

Study and Research

Regional Best Practice

on

Time Release Study



WCO Regional Office for Capacity Building

Asia Pacific

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1. Background

As a consequence of economic globalization, the modern business environment of international just-in-time production and delivery, and increasing intra-company trade, it has become vitally important to facilitate border procedures while ensuring efficient and effective border control by Customs and other trade-related government agencies (OGAs). Modern Customs administrations have recognized that streamlining and simplifying goods clearance procedures is of benefit to importers, exporters and the national economy by increasing Foreign Direct Investment. Manufacturers and traders also require efficient and predictable border management by Customs and OGAs.

One of the methods used to measure the efficiency of border procedures is to determine the average time taken between the arrival of the goods and their release. Time Release Study (TRS) is one of the WCO's most important trade facilitation instruments. Based on similar initiatives in the USA and Japan, it was developed by the WCO in 1994 and amended in 2001 to improve its user friendly attributes.

The TRS tool helps Customs and OGAs identify both the problem areas and potential corrective actions required to increase efficiency. The use of automation, non-intrusive inspection equipment and other sophisticated techniques such as risk management allow Customs and OGAs to improve compliance and at the same time improve facilitation for the majority of low risk goods.

TRS also meets the concerns of traders as it enhances predictability of clearance time. It helps Customs to respond to trade requirements where the operators need to plan ahead for the movement of goods across borders in order to meet tight production schedules and just-in-time inventory systems that require forward planning.

TRS has increasingly become the measure by which the international trading community assesses the effectiveness of a Customs administration. It is also discussed during the WTO trade facilitation negotiation as an effective way to identify the effectiveness of the border procedures of Member countries and territories.

Bearing in mind the benefit of the TRS, Customs administrations in Asia Pacific have measured clearance times using the WCO “Guide to measure the time required for the release of goods” (hereinafter called “TRS Guide Book”). Member Customs administrations have adopted several methods for the practical application of the TRS taking into account their clearance procedures and conditions.

So far the ROCB has identified that China, Indonesia, Korea, Japan, Malaysia, Philippines, and Thailand have conducted the TRS in Asia Pacific Region. Many other Customs administrations have also been planning to undertake the TRS in the near future. For this reason, the ROCB decided to provide the TRS of Japan and Korea as best practice examples in the AP region to support members intending to conduct the TRS. Japan Customs has regularly undertaken the TRS manually by following the TRS Guidebook while Korean Customs has carried out the TRS fully automatically using their clearance system. Therefore these two examples provide very useful information for members.

2. Outline of the TRS

In 1994, the WCO’s Permanent Technical Committee (PTC) adopted a study to measure the time required for the release of goods which was based on similar initiatives undertaken by the Customs administrations in Japan and the USA. In 2001, the PTC reviewed and updated the study in an effort to simplify its application and subsequently developed the TRS Guide Book. The software for analyzing data collected through the study was developed by the WCO and the World Bank in 2005. The TRS Guide Book is designed to be very flexible for users.

The study is divided into three phases, 1) preparation of the study, 2) collection and recording of data, and 3) analysis of data and conclusions. The preparation phase is very important for the success of the study. Customs has to decide the following elements before conducting the study.

- 1) Scope and design of the study
- 2) Working Group
- 3) Kind of data to be collected (how and by whom)
- 4) Duration and timing of the Study
- 5) Geographical scope
- 6) Type of Goods

- 7) Choice of traffic
- 8) Sampling methods
- 9) Designing a Form for data collection
- 10) Test run

3. Best Practice in Asia Pacific Region

3.1 TRS on Japan Customs

3.1.1 Outline of the TRS

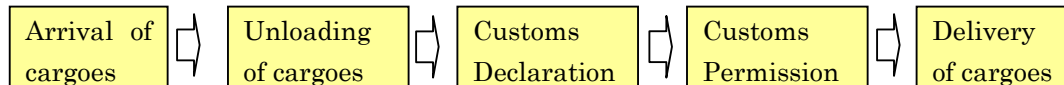
Japan Customs undertook the first TRS in February 1991 simultaneously with US Customs (currently US Customs and Border Protection (CBP)) to identify the time consumed by clearance procedures by Customs as well as other parties such as OGAs and Customs brokers, and to identify bottlenecks in import clearance procedures. Since then, Japan Customs has conducted the TRS once every two or three years and the 8th TRS was undertaken in March 2006. Basically, the procedures for collecting data are carried out manually in cooperation with Customs brokers and OGAs.

Japan Customs has used the results of the TRS as one of the indicators of the evaluation of Customs performance. It is also used to evaluate efficiency of the new scheme and procedures introduced by Customs. At the same time, Japan Customs has disclosed the results of the TRS using web-site and other media, in order to increase predictability of the clearance times for traders. Currently most traders are able to estimate a total clearance time, from arrival of ship/airplane to Customs permission, and they can provide a truck to warehouse/container yard for withdrawing their cargoes without significant loss of time. Japan Customs also asked a private “think tank” to analyze the economic impact for trade facilitation using the TRS result.

