Economic Commission for Europe

Inland Transport Committee

Working Party on Customs Questions affecting Transport

Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure

Twentieth session
Prague, 19-20 April 2012
Item 7 of the provisional agenda
Dematerialization of documents attached to the TIR Carnet

World Customs Organisation document on dematerialization of supporting documents

Note by the secretariat

1.   At its eighteenth session, the Informal Ad hoc Expert Group on Conceptual and Technical aspects of Computerization of the TIR Procedure, further referred to as the Expert Group, requested the secretariat to contact World Customs Organization (WCO) to obtain more information on a WCO survey on the use of attached documents and, in case the requirements regarding documents to be attached to the TIR Carnet had not been identified by the survey, to launch a similar survey among TIR Contracting Parties and to present the results at one of its future sessions for further consideration.

2.   The secretariat contacted the WCO secretariat before the survey was launched and agreed with them that sub-questions specific to the TIR procedure could be introduced in the questionnaire. The questionnaire was sent out to all WCO members on 18 April 2011 and the deadline for response was set at 15 June 2011.

3.   For information purposes, the secretariat reproduces, in annex to this document, the complete document on the dematerialization of supporting documents prepared by the WCO on the basis of the survey, including the detailed results of the survey itself.

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WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES
Established in 1952 as the Customs Co-operation Council
Créée en 1952 sous le nom de Conseil de coopération douanière

PERMANENT TECHNICAL
COMMITTEE
-
Information Management
Sub-Committee
-
62nd Meeting
-

PM0306E1a

Brussels, 05 January 2012.

DEMATERIALIZATION OF SUPPORTING DOCUMENTS

SECRETARIAT NOTE

(Item VII (a) of the Agenda)

Background

1.   The Permanent Technical Committee (PTC) had recognized that in most WCO member administrations, Customs and other Cross-Border Regulatory Agencies insisted on the presentation of supporting documents in hardcopy at the time of release. For several years, observers to the PTC representing trade and industry have stated that this practice tended to diminish or negate the potential benefits from electronic filing of Customs declarations and automated cargo clearance procedures. Governments have acknowledged that paper-based processes involving licences, permits and certificates posed significant risks of document manipulation and fraud.

2.   The PTC had agreed that the continuing practice by Customs administrations of asking for a range of documents in hardcopy to be submitted on arrival of goods at import or export worked counter to the principles of trade facilitation. This practice was in clear opposition to the real and expected benefits of supplying import and export declaration as data at, or in advance of export, in standard electronic format. It is in this context that the PTC launched the initiative on 'dematerialization' (or digitization) of supporting documents with the ultimate aim of finding solutions to this problem through a suitable WCO instrument.

3.   The PTC directed the IMSC to undertake a detailed study on the role of 'supporting documents' and to work towards a WCO Recommendation on eliminating the necessity of furnishing supporting documents at the time of release and, where this was unavoidable, to provide secure access to the online or digital versions of these documents.

4.   At its 193-194th session, the PTC took note of the progress made by the IMSC on the dematerialization of supporting documents and agreed that the initiative was of strategic importance to trade facilitation. As part of the guidelines being developed by the IMSC on supporting documents, the PTC suggested the identification of potential

users and their related needs. This would include descriptions of the *minimum features* of electronic access (or electronic versions) that might replace or supplement the original paper. The guidelines should also enumerate the benefits that such electronic access or electronic versions of certificates and documents might provide.

Legal underpinnings

5.   The question of dematerialization has been discussed at the PTC and the IMSC since 2009. The revised Kyoto Convention(RKC) describes the role of supporting documents as an important part of the overall "checking the Goods declaration" in which Customs takes the necessary actions to satisfy themselves that the Goods declaration is correctly made out. In so doing, Customs must therefore demonstrate that the relevant supporting documents fulfill all prescribed conditions. As such, the RKC envisages a role for supporting documents but insists that Customs shall require *only those documents* necessary (i) to permit control of the operation and (ii) to ensure that all requirements relating to the application of Customs law have been complied with. [refer to Standard 3.16 of the General Annex]. In addition, the RKC provides flexibility to Customs administrations in prescribing the timing and manner of lodgement of supporting documents. They may be lodged electronically with Customs (Standard 3.18), lodged prior to the arrival of goods (Standard 3.25), and for valid reasons, submitted within a specified period (Standard 3.17).

Recent developments in technology and industry practice

6.   Besides there being a legal basis for dematerialization, there is also an opportunity created due to recent technological developments. The spread of the ubiquitous, secure and wireless Internet, and reduction in the costs of connectivity have made it possible for organizations to deploy applications used by mobile Customs officials in the field and at the desk. Customs officials can access documentation electronically on portable, handheld devices at the place of examination

7.   The "Apps" or application programs that run on mobile computing devices, are growing evermore popular especially since they are easy to use ("Apps" can be launched by the user by simply choosing an icon on a touch screen)and they are simpler to distribute, install and maintain than conventional computer applications. Anytime, anywhere availability of documentation does away with the need to for copying and collating numerous pieces of paper.

8.   There has been a recent growth in the use of software applications for electronic document management. These software applications store and manage the lifecycle of electronic documents effectively irrespective of whether the documents are scanned images of paper documents or are formatted to contain re-usable data. In the last decade, pieces of legislation concerning corporate governance such as SOX (Sarbanes Oxley) law in the US, legislation concerning electronic healthcare records has encouraged the establishment of robust electronic document management solutions. To support compliance with such legislation, industry provides ready to use and inexpensive solutions for electronic document management including third party document repository and archiving services.

9.   Business processes and workflows that involve the 'review and sign-off' documents exchanged in business transactions have benefited from the recent growth of services of 'on-demand' online electronic signatures, leaving behind the past difficulties associated with the cost of Public Key Infrastructure (PKI) based digital signature. The law in relation to the validity of these signatures is now settled in several countries and that has resulted in the mushrooming of electronic signature service

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providers to support the conclusion of sales contracts and real-estate purchase agreements.

10. Together, the above developments provide for the deployment of very agile and efficient business processes that hold great promise for making dematerialization of supporting documents a practical reality.

Benefits of Dematerialization

11. The case for moving to paperless processes in international trade rests on the fact that it has the potential to reduce delays occurring at the time of release and clearance of cargo. There are other benefits as well. The volume of paper used in international trade would be reduced with consequent beneficial impact on the environment. 'Going green' and saving money go hand in hand when Customs administrations introduce "paper-free" solutions.

12. Dematerialization of supporting documents not only supports a lean and efficient customs clearance process, it also creates a number advantages for downstream business processes of Customs, especially in the area of post-clearance audit and enforcement and miscellaneous functions associated with the management of disputes. Customs officers performing audit and enforcement functions manage documentation in a very challenging setting. With the support of technology for document management, it would be far easier for these officers to collate, share and cross-verify information quickly and efficiently. In post clearance audit, desk-checking and onsite audit verification requires quick access to reports based on Customs declarations and supporting documents. Systematic document management is an absolute necessity for a best-practice modern Customs administration. Where high volumes of documentation are involved, timely accessibility, accuracy and correctness are of essence especially for carrying out audit and enforcement functions.

WCO Survey, Draft WCO Recommendation & Guidelines

13. To support the study on dematerialization, the Secretariat launched a WCO Survey on dematerialization. The Secretariat, with the support of the WCO Data Model Project Team drafted a survey questionnaire, which was circulated in April 2011. Around 50 Customs administrations took part in this study as of October 2011 by sending their replies to the Secretariat. With this limited number of responses, it was observed that the survey outcome needed to be carefully interpreted as describing the survey as a 'participating Customs administrations' practice on supporting documents. As yet the outcome could be construed in a way that provides a general overview of the practice in the entire WCO Membership.

14. The detailed report is placed at Annex I to this document. The following are the key observations:

(a) Customs administrations are still highly dependent on paper forms;

(b) There are frequent and extensive requirements for the submission of supporting documents to apply for or comply with Customs procedures;

(c) Dematerialization has largely been on the policy agenda;

(d) Members generally acknowledge the existence of a basic legal framework for paper-less customs procedures but are not fully aware of the practices involved;

(e)   The relevant services for document archiving and repository are now available; and progress in dematerialization has taken place in several countries.

15.   The PTC has noted that the revised Kyoto Convention envisages both manual and automated customs procedures and provides for standards that could fit both scenarios. Prior to automation of declaration processing, regulatory forms were simple and contained few boxes/columns. These forms mainly left the key regulatory information to be provided in supporting documents, which had to be studied in detail by the Customs officer for the purposes of making release and clearance decisions. For example, crucial information on duties and taxes had to be extracted from the supporting documents, such as the commercial invoice, and the bill of lading. The onus was on Customs officers to study the supporting documents. Obviously, this process was complex and required and even encouraged face-to-face dealings and thus also encouraged manipulations.

16.   With the introduction of automation, the declarant was required to present <u>all</u> regulatory data electronically, which served as the main basis for making determinations concerning admissibility, and the levying of duties & taxes. The onus of analyzing regulatory information shifted to the trader. Customs officers relied upon supporting documents only where the regulatory information could not be supplied electronically or where there was uncertainty. Based on the principles of risk management, Customs officers were permitted to call for supporting documents for verification, either during or after release. In many countries this verification process was routinely carried out on all declarations, increasing the burden on trade. For documentary verification, the trader had to make mandatory appointments for face to face meetings with Customs officers. This practice is inefficient and potentially can lead to collusion as mentioned above. .

17.   The proposed strategy of dematerialization has the following elements:

(a)   The declarant should submit regulatory transactional data electronically via declarations along with references to supporting documents.

(b)   Where it is necessary to submit supporting documents, the declarant should provide electronic accessand such access should be embedded within the electronic declaration.

(c)   Supporting documents should be used only for verification purposes, and the decision on verification should driven by the principles of risk management.

   i. There is no need to routinely verify supporting documents to release the goods.

   ii. Checks are required only for regulatory documents such as licences, and certificates, which are legally mandated or in cases where the risk assessment system requires verification.

(d)   All supporting documents should be presented in dematerialized formats, which should be available in secure and trusted repositories for electronic documents.

(e)   The following three modes of dematerialization were identified:

   (i)   Verification through access to online databases containing records pertaining to supporting documents. In this case, supporting documents

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could be generated at the instance of the transaction and the necessary verification accomplished automatically through electronic queries exchanged between the participating IT systems.

    (ii)   Supporting documents can be presented as portable electronic files to Customs in standard pre-assembled electronic formats. Data contained in these electronic files can be queried electronically and the required verification can be accomplished automatically.

    (iii)   Supporting documents are presented as digitally scanned images of supporting document, where access is in electronic mode but verification routines are manual.

(f)   Online verification through OGA data bases and electronic documents held in 3rd party repositories should be preferred. Scanning of paper documents for later online access should be a transitional arrangement.

(g)   When Customs requires the presentation of a supporting document, officers should invariably access the information through an access key embedded in the electronic declarations.

18.   Based on the above strategy, a draft WCO Recommendation on Dematerialization has been prepared (Annex II). The Recommendation will be presented to the forthcoming PTC for adoption.

19.   The Data Model Project Team's focus group on dematerialization has developed guidelines for dematerialization, describing the scenarios involved in the generation and use of supporting documents. These guidelines follow an end-to-end lifecycle for the management of supporting documents in electronic formats. Effective dematerialization begins with the creation of the supporting document by the document issuing agency in appropriate electronic formats. The document could be authenticated as per the requirements of the parties and regulatory agencies. The guidelines offer explanation on the key role of document repository service providers. Government organizations, Single Window service providers, cargo community systems operators, peak industry organizations and third party private sector providers can all potentially provide electronic document repository services by following the relevant industry standards. The guidelines on supporting documents were first published as part of Volume 2 of the "Compendium on How to Build a Single Window Environment." The focus group has produced an update of the guidelines (Annex III).

Expected Outcome

20.   The IMSC is requested to note the findings of the WCO Survey on Dematerialization (at Annex I) and to approve the draft of the WCO Recommendation on Dematerialization (at Annex II) for PTC's consideration. The IMSC is also requested to take note of the update on the Guidelines on Dematerialization of Supporting Documents(at Annex III).

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WORLD CUSTOMS ORGANIZATION

A Survey of Dematerialization on Supporting Documents

(January 2012)

World Customs Organization

Annex I to
doc. PM0306E1

Table of Contents

List of Abbreviations

References

List of Abbreviations

ACS   Automated Cargo Clearance System
APEC   Asia-Pacific Economic Co-operation
CITES   Convention on International Trade in Endangered Species of Wild Fauna and Flora
DMPT   Data Model Project Team
FIATA   International Federation of Freight Forwarders Associations
FWB Air Waybill data in accordance with the IATA Cargo Services Conference Resolutions
GSP   Generalized System of Preferences
IATA   International Air Transport Association
ICT   Information and Communication Technology
IMO   International Maritime Organization
IMSC   Information Management Sub-Committee
PCA   Post Clearance Audit
TIR   International Transit by Road
TTP   Trusted Third Party
WCO   World Customs Organization

I. Overview

Introduction

A growing number of Customs procedures are conducted by electronic means using automated cargo clearance systems (ACS). According to a recent study[1], many Customs administrations generally operate an ACS for processing Customs declarations and which curtails paperwork, streamlines business processes, and reduces cargo release times. Despite the extensive use of ACS, however, many Customs administrations still require the submission of multiple supporting documents prior to release. This can hinder the effective and efficient flow of goods.

