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Agenda Item: 4(ii)

**Single Window Report - Working Toward the
Implementation of SW in the APEC Economies and
International Interoperability**

Purpose: Consideration
Submitted by: Japan, Chinese Taipei



JAPAN 2010

**Second Sub-Committee on Customs
Procedures Meeting
Tokyo, Japan
15-17 September 2010**



JAPAN 2010

SCCP

Single Window Report

**Working toward the implementation
of SW in the APEC economies
and
International Interoperability**

**Sub-Committee on Customs Procedures (SCCP)
15 September 2010**

1. Foreword

In September 2006, the Single Window Working Group (SWWG) was established under the Sub-Committee on Customs Procedures (SCCP). The SWWG developed the Single Window Strategic Plan which included 6 recommendations for the implementation of single window systems. At the second SCCP meeting held in Singapore in August 2009, the Final Report of the SWWG was endorsed and the SWWG completed its work.

At the first SCCP meeting in 2010, the SCCP members discussed future work on single windows and agreed on 3 action items including conducting a stock-taking study on implementation of a single window system in each economy. This report was compiled from the survey led by Japan and Chinese Taipei on the current situation and difficulties in establishing single window in the APEC economies.

As of August 2010, APEC 21 economies (Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong, China, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, the Philippines, the Russian Federation, Singapore, Chinese Taipei, Thailand, the United States and Viet Nam) participated in the stock-taking study.

2. Overview of the development of single window systems in the APEC region

(1) Single window development and operation

All 21 economies which participated in the study have adopted computer-based cargo clearance systems and most of the systems, except for a few economies' systems which were only recently introduced, process nearly 100% of customs declarations.

13 economies have developed single window systems and 5 economies have single windows systems currently under development. Only 2 economies' single window systems covered all the other trade-related government agencies' procedures, including Customs. Most economies have developed single window systems that link their customs clearance systems with other major trade-related government agencies' systems. The most selected type of single window, which 8 economies have adopted so far, is the Hybrid Model, which is a combination of the Integrated Model and the Interfaced Model. There are some economies that are in the process of transition from the Hybrid Model to the Integrated Model.

In most cases, the Customs administration provides the administrative services for the single window system. In such cases, government funds are provided for the maintenance and operation of the single window system. Meanwhile, single window systems were operated by the private sector in 2 economies.

(2) International interoperability

Each economy has actively used international standards such as the UN/EDIFACT and WCO Data Model in developing its single window system. 10 economies have already started trade-related data/document exchange such as certificates of origin and phytosanitary certificates. For transmission and reception, economies have taken measures such as using EDI (including UN/EDIFACT) or harmonizing data elements between two systems. Some economies have used XML in the exchange of data.

(3) Single window governance

High-level security and reliability to prevent unauthorized computer access are required in single window systems, as well as customs clearance systems. 5 economies introduced a security standard implementation framework such as ISO28000 and BS7799, while the other economies employed unique security methodologies.

Access from users was controlled with various authentication measures such as PIN (Personal Identification Number), Passwords and PKI (Public Key Infrastructure).

(4) Difficulties in the development of single window systems

The following were pointed out as factors that hinder economies from developing single window systems which connect their customs clearance systems and the systems of other trade-related government agencies.

- a) Cost and Benefit (2 economies): There is a relatively low volume of permit transactions and the complexity of some permit requirements requires a relatively high development cost, which is more than the benefit obtained.
- b) Lack of government support (5 economies): There is no political decision and support, no leading agency, and no coordination among trade related government agencies for the development of SW. SW may not be a priority for some trade related government agencies.
- c) Lack of infrastructure/IT Gap (8 economies): There is a varied level of IT awareness and IT readiness among trade related government agencies.
- d) Lack of harmonization of system, procedures and data elements (3 economies): It is difficult to harmonize or coordinate systems, procedures and data elements among trade related government agencies including Customs, in order to develop the SW.
- e) Lack of resources (4 economies): There is a lack of funds/budget and human resources for developing the SW.
- f) Lack of legal framework (2 economies): The laws and regulations needed to implement SW or other computerized systems for trade related government agencies have not been implemented, or lengthy periods of time are required for such changes.
- g) Lack of needs from stakeholders (1 economy): The respective regulatory regime currently operated by those agencies is running in an effective manner, hence there seems no pressing business need for them to establish the SW.