3.1.2 TRS Process

(1) Scope and design of the study

TRS Japan covers not only Customs procedures but also other government agencies procedures’ such as quarantine, food sanitation and licenses. It means that the study measures the time from arrival of cargoes in a port/airport until they are given Customs release permission.



In addition, Japan Customs has measured time from arrival of cargoes to physical release of goods from Customs control area three times among eight times of the TRS. It covers not only the computerized procedures but also manual procedures; however, currently more than 95% of import and export declarations are processed by computer system. It should be noted that Japan Customs has requested Customs brokers to assist the TRS by collecting necessary data.

(2) Establishment of a Working Group

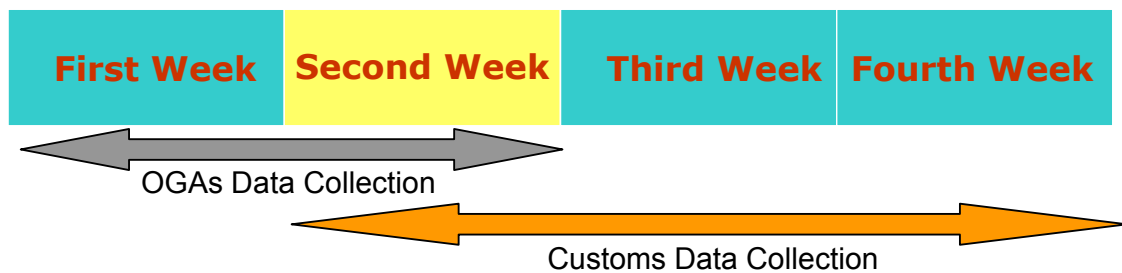
In 1990, the Government of Japan established an “Import Procedures Committee” consisting of Ministry of Finance (Customs and Tariff Bureau), Ministry of Industry Trade and Economy, Ministry of Agriculture, Fishery and Forest, and Ministry of Health, Labor and Welfare to discuss and solve problems related to import/export procedures. The TRS was discussed at this Committee and the scope of the TRS in Japan was determined by the Committee.

Each ministry including Customs explained the aims, scope, and method of the study to relevant front-line officers. Customs also explained them to the customs brokers to obtain their cooperation for the collection of necessary data.

(3) Duration and timing of the study

As the TRS guide book suggests carrying out the study at least 7 consecutive working days, Japan Customs has undertaken the study 7 consecutive days, from Monday to Sunday. The guide book also states that the study should be one of normal traffic and a period including seasonal fluctuation should be avoided. Considering the suggestion of the guide book and to ensure effective comparison of the results of the study against past data, Japan has undertaken the study once every two or three years in March since 1993 (third study). The first two studies were conducted in February.

In order to measure the time taken by other government agencies and permissions of Customs and the physical movement of goods, the study starts one week before the week (to study OGAs procedures) and continues for two weeks after the study week (to collect permission times or physical movement times)



Customs request OGAs to keep all records (e.g. acceptance and permission time of declaration) and Customs requests OGAs to provide data of the sample declaration after sample declarations are decided by Customs using a random sampling method.

(4) Geographical scope and choice of Customs offices

It should be determined whether the study is to be conducted nationwide or at certain individual offices. The Guide Book suggests choosing the busiest Customs office in terms of traffic. In Japan, there are 120 Customs ports (designated ports for foreign trade), which are covered by 9 Regional Customs Houses. Japan selected 22 major sea ports and 4 major airports for the study.

(5) Type of goods

The TRS of Japan covers all goods such as container cargoes and conventional cargoes, dutiable goods and non-dutiable goods, based on the recommendation of the Guide Book

(6) Choice of traffic

As Japan is sea locked country, Japan Customs has undertaken the study on sea cargoes and air cargoes.

(7) Sampling

A random sampling method using the customs declaration number was chosen by Japan. More specifically, Japan Customs chose several numbers of the last two-digits of the declaration. During the 8th TRS, 2,800 sea cargo declarations and 4,100 air cargo declarations were selected.

(8) Form

Very similar form which was mentioned in the Guide Book is used for collecting data. Simplified form is not applied.

(9) Collection and recording of data

Collection of data is as follows:

- Cargo (Ship/airplane) arrival time: Customs broker inputs necessary time to the survey sheet by obtaining from computer clearance system (NACCS) or shipping lines
- Cargo unloading time: Customs broker inputs necessary time to the survey sheet by obtaining from the NACCS or warehouse operators
- Customs declaration time: Customs broker inputs time to the survey sheet by obtaining from the NACCS
- Customs permission time: Customs officer inputs time to the survey sheet by obtaining from the NACCS
- Cargo physical release time: Customs broker input time to the survey sheet by obtaining from warehouse operators and other relevant parties
- Declaration time and permission time of the OGAs: Customs requests OGAs to input necessary time to the survey sheet by passing the sheet to the OGAs. Therefore OGA checks all declaration time and permission time one week before the survey period.

(10) Verification and analysis of the data

Japan Customs use a computer system developed by Japan to analyze the collected data.