Customs adherence to supporting documents is ostensibly to verify Customs declarations are fully reconciled with the supporting documents to deter misconduct, fraud and other irregularities. Long-standing regulations, legacy systems and vested interests are also behind this practice. Given the pressures for Customs to become more efficient, traders' demand for better service and the increasing complexity of international trade, submission of hard copy documents is redundant and harms trade facilitation. Gradually, some Customs administrations are reducing the requirement for physical presentation of supporting documents but call for traders or brokers to maintain the record of declarations and supporting documents for post clearance audit (PCA).

Technology has existed for over a decade to make electronic documents functionally equivalent to paper documents. Now most functions and operations rendered on a hard copy document can be achieved by digital equivalent. Rapid advances in information and communication technologies (ICT) nurture conducive environments for paperless transactions, while prompting new ideas and solutions for better international trade.

The World Customs Organization (WCO) has taken on the topic of electronic submission of supporting documents since 2006 following industry requests. The key element is to examine the possibility of replacing supporting documents with standard electronic documents or messages. The WCO Single Window Compendium was published and one of the sections is dedicated to a guideline on dematerialization of supporting documents[2]. The WCO Data Model Project Team (DMPT) and the Information Management Sub-Committee (IMSC) have been discussing this topic. Thus, it was decided to conduct a survey on the dematerialization of supporting documents. The findings of the survey will be used to provide the WCO and its Members with insights into the current status of practice in dealing with supporting documents, and will support the development of a recommendation.

Survey questionnaire

The survey questionnaire was conceived by the WCO Secretariat in consultation with the WCO Data Model Project Team (DMPT)'s focus group on the dematerialization of supporting documents. The survey has 89 questions grouped into five sub-sections.

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[1] WCO (2011), *A survey of Single Window implementation*, 2011 August available at http://www.wcoomd.org/home_research_researchseries.htm

[2] WCO (2011), *Single Window Compendium*, 2011

- Inventory of relevant supporting documents;
- Policies and infrastructure;
- Commercial documents;
- Transport documents; and
- Regulatory documents.

The survey questionnaire was first drafted in the WCO's official languages (English and French), and translated into four others – Spanish, Russian, Portuguese and Arabic - with a view to promoting Member participation.

Survey participating countries

The WCO in April circulated the survey questionnaire to all Members. As of December 2011, 50 Members submitted the surveys (28% of the WCO Membership). Of the 50 submissions, 43 were fully completed and seven were not fully completed.

Table 1: Survey of participating countries

WCO region	WCO Member	
East and Southern Africa region	Angola, Botswana, Mozambique, South Africa, Uganda, Zimbabwe	6
Europe region	Albania, Azerbaijan, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Kazakhstan, Moldova, Latvia, Lithuania, Malta, Netherlands, Norway, Slovakia, Slovenia, Switzerland, Turkey, Ukraine , United Kingdom	25
Asia-Pacific region	Australia, Hong Kong China, Indonesia, Japan, Korea, Mongolia, Myanmar	7
North of Africa, Near and Middle East region	Yemen	1
Americas region	Argentina, Canada, Colombia, Costa Rica, Dominican Republic, Mexico, Peru, Trinidad and Tobago, Uruguay	9
West and Central African region	Burkina Faso, Sao Tome and Principe	2

Key observations

1. Survey respondents think that commercial documents, transport documents and regulatory documents are all fairly relevant to dematerialization with no significant disparities among three document types.

2. Many survey respondents consider dematerialization of supporting documents and providing online access as policy objective. The large majority of Customs administrations have a basic legal framework with a digital signature law and general electronic document law in place.

3. Many survey respondents dispense with the need for paper with the availability of online access to supporting documents. Minimum criteria for dispensing with paper, however, are not generally in place. Certified private sector providers for document archiving or repository services are not extensively available.

4. While most survey respondents require supporting documents for import and export procedures, some Customs administrations do not demand supporting documents, or require based upon risk assessment.

5. Supporting documents are frequently required during Customs procedure. Many survey respondents demand the documents at every transaction, while others call for occasionally, only during post audit, or for investigation.

6. The majority of survey respondents require supporting documents prior to release as well as at the time of release. Some respondents demand supporting documents during post release.

7. Paper is the predominant form for supporting document as most survey respondents accept paper documents. Many survey respondents still insist on the presentation of paper documents while refusing other forms.

8. Scanned documents, online declaration or other electronic forms are not extensively accepted by survey respondents.

9. While many survey respondents have a process for standardizing electronic documents, formats are not generally specified.

10. Most surveyed respondents have not implemented the dematerialization of supporting documents. Some implied pilot programs are in operation.

II. Survey analysis

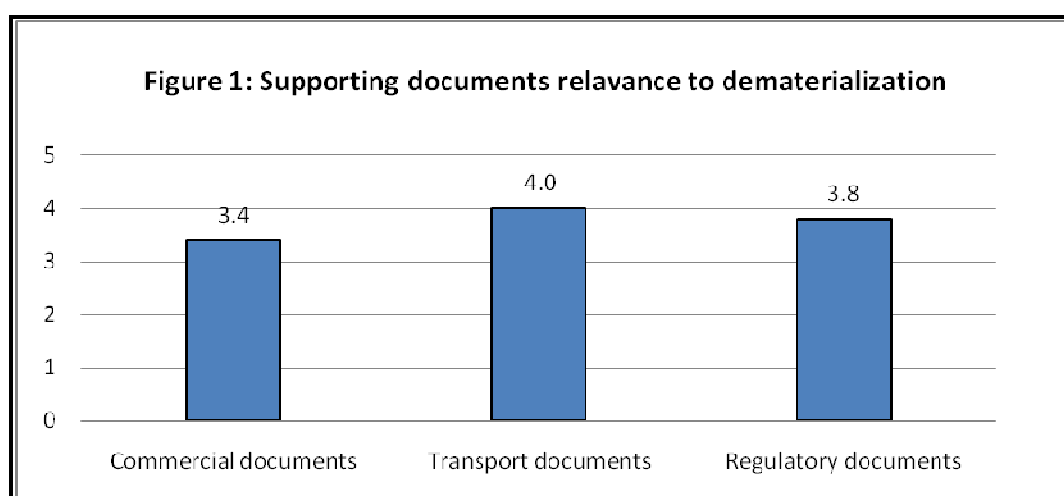### 1. Supporting document's relevance to dematerialization

This section examines the relevance of supporting documents to dematerialization. Respondents are requested to mark points in the range of 1 (low relevance) and 5 (high relevance). The outcome is based upon respondent's individual perception and thus may not reflect the actual relevance of supporting documents to dematerialization.

The survey indicated that all three types of supporting documents – commercial documents, transport documents and regulatory documents – are fairly relevant to dematerialization, and with no significant difference among the three groups. Transport documents obtained the highest average point, followed by regulatory documents and commercial documents.

Of 48 Customs administrations responding to this question:

- Commercial documents: the average point of 3.4;
- Transport documents: the average point of 4.0; and
- Regulatory documents: the average point of 3.8.

See figure 1

Figure 1: Supporting documents relavance to dematerialization

∗ In the survey question, a scale of 1 to 5 was given with 5 the highest relevance.

Among the 35 supporting documents presented in the survey questionnaire, 14 are found highly relevant to dematerialization with the average score above 4.0.

These documents are:

- Commercial documents: commercial invoice
- Transport documents: master bill of lading; airway bill (IATA FWB); and master air waybill

- Regulatory documents: export licence; sanitary certificate (export); veterinary certificate (export); inspection certificate (sanitary); inspection certificate (veterinary); inspection certificate (CITES); declaration of origin; certificate of origin form GSP; import licence; and value declaration.

Table 2: Relevance of supporting document to dematerialization

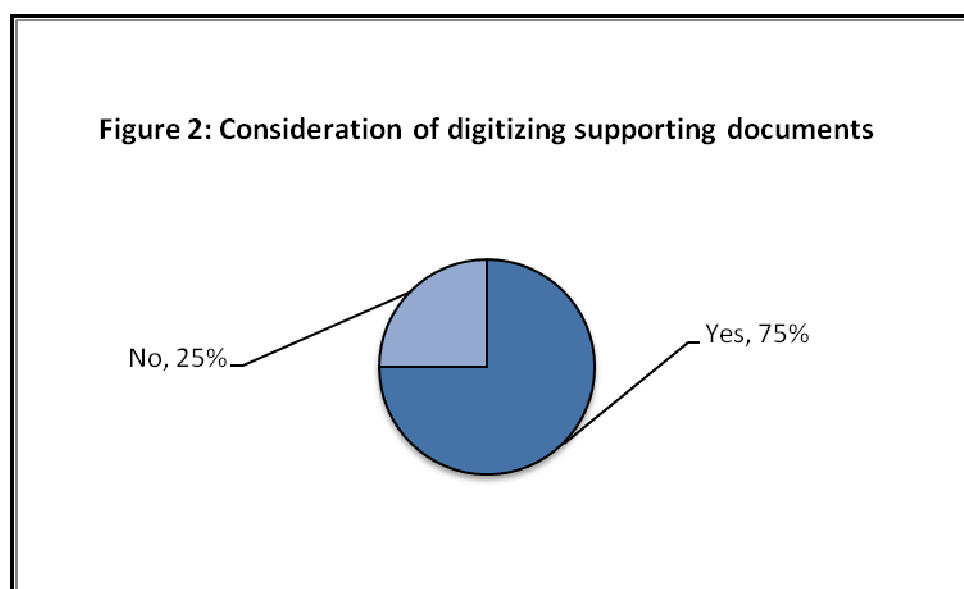| Points	Commercial documents	Transport documents	Regulatory documents
4.1 to 5.0	Commercial invoice	Master bill of lading Air waybill (IATA FWB) Master air waybill	Export licence Sanitary certificate (export) Veterinary certificate (export) Inspection certificate (sanitary) Inspection certificate (veterinary) Inspection certificate (CITES) Declaration of origin Certificate of origin form GSP Import licence Value declaration
3.1 to 4.0	Packing list Proforma invoice	FIATA Negotiable Multimodal Bill of Lading FIATA non-negotiable Multimodal Way Bill Road consignment note	Inspection certificate (phytosanitary) Certificate of analysis Certificate of conformity Certificate of quality Excise certificate Exchange control declaration Transit Despatch note Phytosanitary certificate (export) TIR carnet EUR 1 certificate of origin Control document (T5) Dispatch note model(T2L)
2.1 to 3.0	Product specification Purchase order		Test report Product specification report
Below 2.0	-	-	-

2. Policies and infrastructure

Consideration of digitizing supporting documents

It was indicated that the large majority of surveyed Customs administrations have considered digitization of supporting documents as part of the Customs agenda.

Of 48 Customs administrations that responded to this question:

- 36 (75%) indicated that they have considered digitization of supporting documents;
- 12 (25%) indicated that they have not considered digitization of supporting documents.

See figure 2

Figure 2: Consideration of digitizing supporting documents
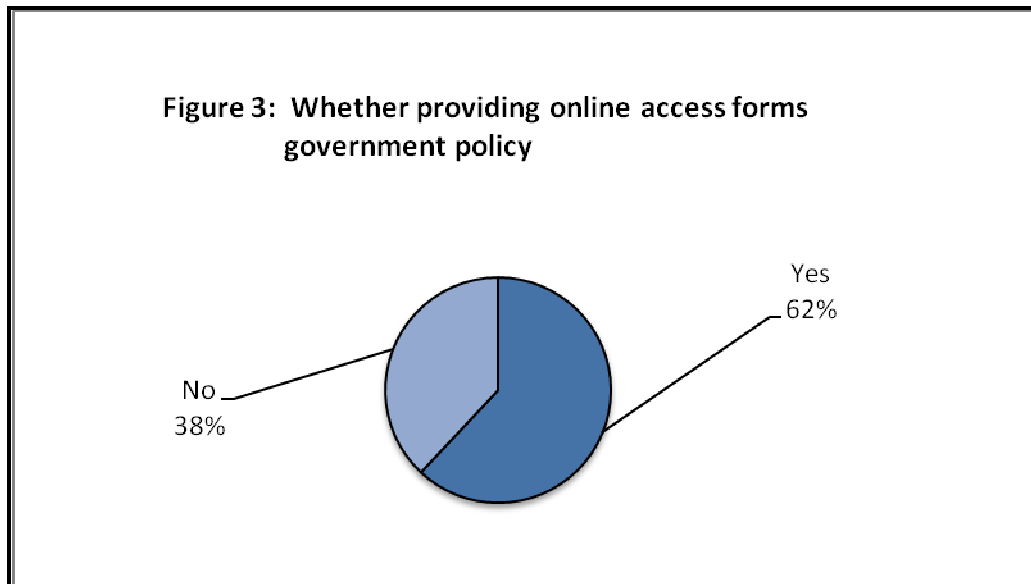
No, 25%

Yes, 75%

Providing online access as government policy

As to the question of whether providing online access forms part of the government policy for streamlining regulatory procedures, the majority of surveyed Customs administrations replied positively.