3. Capacity building on the development of single window system and international interoperability.

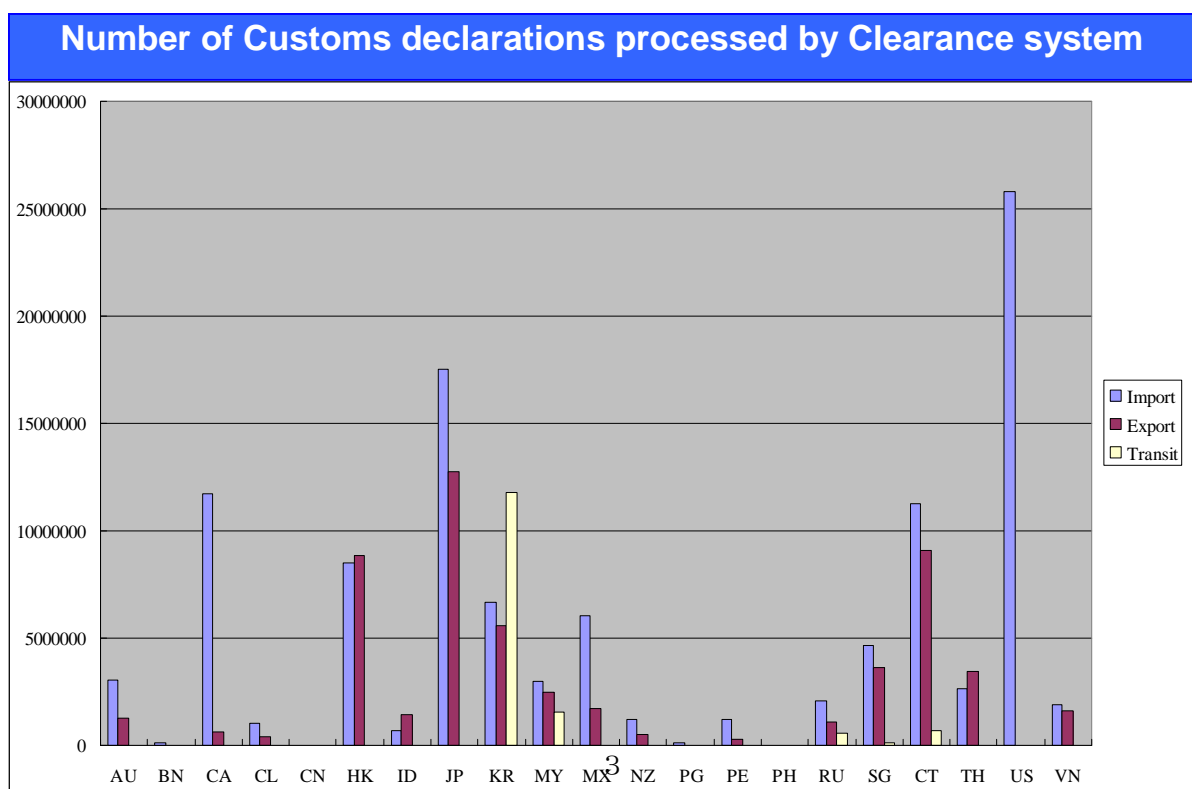
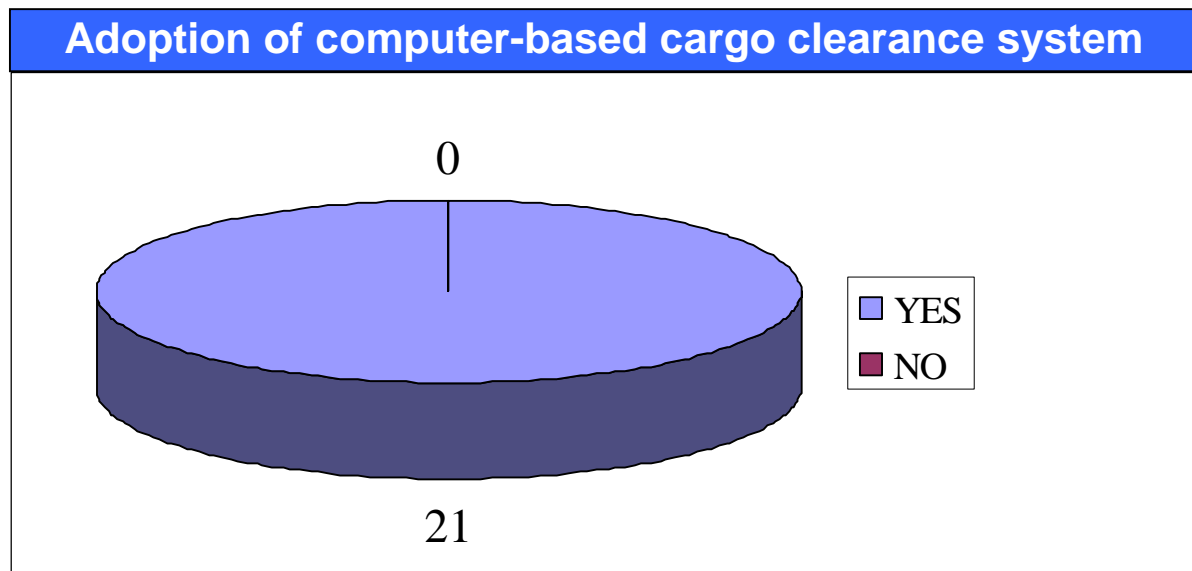
Taking into account these difficulties listed above, the SCCP needs to hold economy specific seminars, upon the request of members, to raise awareness among customs officials and other trade related officials/persons regarding the necessity of developing a single window and the importance of the roles of trade-related government agencies and international standards.

In addition, since the harmonization of data used in international trade and messaging protocol is essential to promote international interoperability (system connectivity) between single window systems, experience sharing by the economies which have already achieved international interoperability is needed.