(11) Questionnaires

Customs sends questionnaires to the Customs broker if the process time is longer than standard time to identify reasons for the delay in the clearance procedures. The questionnaires are collected and analyzed to identify bottle necks in the clearance procedures.

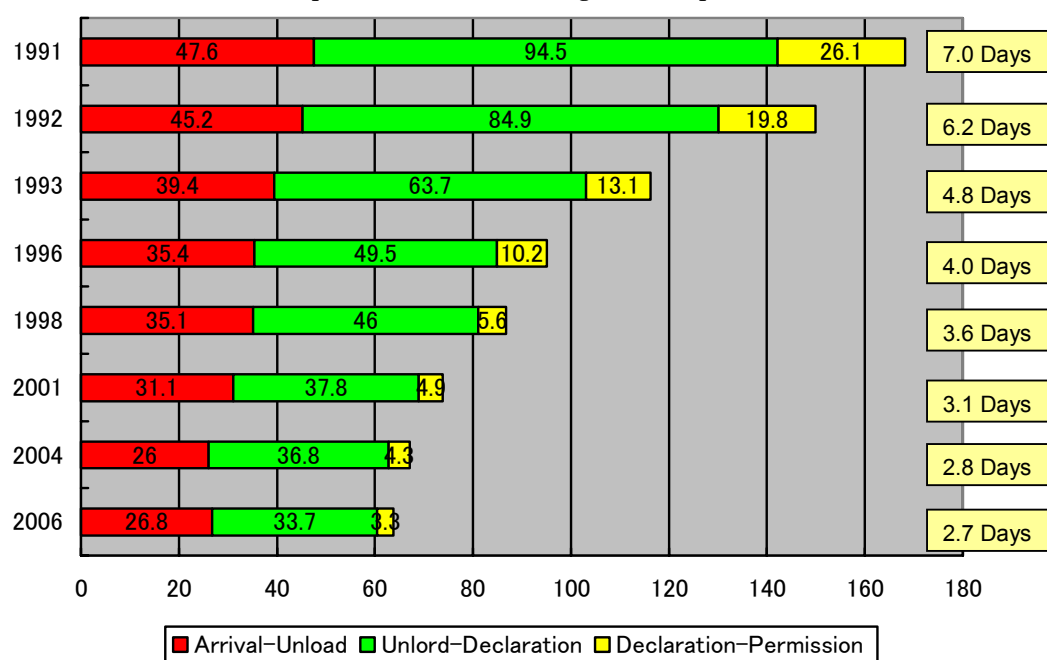
3.1.3 Results of the study

Japan has undertaken TRS 8 times and the following graph shows the results of the study on sea cargoes. During the last fifteen years, Japan Customs has

introduced many modernization schemes, procedures and techniques such as a computer database for risk management, computer clearance system, and the pre-arrival declaration.

When the first TRS was undertaken in 1991, Customs and OGAs had not yet introduced a computer system for sea cargoes. The Customs Clearance system, which covers Customs, Banks and Customs brokers was introduced for sea cargoes in October 1991. The system was introduced at three major ports and it has expanded gradually to cover all of Japan. In Oct. 1999 a new system, which covered shipping companies, container terminals and warehouses, was introduced to all sea ports. The OGAs computer system was introduced and interfaced with Customs system by April. 1997. Then the Single Window System, which covered major trade related government agency's procedures, was introduced in July 2003.

