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From the WCO drawing board to Customs strategic plans: is the nCEN Programme taking Customs by storm?

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By Iwona Sawicka, CEN Programme, WCO

When it all began, in 2013, the National Customs Enforcement Network (nCEN) application was only used in one country which needed a tool to collect, store, analyse, and disseminate law enforcement information efficiently in order to establish robust intelligence capabilities. In the first year after its release, eight countries began using the application, and, as time went on, others followed suit. Today, nCEN has been deployed in 35 Customs administrations, and concrete plans are in place to increase this number to 50 by the end of 2020.

The fast growth in the number of nCEN countries is, in large part, due to the generous funding provided to the WCO from several donor countries. Indeed, the WCO offers the nCEN software to its Members free of charge, but does not cover the purchase of the hardware needed to run the nCEN application, the costs associated with training, and the costs related to modifications of local IT infrastructure, which is sometimes necessary.

Donors' funding also enables the WCO to make important functionality enhancements to the application. The continued success of the nCEN Programme is largely dependent on these donations, especially taking into account the long list of candidate countries in need of such support.

With the first version of the nCEN, the focus was primarily on data collection for risk management. As the user base grew and more countries began using the application, the communication component called Icomm was improved to allow for simpler and more comprehensive data exchange between Customs administrations.

Today, the interest of enforcement officers in the nCEN goes beyond risk analysis, towards profiling and targeting of suspects, companies, or means of conveyance. The latest version of the nCEN, soon to be released, contains basic data analytics functionality such as automated searches on new data, and matching rules that allow users to identify connections between data elements in the application. New versions of the nCEN are released to nCEN countries periodically through an automated update manager component in the application.

Discussions are underway to further expand the functionality of the nCEN to meet the expectations of Customs administrations and the broader enforcement community, by reevaluating and standardizing the current ways of collecting data on suspects and offenders, and creating an additional "persons" database.

Data transfer between the three applications which form the CEN Suite - the CEN, CENcomm,

and the nCEN - has also been made easier. Aware that data collected by different systems cannot be easily integrated, often lacking variables for matching across systems, the WCO has been investing in making the CEN Suite increasingly interoperable.

The latest version of CENcomm, also to be released shortly, enables seizure data collected during Customs operations to be transferred to the nCEN at a push of a button, while the third party connection feature in the CEN and the nCEN makes it possible to feed seizure data automatically to those applications from existing national systems.

Although it was designed as part of a connected and interoperable CEN Suite, the nCEN is, in fact, an application that is composed of a set of independent modules, which can be utilized in combination or separately, depending on the operational or legislative needs of the implementing Customs administration.

While in certain administrations the nCEN is proving to be an effective tool for communication between local stakeholders (other enforcement agencies and other services) and information sharing for the purpose of training, others appreciate the tool's workflow management features and its structured communication relating to the investigation process or post-seizure action items.

Moreover, recent deployments of the application in Customs administrations already possessing centralized systems for enforcement data show that the nCEN can be instrumental in setting up cooperation mechanisms at the regional level or beyond, as all users of the application form part of a Global nCEN Network.

Despite the availability of the nCEN in multiple language versions, the connection between users is facilitated by a rigid data model, enabling the structured translation of labels and data lists. This, in turn, allows for the breakdown of language barriers and easier conversion between the different nCEN language versions.

The technological advancements of the nCEN have been driven directly by its users. With a growing number of deployments, the WCO has been facilitating the creation of regional cooperation structures that enable nCEN users to exchange best practices and experiences, and discuss functionality enhancements to the application.

Regional meetings on nCEN matters now take place in East and Southern Africa and in Asia/Pacific, and the Global nCEN Network keeps growing in importance as more countries implement the application. The nCEN is also being integrated into the strategic plans of its user administrations, a much needed step in order to guarantee an adequate level of support for the growth and strengthening of the implementation programme at the national level.

In conclusion, is the nCEN taking Customs by storm? From one pilot country to 35 countries, and soon 50! The numbers speak for themselves.

More information

ncen@wcoomd.org

About the CEN Suite

The Suite includes three stand-alone applications:

Customs Enforcement Network (CEN), a web platform that acts as a depository of enforcement-related information, which analysts can mine to produce valuable analysis and intelligence. At its core is a database of seizures and offences as well as pictures. Its value rests squarely on the steady flow of quality data provided by all WCO Members.

National CEN (nCEN), an application that gives Customs the ability to collect, store, analyse, and disseminate law enforcement data effectively. It consists of three independent databases. The principal database of national seizures and offences comprises data required for analysis, as well as means of conveyance, routes, and the possibility to view photos depicting exceptional concealment methods. Two supplementary databases contain information on suspect persons, methods of conveyance and business entities of interest to Customs, thereby facilitating a structured investigation process.

CEN communication platform (CENcomm), a web-based communication system permitting a closed user group of officers to exchange information, in real time, for the duration of an enforcement operation or project. Information reporting can be standardized with the use of templates, which can be customized to only include data fields that are pertinent to a specific operation.

UNODC-WCO Container Control Programme: 15 years old and still going strong

By Norbert Steilen, CCP Coordinator, WCO

Identifying shipments containing prohibited or smuggled goods is somewhat like searching for the proverbial "needle in a haystack" for Customs officers. Let's keep this image in mind: modern container ships are like massive "haystacks," each carrying up to 20,000 containers. It's the same with planes: while the volume of goods they carry is less impressive, it is still substantial, and the rise of e-commerce has generated fleets of all-cargo aircraft carrying thousands of individual parcels across the globe.

Aware of these challenges, the WCO and the United Nations Office on Drugs and Crime (UNODC) agreed 15 years ago, in 2004, to launch a joint programme to deal with illicit goods being transported in sea containers. This saw the birth of the Container Control Programme (CCP). The programme aims at establishing and training dedicated Port Control Units (PCUs) and Air Cargo Control Units (ACCUs) at key seaports and airports, and to improve their risk analysis capacity, enabling them to efficiently control trade operations with minimum disruption.