Of 47 Customs administrations that responded to this question:

- 29 (62%) indicated that providing online access forms part of the government policy;
- 18 (38%) indicated that providing online access does not form part of the government policy.

See figure 3

Figure 3: Whether providing online access forms government policy

Yes 62%

No 38%

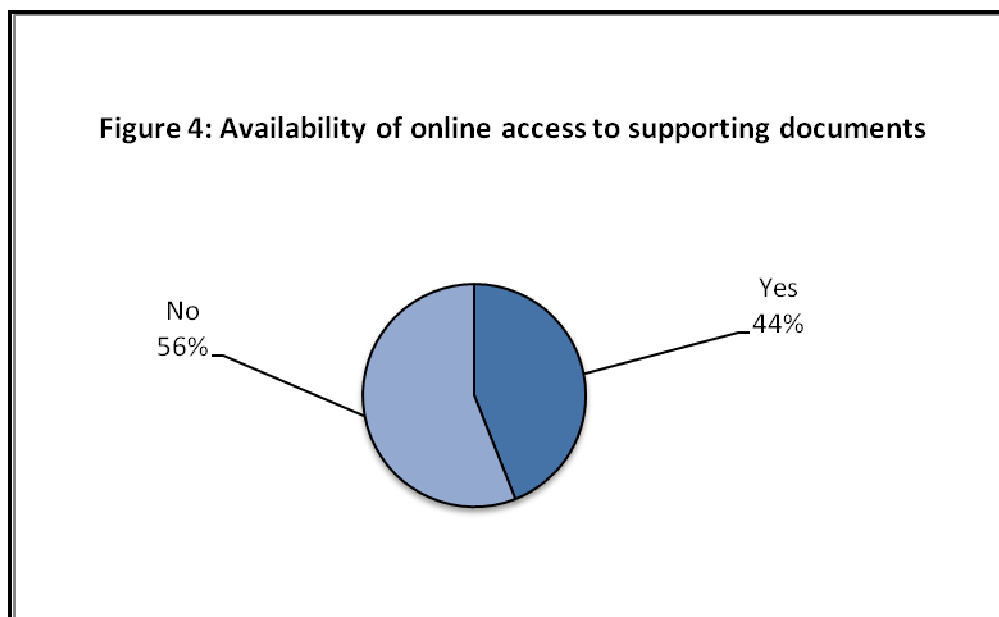### *Availability of online access to supporting documents*

Some surveyed Customs administrations provide or use online access to supporting documents such as certificates.

Of 48 Customs administrations that responded to this question:

- 21 (44%) indicated that they provide or use online access to supporting documents[3]:
- 27 (56%) indicated that they do not provide or use online access to supporting documents.

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[3] 21 Countries which answered positively to this question: Argentina, Azerbaijan, Colombia (export only), Costa Rica, Dominican Republic, France, Germany, Hungary, Indonesia, Japan, Korea, Mexico, Moldova, Mongolia, Peru, São Tomé e Príncipe, South Africa, Switzerland, Turkey, UK, and Uruguay.

See figure 4

Figure 4: Availability of online access to supporting documents

Basic legal framework

Well established and supportive legal provisions pave the way for the implementation of dematerialization. Nowadays, many countries maintain legislations allowing for the recognition of electronic transactions and giving them the same validity as their paper peers. Such legislations are concerned with the following aspects of electronic transactions: giving electronic record similar status to written documents; when and how electronic transactions take place; giving evidentiary weight to electronic and computer-generated records; frameworks under which certification authority may be set up to administer and verify digital signatures; and clarifying the liability of network service providers from third party content[4].

With respect to basic legal framework for dematerialization, the large majority of surveyed Customs administrations stated that there are digital signature law and general electronic document law in their country[5].
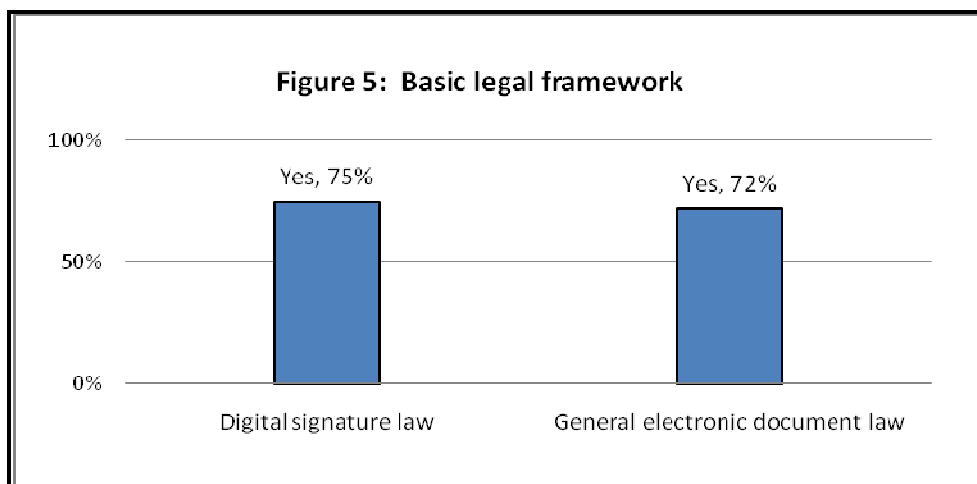
Of Customs administrations that responded to this question:

- 33 (75%) of 44 indicated that their country has a digital signature law;
- 31 (72%) of 43 indicated that their country has a general electronic document law.

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[4] ADB (2005), *Trade Facilitation and Customs Cooperation Implementation Stretegy for Data Exchange between Customs Administrations*, Chan Fook Seng, ADB 2005 November.

[5] For airline industry's regularoty environment, refer to IATA (2009), *IATA e-Freight: Taking the Paper out of Air cargo*, the Global Enabling Trade Report 2009.

See figure 5

Figure 5: Basic legal framework

Dispensing with paper documents

It will substantially reduce the burden of presenting and/or maintaining supporting documents for traders as well as Customs administrations, if it is allowed to dispense with paper supporting documents when Customs administrations have online access to the supporting documents stored in a trusted third party (TTP) – i.e. document archiving and repository services[6], or in other internal or external data bases. To this end, it would be necessary to establish certain criteria for data security, authentication, and reliability.
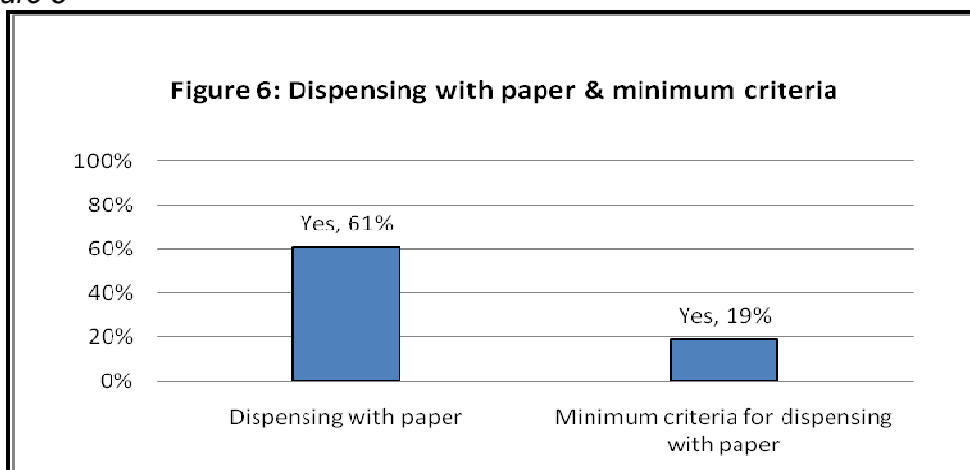
The survey found that the majority of surveyed Customs administrations dispense with the need for paper with the availability of online access to supporting documents. Only a small number of respondents, however, indicated that the minimum criteria for dispensing with paper are in place in their country.

Of Customs administrations that responded to these questions:

* 25 (61%) of 41 indicated that they dispense with the need for paper with the availability of online access to supporting documents;
* Seven (19%) of 37 indicated that there is minimum criteria specified by government for dispensing with paper.

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[6] The International Maritime Organization (IMO) uses the term "the Certified e-Document Authority" which refers to a trusted third party (TTP). For details, refer to IMO (2011*), Certificates and documents required to be carried on board ships and FAL forms,* IMO 2011 June.

See figure 6

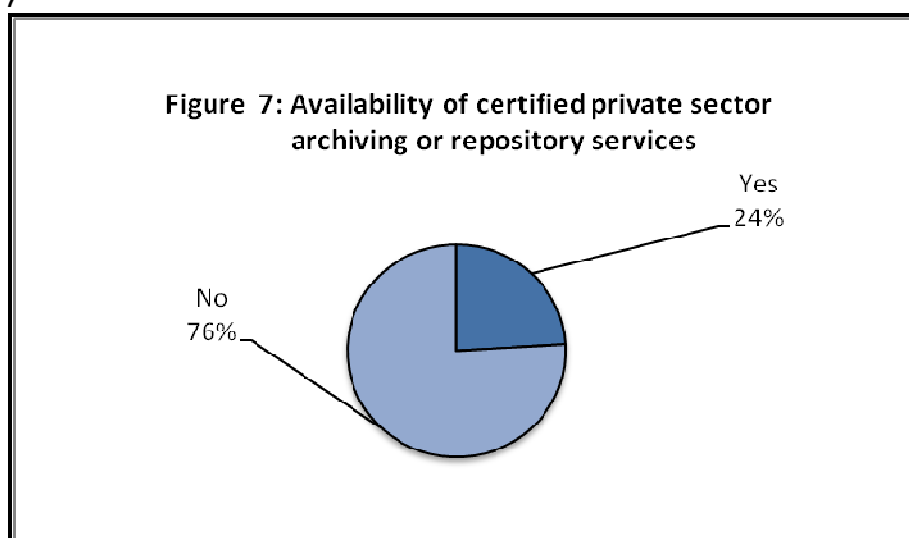### Figure 6: Dispensing with paper & minimum criteria

Availability of document archiving or repository services

With regard to the question of whether there are certified private sector providers for document archiving and repositories services in the country, about one out of four surveyed Customs administrations answered positively.

Of 46 Customs administrations that responded to this question:

- 11 (24%) indicated that there are certified private sector providers for document archiving or repository services in their country[7];
- 35 (76%) indicated that there are no certified private services for document archiving or repositories services in their country.

See figure 7

Figure 7: Availability of certified private sector archiving or repository services

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[7] Eleven countries indicating the availibilty of document archiving or repository services are: Argentina, Costa Rica, Finland, France, Hong Kong China, Hungary, Indonesia, Korea, Peru, South Africa, and Uganda. Urugauy implied the existence of service providers in their planning stage.

3. Supporting document requirement in Customs procedure

Customs procedures requiring supporting documents

With respect to the types of Customs procedures for which Customs administrations require[8] supporting documents, the survey observed that the large majority of surveyed Customs administrations demand supporting documents for import and export procedures respectively. Some Customs administrations, however, do not require supporting documents for all three procedures.

Of Customs administrations that responded to this question:

- 84% indicated that they require supporting documents for import;
- 61% indicated that they require supporting documents for export; and
- 38% indicated that they require supporting documents for transit.

Table 3: Requirement of supporting documents in Customs procedures

	Average[9]	Commercial invoice	Packing list	Transport documents[10]	Origin certificate	Inspection certificates
Import	84% (188/224)	88% (43/49)	76% (29/38)	77% (36/47)	85% (39/46)	93% (41/44)
Export	61% (136/224)	71% (35/49)	68% (26/38)	64% (30/47)	43% (20/46)	57% (25/44)
Transit	38% (86/224)	49% (24/49)	42% (16/38)	49% (23/47)	4% (2/46)	48% (21/44)

∗ Respondents were allowed to make multiple selections for each type of document.

It was noted that 11% of survey Customs administrations indicated that they do not require supporting documents for all three procedures.

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[8] The survey questioinnaire does not provide the definition of "require" whether it means the obligation of presenting supporting documents, or the general responsibilitioes of maintaining supporting documents in the traders' premises for statutory period and making them availible upon request. The meaning may differ from question to question.