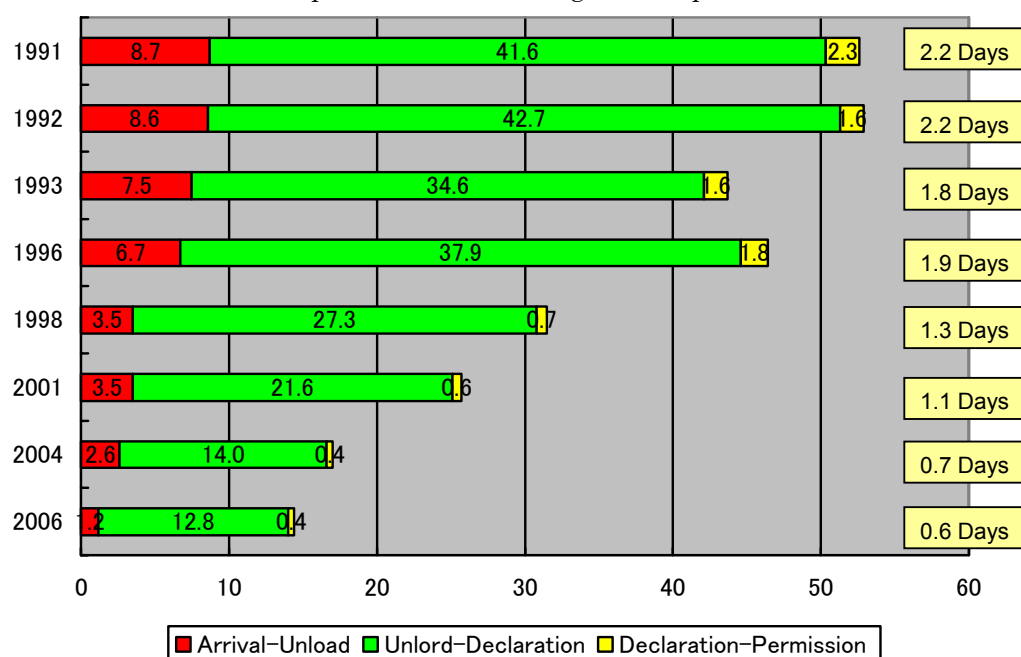
Graph 1: TRS for Sea Cargoes in Japan



In addition, Customs has tried to introduce trade facilitation measures such as a Pre-arrival declaration scheme (Apr. 1991), Immediate permission upon arrival (Oct. 1999), and simplified procedures for authorized person (Mar. 2001). Customs also work closely with the OGAs to facilitate procedures. As a result, the Government of Japan has been able to reduce clearance time, from arrival of cargo to Customs permission, by almost two third within 15 years.

The graph 2 shows the results of the air cargoes TRS in Japan. Air cargo was already computerized in 1991 in Japan; however OGAs procedures were not computerized. Many trade facilitation measures were introduced since 1991 similar to sea cargoes. The biggest impact was made between 1996 and 1998, when Customs introduced deregulation of the control of the clearance area. Because of the small Customs area at Narita airport, the biggest airport in Japan, the ordinary air cargoes were moved to Baraki, designated area located between Narita and Tokyo to clear the goods. Since then, big progress has been achieved for air cargoes clearance. Currently most air cargoes is permitted only half a day after the arrival of the airplane.

Graph 2: TRS for Air Cargoes in Japan

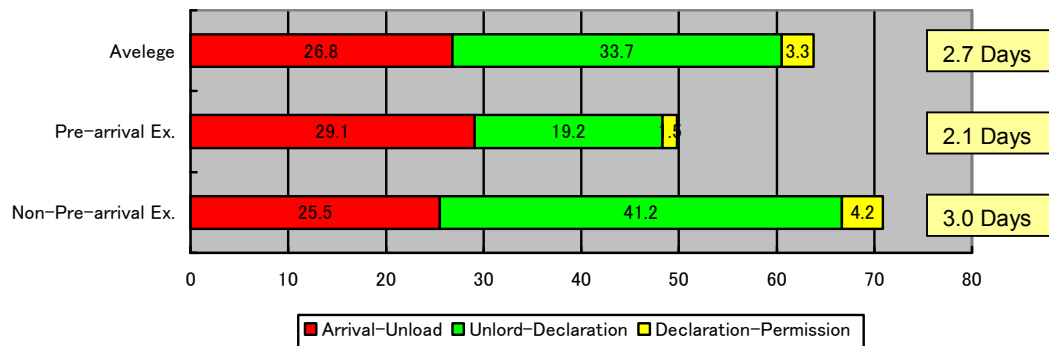


As Japan Customs has disclosed this data to the public through web-site and mass media, traders are able to predict their necessary time for clearing goods. It is also useful to provide peer pressure for OGAs and private sectors such as Customs brokers to simplify and rationalize their procedures.

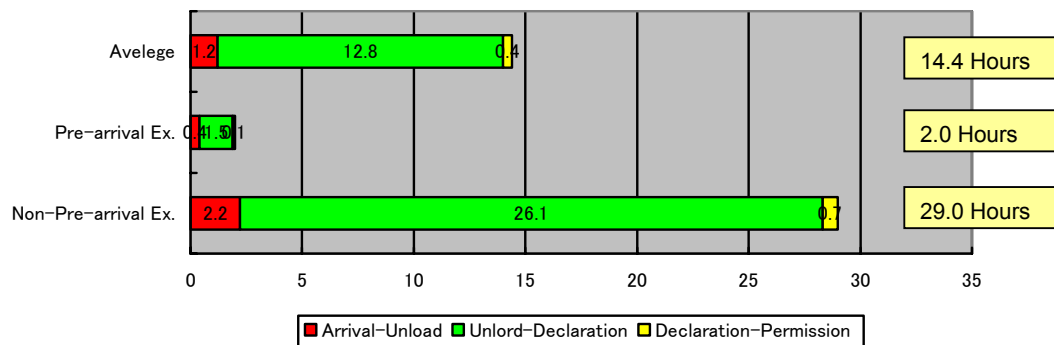
The TRS is able to be used to measure the efficiency of specific procedures or schemes introduced by government agencies. Graph 3 and 4 shows that the average time of the application of the “Pre-arrival Declaration System” for sea cargoes and air cargoes. For sea cargoes, Pre-arrival declaration is about one day shorter than that of non applied declaration. For air cargoes, the efficiency is

more clearly shown in the graph. If traders apply for the scheme, they can get their cargoes within two hours after arrival of the airplane.