PCUs and ACCUs are "joint units" gathering Customs officers and other national law enforcement personnel, such as the police, the drug enforcement agency, the environmental agency, and the air security agency. The composition of these units is a national decision. If the legal tasks of participating authorities are not merged, the fact that they are gathered into a single unit and follow the same training enables an inclusive analysis of risk, which increases the detection of illicit goods, be it drugs, strategic goods, high excise products, protected timber or endangered wildlife, and even stolen motor vehicles.

Elephant tusks concealed in sawdust were discovered by officers working at the Port Control Unit in Vietnam

Training delivery and gender mainstreaming

At the outset, the two Organizations adopted a staged approach in the way they delivered the programme. Activities are organized over a period of at least three years in stages, referred to as the "crawl-walk-run" approach. While the WCO focuses on delivering specialized training to the units' members, the UNODC manages other aspects that include ensuring funding, political support and preparing the pre-deployment phase as well as maintaining close contacts with participating countries.

Full-time experienced trainers work for the programme. Training starts with two basic courses to ensure members of the newly formed teams have the necessary theoretical and practical knowledge, and then continues with regular specialized courses on precursor chemicals, strategic trade goods, endangered species, evidence handling, and other topics specific to the challenges in a particular country.

Safety and Security are also high on the CCP's agenda. Cooperation with the International Civil Aviation Organization (ICAO) enabled air cargo security to be embedded into the training curricula and ACCU staff to be sensitized on the critical elements to watch out for, in order to ensure the integrity of air transport.

All training courses address the risks associated with "insider threats" as well as the infiltration of port and airport infrastructure by well-organized criminal syndicates. To combat these issues of crucial importance, the units are always strongly encouraged to hold regular meetings with the private sector, in particular, terminal freight forwarders and operators as well as shipping line representatives.

Study visits to other ports or airports are also organized to familiarize the newly trained officers with the working methodologies applied elsewhere, and to enable them to establish personal contacts with their fellow colleagues abroad. Each CCP training event is evaluated by the participants, which enables the trainers to measure their performance and, if necessary, adapt the methodology. Support is also provided through mentoring: each CCP trainer acts as a mentor, spending a few days every two to three months with each PCU or ACCU to evaluate their working methods, provide advice, retrain them, if necessary, and document what is happening with the unit for report-back to the programme management team.

Moreover, a national Steering Committee in charge of monitoring their work meets regularly, and external assessments are conducted at midterm level. If the number of cases managed or initiated by the units is an indicator of their performance, it is not the only one. Also taken into account are the modus operandi put in place, the level of exchange of information, and the motivation and skills of the team.

Given the high focus now placed on gender mainstreaming, an internationally embraced strategy to ensure gender equality, the "CCP Women's Network" was launched, in 2015, to promote the role of women in the CCP and, more generally, in law enforcement activities. To boost this decision, gender sensitization training modules have been integrated into the training portfolio.

Instruments and tools

In terms of tools, the "ContainerComm" and "AirCargoComm" communication platforms provided by the WCO enable PCUs and ACCUs to exchange information on seizures made, on suspicious shipments or on any analysis undertaken so that they can update their national risk profiles on concealments, modus operandi, and smuggling routes.

Currently, ports and airports in more than 100 countries, including small islands as well as countries participating in the programme as mentors or partners, have access to the WCO's communication platforms, creating a large community of professionals. Some units also have access to the WCO Cargo Targeting System (CTS), an IT system that enables users to capture advance electronic cargo manifest information, and to perform risk assessment, profiling, and targeting.

All these elements, such as the use of pre-arrival data for risk management purposes, regular meetings with private sector entities, Customs-to-Customs cooperation, are embedded in WCO instruments, in particular

All training courses address the risks associated with "insider threats" as well as the infiltration of port and airport infrastructure by criminal syndicates. To combat these issues of crucial importance, the units are always strongly encouraged to hold regular meetings with the private sector.

the Risk Management Compendium and the SAFE Framework of Standards to Secure and Facilitate Global Trade.

Shortfalls and challenges

Of course, the implementation of a complex programme such as the CCP does not go without shortfalls and challenges. These range from poor support from management and even isolation of the PCUs and ACCUs, frequent rotation of the units' staff, to long-winded decision-making processes, and a lack of adequate legislation. Staff attached to PCUs and ACCUs have also been threatened by criminal syndicates.

However, the WCO and the UNODC believe in the value of the programme, and try to work with each participating country in a flexible manner, adapting to local situations and needs, and keeping the momentum going. This is evidenced by the recent focus on illicit trade in timber in several Latin American and Southeast Asian countries, and on illicit shipments of waste and abandoned containers.

Successes and thanks

Today, 53 countries participate in the programme with more than 110 units established. The figures that follow demonstrate the successes of the CCP. Different PCUs and ACCUs have identified and detained over:

- 319 tons of cocaine;
- 6.5 tons of heroin;
- 71 tons of cannabis;
- 1.7 million tons of precursor chemicals;
- 903 consignments of counterfeit goods;
- 1.9 billion cigarettes;
- 98 shipments of strategic trade goods;
- 183 shipments of illegal items infringing environment related regulations.

Members of the Port Control Unit at Cebu in the Philippines attend a training session

The CCP is now 15 years old, and is one of the WCO's longest-running programmes. Such longevity would not be possible without the generous financial support of the international donor community, and the in-kind contributions of numerous WCO Members who have provided training experts and made facilities available.

The WCO and the UNODC Secretariats will continue striving to keep the programme dynamic and responsive to both the needs of its participating members and society, and would like to thank the men and women working in or with the programme, who day-after-day demonstrate their commitment to safeguarding the nations of the world.

More information

CCP Annual Report
http://www.wcoomd.org/

WCO Data Model: understanding the WCO's key data harmonization and standardization tool for cross-border regulatory processes

By the WCO Secretariat

The availability of quality and timely electronic data in a standardized and harmonized manner underpins the effective use of information and communication technologies (ICT) for modern border procedures. Some of the common challenges relating to data requirements for various Customs and border clearance processes include redundancy, proprietary or bespoke standards, poor structure and definition, and fragmented or excessive data requirements.

