NTT DATA
Global IT Innovator

Contributing to further development of "NACCS," a customs clearance system developed by NTT DATA

-"NACCS," a customs clearance system going global that fully leverages the experience and know-how accumulated in Japan-

NTT DATA is internationally launching its IT infrastructure development business, including emerging markets in Asia with substantial growth, by leveraging its extensive experience and know-how of Japan on IT infrastructure development. Among many, its system development and introduction in Vietnam and Myanmar based on the Japanese customs clearance system "NACCS (Nippon Automated Cargo and Port Consolidated System)" is one of its most significant achievements.

NACCS, Moving Forward Together with the Development of Japan

"NACCS," a customs clearance system developed and supported by NTT DATA, plays a significant role as the core system for Japan's international logistics field. The system started operations as a processing system for customs clearance procedures in Narita Airport in 1978, and expanded its scope to maritime shipping in addition to air cargo. NACCS has continued advancements through numerous updates in response to Japan's economic growth and changes in user needs in its long history, together with incorporating the latest IT technology at the time. It is now incorporated in major airports and harbors throughout the country, and developed into an exceptional IT system in the world that runs one-stop processing 24 hours a day, 365 days a year, and now also processes procedures in relevant government authorities pertaining to trade.

Significantly Expedited and Streamlined Operations through NACCS are also Numerically Proven

About 99% of export and import procedures in Japan are currently processed by NACCS. The accomplishments that NACCS has contributed to the country's trade-related operations are also demonstrated in the data disclosed by the government. For example, while the number of import permits (*1) increased to 23,521K in 2014 compared to 4,875K in 1989, the time required for import clearance (*2) drastically shortened from 52.6 hours in 1991 to 12.8 hours as of 2015 for air cargo. The fact that the number of customs officers has almost remained the same
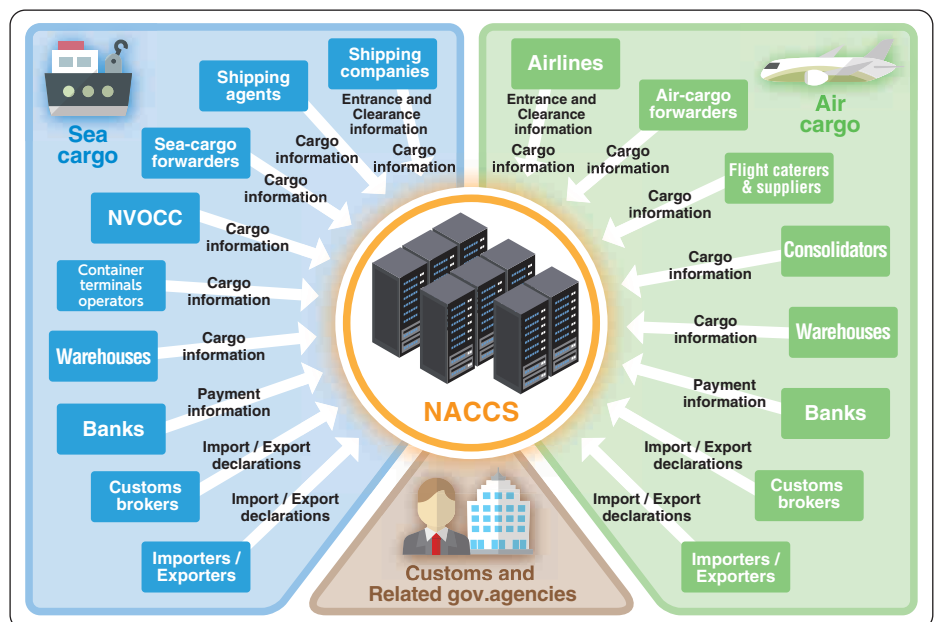
further proves the extent of how operations were streamlined through NACCS.

Due to its proven results in Japan, completeness and impressive reliability, NACCS is also highly evaluated abroad, and particularly for emerging markets such as Southeast Asia that is seeing rapid developments, the system is very attractive in that it has overcome numerous issues and supported Japan's period of high economic growth. NTT DATA proactively supports digitalization of customs clearance procedures that lead to stronger economic develop-

ment and global competitiveness through its development of NACCS-based customs clearance systems for other foreign countries.

This report introduces case studies in Vietnam and Myanmar in which NTT DATA jointly developed and supported the introduction of systems with the Bureau of Customs of the Ministry of Finance, Japan International Cooperation Agency (JICA) and Nippon Automated Cargo and Port Consolidated System, Inc. (NACCS Center) as Japan's official development assistance (ODA) grant aid project.

(*1) Customs Report   http://www.customs.go.jp/zeikan/pamphlet/report/pdf/report_008j.pdf
(*2) Ministry of Finance, 11th Survey on the Time Required for Import Customs Clearance Procedures   http://www.mof.go.jp/customs_tariff/trade/facilitation/ka20160609.htm

Vietnam Authorities Highly Regarded the Achievements in Japan

Vietnam made the first step towards developing a NACCS-based international customs clearance system.

