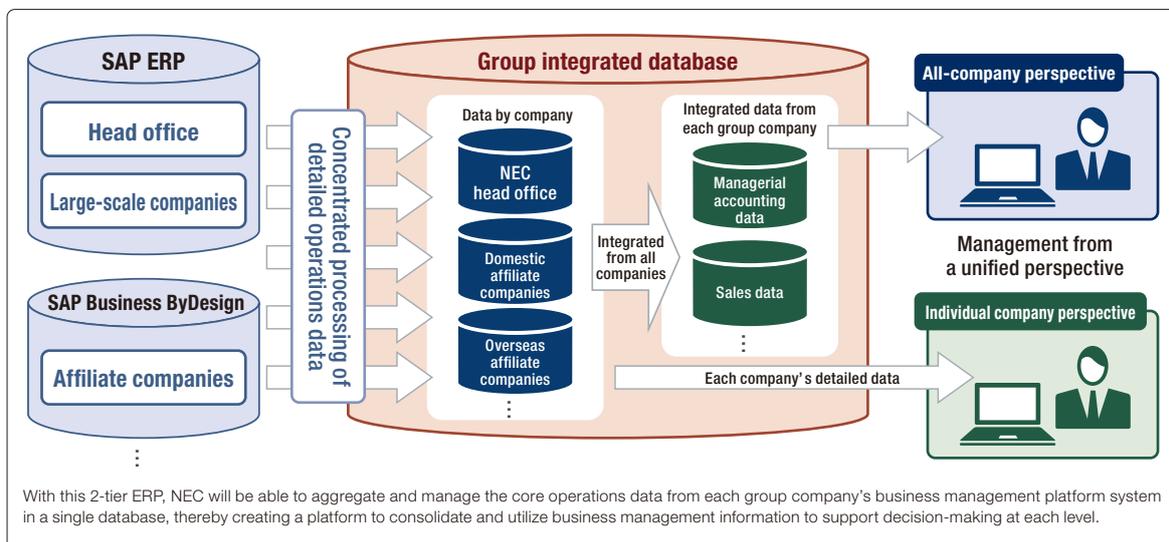
Knowing that it can complete deployment, including testing and training of local staff, in a very short time, NEC is launching simultaneous deployment to companies in Saudi Arabia, Vietnam and China.

There have also been some unexpected difficulties, resulting from different cultures in different regions. “One example was how Sunday is a working day in Saudi Arabia, while Friday is a non-working day. We also needed to consider Ramadan and work it into our system deployment schedule in advance,” says Sudo. It is important that NEC pays attention to and understands the customs and culture of each country as it proceeds with global deployment of ERP.

NEC has gained diverse insight from undertaking this project, gaining knowhow on how to smoothly implement and stably operate a new system and resolve the various issues that emerge during the implementation process, and has established a system to feedback these insights and know-how and share them within the group. NEC is also working closely with SAP to verify the technologies of SAP Business ByDesign during this project and confirm other technical aspects such as the linkage with SAP ERP. These verification results are being aggregated by NEC.

Moving forward, NEC will continue to deploy 2-Tier ERP to overseas group companies and will use the knowhow gained from this experience to provide better solutions for customers.

- Grasping integrated business management information from all companies



About

NEC Corporation is a comprehensive IT vendor offering a full selection of business-oriented products ranging from terminal devices to network equipment, computer equipment, software

products, and service platforms, as well as extensive solution services based upon these products.

Corporate Headquarters (Japan)

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