To that end, the WCO Data Model (DM) has been developed as a compilation of clearly structured, harmonized, standardized and reusable sets of data definitions and electronic messages, to meet operational and legal requirements of cross-border regulatory agencies, including Customs, which are responsible for border management. As a global standard, the WCO DM has been organized in such a way that the complex nature of the data requirements for various cross-border procedures could be developed and understood in a simple, consistent and harmonized manner.

The WCO DM also includes Information Packages, which are subsets of the Model that act as standard templates linked to a particular policy/legal requirement and business process, such as the cargo declaration, the goods declaration, conveyance reporting, licences/permits, and certificates. The Information Package concept enables WCO Members to select and focus on a particular subset of the WCO DM that fits the purpose for a specific regulatory procedure, by deriving pertinent Information Package and translating it into a My Information Package (MIP), namely the national implementation of the WCO DM Information Package.

Currently, the WCO DM contains 727 data elements that support different data requirements for various Customs and border regulatory processes and systems, including the Single Window environment. It is a comprehensive technical dataset that is dynamically updated through an established Data Maintenance Request (DMR) mechanism to meet new and emerging requirements.

The WCO DM does not stand in isolation, and it should be seen in the context of a specific business process such as import, export, transit, e-certification, a security programme, and e-commerce. It is closely linked with, and supports, other WCO instrument and tools for fulfilling data requirements under respective instruments and related business processes.

Normally, the WCO body responsible for managing an instrument/tool on a specific topic determines the data elements based on policy imperatives and business needs. Afterwards, those data elements are mapped to the WCO DM or a subset thereof to help translate the policy dataset into a technical standard to enable seamless data exchange. In cases where some of the data elements, which may be required for an existing or new business process, are not already available in the WCO DM, they can be added to the Model through the established DMR mechanism.

A non-exhaustive list that describes the relationship between the WCO DM and other policy datasets is outlined in the table accompanying this article.

The WCO continuously examines data requirements for new business processes. This includes the standardization and harmonization of data elements in the area of e-commerce, with regard to which a policy dataset is currently being developed.

Relationship between the WCO Data Model and other datasets contained in international instruments

Dataset	Instruments and Tools	Main Topic	WCO DM Equivalent
Pre-loading advance cargo information (PLACI) 7+1 dataset (Annex III to the SAFE Framework of Standards)	SAFE Framework of Standards	PLACI dataset for air cargo security	PLACI Derived Information Package (DIP)
SAFE Advance Electronic Information (AEI) Dataset (Annex II to the SAFE Framework of Standards)	SAFE Framework of Standards	Pre-loading/pre-arrival advance electronic data for supply chain security	AEI DIP
Immediate Release Dataset	Immediate Release Guidelines (IRG)	Simplified data requirements for immediate release/ clearance	IRG DIP
CN 22/23 dataset	WCO-UPU Postal Customs Guide	Simplified and harmonized dataset for postal items	UPU DIP
Advance Passenger Information (API)	WCO/IATA/ICAO API Guidelines	Advance passenger data for facilitation and control	API DIP
International Maritime Organization (IMO) Facilitation (FAL) Forms	IMO Compendium for Electronic Business	Standardized dataset for ship reporting	IMO FAL DIP

The relationship between the WCO DM and other policy datasets for specific business domains ensures that further development and maintenance of the Model as an international technical standard are in line with, and driven by, respective business needs and requirements. In addition, it helps ensure that all datasets developed and maintained by different working bodies are aligned with each other, specifically when the same data elements are used/reused in different policy datasets.

The WCO, through its different working bodies, continuously examines data requirements for new business processes. This includes the standardization and harmonization of data elements in the area of e-commerce, with regard to which a policy dataset is still being developed by the relevant working bodies. Once this exercise is completed and endorsed by the WCO Council, the identified dataset will be mapped to, and incorporated into, the WCO DM, potentially as a new DIP.

E-learning courses have been developed. Customs officers may access them via the CLiKC! Platform, and trade professionals via the WCO Academy. Customs officers who wish to acquire more in-depth knowledge about, and contribute to, the WCO DM should also consider attending the DMPT meetings and workshops that are organized from time to time.

More information

facilitation@wcoomd.org

Council 2019

Directors General of Customs gathered at WCO Headquarters from 27 to 29 June 2019, as part of the annual Council Sessions, to consider and endorse the enormous amount of work done by the Organization from July 2018 to June 2019, and to provide strategic direction as well as chart the way forward in the months ahead.

This dossier touches on the WCO's main areas of work – compliance, facilitation, tariff and trade affairs, and capacity building – during the period under review, and presents the progress made and initiatives taken in each of these areas, including interesting events that occurred during the Council Sessions.

Reflections on WCO Members' priorities

By Kunio Mikuriya, Secretary General, World Customs Organization

At the 2019 WCO Council Sessions, Members endorsed a new Strategic Plan for the 2019-2022 period, comprising nine priorities that the WCO Secretariat should focus on: Coordinated Border Management, Safety and Security, the Revised Kyoto Convention, E-Commerce, the Harmonized System, the Capacity Building Strategy, Performance Measurement, Integrity, and Digital Customs and Data Analytics. In this article, I will take up each of these topics in turn, explaining what we have recently done in these areas, and what is yet to come.

Coordinated Border Management

A key enabler of coordinated border management (CBM) is connectivity, supported by the establishment of IT platforms that create a one-stop shop for trade and which can be linked across borders. These platforms can take different names and forms. We call them Single Window environments. The WCO "Single Window Compendium" provides guidance on what such environments should look like and how they should operate.

Given the high uptake of Single Windows around the world, the WCO has embarked on the development of a "Single Window Study Report," which presents the findings drawn from a survey among its Members, including existing typologies and models, and which addresses interoperability issues as well as the impact of the latest technologies and analytical tools on this environment and its evolution.

Moreover, to enable data harmonization and digital collaboration at the national and international level, which supports the development of Single Window environments, the WCO continues to expand its Data Model so that it covers more and more border regulatory requirements. The continuing uptake of the Model by WCO Members is a gratifying development.