Graph 3: Application of pre-arrival declaration for Sea Cargoes (8th TRS)

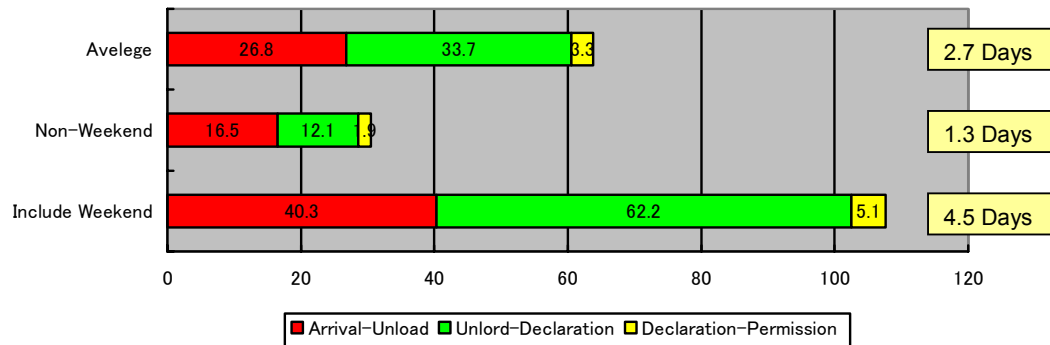


Graph 4: Application of pre-arrival declaration for Air Cargoes (8th TRS)



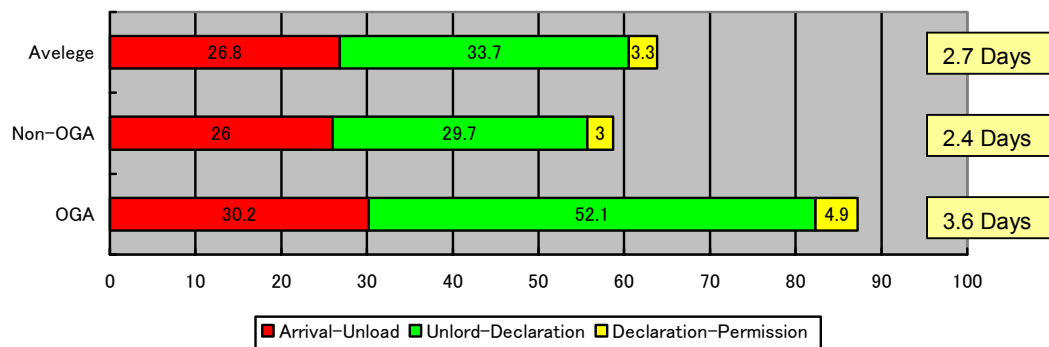
This is another example of the result of the TRS. The 8th TRS revealed that if the clearance process did not include a weekend (Saturday and Sunday), the traders could get their cargoes within 1.3 days after arrival of the vessel at the port. However, if the vessel arrives at the weekend or if the clearance process included the weekend, it took about 4.5 days, 3 times more than week days process. See graph 5 below

Graph 5: Process time of weekend for Sea Cargoes (8th TRS)



Other government Agencies process times are indicated using TRS. The following graph shows the time difference between the process of non-OGAs and including OGAs. It shows that 1.2 days for OGAs' process was requested.

Graph 6: Process time of OGAs for Sea Cargoes (8th TRS)



In the case of Japan Customs, the proper application of the TRS shows that we can gain very useful information for management and administration as well as facilitating trade through the modernization of Customs and OGAs procedures.

3.2 TRS on Korean Customs

3.2.1 Outline of the TRS

Measuring the time required for clearance of imported goods in Korea started rather early. It calculated the time release on a sampling basis by the ad hoc SOC (Social Overhead Capital) planning team under the auspices of the Presidential Office in 1991. Even as the volume of export/imports drastically increased, it had been extremely difficult to make proper investments in Social

Overhead Capital (roads and ports) for it required huge amounts of money and time, thus delays in logistics flow of exports/imports emerged as a roadblock for further economic development and growth of Korea.