Vietnam Customs incorporated a customs clearance system developed domestically from around 2005, but issues gradually came into light. In particular, the systems is not centralized, and automation through technology is not progressing because of limited functions.Therefore, it caused obstructions such as for collection of information to the central office and operations of customs officers on-site.

Moreover, import and export volumes continues to grow as direct investments from abroad rapidly increased after joining the WTO in 2007. These backgrounds prompted the Vietnamese government to incorporate a new customs system, as well as streamline trade procedures and customs clearance.

NACCS was chosen among the prospective customs clearance systems of multiple countries after

reviewed. Mr. Le Duc Thanh, the Deputy Director of the IT and Statistics Bureau of the General Department of Vietnam Customs, explains, "Although being eligible for assistance as an ODA project was one of the reasons, the reliability of the system backed by approximately 40 years of experiencing various changes and issues involved in Japan's rapid economic growth, its development to respond to those changes and the fact that the system was

The project's issues and installation benefits

Customer issues	Installation benefits
All import and export procedures require declaration on paper.	Declarations can be made on the system without going to the customs office.
Screening from customs offices and on-site inspection are required for import and export procedures.	Qualified declarations are immediately completed on the system.
Because individual customs clearance systems are run in each customs house, significant burdens are required as companies need to submit customs documentation to the local customs office.	After the customs clearance system has been integrated, document submissions by going to the local customs office are not required for qualified declarations satisfying a certain condition.

operated without significant trouble was also a large factor."

NTT DATA, which worked on the development and maintenance of NACCS so far, signed an agreement on August 2012 with the Vietnamese government and kicked off the project since its system development know-how pertaining to trade and customs clearing operations and capabilities of developing large systems in short timeframes were highly evaluated. The system was named "VNACCS (Vietnam Automated Cargo Clearance System)," and the team comprising NTT DATA and Japanese staffs from multiple organizations integrally has worked on its development.

Local Companies Also Welcome the Significant Reduction in Work Burden for Procedures

"Together with the VNACCS installation, we redesigned Vietnam's customs operations in detail thanks to assistance from Japan. Communication between staffs at our customs and private companies became smoother as a result. Furthermore, our employees' way of approaches on the organization and work have also improved as their tasks significantly underwent changes, and they became more assertive and cooperative," reflects Mr. Le Duc Thanh.

Flexible application and development were in place for VNACCS instead of applying NACCS functions from Japan to realize functions such as digitalization of procedures in land boundaries, compatibility with electronic signatures based on the electronic commerce law, and functions for "temporary import procedures for re-export duty-free", to correspond to operations unique to Vietnam.

After operations of VNACCS started on April 2014, many companies in Vietnam have also voiced positive opinions on how importing and exporting procedures have significantly increased efficiency. One characteristic of Vietnam was that documentation were required for each regional customs office that the company was located, and whenever a client company of a customs broker was in a regional area, all declaration documents had to be brought in to the local customs office. "But after the VNACCS service launch, the green channel (no manual screening (document screening, on-site inspections) now immediately gives us the results of its automated judgment from the system, and we no longer have to go to the local office every time. Because the green channel accounts for about 70-80% of declarations in the way I feel it, we significantly reduced both time and human efforts involved." (An employee from an international logistics company)

Marking about 3 years since its operation launch, VNACCS is boasting impressive reliability without seeing any significant trouble such as the suspension of line services. Following this, Mr. Le Duc Thanh discusses his outlook. "We seek to upgrade all of Vietnam's customs operations to global standards by within 5 years. To achieve this goal, the support from NTT DATA is indispensable."

Mr. Le Duc Thanh
Deputy Director, Customs IT and Statistics Department,
General Department of Vietnam Customs
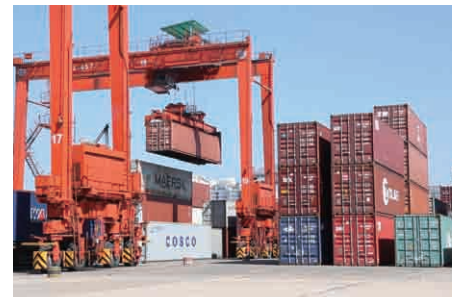
Port of Loading

Myanmar Seeking Solutions for Various Issues Caused by Manual Operations and Staff Shortages

The success in Vietnam drew more attention around the world, and Myanmar in the same Southeast Asia region became the second country to incorporate the system.

All import and export procedures require declaration on paper.
Declarations can be made on the system without going to the customs office.
Screening from customs offices and on-site inspection are required for import and export procedures.
Qualified declarations are immediately completed on the system.
Paper-based operations obstruct the efficiency of import and export procedures.
Paper documents are significantly reduced through digitalization, and greatly streamlined and saved labor for on-site customs operations.
Paper-based tabulations raise concerns on the credibility of statistical information.
Increased investments from abroad are anticipated after accurate statistical information is now available.