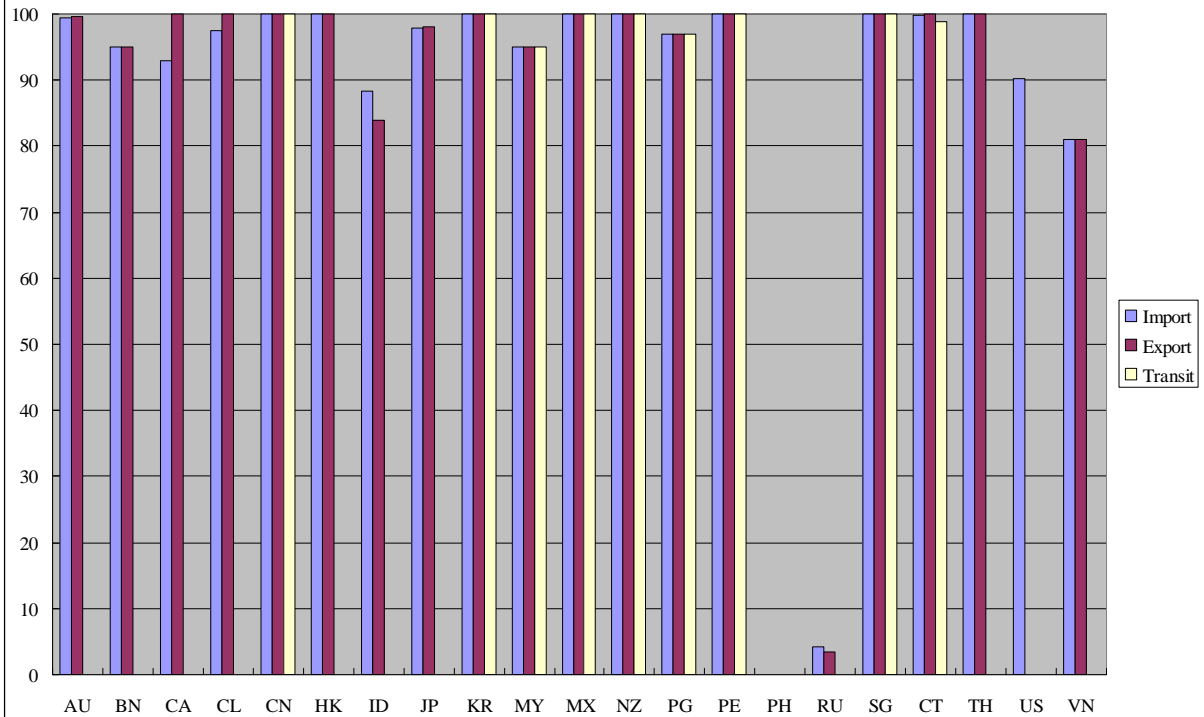
4. Response from SCCP members

(1) Overview of current customs clearance

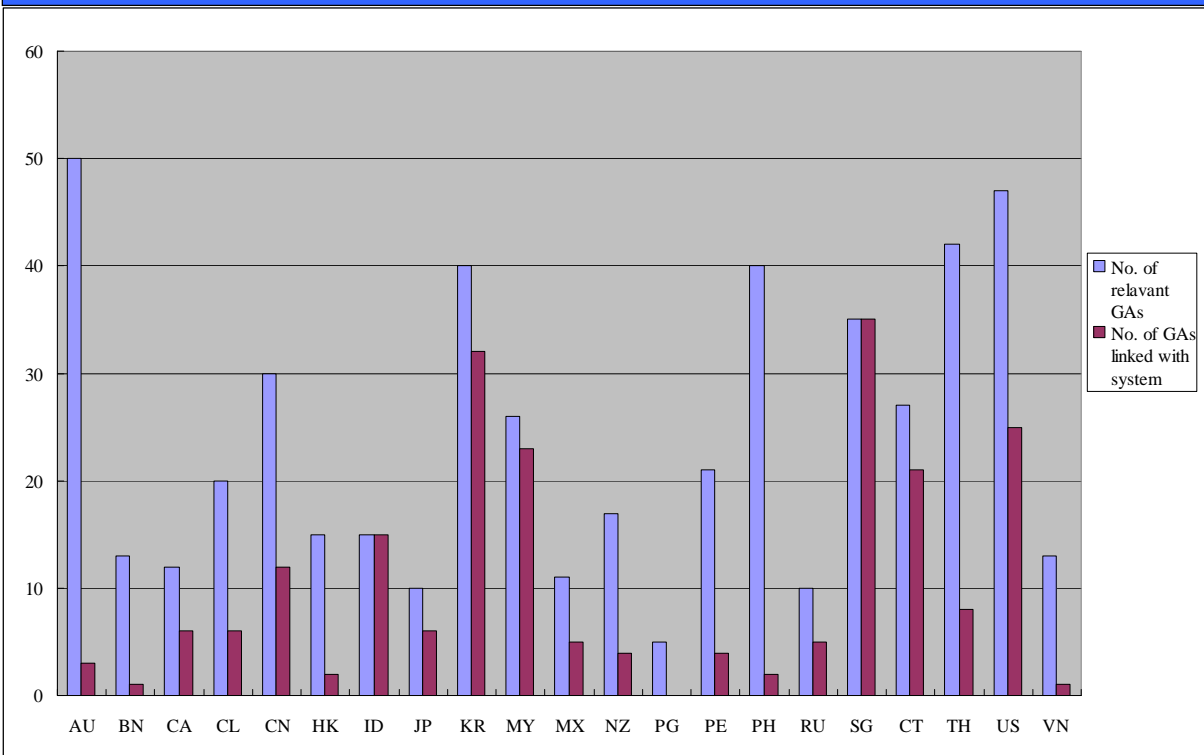
All 21 economies which participated in the study have adopted a computer-based cargo clearance system in their import and export procedures. Although the number of import/export declarations processed by each system varies economy by economy based upon the amount of international trade, the percentage of computer-based clearance to total number of customs clearance extends to 100% or almost 100% in almost all the economies, except in the economies that have only recently adopted such systems. Regarding the interface or integration of systems with other trade-related government agencies, most economies electronically linked their customs clearance systems with the systems of other major trade-related government agencies. 2 economies have achieved electronic linkage among all the systems of trade-related governmental agencies.