I am also pleased to announce that, thanks to the work of major non-intrusive inspection (NII) industry players, a new standard has come into being this year for X-ray files generated by NII devices. Known as the Unified File Format (UFF), it will significantly facilitate the interoperability of NII equipment supplied by different manufacturers, and improve the exchange of images within and between Customs administrations, as well as between Customs administrations and other agencies. It is now crucial for WCO Members to start using this standard by requiring their suppliers to deploy the UFF on equipment in use, if possible, and to add the specifications of UFF 2.0 in their tender documents for the procurement of NII systems. Ways to enhance the standard have been discussed, but developments in this regard will largely depend on the extent that the recently adopted version is used.

Digital collaboration requires underlying cooperation mechanisms to be in place between Customs and other agencies. In this regard, the WCO continues to work on developing guidance material for strengthening institutional cooperation. Handbooks have been published on the establishment of coordination and cooperation mechanisms between Customs and tax administrations as well as between Customs and the police. A new handbook focusing on cooperation between Customs and financial intelligence units is currently being developed, and will be submitted for consideration and adoption in June 2020.

Safety and Security

The WCO continues to offer assistance as part of its Security Programme in five domains: passenger controls; the fight against chemicals and components that could be used in the manufacture of improvised explosive devices (IEDs); strategic trade Controls; the fight against trafficking in small arms and light weapons

The WCO has embarked on the development of a "Single Window Study Report," which presents the findings drawn from a survey among its Members, including existing typologies and models, and which addresses interoperability issues as well as the impact of the latest technologies and analytical tools on this environment and its evolution.

(SALW); and terrorist financing. We will have a chance to review progress in these areas at the second WCO Security Conference, which will take place in mid-December 2019.

Interesting developments in the area of passenger controls are taking place, beginning with the first deployments of the Global Travel Assessment System (GTAS), an application that enables advance passenger information (API) and passenger name record (PNR) data to be collected, visualized, and analysed.

With the GTAS in place, the WCO Secretariat can now not only continue to promote and maintain API and PNR standards, but also answer requests from administrations that do not have the internal capacity to develop their own in-house system, but want to start using such data. For information, the GTAS is open source and free. The system was very recently deployed in the Maldives, who share their experience in this edition of the magazine.

The WCO is also taking up the issue of passenger control in the maritime environment, primarily focusing on cruise ships and exploring, among other things, the possible standardization of data for maritime passengers.

I would like to highlight the launch of a new project, called COLIBRI. The project focuses on general aviation, a sector that is not very well controlled, along the cocaine route. It has a capacity building component as well as an IT component, which is very promising.

I am also glad that the WCO Counterfeiting and Piracy Group (CAP) agreed on new terms of reference, enabling the Group to provide more effective assistance and support to the work of the Secretariat in developing relevant, non-binding tools and guidance material to respond to emerging risks, and WCO Members' needs to enhance their capacity in the fight against counterfeiting and piracy.

The WCO Secretariat is also exploring ways to be more active in the protection of the environment. The Contracting Parties to the Basel, Rotterdam and Stockholm Conventions (three multilateral environmental agreements dealing, respectively, with hazardous wastes, hazardous chemicals and pesticides, and

persistent organic pollutants), which met in April 2019, highlighted the role of Customs while reaffirming the need to cooperate with the WCO to ensure compliance with the three Agreements' provisions.

In the above regard, the WCO is currently preparing a fifth edition of the enforcement operation codenamed DEMETER, and I hope that all Customs administrations will, once again, join together to demonstrate their commitment to fighting illegal waste trafficking.

Indeed, enforcement operations enable us to keep law enforcement efforts going and to obtain seizure reports from Customs administrations, which are then fed into the WCO Customs Enforcement Network (CEN). However, the amount of data collected during the course of an operation is obviously not enough to gain a really good picture of this trade, and merely provides a snapshot of what is happening on the ground.

With the above in mind, I would like to, once again, remind WCO Members of the importance of sharing enforcement data through the CEN, as we need global comprehensive data to fully understand the illicit trade phenomenon. Indeed, with such information, we will be able to better our efforts in targeting those involved in these nefarious activities that poison the international trade supply chain.

Of course, it is also critical, in general, to collect and analyse data to enable effective risk analysis and efficient intelligence-based controls. Here, I might add that I am glad to see that more and more Customs administrations are implementing the National Customs Enforcement Network (nCEN), another critical tool that the WCO provides to its Members free of costs.

Revised Kyoto Convention

The revised International Convention on the Simplification and Harmonization of Customs Procedures (Revised Kyoto Convention or RKC), which was adopted in 1999 and entered into force in 2006, currently has 120 Contracting Parties. The WCO continues to provide assistance to its Members, and especially Small Island Economies, to ratify the Convention.

Moreover, discussions are ongoing as to how to review this critical instrument, with particular attention being given to Specific Annex D and K, dealing respectively with free zones and rules of origin. To support the WCO Working Group on the Comprehensive Review of the Revised Kyoto Convention (WGRKC), the Secretariat has undertaken research on special Customs zones/free zones (SCZs).

In the above regard, existing literature was reviewed, and throughout 2018 and early 2019, a series of regional workshops were held to encourage discussions on SCZs among WCO Members. In parallel, fieldwork was undertaken in 11 countries. Using the knowledge gained through these activities, a research paper was produced to provide an analysis of the current situation surrounding such zones, and will hopefully be followed by a guidebook in the coming months.

E-Commerce

In June 2018, the WCO adopted the "Framework of Standards on Cross-Border E-Commerce" to assist its Members in developing or enhancing strategic and operational frameworks for e-commerce. This year, the WCO Council endorsed technical specifications relating to the Framework, as well as other guidance material that further enriches the instrument such as definitions of certain terms used in the Framework, flow charts, business models, and case studies. An implementation strategy, an action plan, and a capacity mechanism aimed at ensuring the widespread adoption and implementation of the Framework were also adopted.

All the above-mentioned documents have been brought together in a WCO E-Commerce Package, a living document that will be regularly maintained and updated. In addition, work on a reference data set for e-commerce, revenue collection approaches, and the roles and responsibilities of e-commerce stakeholders will continue, and documents related to these areas will be submitted to the WCO Council in June 2020.