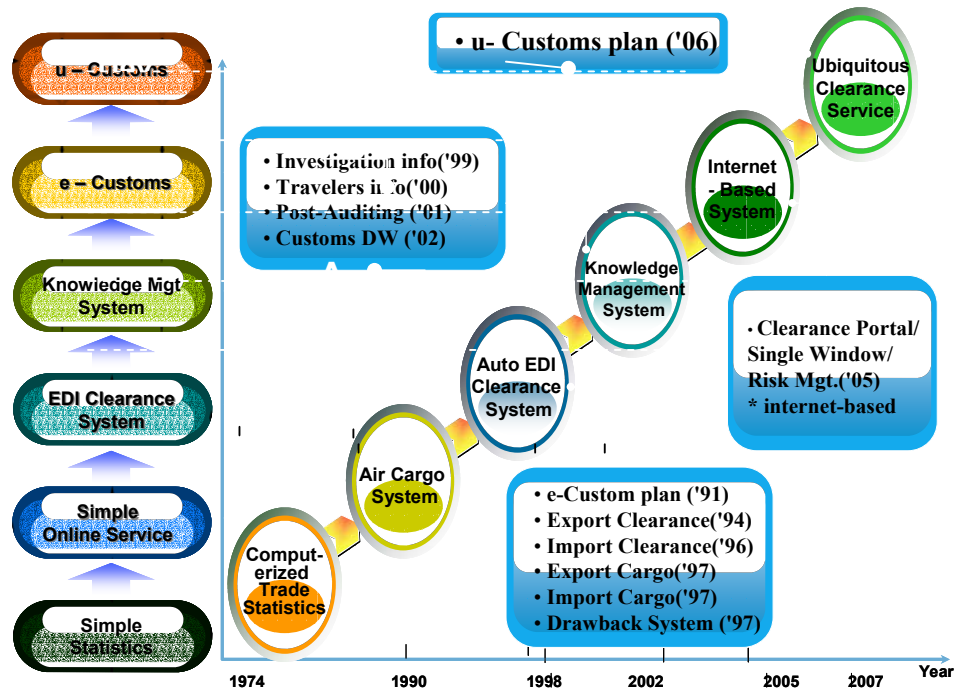
According to a survey done at that time, cargo processing time of imported goods from its arrival at a port to the final release was as long as 23 days on average and the cost required through the process accounted for up to 15% of the total sales.

With these startling figures, the Government of Korea launched special projects to reduce the overall logistics cost. Korea Customs' TRS system was promoted as a diagnostic tool to improve trade related logistics cost. It aimed to locate inefficiencies and bottlenecks to the flow of exported/imported cargo. In particular, Korea Customs Service (KCS) developed a TRS measuring system and implemented follow-up reform measures to drastically improve TRS. As a result of KCS's commitment to trade facilitation, KCS made dramatic improvements in export/import logistics by simplifying complicated clearance procedures and eliminating redundant and bureaucratic red tape without additional large-scale investment.

In Korea, key elements of the TRS are automation. KCS completed the EDI-based import cargo management system and import clearance system in 1997 and, utilizing the processing time recorded in the systems, developed a method of calculating, at major logistics stages, the average processing time of all imported cargoes brought into Korea for certain duration of time.

With the automated clearance system, KCS can measure average cargo clearance time during arrival – storage in bonded area - declaration – approval process, utilizing actual data of Customs clearance. The automated clearance system focused on average clearance time of import declaration for a month. Automation of Clearance and Cargo Management system provided Customs with the additional benefit of tracking the movement of all cargoes over the whole process from its arrival at the port to the final release. The Cargo management system is based on assigning unique cargo management numbers to all imported cargo. It consists of Manifest Ref. No. + Master B/L Sequential No. + House B/L Sequential No.

[Automation map of Korea Customs Service]



In addition to automation of Customs procedures, KCS adopted several reform measures such as pre clearance with Advance Cargo Information, Cargo Selectivity which examines 2.5% of aggregate imported cargoes by Risk Management, Non-intrusive examination, Compliance measurement and Single window system to achieve trade facilitation and reduction of TRS.

In 2006, KCS further developed the existing EDI-based system into an independent, web-based TRS system, which enables automatic TRS measurement of all process and scope on a real-time basis of average processing time, standard deviation and performance of individual logistics participants, and information sharing among stakeholder.

KCS named it - Client-oriented Logistics Information System (CLIS), highlighting its client-oriented function and automated, independent information system. CLIS is differentiated from existing EDI-based TRS measurement systems in that first, its statistics are based on complete enumerations rather than sampling; second, all measurement scope and processes are done by automated, independent system; third, clients can get all related logistics information through the internet free of charge.

3.2.2 TRS Process

Thanks to the advanced automated system, KCS do not need to employ TRS methodology stipulated in the TRS WCO guideline. Instead, KCS measures its TRS simply by running the TRS program every month using clearance data base.

(1) Measurement scope

KCS measures the time spent for all the imported cargoes from its arrival at a port to unloading, transportation, warehousing, certification of OGA's requirement, declaration and release as most Customs administration do (Arrival → Unloading → Transportation → Warehousing → Certification of OGA's Requirement → Declaration → Release). It does not use sampling data, it includes all the import declaration and clearance data.

(2) Measurement period

Basically, KCS measures TRS on a monthly basis, but the Customs and clients including importers can measure the cargo processing time on a quarterly, semi yearly, yearly or on a selected time basis as they want.

(3) Raw data entry for TRS measurement

As the cargo processing time data is captured by the Import Cargo Management System and the Import Clearance System, it is automatically transmitted to CLIS, thus additional data entry for TRS measurement is not necessary.

(4) Statistics generated from measurement results

CLIS provides the time required for processing import declaration by specific type or category of industry or goods and its standard deviation. It can also reprocess raw data on cargo processing time for other purposes and relevant organizations are depending on its data as basic business management tools.

(5) Measurement method and statistics output

Korea's CLIS calculates the cargo processing time of all imports for a certain period of time on the accumulative arithmetical average basis and the statistics data available is something like by each of 1,000 biggest companies, major industry, HS code, trader, customs house, import item, bonded area, bonded transportation company, transportation mode of marine, air or inland, etc. depending on the various client demand.