Percentages of Customs goods declarations reported electronically



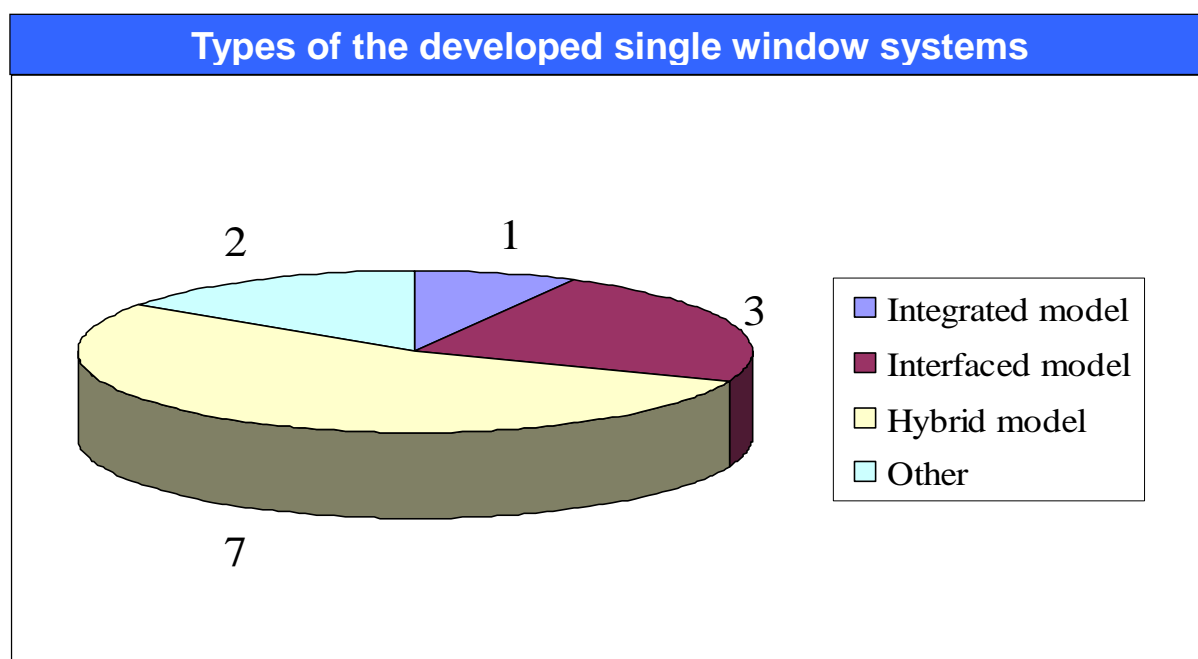
Number of trade-related government agencies and their link with Customs system



(2) Single window planning and development

13 economies have developed single window systems. There are 3 types of single window systems in use: the Integrated Model, Interfaced Model and Hybrid Model. 7 economies have developed Hybrid Model single windows.

In many economies, the Customs administration provides the single window service, and the government funds the operation of the single window in most economies.



10. Who provides Single Window Service, either integrated or interfaced model in line with UNCEFACT Recommendation 33, in your economy?																					
	AU	BN	CA	CL	CN	HK	ID	JP	KR	MY	MX	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN
Customs	X	X	X		X		X		X					X	X	X		X	X	X	
Other Government Agency					X									X							
Semi-Governmental Agency					X																
Private Sector							X			X*											
Other																	X*				
Remarks																					
Singapore																					
Singapore Customs adopted a Public-Private Partnership (PPP) model for the development and implementation of SW service. CrimsonLogic Pte Ltd, a private company, was selected through an open competitive tender to develop, operate and maintain the system. The PPP model enables Singapore Customs to leverage on the capabilities and expertise of the IT company to build and operate the system, while CrimsonLogic is able to recover its capital investments and operating expenses through collecting processing fees from users.																					
Malaysia																					
Private Sector (Government Link Company)																					

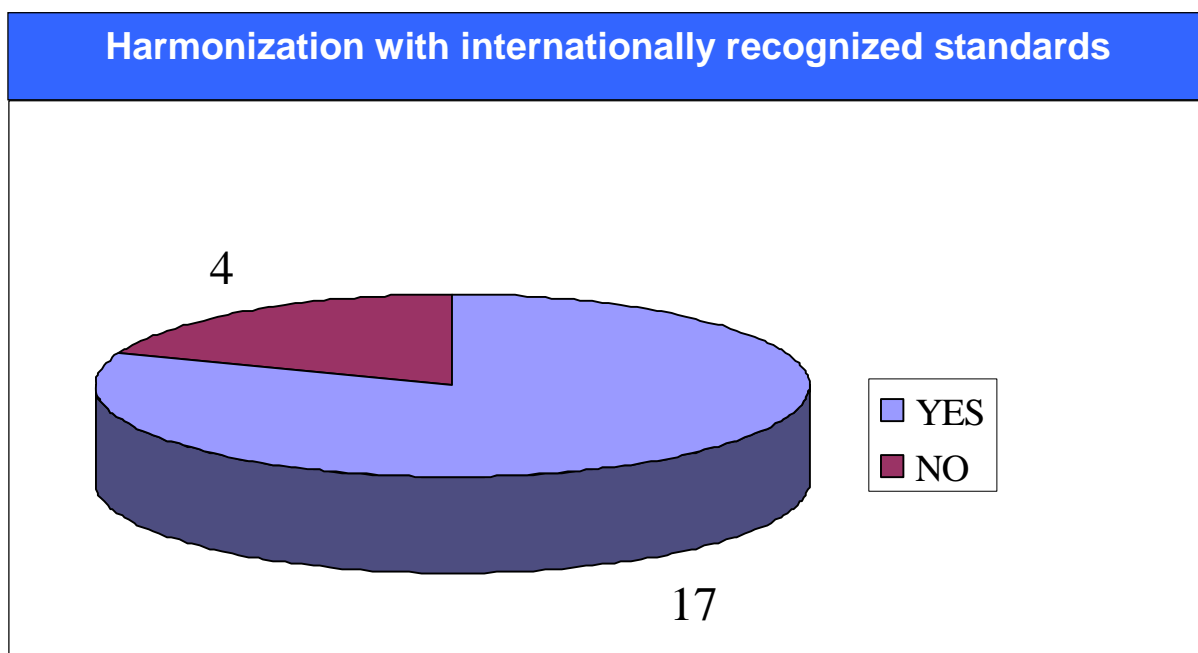
11. How is the maintenance and operation of the Single Window funded?																					
	AU	BN	CA	CL	CN	HK	ID	JP	KR	MY	MX	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN
Entirely funded by government		X	X		X		X	X	X					X*	X			X	X	X	
Public-private partnerships (including partially funded by government)																					
User fees (self-sustainable)								X		X							X				
Other (please provide further information)	X																				
Remarks																					
Australia																					
Government funded with part funding via the Import Processing Charge																					
Peru																					
* In the First Phase, the maintenance and operation will be funded mainly by the Ministry of Foreign Trade and Tourism.																					