The Framework places emphasis on advance electronic data for pre-arrival risk assessment.

For the past 20 years, the WCO has been advocating for a move towards a paperless environment for traditional trade. The same should apply to e-commerce. Express carriers are largely providing advance electronic data as recommended in the Framework of Standards, enabling Customs to conduct risk assessments in advance. However, postal operators are lagging behind, although progress has been made in some countries with support being provided by the WCO and the Universal Postal Union (UPU).

Over the past few months, the WCO and the UPU have worked together to develop additional guidance on the exchange of advance electronic data, including data capture and data quality, as well as the associated legal and operational frameworks. This resulted in the "Joint WCO UPU Guidelines on Exchange of Electronic Advance Data between Posts and Customs," which the WCO Council adopted in June 2019.

The WCO and the UPU also continue to support Customs and Posts in the implementation of electronic advance data, and on the implementation of the Customs Declaration System (CDS), which was developed by the UPU's Postal Technology Centre.

Harmonized System

The 2022 edition of the Harmonized System or HS has been adopted by the WCO Council and will enter into force on 1 January 2022 for all Contracting Parties to the HS Convention, numbering 158 at the end of September 2019. Of course, I sincerely hope that this new version of the HS will be implemented diligently by all HS Contracting Parties.

The potential for a strategic review of the HS was raised with the WCO Policy Commission, leading to a Conference on the review of the HS being held in May 2019. After reporting the discussions back to the Commission, the Secretariat has been tasked to prepare a business case, for submission to the WCO Finance Committee in the first instance, covering the scope of a possible review, the initial impact and feasibility studies, possible governance mechanisms for the change process, and the expected financial and human resource costs.

Capacity Building Strategy

WCO Members have requested the Secretariat to review its Capacity Building Strategy and the management of experts, in order to ensure that the strategy has a clearly defined future direction, and that it improves the delivery of all WCO capacity building activities. Among other things, it has been decided to create a pool of experts on every topic on which the Secretariat provides technical assistance in each WCO region.

More than 600 capacity building activities were delivered from July 2018 to June 2019, and detailed information on these activities has been made available in the WCO Capacity Building Progress Report. This year, the WCO Secretariat also published the Mercator Programme Report, which presents activities undertaken since the launch of this key programme five years ago.

The 2022 edition of the Harmonized System has been adopted and will enter into force on 1 January 2022 for all Contracting Parties to the HS Convention, numbering 158 at the end of September 2019.

Performance Measurement

The WCO Council adopted the terms of reference of the Working Group on Performance Measurement (WGPM) whose role is to develop a new mechanism to measure Customs performance. The Group will meet in the coming weeks, and I invite all administrations to join it. Wide participation in WCO working bodies leads to more comprehensive outcomes, a point which I cannot stress enough.

Moreover, the WCO Secretariat has also been looking at the methodology used by other international organizations, including the World Bank and its Doing Business team with whom it continues a dialogue, in order to convey the views of Customs, as well as those of the WCO Private Sector Consultative Group (PSCG), in an effort to improve the methodology. It also engaged with the World Bank to improve the WCO Time Release Study, a key performance indicator tool.

Integrity

The WCO Secretariat carries out various types of missions at the request of its Members, such as integrity assessment missions, missions

to provide guidance on the introduction of performance measurement systems, and ad hoc missions to provide support in revising a code of conduct, an integrity strategy, a training plan or the mapping of corruption risks.

It recently gathered the experience of some administrations in implementing Principle 6 of the revised WCO Arusha Declaration on good governance and integrity in Customs, focusing on audit and investigation, and published them in a document entitled "Compilation of WCO Members' Integrity Practices on Internal Controls and the Relationship with External Controls."

Moreover, in January 2019, the WCO and the Norwegian Agency for Development Cooperation launched the Anti-Corruption and Integrity Promotion (A-CIP) Programme for 11 WCO Members: Afghanistan, Ghana, Ethiopia, Lebanon, Liberia, Mali, Mozambique, Nepal, Sierra Leone, Tanzania, and Tunisia. Each is expected to develop a multi-annual action plan along with clear benchmarks and performance measurement criteria.

Digital Customs and Data Analytics

The WCO Secretariat has been asked to place a new focus on the development of guidance and capacity to support the digitalization of Customs operations and the use of technologies and data analytics. This is one of the new priorities of the Strategic Plan, and one of the issues that will be discussed by the WCO Policy Commission in December 2019, to enable the Secretariat to obtain orientation and guidance.

Among other things, the WCO plans to develop a Digital Customs Package, bringing together all relevant information, tools, guidance, and training material that can be used by Customs administrations to implement new mechanisms for data collection, exchange, and analysis. The compilation of studies and methods will be further developed, and regional workshops will also be organized on disruptive technology in order to pursue efforts to raise awareness and share best practices.

Continuous capacity building support will be provided in these areas, led by specialized WCO staff. The Secretariat will take forward its work through a Cloud Computing Server, offering support and guidance to WCO Members in the area of data analytics, with the development of more concrete solutions adapted to Customs issues and operations.

Going forward

I have highlighted here only a few of the activities carried out and results achieved over the last 12 months on each of the priorities of the WCO's new Strategic Plan. Additional WCO activities are summarized in the articles which follow, under the name of each specific WCO Directorate.

In closing, I trust that you will enjoy reading about what the WCO has done and what it will be doing in the months ahead, and that you will equally appreciate the other interesting and insightful articles that were selected for this edition of the magazine.

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Tariff and Trade Affairs

Cross-cutting activities

WCO Revenue Package and advance rulings

The WCO continued to assist its Members in implementing the Revenue Package, which provides guidance and best practices for improving the efficiency and effectiveness of revenue collection, as well as in implementing an advance ruling system for classification and origin, as required under the World Trade Organization's (WTO) Trade Facilitation Agreement (TFA).

Assistance was provided to Azerbaijan, Bahamas, Eswatini, Lesotho, Liberia, Mauritius and Niger to assist them in developing or expanding their advance ruling systems.