[9] Number of combined responses that each document obtained/ total number of Customs administraions that answered to the questions concerned. The same method applies to other analyses.

[10] Tansport documents refer to bill of lading and waybill

Table 4: Requirement of supporting documents in Customs procedures

	Average	Commercial invoice	Packing list	Transport documents	Origin certificate	Inspection certificates
None	11% (25/224)	10% (5/49)	21% (8/38)	17% (8/47)	7% (3/46)	2% (1/44)

Some 24 customs administrations, although they answered positively to the questions above, provided additional remarks to the effect that they usually do not require the presentation of supporting documents unless the cargo is classified as risky[11].

These countries are:

- Commercial invoice; Australia, Cyprus, Estonia, Finland, France, Germany, Hong Kong China, Japan, Korea, Switzerland;
- Packing list: Colombia, Cyprus, Finland, Hong Kong China, Korea, Malta, Peru, Slovenia;
- Transport documents: Canada, Germany, Korea, Malta, Switzerland; and
- Certificate of origin: Denmark.

Some of these countries indicated that they received supporting document information through electronic Customs declarations.

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[11] The combined number of respondents which inidcated no requirement of supporting documents (25) and the requirement of presenting supporting documents only in case of risky cargo (24) is 49, which means 22% (49/224) of total respondents to the questions.

Frequency of supporting document requirement

Regarding the frequency to which supporting documents are required, the majority of surveyed Customs administrations demand at every transaction, followed by occasional basis, only during post audit, and only for investigations.

Of administrations that responded to this question:

- 66% indicated that they require supporting documents at every transaction;
- 30% indicated that they require supporting documents occasionally;
- 18% indicated that they require supporting documents only during post audit; and
- 9% indicated that they require supporting documents only for investigation.

It appears that most surveyed Customs administrations (93%) require certificate of inspection for every transaction.

Table 5: Frequency of requiring supporting documents

	Average	Commercial invoice	Packing list	Transport documents	Origin certificate	Inspection certificates
Every transaction	66% (102/154)	68% (26/38)	45% (13/29)	64% (21/33)	58% (14/24)	93% (28/30)
Occasionally	30% (46/154)	29% (11/38)	48% (14/29)	27% (9/33)	29% (7/24)	17% (5/30)
Only during post audit	18% (27/154)	18% (7/38)	21% (6/29)	15% (5/33)	29% (7/24)	7% (2/30)
Only for investigation	9% (14/154)	8% (3/38)	10% (3/29)	9% (3/33)	17% (4/24)	3% (1/30)

∗ Respondents were allowed to make multiple selections for each type of document.

Stages of supporting document requirement

As to the stages that Customs procedures require supporting documents, about half of survey participating Customs administrations indicated that they require supporting documents prior to release and at the time of release respectively. About one out of four respondents implied that they demand supporting documents post release stage.

Of Customs administrations that responded to this question:

- 53% indicated that they require supporting documents prior to release;
- 57% indicated that they require supporting documents at the time of release; and
- 28% indicated that they require supporting documents during post release.

Table 6: Stages of requiring supporting documents

	Average	Commercial invoice	Packing list	Transport documents	Origin certificate	Inspection certificates
Prior to release	53% (79/148)	57% (20/35)	48% (14/29)	59% (17/29)	44% (11/25)	57% (17/30)
At the time of release	57% (85/148)	54% (19/35)	41% (12/29)	62% (18/29)	60% (15/25)	70% (21/30)
Post release	28% (42/148)	40% (14/35)	28% (8/29)	24% (7/29)	40% (10/25)	10% (3/30)

∗ Respondents were allowed to make multiple selections for each type of document.

Acceptable forms of supporting documents

With regard to the acceptable forms of supporting documents, the survey found that most survey participating Customs administrations allow the submission of paper supporting documents. Among other types of supporting documents, photocopy/fax and scanned documents came next with about one third of acceptance rates respectively. The vast majority of respondents do not usually accept all the other forms of supporting documents.

Of Customs administrations that responded to this question:

- Paper and paper-oriented forms:
    - 88% indicated that they accept supporting documents in paper;
    - 38% indicated that they accept supporting documents in photocopy or fax;
    - 13% indicated that they accept supporting documents via online declaration and then paper with ink-signatures.

- Scanned document form[12]:
    - 36% indicated that they accept supporting documents as a scanned document:

Table 7: Acceptable forms of supporting documents

	Average	Commercial invoice	Packing list	Transport documents	Origin certificate	Inspection certificates
Paper	88% (166/189)	85% (39/46)	82% (27/33)	89% (33/37)	92% (34/37)	92% (33/36)
(Paper only, not accepting other forms)	(43%) (81/189)	(28%) (13/46)	(39%) (13/33)	(32%) (12/37)	(57%) (21/37)	(61%) (22/36)
Photocopy, FAX	38% (72/189)	52% (24/46)	58% (19/33)	43% (16/37)	19% (7/37)	17% (6/36)
Online, then with ink sign	13% (25/189)	22% (10/46)	12% (4/33)	16% (6/37)	5% (2/37)	8% (3/36)
Scanned document	36% (68/189)	54% (25/46)	45% (15/33)	41% (15/37)	24% (9/37)	11% (4/36)
Digital document with no sign	13% (24/189)	22% (10/46)	9% (3/33)	14% (5/37)	8% (3/37)	8% (3/36)
Digital document with digital sign	11% (20/189)	20% (9/46)	9% (3/33)	14% (5/37)	5% (2/37)	3% (1/36)

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[12] Scanned documents can be useful for enhancing traders' compliance by making it impossible to recreate or forge supporting document after the initial declaration was made. Now the computer and scanning devices' capacity expanded remarkably, producing image scanned documents is simple and easy. Reviewing them however, entails Customs officers' manual interventions, while not allowing automated risk assessment.

As part of online goods declaration	16% (30/189)	20% (9/46)	12% (4/33)	19% (7/37)	11% (4/37)	17% (6/36)

∗ Respondents were allowed to make multiple selections for each type of document.

- Other electronic forms:
  - ➢ 13% indicated that they accept supporting documents as a digital document (unsigned):
  - ➢ 11% indicated that they accept supporting documents as a digital document with digital signature; and
  - ➢ 16% indicated that they accept supporting documents submitted online only as part of goods declaration[13].

A separate analysis indicated that approximately 43% of respondents replied that they accept only paper supporting documents, while not accepting any other form of supporting documents. Among the types of supporting documents, this practice gains more prominence for regulatory documents with higher response rates: certificate of origin at 57% and certificates of inspection at 67%.

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[13] This refers to electronic goods declaration with a component of supporting document data elements that enable automatic risk assessment. For instance, if a trader wants to obtain preferential tariff rate, he or she can fill out a form for preferential rule of origin, and send it as part of an online declaration.
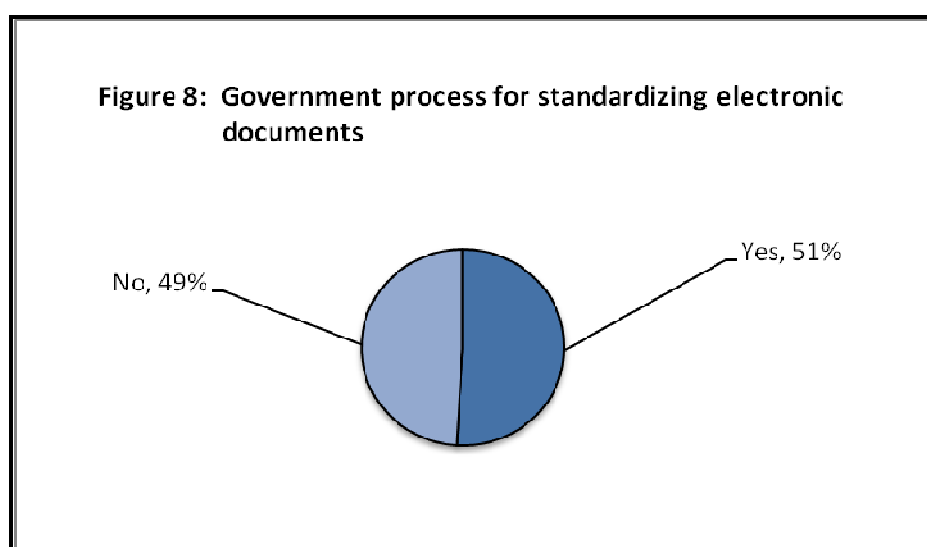
Standardization of supporting documents

Standard format for supporting documents can facilitate the process for document production, review, and circulation. A standard format can be characterized as pre-defined structure for the processing, storage or display of a document.

The survey asked the question with respect to a government process for standardizing electronic documents. About half of surveyed Customs administrations responded positively.

Of 43 Customs administrations that responded to this question:

- 22 (51%) indicated that the government has a process for standardizing electronic documents;
- 21 (49%) indicated that the government does not have a process for standardizing electronic documents.

See figure 8

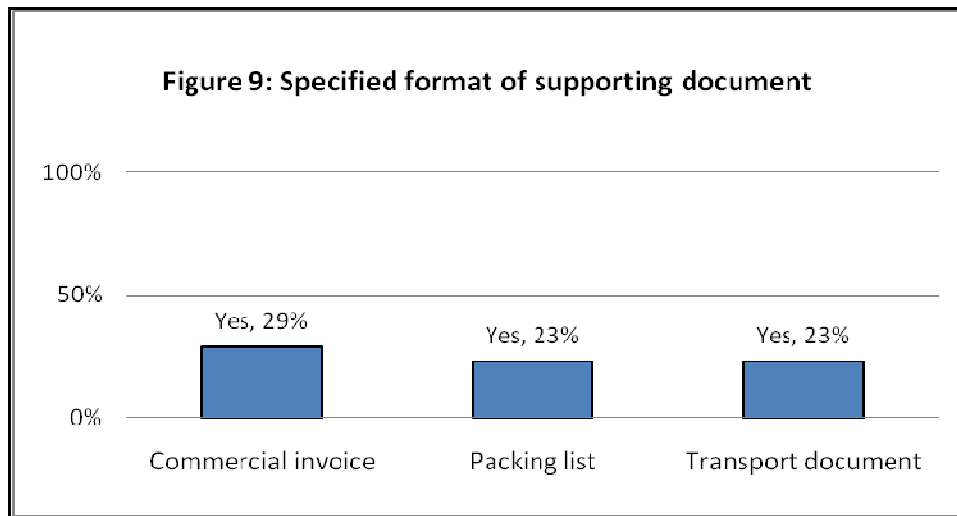Figure 8: Government process for standardizing electronic documents

No, 49% Yes, 51%

In relation to this, the survey asked whether Customs administrations specify format for supporting documents. It was observed that the large majority of Customs administrations surveyed do not specify the format.

 Of Customs administrations that responded to this question:

- 14 (29%) of 48 indicated that they specify the format for commercial invoice;
- six (23%) of 26 indicated that they specify the format for packing list; and
- Nine (23%) of 39 indicated that they specify the format for transport documents.[14]

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[14] As for transport documents, Customs administrations indicated to follow the standard layout of the FIATA Negotiable Multimodal Bill of Lading (Angola, Botswana, Germany, Malta, Moldova, Slovakia, Trinidad and Tobago, and Uganda): to follow the standard layout of the FIATA Non-Negotiable Multimodal Waybill (Angola, Germany, Malta, Slovakia, Trinidad and Tobago, and Uganda): to receive and process the electronic IATA Airwaybill (Canada, Malta, and Trinidad and Tobago).

See figure 9

Figure 9: Specified format of supporting document

Supporting document requirement for transport

The survey asked the kinds of transport supporting documents that Customs administrations require for three transportation modes.

In the air mode, of 45 Customs administrations that responded to this question:

- 35 (78%) indicated that they require master airway bill or house airway bill as applicable;
- 27 (60%) indicated that they require house airway bill along with a copy of the master airway bill in case of consol cargo:
- 12 (27%) indicated that they require cargo arrival notice: and
- 12 (27%) indicated that no supporting document is needed as relevant information is present in cargo manifest.

Table 8: Supporting document requirement for air mode

Types of transport document	Response rate
Master airway bill or house airway bill as applicable	78% (35/45)
House airway bill along with a copy of the master airway bill in case of consol cargo	60% (27/45)
Cargo arrival notice	27% (12/45)
Relevant information is present in cargo manifest, therefore no supporting document is needed	27% (12/45)

In the sea mode, of 43 Customs administrations that responded to this question:

- 12 (28%) indicated that non-negotiable way bill is sufficient:
- 13 (30%) indicated that they require negotiable bill of lading only;
- 29 (67%) indicated that they require master bill of lading or house bill of lading as applicable;
- 19 (44%) indicated that they require freight invoice; and
- 15 (35%) indicated that they require insurance certificate.