The following show the elements which were covered by the customs clearance system in each economy.

8. What kind of business process, functionality and service does Single Window/ One-Stop Service/Customs system cover?																					
Business Process/Functionality/Service	AU	BN	CA	CL	CN	HK	ID	JP	KR	M	M	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN
Common Business entity registration service	X*	X			X	X		X	X						X		X	X			
Common directory of locations and facilities					X			X	X								X	X			
Single user registration service (relevant only for the integrated model)	X	X						X	X					X	X		X	X			
Shared services for Digital Signature certificates					X	X		X*	X					X			X	X			
Shared user authentication	X	X			X	X		X	X					X			X	X			
Import cargo clearance procedures	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X	X	X
Export cargo clearance procedures	X	X	X		X	X	X	X	X	X	X	X	X				X	X	X	X	X
Bonded transit approval/permission	X				X	X		X	X	X	X		X				X	X			
Online information on tariff, restrictions and prohibition for commodities/ products	X	X	X		X	X		X	X	X		X	X	X		X	X	X	X		
Computation of duties taxes and fee (as a shared service across departments and services)	X	X			X	X		X	X	X		X*		X			X	X	X		
Duty and tax payment	X	X	X		X	X		X	X	X	X	X	X	X			X	X	X	X	X
Duty and tax refund and other similar procedures	X	X			X			X	X		X	X					X	X	X		X
Warehouse cargo control	X	X	X		X	X		X	X		X		X				X		X	X	
Submission of cargo manifest	X	X	X		X	X		X	X	X	X	X	X					X	X	X	
Reporting and processing of vessel entrance/departure notice or report to Customs administrations (e.g. ship,	X**		X		X			X	X	X	X	X		X				X	X		
Submission and processing crew/passenger list			X		X			X	X		X	X		X							
Inspection/examination includes automated scheduling of equipment and human resources					X				X			X*						X			
Filing of inspection/ examination results	X	X	X		X	X		X	X			X						X	X		
Quarantine application and approval/permission	X						X	X	X		X	X*		X	X		X	X			
Food sanitation application and approval/permission	X						X	X		X				X	X		X	X			
Import/Export license application and approval/permission		X					X	X	X	X	X			X	X		X	X	X		
Immigration procedures							X					X									
Airport authority's procedures, e.g. aircraft arrival/departure permission							X	X	X											X	
Port authority's procedures, e.g. ship arrival/departure permission							X	X	X					X					X	X	
Reporting of dangerous goods	X						X	X		X				X			X	X	X		
Application and issuance of certificate of origin	X***				X		X**	X	X						X		X	X	X		
Application and issuance of other licenses and permits not specified above					X		X	X							X		X	X			
Application and issuance of advance ruling, e.g. classification, valuation	X	X			X		X	X		X						X		X			
Automated profiling/risk assessment of cargo (selectivity)	X	X	X		X	X		X	X			X					X	X	X		X
Statistical reporting capability	X	X	X		X	X		X	X		X	X	X			X	X	X	X		X
Time Release Survey capability	X				X			X	X												
Other (please provide further information)	X																			X	
Remarks																					
Australia																					
* Customs and Border Protection utilises the Australian Business Register administered by the Australian Tax Office.																					
** Reporting of vessel details is conducted for cargo clearance purposes only. A separate reporting process is conducted for actual vessel clearance, which is used for a range of vessel clearance requirements administered by Customs and Border Protection, Department of Transport (for security reasons), Department of Immigration and the Australian Maritime Safety Authority (for collection of maritime levies).																					
*** Certificates of Origin are not issued by government agencies in Australia and Australian regulatory authorities request COO presentation on a risk assessment and risk management basis.																					
Japan																					
* For the sake of the promotion of electronic reporting, Japan Customs Law was amended in order that applicants signature is not legally required in the electronic environment.																					
** Certificates of origin are issued by the Japan Chamber of Commerce and Industry, and the issuance are made electronically.																					
New Zealand																					
* Limited																					
Viet Nam																					
Banking and insurance industry information processing; Inter-government information processing.																					

(3) International interoperability

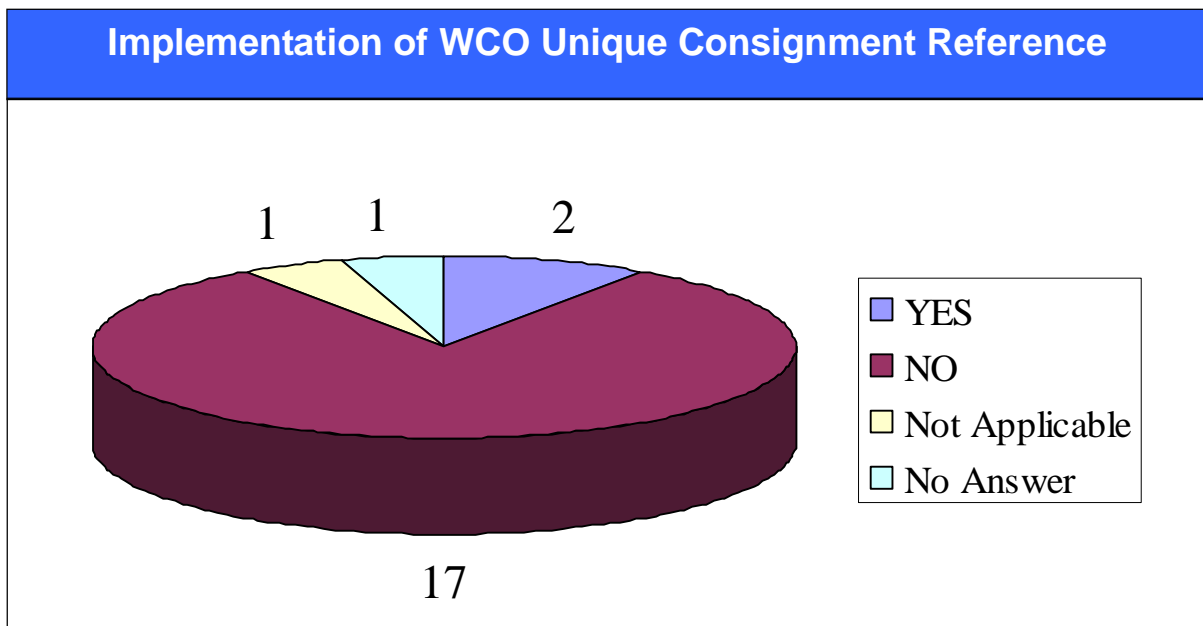
17 economies have used the UN/EDIFACT or WCO Data Model in their customs clearance systems.