As part of the programme "Harmonizing the classification of goods based on WCO standards to enhance African trade," a regional accreditation workshop for Technical and Operational Advisors (TOAs) on the cross-cutting tools for classification, origin and valuation was conducted for French-speaking African officers.

Secretariat staff also supported Customs administrations who themselves provide training to foreign colleagues. In addition, they participated in various events, including the First Workshop of the African Union Technical Customs Working Group on Pre-Shipment Inspections.

Nomenclature and classification

The WCO continued to carry out its work on the uniform application of the Harmonized System (HS), with the adoption of numerous classification decisions and intensified capacity building efforts devoted to the implementation of HS 2017, including the harmonization and enhancement of analytical methods used by Customs laboratories as well as the work on the implementation of advance ruling systems mentioned earlier.

HS Contracting Parties and status on the implementation of HS 2017

The number of Contracting Parties to the HS Convention has reached 158, with the accession of The Gambia (June 2019). At present, 120 Contracting Parties have notified the WCO that they had implemented HS 2017, and a further 14 had indicated that they would have implemented it by January 2019.

Speeding up the HS decision-making process

The Recommendation of 30 June 2018 amending Article 8 of the HS Convention with a view to speeding up the HS decision-making

process by placing a two-reservation limit on classification decisions taken by the HS Committee was unanimously adopted and will enter into force on 1 January 2021.

Classification decisions and amendments to HS publications

At its 62nd and 63rd Sessions, the WCO HS Committee took 304 classification decisions, including 242 classifications of international nonproprietary name (INN) pharmaceutical products linked to the WTO Agreement on Trade in Pharmaceutical Products.

The HS Committee, at these two sessions, also adopted 58 amendments to the HS Nomenclature, 6 sets of amendments to the HS Explanatory Notes (Article 16 procedure / effective on 1 January 2022), 8 draft corrigendum amendments to the Explanatory Notes (Article 8 / HS 2017), and 53 new Classification Opinions. With the exception of those for which reservations have been entered, the decisions and amendments are available on the WCO website and via the WCO bookstore.

Technical assistance

HS-related capacity building assistance to WCO Members is delivered in the form of national and regional seminars and workshops on the implementation and uniform application of the HS, on the modernization of Customs laboratories and their analysis methodology, and on the implementation of advance ruling systems for classification. The WCO Secretariat also provides, at the request of a Member, advice on the classification of commodities.

Assistance aimed at increasing institutional capacity to carry out classification work was provided to the Bahamas, Georgia, Vietnam and Palestine Customs. A diagnostic mission to assess the existing infrastructure in respect of work undertaken with regard to the HS and tariff classification was held in Niger. Regarding the accreditation of experts, a regional workshop for expert trainers on the HS in the West and Central Africa region was conducted in Burkina Faso.

National workshops on the development of an advance ruling system for classification were organized in Bhutan, Malawi, Nepal, Papua New Guinea, Vietnam and Zimbabwe.

Technical assistance related to Customs laboratory infrastructure and analysis methodology was provided to Albania, Colombia, and 14 countries in the MENA region. Moreover, experienced Customs chemists and classification officers from six countries participated in the 6th Customs Laboratory Programme, which was funded by Japan Customs. Participants spent one week studying WCO HS tools at the WCO Secretariat before going to Japan for six weeks' practical training on chemical analysis methods.

In addition, the Organisation for the Prohibition of Chemical Weapons (OPCW) invited the WCO to introduce the role played by the

Organization in controlling the trade in chemical products to participants attending the OPCW's Associate Programme – an annual programme for developing countries that aims to enhance their capacities by offering training in chemistry and chemical engineering.

During the 2018/2019 financial year, 97 classification advice responses, covering 109 products, were provided to WCO Members by the WCO Secretariat.

Review of the HS

The potential for a strategic review of the HS was raised with the WCO Policy Commission, which led to a Conference on the review of the HS being held in May 2019. After reporting the discussions back to the Policy Commission, the Secretariat has been tasked to prepare a business case, for submission to the WCO Finance Committee in the first instance, covering the scope of a possible review, the initial impact and feasibility studies, possible governance mechanisms for the change process, and the expected financial and human resource costs.

HS 2022

The WCO Council adopted an Article 16 Recommendation concerning the amendment of the HS for HS 2022. It contained 351 sets of amendments. Some notable amendments include new headings or defining Notes for:

- new or major technologies (3D printers, smartphones, drones and novel tobacco products):
- electronic waste (e-waste);
- various gases with high global warming potential;
- rapid diagnostic kits for the Zika virus and other mosquito-borne diseases;
- new fentanyl opioid derivatives;
- cultural articles;
- edible oils produced by microbes;
- edible insect products;
- minimally processed quinoa.

HS 2022 will enter into force on 1 January 2022 for all HS Contracting Parties, but will exclude any amendments objected to during the six month time-frame, during which Parties can notify the WCO of an objection to a recommended amendment.

New recommendation

The Council adopted the Recommendation on the insertion in national statistical nomenclatures of subheadings to facilitate the monitoring of the international movement of substances that deplete the ozone layer, controlled by virtue of the Kigali amendments to the Montreal Protocol.

Valuation

The WCO continued its efforts in assisting its Members with the uniform application of the WTO Agreement on Customs Valuation (the Agreement), in particular, by providing guidance on the management of Customs valuation matters.

Examination of Customs valuation questions

The WCO Technical Committee on Customs Valuation (TCCV) completed the examination of the "Valuation of imported goods purchased in flash sales" case that was submitted by Mauritius, and which led to the adoption of Advisory Opinion 23.1 at its 48th Session in May 2019.