Table 9: Supporting document requirement for sea mode

Types of transport document	Response rate
Non-negotiable way bill is sufficient	28% (12/43)
Negotiable bill of lading only	30% (13/43)
Master bill of lading or house bill of lading as applicable	67% (29/43)
Freight invoice	44% (19/43)
Insurance certificate	35% (15/43)

In the road mode, of 37 Customs administrations that responded to this question:

- 28 (76%) indicated that they require road consignment note:
- 13 (35%) indicated that they require bill of lading;
- 16 (43%) indicated that they require freight invoice; and
- 9 (24%) indicated that they require insurance certificate;

Table 10: Supporting document requirement for road mode

	Road consignment note	Bill of lading	Freight invoice	Insurance certificate
Response rate	76% (28/37)	35% (13/37)	43% (16/37)	24% (9/37)

Dematerialization in progress

The survey observed that most surveyed Customs administrations have not implemented dematerialization of supporting documents. About one out of seven Customs administrations implied that they have a pilot program in place.

Of Customs administrations that responded to this question:

- 77% indicated that they have not yet dematerialized supporting documents;
- 15% indicated that a pilot program is available; and
- 7% indicated that their dematerialization is fully implemented.

Table 11: Dematerialization status

	Average	Commercial invoice	Packing list	Transport documents	Origin certificate	Inspection certificates
Not yet	77% (137/177)	69% (31/45)	83% (25/30)	79% (27/34)	79% (27/34)	79% (27/34)
Pilot available	15% (27/177)	20% (9/45)	10% (3/30)	15% (5/34)	21% (7/34)	9% (3/34)
Fully implemented	7% (13/177)	11% (5/45)	7% (2/30)	6% (2/34)	-	12% (4/34)

Table 12: List of countries: dematerialization status

	Fully implemented	Pilot available
Commercial invoice	Canada, Costa Rica, Japan, South Africa, UK	Burkina Faso, Dominican Republic, France, Korea, Mozambique, Netherlands, Peru, Ukraine, Uruguay
Packing list	Japan, South Africa	Burkina Faso, Mozambique, Yemen
Transport documents	Canada, South Africa	Burkina Faso, Korea, Mozambique, Ukraine, Uruguay
Certificate of Origin		Burkina Faso, Dominican Republic, Germany, Japan, Korea, Mozambique, Uruguay
Certificates of Inspection	Colombia, France, Japan, Korea	Burkina Faso, Peru, Uruguay

III. Conclusion

Many international borders suffer from delays in Customs procedure in part due to Customs reliance on supporting documents for clearance procedures. To counteract this challenge, the WCO revised Kyoto Convention recommends electronic commerce methods as an alternative to paper-based documentary requirements[15]. With a view to assisting WCO Members' discussions, the WCO in 2011 conducted a survey of dematerialization of Customs supporting documents with the participation of 50 Members. The main purpose of the survey was to generate additional information and analysis on current practices and infrastructure on Custom supporting documents.

Discussions and observations derived from the study include: Customs strong dependency on paper-oriented supporting documents; frequent and extensive demands in Customs procedure; digitization of supporting documents as policy agenda; basic legal framework: limited availability of document archiving and repository services; supporting documents relevance to dematerialization; and current status on the implementation of dematerialization. These findings are more relevant to survey participating countries rather than Customs administrations worldwide.

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[15] Source: Revised Kyoto Convention, General Annex, Chapter 7 (Applicationi of Information Technology)

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RECOMMENDATION OF THE CUSTOMS CO-OPERATION COUNCIL

ON THE DEMATERIALIZATION OF SUPPORTING DOCUMENTS

(June 2012)

THE CUSTOMS CO-OPERATION COUNCIL[*],

ACKNOWLEDGING that the Customs administrations by and large have introduced automated systems for cargo clearance and have committed to apply information technology to support Customs operations, where it is cost-effective and efficient for Customs and for the trade,

CONSIDERING that the use of paper-based documentation in international trade is expensive, time-consuming and prone to error and malpractice,

RECOGNIZING the rapid development of cost-effective, secure and trusted solutions for electronic document management and repository services, and extensive adoption of these solutions by the industry and administrations,

RECOGNIZING that International organizations, government agencies, and industry associations are increasingly introducing standard formats for electronic documents such as license, certificates, and permits, and are promoting their use in the entire course of the international trade transaction,

DESIRING to reduce the cost of trade and to simplify trade procedures by alleviating the burden of delivering, storing, and presenting original paper-based supporting documents during Customs procedures,

to promote paperless transactions for Customs clearance as an alternative to paper-based documentary requirement, and

to enhance Customs control through the effective use of automated verification and by adopting the principle of risk management,

RECOMMENDS that Members of the Council and all members of the United Nations Organization or its specialized agencies, and Customs or Economic Unions should as far as possible to:

  (1) identify supporting documents that are routinely required for customs clearance with a view to discontinuing the requirement for the presentation of these documents to Customs in hardcopy;

  (2) process the release and clearance of cargo based only on electronic declaration and automated verification:

  (3) select declarations for manual verification of supporting document based on the results of risk assessment;

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[*]   Customs Co-operation Council is the official name of the World Customs Organization (WCO).

(4) enable automated Customs clearance systems to automatically verify information contained in dematerialized supporting documents where such information is accessible electronically in:
- (a) Other Government Agencies data bases
- (b) Single Windows environments (and Cargo Community Systems) on export or import side
- (c) private repositories (of major companies, brokers or services providers);

(5) make information contained in supporting documents accessible by electronic means to Customs officers and automated customs clearance systems,

REQUESTS Members of the Council and members of the United Nations Organization or its specialized agencies, and Customs or Economic Unions which accept this Recommendation to notify the Secretary General of the Council of the date from which they will apply the Recommendation and of the conditions of its application. The Secretary General will transmit this information to the Customs administrations of all Members of the Council. He will also transmit it to the Customs Administrations of the Members of the United Nations Organization or its specialized agencies and to Customs or Economic Unions which have accepted this Recommendation.

Section V: WCO Guide to Single Window Dematerialization of Supporting Documents

[This is an update produced in December 2011 to Section V, Volume 2 of the Single Window Compendium]

1. Executive summary

Supporting documents are a requirement of most cross-border regulatory authorities and are one of the main causes of process delays and costs. The Single Window Environment must provide a comprehensive solution to the question of handling supporting documents through digital means.

In order to facilitate cross-border clearance procedures, their dematerialization should be addressed to enable electronic submission and verification.

To achieve this process it would be prudent to follow the steps listed below:
- **(6)** identify all supporting documentation required at a national level for regulatory declaration separating trade / transport and public sector
- **(7)** establish an inter agencies task force with a mutually defined lead agency
- **(8)** simplify business processes between agencies
- **(9)** address legislative / regulation issues
- **(10)** undertake dematerialization process including access requirements for private sector supporting document data

To provide the access (system or human) to the information a repository service can be provided by a public (eg. agriculture, defense, culture, etc...) or a private sector body (eg. banks, freight forwarders, brokers, individual companies, commercial secure storage companies).

The following ground rules should be kept in mind:
- **(11)** E-documents will be referenced in customs declarations;
- These references will identify the permanent location of the e-document;
- Digital signatures are a means for maintaining authenticity and integrity of the data;
- The signatures and the archived information are long-living and will be valid beyond the life-cycle of the certificate or the Certifying Authority;
- Customs can download e-doc information as and when it needs.

The purpose of this document is to provide a comprehensive guideline on supporting documents dematerialization.

2. Introduction

2.1 What are supporting documents?

Supporting documents are documents required to be submitted in addition to the regulatory declarations. These documents are referred to and relied upon during the release and clearance of goods, means of transport and transport equipment. Supporting documents can be broadly divided into two categories:

(i) Key business documents that form trade and transport exchanges such as the Invoice, Packing List, Purchase Order, Delivery note, Bill of Lading, Consignment Note etc

(ii) Regulatory documents such as Licenses, Certificates, Permits and Others – referred to in the WCO Data Model as LPCO.

A list of supporting documents is enclosed as Annex - VI

2.2 Documents or Data?

A commonly question raised by business manager in respect of supporting documents is that in a Single Window environment, the aim is to simplify the 'paperwork', how are supporting documents relevant? Would all documents not be converted into data? Most people don't consider small pieces of information as documents and make a distinction between highly structured and unstructured information associating only the former with documents. Structured data is useful for transactional purposes while unstructured data is used for narratives.

Business processes in an automated environment relate both to data and documents. The WCO Data Model represents both structured data that can be instantiated not only as meaningful units of data but also as documents. Documents are instances of structured data that carry meaning with reference to a business process. It is well understood that business data in transactional documents have to move between documents. For instance, invoices and bills of lading contain information that 'moves' into regulatory documents like Customs goods declaration.

WCO Data Model identifies 'Declaration' and 'Response' as the main elements of Cross-border Regulatory transactions. The electronic declarations made to the Single Window Environment contain enough information for the regulatory authorities to take regulatory decisions concerning import, export and transit of goods. The information, however, is normally based on a number of other supporting documents, whose references are provided in the Declaration. These references provide means for the regulatory authorities to verify the declared information and help validate them by referring to external sources. Supporting documents provide solidity and certainty with regard to the information provided in the

Declaration. It would of course be preferable if the regulatory authorities and businesses can get rid of references to other documents in their regulatory transactions. That however is far from being the practice as governments continue to insist on having access to supporting documents.

In a Single Window, routines of verification on supporting documents can be achieved by accessing the systems that host them. Such access to electronic documents is in fact access to the structured data held in automated systems. Experts therefore suggest that it is not useful to press with the distinction between business data and documents.

2.3 Purpose of this document

This document aims at providing guidelines on supporting documents in international trade.

These guidelines will highlight the role that supporting documents in different business processes play and how they are produced and managed.

The end-to-end process will be described as well as the lifecycle management of supporting documents.

3. Supply chain and supporting documents

The international trade supply chain is a highly complex network of business relationships and business processes. Experts have produced analytical models to depict the supply chain for different purposes.

The diagram below describes the Buy Ship Pay supply chain. This diagram shows that, all along the supply chain, supporting documents are exchanged. They go with the goods and the means of transport from origin to destination, from the seller to the buyer, from the place of export to the place of import.

Fig. 1: Supply Chain and supporting documents

From export to import, four levels can be seen:

- The first one (L1) is the customs level at the borders: declarations today are mostly electronically lodged by exporters/importers or their customs brokers;

- The transport level (L2) may include the multiple means of transportation from the factory or the works where the goods were produced and shipped to the delivery destination as required by the buyer. The transport level (L2) includes the stops for controls at the borders where authorities apply controls using automated systems operated by port or airport border management authorities for a cargo control, logistics or traffic purposes. In several countries, these are often the ports and airports Cargo Community Systems. A Cargo Community System is a local federation of actors implementing a computerized workflow from the arrival to the departure of the goods including the customs clearance;

- L3 is the single window that facilitates simplified cross-border regulatory agencies procedures which use dematerialized documents and data. All official requirements including certificate requests (origin, licenses, quality, sanitary...) are collected. The 'One-stop shop'

concept can result in the reduction of the number of physical controls. Limited exchange is envisaged between Customs administrations i.e. between L3s.

- The commercial level (L4) - sellers, buyers, banks, insurance companies are exchanging many supporting documents that customs may require for the clearance of the goods or more generally after the clearance.

Supporting documents 'support' cross-border exchanges in international trade. There are several types of cross-border exchanges that take place in the course of international trade. The diagram below depicts the B2B, B2G and G2G exchanges.
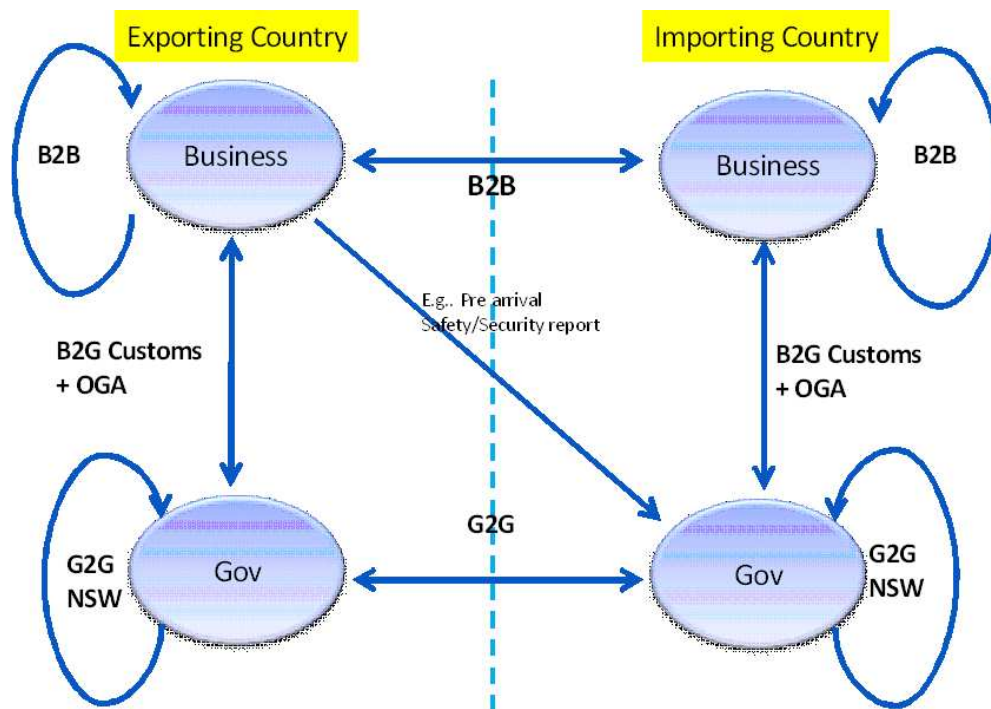

Fig. 2: Cross-border exchanges

In these cross-border exchanges, cross-border jurisdiction is an important issue. While domestic exchanges are governed by national legislation, international exchanges are regulated by international commercial law and international agreements. In the flow of data across frontiers, legal issues concerning the legality and validity of exchanges must be settled.