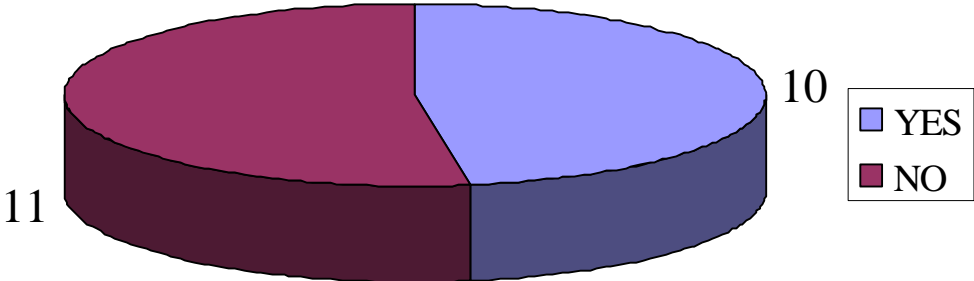
17. Have you harmonised your Single Window participating agency data to an internationally recognised standard? If Yes, what standards were used?																					
	AU	BN	CA	CL	CN	HK	ID	JP	KR	MY	MX	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN
WCO Data Model version 1.1			X																		
WCO Data Model version 2.0	X*	X	X			X	X	X*					X	X	X	X			X		X
WCO Data Model version 3.0	X*							*	X		X			X				X	X		
UNTED (United Nations Trade Data Elements)	X					X	X	X		X	X			X	X			X	X	X	
UNEDIFACT	X						X	X		X	X						X				
UNCEFACT Core Component Library						X				X				X				X	X		
Universal Business Library (UBL)																					
Other																					
Remarks																					
Australia																					
* 58% of inbound message elements are the same as WCO DM v.3 elements. 75% are similar to the WCO DM v.3 elements. (as compared against a draft version of WCO DM v.3 elements)																					
Chile																					
Chile is evaluating the Model to be implemented as well as the international documentary standard to be used.																					
China																					
We are planning to use WCO Data Model version 3.0.																					
Japan																					
* We have preliminary finished mapping work between NACCS data and WCO DM v.3, and have confirmed the consistency of NACCS data elements with those of WCO DM v.3 for customs procedures, but not yet completed for the OGA data elements. We have not installed a translator which converts NACCS messages to WCO DM v.3 messages, as there have been no request made by the private sectors. (We once installed the translator for WCO DM v.2 in the pilot with Canada, but there have been only few transaction made.)																					
Singapore																					
We are studying into alignment of our TradeNet system to the WCO Data Model 3.0.																					

18. What interface and messaging standards do you have or are you planning to incorporate into the Single Window design?																					
	AU	BN	CA	CL	CN	HK	ID	JP	KR	MY	MX	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN
Webservices				X			X	X		X		X		X			X	X			X
MQ	X		X		X							X				X				X	
EDI (including UN/EDIFACT)	X		X				X	X		X	X	X		X			X			X	
XML	X*	X	X	X	X		X		X	X	X	X		X	X	X	X	X	X	X	X
Other (please provide further information)														X*						X*	
Remarks																					
Australia																					
* Internal only																					
Peru																					
* EbXML																					
Thailand																					
* EbXML																					

2 economies have incorporated the UCR (Unique Consignment Reference), which was developed by the WCO, into their single window systems. 10 economies have started trade-related data/document exchange between economies. In exchanging information, various measures have been taken, such as using international standards or harmonizing data elements between two systems.



Information exchange through the SW (International Interoperability)

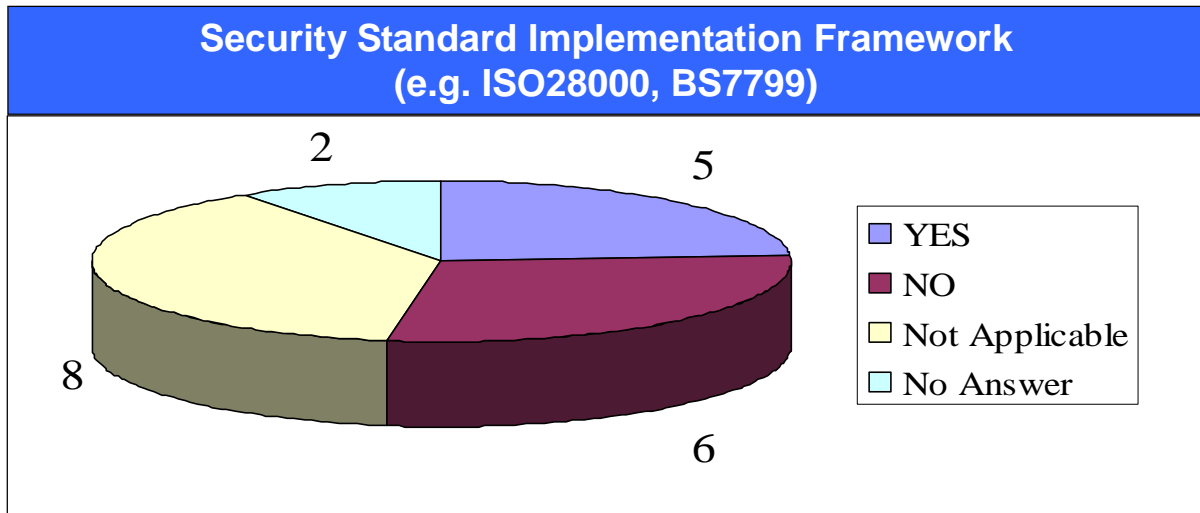


21. If "yes" in question 20, how to enable data exchange between two computer systems?																							
	AU	BN	CA	CL	CN	HK	ID	JP	KR	MY	MX	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN		
Use EDI (including UN/EDIFACT)			X																				
Use XML			X			X	X			X					X					X			
Harmonized data elements between two systems					X						X									X		X	
Other																							