During 2018/2019 the TCCV had examined questions concerning:

- the valuation of imported chip cards relating to transportation service and tourist admission tickets;
- the use of transfer pricing documentation to examine related party transactions, according to Article 1.2 (a) of the Agreement;
- the sale for export to the country of importation under Article 1;
- the interpretation of the value of adjustments under Article 8.1 (b) of the Agreement;
- the payment of royalties and licence fees, calculated by reference to the sales price of products manufactured in the country of importation from imported inputs, and their relevance to the Customs value of the imported inputs necessary for the manufacture of the finished goods;
- the treatment of income tax paid on royalties payable to a licensor in a foreign country;
- the valuation of imported inputs for which a "commission" is paid by the buyer to a promoter under a Promotion and Marketing Service Agreement;
- the valuation of an imported product bearing the importer's own trademark when, at

the same time, the same product with another trademark is presented for importation at a different price;
- the valuation of imported goods sold at discounted prices to accredited buyers;
- the valuation treatment of amounts paid for access rights to a TV bouquet under Article 8.1 (c) of the Agreement;
- the situation involving intra-group transactions, where two invoices with different prices for the same consignment were found during the examination of documents submitted by an importer.

The first question has been put in Part III of the Conspectus of Technical Valuation Questions, and the remaining questions will be examined by the TCCV at its next session.

Technical assistance

National workshops on valuation issues took place in the Bahamas, Bhutan, Colombia, Lesotho, Rwanda, Senegal, Sierra Leone, Thailand, Togo and Montenegro. A Sub-regional workshop was organized for countries of the pacific. In addition, diagnostic missions on the valuation control system and assessment of related expertise were carried out in Côte d'Ivoire, Bhutan, Liberia and Niger.

As part of a series of joint regional workshops conducted by the WCO and the Organisation for Economic Co-operation and Development (OECD) on Customs valuation and transfer pricing, a workshop was organized for countries in the Asia/Pacific region.

For the 2018/2019 financial year, the WCO Secretariat responded to nine requests for advice received from WCO Members in relation to Customs valuation.

Events

WCO valuation experts participated in a private sector conference series focusing on transfer pricing called the "TP Minds Conference," which was organized in Australia, Singapore, South Africa and the United Kingdom with the objective of promoting WCO valuation work. They also participated in a WTO workshop entitled "Experience sharing on the implementation of the Customs Valuation Agreement, and ensuring that the Trade Facilitation Agreement supports implementation of the CVA including technical assistance and capacity building."

Rules of origin

The WCO continued to support its Members with their understanding, management and implementation of rules of origin amid the ongoing proliferation of regional trade agreements.

The Technical Committee on Rules of Origin (TCRO) met to report on the technical aspects of the WTO Agreement on Rules of Origin. The work on the harmonization of non-preferential rules of origin at the WTO has remained stagnant for some years, but

discussions have taken place on issues linked to notifications and transparency.

Back to back with the TCRO, a workshop was organized to address preferential market access for LDCs, origin procedures including certification and verification, and e-learning opportunities for public and private representatives. The review of the Revised Kyoto Convention (RKC) was also discussed, with the inputs being reported to the Working Group on the Comprehensive Review of the RKC.

Technical assistance

Capacity building activities included the organization of eight training workshops:

- In Sri Lanka, WCO Secretariat staff partnered with the WTO to deliver presentations related to the operational aspects of origin.
- In Angola, Indonesia and the Lao People's Democratic Republic, they assisted Customs officers in enhancing their knowledge of preferential rules of origin and their ability to correctly apply the rules related to origin.
- In the Bahamas, they delivered a train-the-trainer workshop for eight officials.

WCO Secretariat staff also participated in several external events:

- A workshop on electronic certificates of origin, gathering the four Members of the Agadir Agreement (Egypt, Jordan, Morocco and Tunisia).
- A roundtable on the future of rules of origin and utilization rates organized by the European University Institute in cooperation with UNCTAD, aimed at providing a platform for origin experts, researchers, government officials and the private sector to discuss developments in the area of rules of origin.
- A workshop on the implementation of the APEC Customs Transit Guidelines that were adopted in 2014.

New publication

A number of origin tools have been updated or translated into new languages:

- The WCO Origin Compendium, a compilation of all origin related tools and instruments, is now available in Spanish.
- The Database on Preferential Rules of Origin, and the Comparative Study on Preferential Rules of Origin have been updated, with the Study now translated into French and Spanish.

Specific Annex K of the Kyoto Convention

The WCO Secretariat believes that there is a need to update Specific Annex K of the Revised Kyoto Convention (RKC) that deals with rules of origin as part of the current RKC review. The Annex was not part of the revision of the original Kyoto Convention, and, as such, there is a need to update the text to ensure that it matches modern Customs and trade procedures and practices.

Moreover, the WCO Secretariat is advocating for binding and enforceable provisions, thereby promoting that the WCO and Customs take the lead in relation to international standards on the administrative procedures regarding rules of origin.

More information

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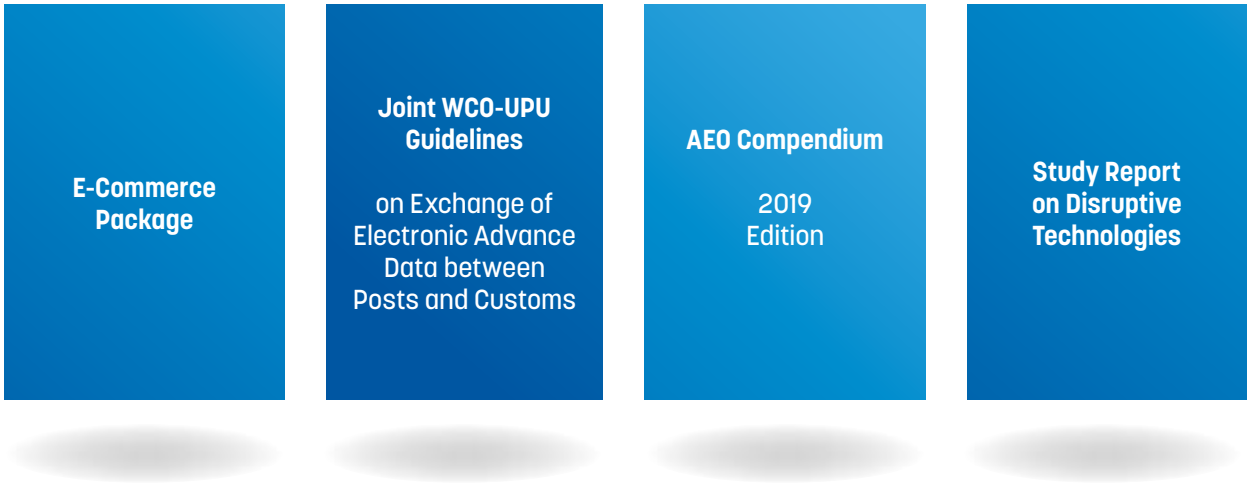
Procedures and Facilitation

New publications



WTO Trade Facilitation Agreement (TFA)

The TFA entered into force on 22 February 2017. Since its launch in June 2014, the Mercator Programme has been the WCO's strategic initiative aimed at assisting governments worldwide in implementing the TFA in an expeditious and consistent manner by applying WCO instruments and tools, as the TFA's provisions relate, to a large extent, to Customs procedures.