4. Strategy

In order to achieve dematerialization of supporting documents, it would be prudent to follow the steps listed below:

   (12)   identify all supporting documentation required at a national level for regulatory declaration separating trade / transport and public sector
   (13)   establish an inter agencies task force with a mutually defined lead agency

(14)   simplify business processes between agencies
(15)   address legislative / regulation issues
(16)   undertake dematerialization process including access requirements for private sector supporting document data

5. Collecting basic data on supporting documents

A comprehensive list of supporting documents used in international trade may be prepared nationally. Customs authorities should collect the following data in regard to these documents.

(iii)   Name of the Document
(iv)   Issuing Authority / Agency
(v)   Location of the issuing authority/agency
(vi)   What is the primary legislation and regulation governing the supporting document?
(vii)   Does the regulation prescribe the format of the paper form and/or electronic form? Are there data standards that govern the electronic form? Can the issuing authority be expected to conform with the standard electronic form?
(viii)   At what point in the business process is the supporting document issued?
(ix) At what point in the business process is the document relied upon?
(x)   Whether the supporting document holds deductible amounts or quantities?
(xi)   What is the frequency of use of the document?

6. Dematerialization

The availability of the supporting documents in real-time at an address in the web to Regulatory authorities is an important consideration in the project for dematerialization. Instantaneous access with a mouse-click will greatly facilitate control and cross-checking. To achieve this, the following is suggested:

6.1 Referencing supporting documents in a regulatory declaration

Customs declarations such as goods declarations and cargo reports that are filed by actors in the transport and business levels would include references to the supporting documents. The WCO Data Model contains a grouping of data on supporting documents called 'Additional Document'. In the WCO Data Model, information on supporting documents could be provided at different levels eg at the level of the declaration, at the means of transport level, at the level of the shipment, as part of the regulatory goods item and at the level of the product. The Table I of Annex II provides information regarding the data elements that capture information concerning supporting documents could be included in any cross-border regulatory declaration.

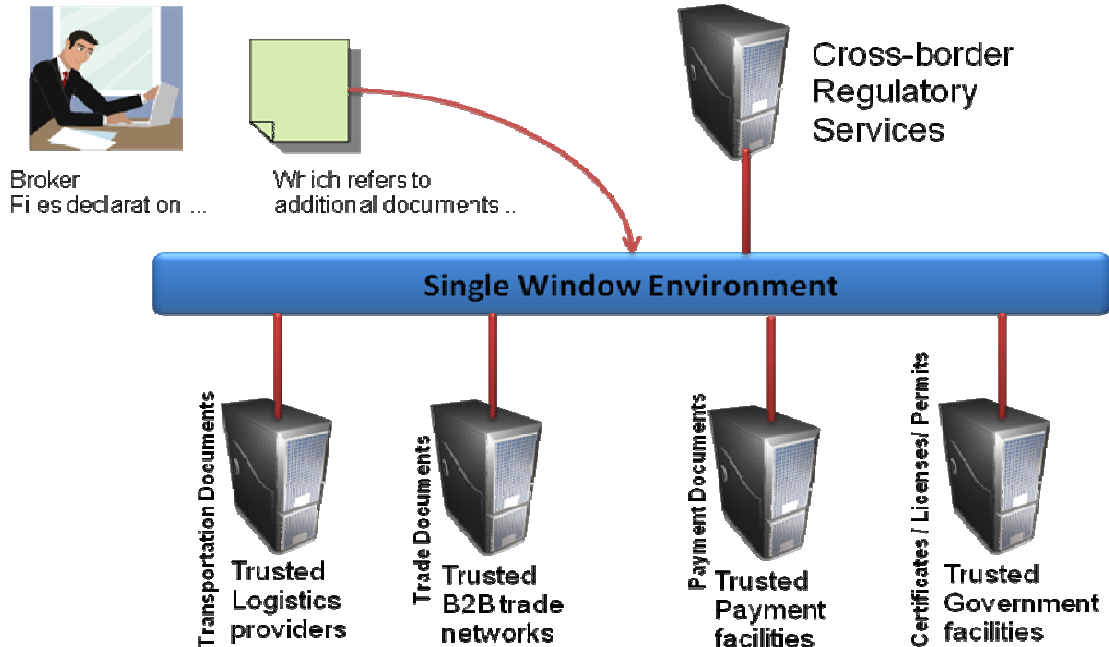## 6.2 Secure electronic repository of supporting documents

These electronic documents are required to be stored securely in a trusted facility. Such a facility should meet the accessibility, security and reliability needs of the parties involved. To formalize the arrangement of secure storage, the issuer or submitter of the supporting document may enter into a legal agreement with the subscribing party or the relying party to the document. The validity of secure access must be co-terminus with the validity of the original declaration to the regulatory authority. For instance, the repository service provided by the exporters/importers/customs brokers or their trusted service providers must keep the document accessible in repositories for all regulatory entities including the customs authorities and their designated IT systems as long as the goods declaration is legally valid.

This repository service can be provided by a public (eg. agriculture, defense, culture, etc…) or a private sector body (eg. banks, freight forwarders, brokers, individual companies, commercial secure storage companies). The access to private repositories could be aligned to trusted trader preferences.

When considering ports or airports Cargo Community Systems, documents or data relative to transport will be made available to authorities.

A global repository service can also be maintained by the National Single Window in charge of gathering all documents going with goods.

The interface between the cross-border regulatory services IT systems and these storage providers should be defined (eg. secured protocols).

Secure repositories of "supporting" document

Fig. 3: Secure repository

6.3 Content of the supporting documents

This guide does not include the electronic formats for supporting documents. There exist several internationally accepted electronic formats to represent supporting documents. The documents can be stored in the standard format. The metadata about the document layout will provide the means for the subscriber parties to access data items in the document. If necessary, the entire content of the document can be downloaded into the regulatory authorities system. Where electronic documents are not present, as an expedient measure, some parties may need scanned images of the supporting documents. In such cases, the content of the supporting document cannot be processed by a machine as they are not dematerialized.

Today, the control of authenticity and integrity of many paper documents is based on rubber-stamp (with ink) or dry stamp. The visa is stamped by the relevant authority on the export side.

When considering dematerializing theses kind of documents the stamp needs to be replaced by something equivalent in terms of value. Every paper based document issued by an authority (or delegated to an authority) on the export side and presented to another authority on the import side can be identified. For example, preferential and non preferential certificates of origin (CO), certificates of conformity, textile import licenses…

6.4 Accessing the supporting documents

The supporting documents stored in the secure repository can be accessed through a secure URL link mapped to the new data element 'Document Location'.

6.5 Digital signature of supporting documents

This document recommends that supporting documents that are dematerialized should be signed using a digital signature certificate. If not digitally signed, the regulatory authorities should keep a time and date stamped fingerprint of the document to protect its integrity during its time life. An incorrect fingerprint indicates that the document has been modified / corrupted since it was fingerprinted.

Electronic signature should comply with normalization (Eg. XMLDSIG or XADES) and be included in the e-doc (enveloped signature, time and date of signature are included and are both signed, certificate of the signer is included but is not signed).

7. Regulatory documents

Customs and other Government Agencies need to access to regulatory documents which may be systematically controlled in order to clear the goods: mostly these are documents issued by an authority (Other Government Agencies - OGA) working in partnership with customs, for example CITES (Washington convention on international trade in endangered species) / sanitary / phytosanitary certificates authorities.

It would be beneficial if the IT systems belonging to the main OGAs are connected and can exchange data with customs in order to release the goods. This scheme is based on the circular flow of trust between Customs and international authorities like CITES.

The Swiss and UK CITES authorities have undertaken a pilot with the objective of using dematerialized certificates (e-cert).

The question of document content was discussed in 6.3 above. There exists a standard developed for CITES and is maintained by the United Nations Environment Program (UNEP). The CITES and WCO Secretariats have initiated discussions focusing on the compliance of the e-cert message and the WCO Data Model.

A four actor business model can be imagined:
A CITES certificate is issued by the export CITES authority. The export customs needs to access to the dematerialized CITES certificate mentioned in the export declaration in order to perform computerized checks between CITES certificate and customs declaration data. The customs can also update the CITES database modifying the real exported quantity and the export status. The exporter sends to the importer (by mail) the reference of the export CITES certificate which can be used to fill the import CITES permit. This information is pulled to the

import CITES authority on request and is available for customs to check with the import declaration data.
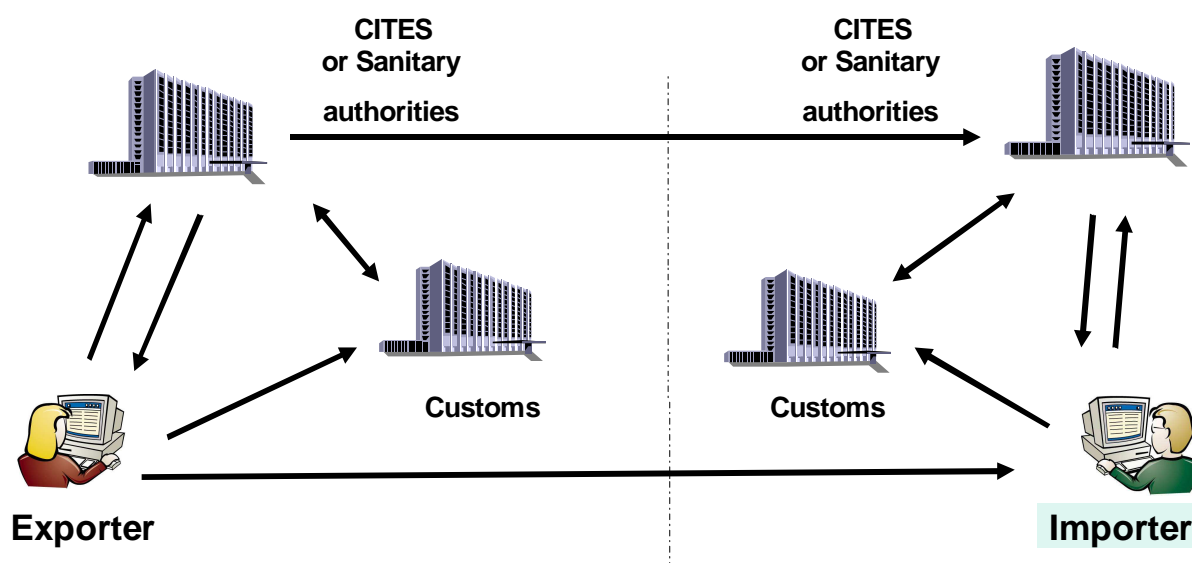

Fig. 4: Customs has an access to OGAs data

8. Other documents

Customs do not request on a general basis certain commonly used supporting documents – i.e. invoices, transport documents. Instead, the customs regulations usually lay down that the importer / exporter – or other entity responsible for paying the customs debt, must avail these documents on request from customs and keep them x years (depending on regulation), giving the customs officers the possibility to scrutinize at an audit or post-control.

There will invariably be initial situations where paper cannot be dropped from the business process as the existing laws and procedures require official seals and signatures. A policy on dematerialization must address the question of a transitional arrangement to use scanned paper documents and to persuade the document issuing authority to move towards an eDocument.

9. Managing a new chain of trust for an end-to-end dematerialization

This project of dematerialization will only have limited effect if undertaken solely at a national level. To be more successful, the management of chain of trust should be addressed at a more global level.

For example, in the case of dematerialization of CITES, sanitary certificates, certificates of origin etc., until the connection between export and import authorities is available (eg. CITES), the import authority may have to formalize an understanding with the export

authority to guarantee the authenticity of an electronically signed document circulating between export and import.