(4) Single window governance

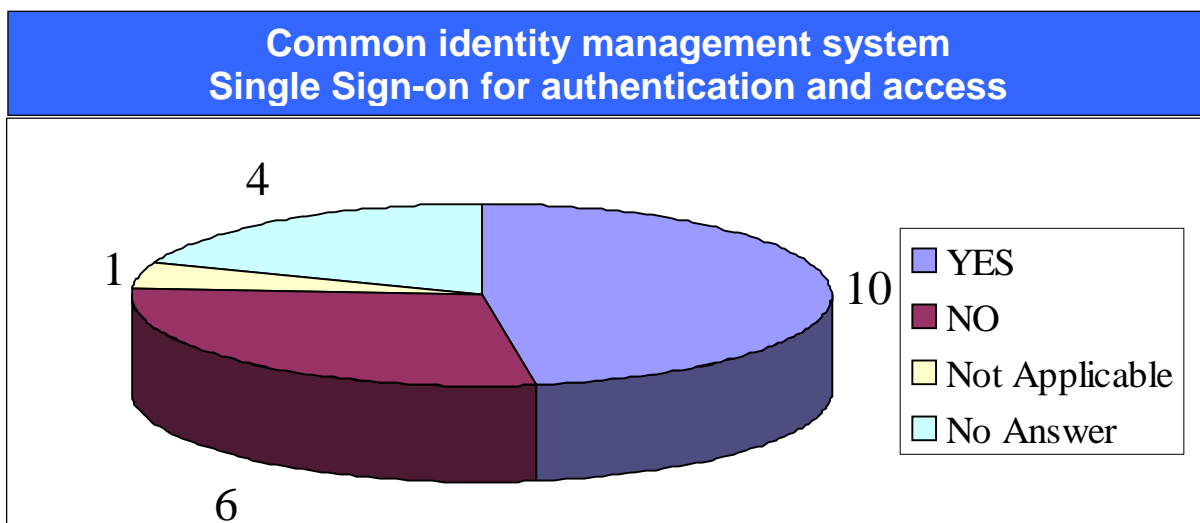
5 economies have applied a security standard implementation framework such as ISO28000 or BS7799. Moreover, all economies have used measures including PIN (Personal Identification Number) and/or passwords, or PKI (Public Key Infrastructure) in authenticating users.

9 economies have used a common identity management system for their single window systems. In addition, 10 economies have implemented “Single Sign-on” for authentication and access to their single window.



24. What type/s of authentication do/will clients use in order to access the Single Window?

	AU	BN	CA	CL	CN	HK	ID	JP	KR	MY	MX	NZ	PG	PE	PH	RU	SG	CT	TH	US	VN
PIN and/or Password system		X					X	X		X			X	X	X		X	X	X	X	
Public Key Infrastructure (PKI)	X		X		X			X	X	X	X				X			X	X		X
Non PKI digital certificates																					
Authentication Tokens																					
Biometrics																					
Smartcard										X											
Other																					



(5) Issues, problems and difficulties for developing single window

Q6. What key factors might have hindered those government agencies from having electronic link with the Customs clearance system?

Australia	<p>Reporting to the Australian Customs and Border Protection Service and the Australian Quarantine Inspection Service represents the bulk of trade reporting in Australia. For a small proportion of transactions, separate contact may also be required with permit issuing agencies to secure permits. In some of these cases, presentation of the permit to Customs and Border Protection (in hard copy or electronically) may also be needed.</p> <p>As a proportion of overall trade transactions, the number relating to permit management is relatively low. The relatively low volume of permit transactions and the complexity of some permit requirements mean that the likely return on investment achievable from further integration of systems for border clearance of goods is not sufficient to warrant significant further work at this time. However, opportunities continue to be explored on a case by case basis for higher volume and higher risk permit management processes to facilitate electronic clearance where practicable.</p>
Brunei Darussalam	<p>Other government agencies are not ready to integrate or do not have computer readiness.</p>
Canada	<p>The key factors Canada Border Services Agency has encountered include cost to participating departments, infrastructure, and the length of time it takes to change legislative and regulatory processes.</p> <p>Costs: Funding pressures facing CBSA and OGDs, competing priorities for scarce resources and expertise have slowed the progress of the development and implementation of the Single Window Initiative.</p> <p>Infrastructure: Participating departments and programs are at varying levels of information and infrastructure readiness; leveraging existing and planned future investments are critical to achieving efficient resource allocation and spending.</p> <p>Legislation and Regulations: Existing and planned legislation and regulations must be enhanced and/or developed to allow for the delegation of responsibilities and tasks related to inspections/examinations. This can be an extremely lengthy process.</p>
Chile	<ul style="list-style-type: none"> • Lack of Government support for aligning institutions. • Low commitment level of the institutions. • Lack of standardization of the requested information. • Different business rules and non-coordinated procedures among Institutions, for issuing previous authorization and certifications. • Technological gap among certain institutions and Customs.
China	<ol style="list-style-type: none"> 1. Difficulty in coordination among agencies. 2. Difficulty in the integration of relevant information systems and reengineering their operational flows

Hong Kong, China	It appears to us that respective regulatory regime currently operated by those agencies are running in an effective manner, hence there seems no pressing business need for them to establish electronic link with the clearance systems of the Hong Kong Customs.
Indonesia	Gap of IT awareness and IT readiness level among Government Agencies
Korea	<ul style="list-style-type: none"> - Requirement verification agencies follow their own set of procedures and that was an obstacle to building an integrated system. - Requirement verification records were not included in the customs clearance system for security reasons.
Malaysia	Budget
Mexico	The requirements of the industry
New Zealand	Their own ICT maturity and capability
Papua New Guinea	Some still on manual, Quarantine(NAQIA), Different systems, No collaboration to work toward SW, No leading agency
Peru	Non political Decision, lack of budget and lack of ICT resources.
The Russian Federation	Currently interagency integrated automated information system (IIAIS) is being developed. Taking IIAIS into force is planning at the end of 2010.