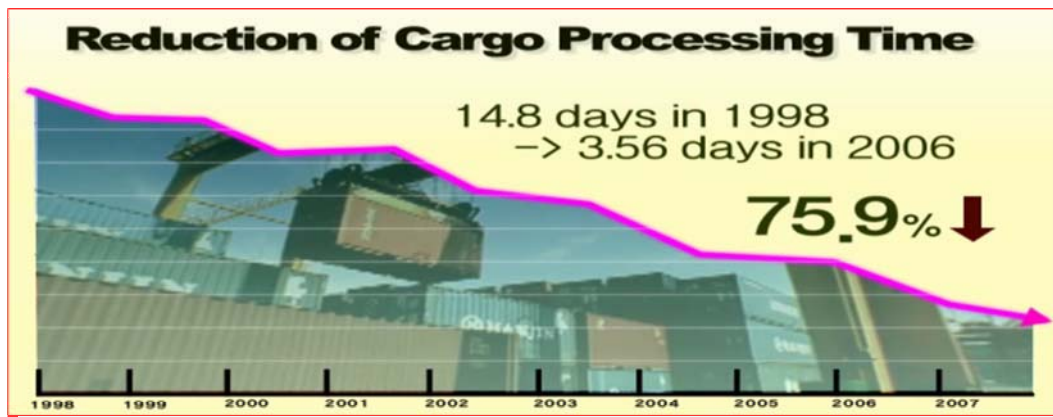
(6) Evaluation of operational efficiency of logistics stakeholder

Korea Customs can measure, compare and assess operational efficiency of customs clients including importers and regional customs houses through regular evaluation of their total processing record (TRS) and reduction in average processing time and standard deviation.

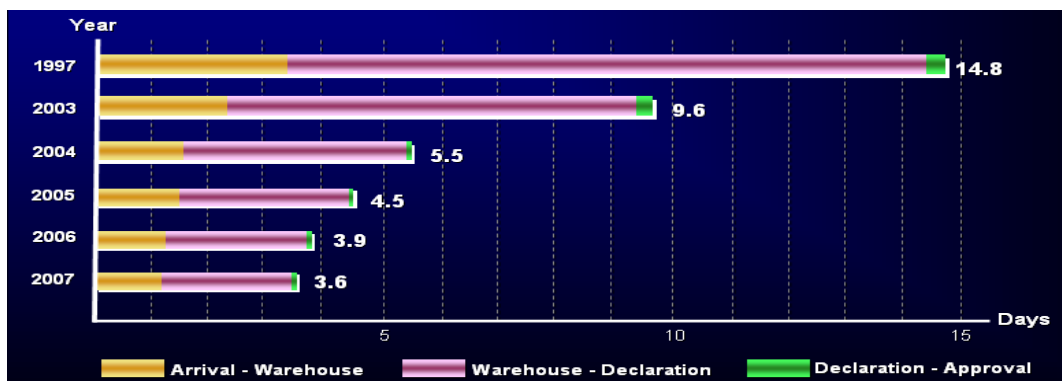
3.2.3 Results of the operation of internet-based electronic TRS

By introducing the TRS in the 1990s, KCS reduced the average TRS by 76% from 14.8 days in 1998 to 3.6 days at the end of 2006, saving US\$2.7billion annually in the national import logistics cost.

[TRS Reduction and its effects]



[TRS Reduction by clearance stages]



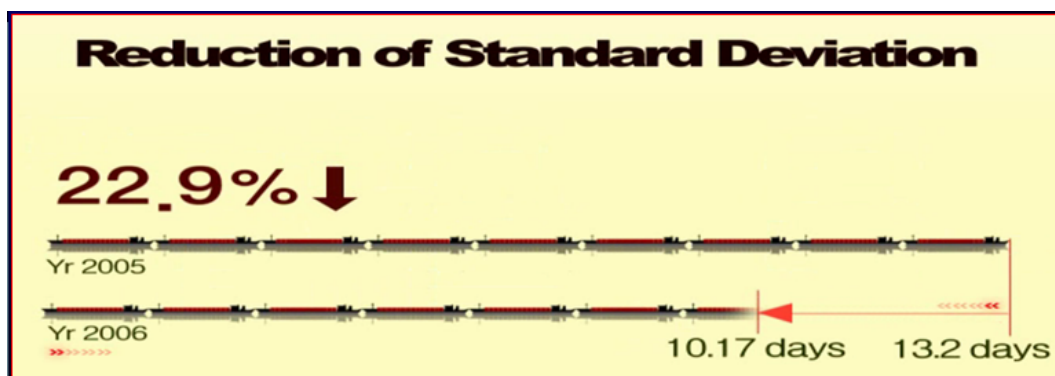
[TRS by mode of transportation, June 2006]

Mode	Arrival Stage (Warehousing, Day)	OGA Stage (OGA approval, Day)	Customs Stage (C. Declaration, Hour)	Total
Air Cargo	0.6	1.91	1:02	2.53
Sea Cargo	2.17	4.4	2:00	6.69
Average	1.34	3.09	1:29	4.5

After substantially reducing the average TRS, KCS began to realize that it is not enough for the business. Business needs predictable clearance service which could be expressed as standard deviation of clearance time. It will help the importers to maximize the just-in-time production technology and reduce huge cost of stockpiling unnecessary components.