An e-doc is trusted if its digital signature is valid – i.e.:
- the e-doc has not been altered (integrity)
- the issuer of the e-doc is safely authenticated

It's easy to check the integrity of the e-doc, but a trust scheme is needed to authenticate the signer. As a mutual recognition of Certificate Authorities (CA) signatures is still far away – the CA is the entity that issues digital certificates, an e-document by e-document / issuer by issuer approach using a Valid Certificate List (VCL) is proposed to answer the question: "who is allowed to sign what?"

Computerized checks, which would lead to reconsideration of time-costly (and often not carried out), controls of paper document:

- the signature is cryptographically correct
- the certificate used for the signature belongs to the VCL
- none of the certificates of the certification path are revoked (CRL)

This VCL - storing all the approved e-certificates - can be implemented on the export or the import side and used to certify the authenticity of the signatory.
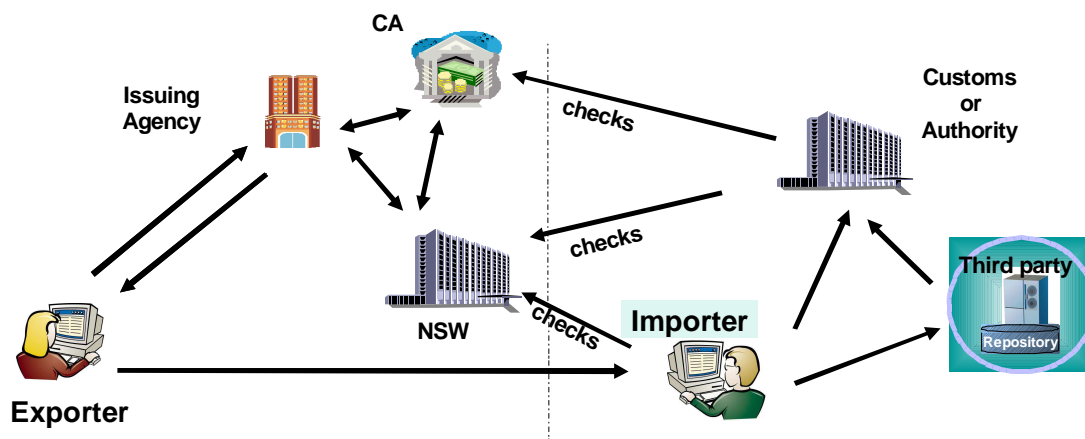

Fig. 5: Import customs has access to e-doc and integrity/authenticity controls

10. Ground rules

The following ground rules should be kept in mind:

(17) E-documents will be referenced in customs declarations;

- These references will identify the permanent location of the e-document;

- Digital signatures are a means for maintaining authenticity and integrity of the data;

- The signatures and the archived information are long-living and will be valid beyond the life-cycle of the certificate or the Certificate Authority;

- Customs can download e-doc information as and when it needs.

ANNEX I – The WCO dematerialization survey

The Permanent Technical Committee has proposed that the WCO Secretary undertakes a study on the role of supporting documents in clearance of cargo at the border. The survey had about 90 questions grouped into five sub-sections (inventory of relevant supporting documents, policies and infrastructure, commercial documents, transport documents and regulatory documents).

As of December 2011, 50 Members submitted. The outcomes should be interpreted as relevant to the survey participating Members.

Key observations

1. Participants think that commercial document, transport document and regulatory document are all fairly relevant to dematerialization with no significant disparities among three document types.

2. Many customs administrations consider dematerialization of supporting documents and providing online access as policy agenda. The large majority of Customs administrations have basic legal framework with a digital signature law and general electronic document law in place.

3. Many Customs administrations dispense with the need for paper with the availability of online access to supporting documents. Minimum criteria for dispensing with paper, however are not generally in place. Certified private sector providers for document archiving or repository services are not extensively available.

4. While most Customs administrations require supporting documents for import and export procedures, some Customs administrations do not demand supporting documents, or require based upon risk assessment.

5. Supporting documents are frequently required during Customs procedure. Many Customs administrations demand the documents at every transaction, while some Customs administrations call for occasionally, only during post audit, or for investigation.

6. The majority of Customs administrations require supporting documents prior to release as well as at the time of release. Some Customs administrations demand supporting documents during post release.

7. Paper is the predominant form for supporting document as most Customs administrations accept paper documents. Many Customs administrations still insist on the presentation of paper documents while refusing other forms.

8. Scanned documents, online declaration or other electronic forms are not extensively accepted by Customs administrations.

9. While many Customs administrations have a process for standardizing electronic documents, formats are not generally specified by Customs administrations.

10. Most surveyed countries have not implemented the dematerialization of supporting documents. Some countries implied pilot programs in operation.

ANNEX II – Business cases
ANNEX IIa - The French customs wine controlled term of origin model

To prevent fraud and fight against counterfeit products, French wine federations (Champagne, Cognac, Armagnac) issue « paper » certificates by delegation. These documents can be verified by import authorities.

In the framework of dematerialization projects, the French customs has developed a pilot including computerized controls of e-documents.
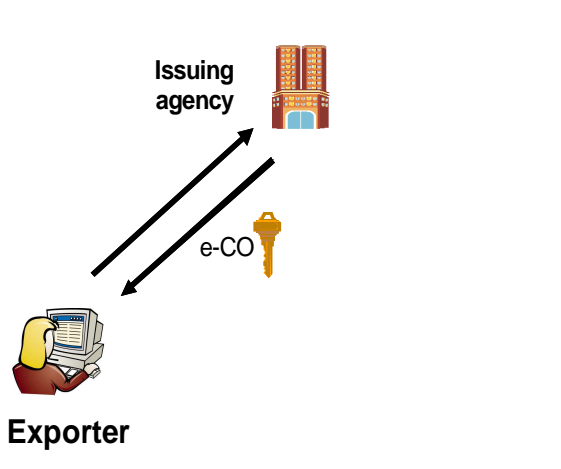
Case study:

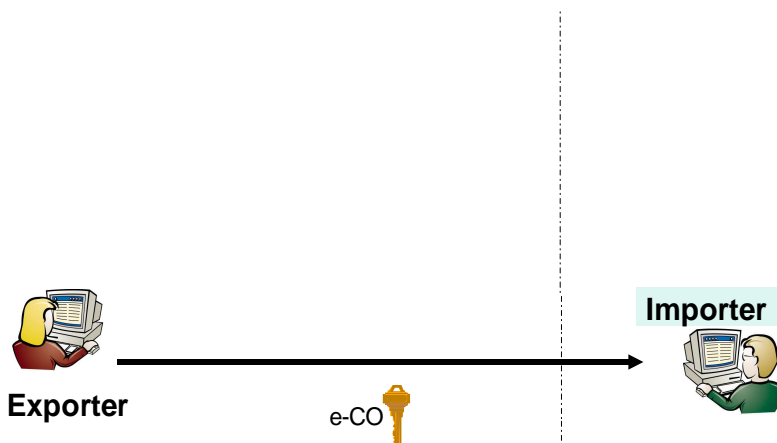Fig 1: The exporter requests the issuing agency for an e-doc

Fig 2: He sends it to his client, the importer (E.g. by mail)

Fig 3: The importer or his customs broker saves the signed PDF/XML file in a repository and then proceeds with the import customs declaration. Customs (or another authority) can have an access to the XML/PDF file and control it.

Fig 4: A new trust scheme:
(1): Either the import authority checks the authenticity and integrity of the PDF / XML file on the basis of a valid certificates list (VCL - list of authorized agencies) and the e-signature properties (the recognition of the export CA is mandatory)
(2): Or the authority requests the export single window to confirm the authenticity and integrity of the file
(3): The importer can check the PDF file by a request on the export single window web site

Annex III to
doc. PM0306E1
ANNEX IIb - The IDB digital certification of origin

The Inter-American Development Bank has developed a model for certificates of origin.

Case study:

- The producer or the exporter fills out the certificate of origin electronic form, digitally signs it and, where appropriate, proceeds in the same manner with the declaration of origin;

- The exporter transmits electronically the certificate and the declaration of origin to the certification authority;

- The certification authority reviews and validates compliance with the origin requirements for the products concerned and, after approval, incorporates the digital signature of the certification authority in the electronic message;

- The certification authority returns electronically the duly signed certificate to the exporter, who, in turn, forwards it to the importer also by electronic means;

- The importer visualizes and reviews the contents of the certificate, binds it to the import clearance certificate, and transmits both documents to the importing country's customs agents and/or customs office;

- The customs agents control the certificate of origin, verify the validity of the signature of the issuing authority and store the certificate in a database for five years or forward it to the customs office of the importing country, as the case may be;

- The importing customs office receives the digital certificate, verifies its integrity, validates the signature of the authority empowered to certify the origin of the products, and stores it in a file database.
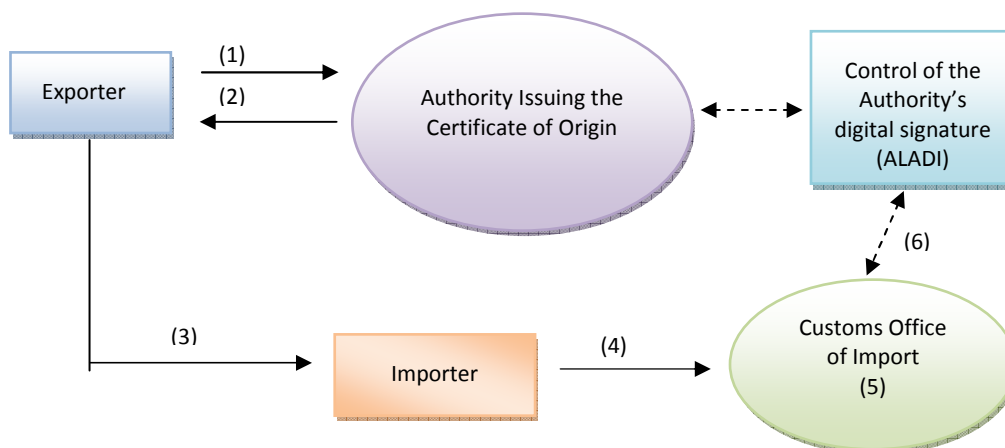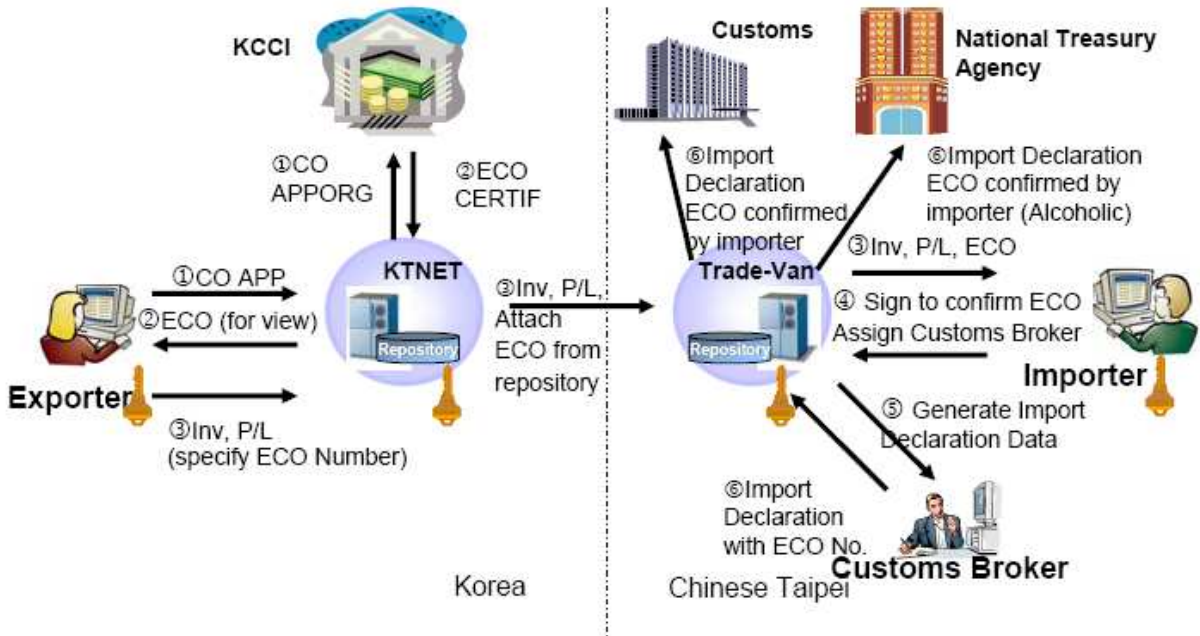

Fig 1: A simplified illustration of the digital certification of origin process
(1): Certificate of origin electronically signed by the exporter
(2): Certificate of origin electronically signed by the certification authority
(3): Certificate of origin e-mailed to the importer (electronically signed by the exporter and the authority)
(4): Certificate of origin sent by the importer to the importing customs office
(5): Verification of the certificate integrity/format

III/18.