Chinese Taipei	<p>The agencies not having electronic link with the Customs clearance system are those that issue lesser amount of permits.</p> <p>Because of considering that the benefit cannot compare with the economic cost, those agencies haven't had will to connect electronically with the Customs clearance system.</p>
Thailand	Lack of ICT infrastructure, human resource on ICT and relevant laws and regulation
The United States	Not all PGA data is currently collected electronically. New applications need to be developed to accept and process the PGA data.

Q15. If you are developing a Single Window in your economy, have you identified any issues, problems and difficulties that prevent the development of the Single Window? If you have already identified, please describe them as well as needs for capacity building in detail.

Canada	<p>The Issues/Challenges include:</p> <p><u>Time:</u></p> <ul style="list-style-type: none"> • The OGD Single Window may not be a priority for some OGDs and reluctance to modernize their existing processes would impede the progress of the initiative; • Lengthy time required for legislation and regulation changes to occur; • Initial project focus on import programs may mean the project does not address in a timely manner full OGD program requirements (exports, domestic, etc.); <p><u>Scope:</u></p> <ul style="list-style-type: none"> • The analysis of OGD Single Window requirements may recommend new technologies which may need to be harmonized with US CBP technologies; • Deployment plans for all stakeholders may be affected by competing projects and/or priorities; <p><u>Dependencies:</u></p> <ul style="list-style-type: none"> • Different levels of electronic readiness found in the importing community; • Different levels of electronic readiness found with our OGD partners. <p><u>Capacity Building:</u></p> <ul style="list-style-type: none"> • CBSA can offer assistance in: <ul style="list-style-type: none"> ○ Documenting data requirements and cross-referencing to version 3 of the WCO Data Model; ○ Analysis and documentation of business processes and requirements ○ Design, development and implementation of advanced EDI reporting
China	<ol style="list-style-type: none"> 1. Identification and authorization of the leading unit 2. Coordination between stakeholders; 3. Integration of the resources of relevant information systems and reengineering their different operational flows
Indonesia	Cultural management problems such as adaptation difficulties on manual to electronic transition
New Zealand	Too early to tell. The TSW will form part of a Joint Border Management System that will cover 90% of border clearance procedures.
Papua New Guinea	<ol style="list-style-type: none"> 1. No Clear leading agency 2. No Direction by Government 3. Agencies not working together/communication to achieve a single window

Chinese Taipei	<ol style="list-style-type: none"> 1. After harmonizing customs clearance and licensing data elements and introducing WCO Data Model 3.0, stakeholders, such as brokers, carriers and warehouse keepers etc., should cooperate to upgrade or reengineer their own computer systems. How to help them do the jobs will be a big issue for Customs. 2. For adopting innovative services offered by the Single Window, the government agencies need to upgrade legacy systems. Making upgrading would be a challenging issue for some of related agencies.
Viet Nam	<p>Some major challenges which Vietnam shall face:</p> <ul style="list-style-type: none"> - Lack of fund and human resources; - Lack of professional experiences; - Lack of mechanism to exchange data, information as well as co-ordination among government agencies; <p>IT and communication infrastructure do not facilitate implementation of e-commerce and e-transactions</p>

Implementation Status of Customs (as of 31 August 2010)

(1) Overview of Current Customs Clearance		
Electrically linked with all trade-related government agencies	2 economies	ID, SG
(2) Single Window Planning and Development		
Established single window system	13 economies	AU, BN, CA, CL, CN, ID, JP, KR, MY, PH, SG, TH, US
● Integrated Model	1 economies	AU
● Interfaced Model	3 economy	CL, CN, MY
● Hybrid Model	7 economies	BN, ID, JP, KR, PH, SG, TH
● Other	2 economies	CA, US
Under developing single window system	5 economies	MX, NZ, PE, CT, VN
● Integrated Model (among economies under developing single window system)	2 economies	MX, NZ,
● Hybrid Model (among economies under developing single window system)	3 economies	PE,CT, VN
(3) International Interoperability		
Incorporation of Unique Consignment Reference (UCR) into single window system	2 economies	AU, KR
Started exchange of trade data/document	10 economies	CA, CL, CN, HK, ID, MY, MX, PH, TH, VN
(4) Single Window Governance		
Security implementation standard framework such as ISO28000 or BS7799	5 economies	AU, ID, KR, SG, TH
Using a common identity management systems for single window	9 economies	AU, CA, ID, JP, KR, MY, PE, SG, CT
Implementing 'Single Sign-on' for authentication and access to different	10 economies	AU, CN, ID, JP, KR, MY, PE, PH, SG, CT

applications on single window		
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Legend

AU: Australia, BN: Brunei Darussalam, CA: Canada, CL: Chile, CN: China, HK: Hong Kong, China, ID: Indonesia, JP: Japan, KR: Korea, MY: Malaysia, MX: Mexico, NZ: New Zealand, PG: Papua New Guinea, PE: Peru, PH: The Philippines, RU: The Russian Federation, SG: Singapore, CT: Chinese Taipei, TH: Thailand, US: The United States, VN: Viet Nam