In reducing the standard deviation in cargo processing time, KCS utilized CLIS. As a result, the standard deviation shrank by 23% from 13.2 days in 2005 to 10.17 days at the end of 2006.

[Reduction of standard deviation]



CLIS has motivated logistics stakeholders to undertake voluntary innovation of their logistics processes by providing key logistics data essential for their management decision making. It is the cargo processing time and standard deviation data for each importer, customs house, commodities and others on a regular basis, thus enabling information sharing among trading communities.

As a result, it has produced a direct outcome of reduction of TRS and its expected benefits of trade facilitation. It also brought in incalculable benefits such as enhanced transparency, predictability and responsiveness in clearance

operation. Other government agencies (OGAs) and business community also recognize the high value of CLIS, saying that it laid the foundation for such remarkable improvement in customs service quality in Korea. Korea Government also recognized its value by awarding CLIS a presidential prize as a best innovative practice in 2006.

In addition to benefits to the business community, TRS in Korea has proven to be beneficial to Customs. In modern days of government management which emphasizes performance measurements and objective evaluation, TRS have been Korea Customs Key Performance Indicator (KPI) for several years. By successfully managing TRS reduction program, KCS can easily obtain the budgets for Customs automation and support from OGAs to make needed reforms in clearance procedures.

In a nutshell, the TRS is taking roots in Korea as a multipurpose and useful tool for trade facilitation, support for corporate competitiveness and service innovation, which creates a qualitative effect of innovating customs service quality as well as quantitative results such as reducing national and corporate logistics costs with a little expense.

3.3 TRS of other countries in Asia Pacific

So far ROCB has been advised that China, Indonesia, Malaysia, Philippines, and Thailand as well as Japan and Korea undertook the TRS based on the WCO TRS Guide Book. They used several methods. For example, the TRS of Indonesia and Philippines was conducted by consultants and/or university supported by Japan International Cooperation (JICA). Malaysia has conducted TRS several times by herself or assisted by the WCO. China and Thailand had conducted TRS with several major ports/airports as a pilot project. As China Customs has tried many methods, it is worth knowing more about the TRS undertaken in China.

3.3.1 China Case Study

China Customs undertook the TRS to fulfill the obligation of the APEC SCCP Collective Action Plan (CAP), and to identify actual clearance times and bottlenecks of import clearance. As a pilot project, China Customs conducted the TRS on three modes of transport, air, sea and land port. Three major ports in

each mode of transport were decided considering the geographical situation and volume of transactions. The ports are as follows:

Airport: Beijing Airport, Guangzhou Airport and Hangzhou Airport

Seaport: Wusong Seaport (Shanghai), Zhangjiagang Seaport (Nanjing), and Huangdao Seaport (Qingdao)

Landport: Huanggang Landport (border with Hong Kong China)), Huorguosi Landport (border with Kazakhstan), and Dongning Landport (border with Russia)

Three Experts Groups composed of the representatives of above-mentioned nine Customs Districts were established in June 2006 and started to study WCO TRS Guidelines. Beijing Customs District was assigned as leader of the pilot project. Three sub-groups (air, sea, and land) were also established and each group commenced to study the current import procedures and to identify where the necessary data could be found and how to obtain it. They met port and airport authorities to request cooperation with the TRS pilot and to identify whether necessary data could be gained.

They also discussed the implementation of the pilot with IT experts in Customs to assist with obtaining data. Interviews with the private sector such as freight forwarders, airlines and shipping companies, truck operators, container terminal operators, and warehouse operators were carried out by the expert groups to identify the existence of necessary data and to obtain their cooperation.

Then, China Customs organized a workshop on TRS inviting experts from WCO ROCB and Korea Customs under the APEC scheme in August 2006 and representatives from nine Customs Districts attended. Presentations of WCO TRS Guidelines, Japanese TRS experience and Korean TRS experience were introduced during the workshop. Participants and experts discussed many issues picked up during the pre-study research by sub-group members.

After the seminar, each Expert Sub-group decided the formula for the TRS. Considering the status of the pilot project many methods were tested. The air mode of transport sub-group decided to gain necessary data through several computer systems including Customs System and Airline Service Companies systems, etc. The sea mode of transport sub-group decided to gain the data through computer systems and manual questionnaires, and the land sub-group decided to gain the data through computer system and manual work.

Duration of the data collection was also varied. Airport team collected data for 6

months (January to June, 2005) using computer systems. Seaport team collected data from three seaports for respective period, such as one month, two weeks and one week.

From the result of study, it is showed more clearly where the bottleneck of the clearance existed, which would lay a solid foundation for increasing the efficiency of releasing goods.