Previously, all customs clearance operations in Myanmar were all executed on paper. The procedures

for imports and exports were thus extremely inefficient, and became an issue of concern that this may impede the growth of the company that is seeing continual growth in trade volume following the high economic growth. Nevertheless, the number of Myanmar customs employees was significantly small compared to the population, with about 800 nationwide.

Mr. Win Thant, the Director of MACCS Division, Myanmar Customs Department , reflects, "The previous procedures based on paper required much work, and we had a hard time, for example, just looking for a file a little while back. In addition, the credibility of statistical data was low because the management of these documents was also based on paper. This was one of the factors that held back investments from abroad because we couldn't incorporate world standards like AEO (Authorized Economic Operator)."

Mr. Win Thant
Director, MACCS Division, Myanmar Customs Department

The project's issues and installation benefits

Customer issues	Installation benefits
All import and export procedures require declaration on paper.	Declarations can be made on the system without going to the customs office.
Screening from customs offices and on-site inspection are required for import and export procedures.	Qualified declarations are immediately completed on the system.
Paper-based operations obstruct the efficiency of import and export procedures.	Paper documents are significantly reduced through digitalization, and greatly streamlined and saved labor for on-site customs operations.
Paper-based tabulations raise concerns on the credibility of statistical information.	Increased investments from abroad are anticipated after accurate statistical information is now available.

A System Completed from Mutual Understanding between the Myanmar and Japan and Japanese

Because of these issues the Myanmar government decided to incorporate NACCS that was proving effective results in both Japan and Vietnam, and officially placed orders to NTT DATA in October 2014 for the development of a customs clearance system.

Win Thant comments, "We determined that NACCS will resolve various problems we were experiencing at the time. The system was also attractive in that we can obtain comprehensive assistance ranging from personnel development to compliance with a world-standard system." The new system was named "MACCS (Myanmar Automated Cargo Clearance System)," and the project went through steady development.

For many developing countries like Myanmar, the grave reality is that they are faced with high maintenance costs after developing a system like those of Japan structured with vendor products with high reliability. Considering this, NTT DATA designed the infrastructure customized for Myanmar with maximum usage of the company's know-how to successfully reduce hardware and maintenance costs. In addition, ODA projects call for personnel development to have maintenance operations conducted domestically in Myanmar after the system introduction. NTT DATA worked with its international group company, NTT DATA Myanmar, on reviewing the overall development process to match with Myanmar's circumstances so that operations will last in Myanmar.

In conjunction with the system development, work was continued to resolve the issues in system implementation rooting from the differences in infrastructure organization and approaches between the two countries. While the discussions involved interpreters, continual contact led to establishing a trusting relationship, and this allegedly created the smooth progress of the project. Mr. Win Thant exclaims, "Mutual understanding on-site will not work only by exchanging words. It also involves understanding through practice. This project was successful because people of two countries ultimately came to understand one another. And I believe this is because NTT DATA and the Japanese side repeated specific practices and applied our paper-based procedures to the system while deepening understanding towards us."

Anticipations for Further Development of the Country from Enhanced Efficiency and Reduced Work for Customs Clearance Procedures

MACCS started operations on November 2016, and was introduced at 4 major locations, including the Yangon International Airport, as its initial phase. Cargos going through customs clearance in these locations now generally run under the MACCS system.

Customs clearance procedures for imports and exports were digitalized through the operations of MACCS, and through linking with the import and export license issued by the Ministry of Commerce, Myanmar's customs clearance procedures drastically improved in efficiency and work required. According to JETRO, the processes from declaration to approval for cargo that is automatically assigned to the green channel now only takes as little as 3 seconds , compared to the several hours before the system was incorporated.

"We were surprised with how all the issues that we had was completely resolved. For example, correct statistics are immediately available, and past documents can be easily found. By implementation of a global-standard AEO system and switch of tariff evaluation methods, we expect that efficiency, predictability and transparency have considerably improved for importers and exporters, and investments from abroad and corporate advancements into our market will drastically move forward." Mr. Win Thant claims with a gleaming smile.

Furthermore, MACCS is under great expectations as a system that will contribute to Myanmar's further economic development.

Mr. Thant continues with convincement, "We will always be looking forward to NTT DATA's ideas and advices. That is because we were able to learn through the MACCS project that having a reliable partner with experience and skills and respond to our consultations with sincerity is the largest factor in improving operations."

Before operations of MACCS

After operations of MACCS

Global IT Innovator

NTT DATA Corporation
Sales Goup1
Public Division 2
Public Sector 1
+81-50-5546-2912

2017.3

http://www.nttdata.com/jp/ja/case/