(6): Validation of the electronic signature of the certification authority's official (ALADI database)

ANNEX IIc - The APEC eCO Pathfinder project

The "Electronic Certificate of Origin Project" co-lead by Chinese Taipei, South Korea and Singapore has been implemented between the two former countries since May 2010.

A study focused on the analysis of costs reduction has been carried by the APEC Policy Support Unit. The study was based on the information obtained from a field survey with World Bank Doing Business approach. The main findings show that dematerialization saves time and costs for exporter (US$ 274 per shipment and 2 days time saving) and importer (US$ 397 and 3 days time).

Annex III – FAQ

i) In many countries, even if declarants file their customs declarations in the Customs IT system, they need to call at customs office for payment and presentation of all original supporting documents. Considering complete dematerialization (no hardcopies of the declaration or original documents systematically submitted to customs), what about offices new organization?
In a paper-less environment, there is no need for a reception desk to acknowledge receipt of hardcopies of trade documents. Officers posted there will be re-allocated to other sections doing more customs related operations. The focus will be on the core customs activities.

ii) How will officers process the declaration on the system without the support of original hardcopy of trade documents?
A risk management module should be implemented to include potential risk criteria in order to shoulder the responsibility of the compliance officers. Consequently, less compliance officers will be required as the system will automatically select risky consignments based on the pre-set selectivity criteria. The declarations for such types of consignments will be channeled for further scrutiny to the Compliance Officers who may request the declarant to submit scanned supporting documents (if required) and may also send for physical examination in case of irregularities and suspicion.

iii) Will the declarants still have to submit attached copies of original invoices, original Bill of Lading or AWB, packing list, and other trade documents to help officers carryout risk management?
Yes! But in electronic format… Voluntary submission of these documents in electronic format will speed up customs clearance

iv) What will be the role of the post clearance teams? Do they have to carryout the post control audit at the premises of the declarants?
These teams have a cardinal role to play in a paperless environment. Instead of performing audit in the office, they have to go on the field. Obviously proper targeting is essential as it is unrealistic to carryout audit for all economic operators.

v) Do we require hardcopy of declarations along with original trade documents for physical examination of goods?
The number of consignments to be sent for physical examination will be very low as only those which represent a high risk and high impact will be examined. In such a situation, customs will already be in possession of the soft copy of all the related trade documents. The submission of hard copy should be undertaken on demand.
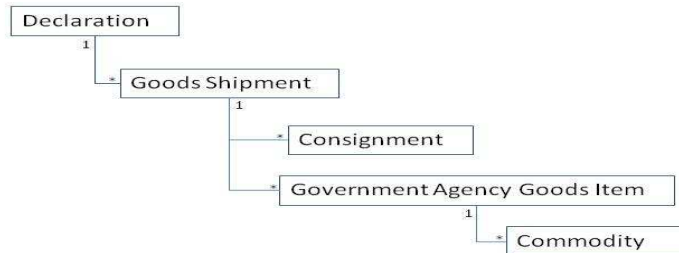
Annex IV - WCO Data Model & and the Metadata for Supporting Documents

Table I Additional Document Class: Information in the WCO Data Model Version 3.0 on Supporting Documents

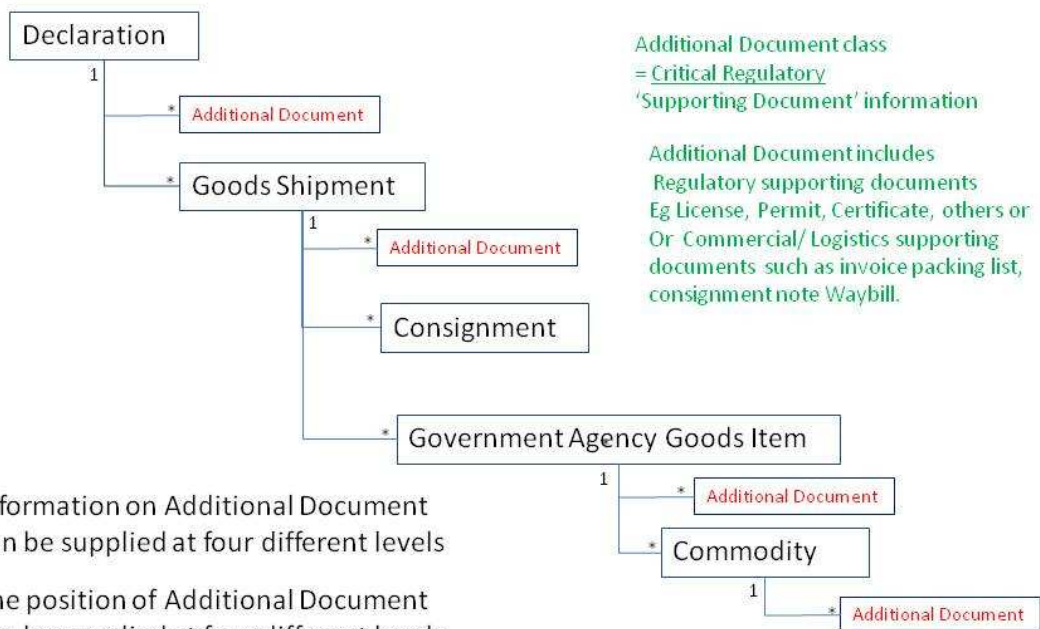| WCO ID	Code/Name	Definition
185	Additional document name	Free text name of an additional document.
263	Additional document amount	The amount covered by the additional document.
275	LPCO expiration (expiry) date	The expiry date of the license, visa, permit, certificate, or other document.
276	LPCO effective date	The effective date of the license, visa, permit, certificate.
313	Additional document quantity	Quantity specified on the additional document
360	LPCO exemption code	Type of exemption from a license, permit, certificate, or other document (LPCO) or indication that no LPCO is required.
389	Additional document issuer	Name [and address] of the party having issued the document.
D001	Additional document issuer, coded	Identifier of the party having issued the document.
D002	Additional document issuing date	Date at which an additional document was issued and when appropriate, signed or otherwise authenticated.
D003	Additional document issuing place	Name of a location where a document was issued.
D004	Additional document issuing place, coded	Place at which an additional document was issued and when appropriate, signed or otherwise authenticated.
D005	Additional document reference number	Identifier of a document providing additional information.
D006	Additional document type, coded	Code specifying the name of an additional document.
D028	Additional document name	Free text name of an additional document
DXXX	Additional Document Image	Binary image of the additional document
DXXY	Document location	Online location of the document in a URI / URL
	Parties associated with Additional Documents	
	Authenticator Insurance Company Submitter LPCO Authorized Party	

The WCO Data Model provides the ability to report supporting documents at different levels. The diagrams below illustrate this:

Generic Goods Declaration WCO DM V3

Declaration
1
* Goods Shipment
1
* Consignment
* Government Agency Goods Item
1
* Commodity

Structure supports
Customs goods declaration or
Harmonized Cross-Border Regulatory Declaration

Supporting Documents in Customs Declaration or Harmonized regulatory declaration

Declaration
1
* Additional Document
* Goods Shipment
1
* Additional Document
* Consignment
* Government Agency Goods Item
1
* Additional Document
* Commodity
1
* Additional Document

Additional Document class
= Critical Regulatory
'Supporting Document' information

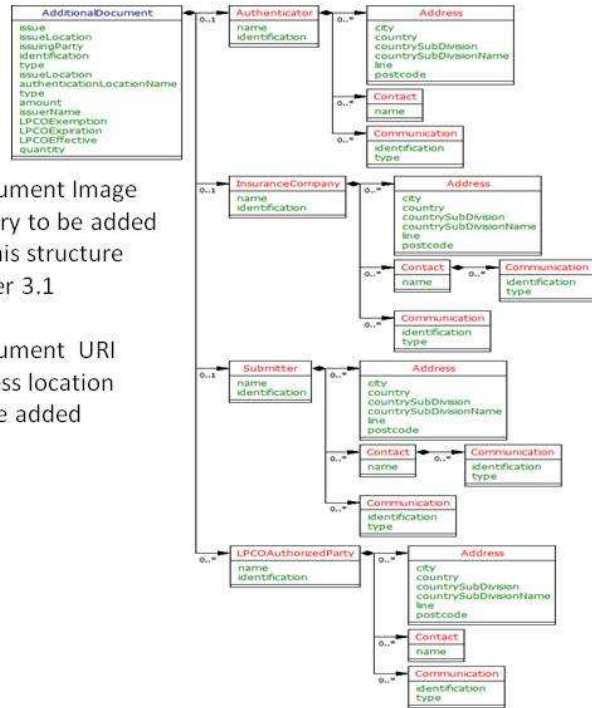Additional Document includes
Regulatory supporting documents
Eg License, Permit, Certificate, others or
Or Commercial/ Logistics supporting
documents such as invoice packing list,
consignment note Waybill.

Information on Additional Document
can be supplied at four different levels

The position of Additional Document
can be supplied at four different levels

Data Structure of Additional Document Class

I . Additional Document class
= Critical Regulatory
'Supporting Document' information

Document Image
Binary to be added
to this structure
In Ver 3.1

II. Additional Document Class ≠
Electronic 'Supporting Document'

Document URI
access location
to be added

III. Additional Document Class can support

Binary images or the

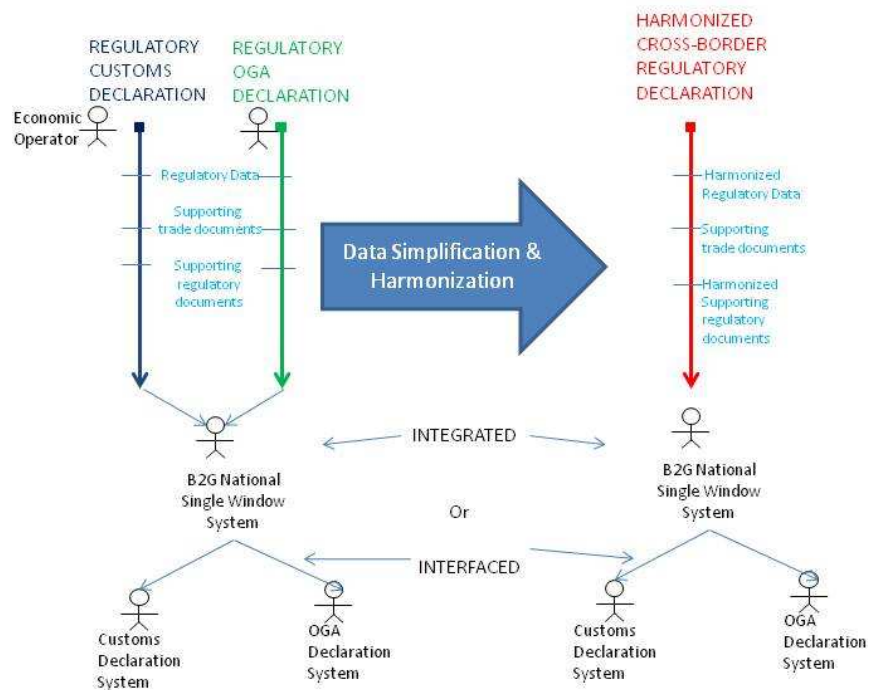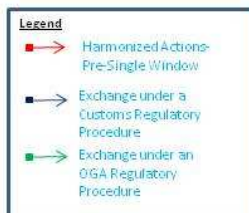URI location of the electronic 'Supporting
Document'

Annex V - Regulatory Data Harmonization:

Regulatory data harmonization involves combining the data requirements of different Regulatory agencies into a single declaration. The process is described below. Harmonization of data ensures the elimination of redundant submission of data, but it still requires the trader so submit supporting documents.

Regulatory Data Harmonization

Annex VI - Top supporting documents (France)

Commercial invoice
Movement certificate of origin EUR.1
Master Air Way Bill
T2LF Certificate of customs status
Pro forma invoice
Packing List
External Community transit declaration / common transit, T1
Bill Of Lading
Certificate of origin Form A
Declaration of preferential origin on an invoice or other commercial document
Air Way Bill
Declaration of particulars relating to customs Valuation Method 1
ATR certificate
Excises document
Authorization to use a customs procedure with economic impact end-use
Production file
Quality control certificate
Universal certificate of origin
Freight note
Common Veterinary Entry Document (CVED)
Imported personal belongings list
Airworthiness certificate
Declaration of non preferential origin on an invoice or other commercial document
Road consignment note
CMR note
Internal Community transit declaration T2
Registration number
Export license AGREX
House moving certificate
T2L Certificate of customs status
TIR Carnet
Phytosanitary import certificate
CE compliance note
Information document
T5 control copy
Transit T document
Champagne Cert
Main bill of lading
Military goods export authorization
Export note
CAP Import license AGRIM
Acquit-a-caution
CITES certificate
Dual use export authorization

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