During the 2018/2019 financial year, numerous TFA-related missions were carried out by the WCO. Amongst other technical assistance and capacity building missions, WCO experts:

- supported Afghanistan, Comoros, Moldova, and Sao Tome and Principe in undertaking a gap analysis as part of these countries' processes towards accession to the Revised Kyoto Convention (RKC);
- delivered regional training on the accession and implementation of the RKC, benefiting 14 countries from the Caribbean and Central America;
- carried out a regional TFA workshop for CARICOM Member States, in partnership with the WTO and other Annex D organizations;
- organized a TFA workshop for Asia Development Bank (ADB) member countries, in partnership with the ADB and the WTO;
- carried out the First African Forum for National Committees on Trade Facilitation in Addis Ababa, together with six other international organizations;
- organized national workshops on how best to conduct a TRS for the Customs administrations of Bahrain, Brazil, Fiji, The Gambia, Guatemala, Lebanon, Liberia, Papua New Guinea, Sri Lanka and Uganda, as well as a sub-regional workshop for countries of the Commonwealth of Independent States (CIS);
- undertook a scoping mission in South Africa aimed at reviewing its existing authorized economic operator (AEO) programme, Single Window (SW) project and risk management practices, to ensure that they met the requirements of the TFA as well as the WCO's principles and instruments;
- provided support to the APEC Capacity Building Workshop on the TFA for micro, small and medium-sized enterprises (MSMEs);
- supported a training course for China Customs on the TFA and related WCO instruments and tools.

Details on activities undertaken in other areas, such as authorized economic operator programmes, e-Commerce, transit and the Single Window, appear later in this article.

Besides regional and national focused assistance, the WCO held two meetings of the WCO Working Group on the WTO Agreement on Trade Facilitation (TFAWG) that discussed various technical topics related to TFA measures, as well as the implementation challenges faced by developing and least developed countries including the coordination of priorities relating to technical assistance and capacity building.

Authorized economic operators (AEOs)

WCO experts supported the implementation of AEO programmes in the Bahamas, Benin, Bosnia and Herzegovina, Cameroon, Cuba, Iran, Nigeria, Pakistan, Senegal, Sudan, Uzbekistan and Zimbabwe, and provided assistance to the Arab States of the Gulf on how to develop a regional AEO programme.

They also supported Belarus Customs in developing its capacities with respect to the negotiation and implementation of mutual recognition arrangements (MRAs), as well as Chile and Peru in enhancing their AEO programmes by improving the validation process and risk analysis, developing performance indicators, and involving other government agencies.

Lastly, WCO experts also organized the first ever train-the-trainer workshop to develop a pool of AEO validators able to help countries of the Americas region to enhance their AEO validation process, based on the WCO's AEO Validator Guide and the AEO Validators Training Course.

Transit

Regional workshops on transit were held for the WCO Europe, Far East, South and South East Asia, Australasia and the Pacific Islands (Asia/Pacific) and North of Africa, Near and Middle East (MENA) regions, thus completing the series of six regional workshops aimed at promoting the implementation of the WCO Transit Guidelines and collecting national and regional transit best practices.

The WCO also supported the delivery of a workshop on Customs transit for the Members of the Andean Community – Bolivia, Colombia, Ecuador and Peru. In addition, to extend its pool of experts in transit issues, the WCO Secretariat organized an Accreditation Workshop for French-speaking experts.

Special Customs zones/free zones (SCZs)

WCO Members agreed, last year, to conduct an analysis of the current situation, including the economic benefit of SCZs, Customs SCZ controls and procedures, and illegal activities associated with SCZs, through an online survey, field studies and regional workshops. These activities have been completed, and the results of some of the workshops are available online.

Based on the activities carried out thus far, as well as existing literature review, a research paper was published in September 2019, stressing the need for strong Customs involvement in SCZ policy as well as the proper application of Customs controls in SCZs. A guidebook will be developed, based on the research paper, which will be discussed at the WCO Permanent Technical Committee (PTC) in the coming months. The issue is also being discussed at the WCO Working Group on the Comprehensive Review of the Revised Kyoto Convention (WGRKC). The RKC is the only international convention that outlines Customs policy in relation to SCZs in Chapter 2 of its Specific Annex D.

Advance passenger information (API) and passenger name record (PNR) data

WCO experts provided support to Uzbekistan on the establishment of API/PNR systems to control and facilitate air passengers, and organized a workshop in Indonesia for Customs authorities in the Pacific. In addition, an e-learning module on the roles and responsibilities of Customs officers in the interdiction of passengers and crew at various points in the airport has been developed.

The Global Travel Assessment System (GTAS) software has been deployed in the Maldives. Available to Customs administrations free of charge, the system enables the collection and analysis of passenger data.

Although WCO activities have focused on the standardization and use of API and PNR for the

control and facilitation of passengers in the air mode and, more specifically, scheduled flights, such data is also collected (or could also be collected) for other modes of transport and for non-scheduled flights. Discussions were held on the use of this data and related challenges for passengers transported by general aviation aircraft, cruise ships, road and trains, and will continue in the coming months.

WCO Data Model (DM)

Seventy-two countries reported that their information systems conform to the WCO DM, and around 58 countries have active implementation projects underway. Version 3.8.1 of the Model has now been released.

A "Data Model Business Guide" has also been published. The purpose of this Guide is to explain, in simple language, the WCO DM and its use and relationship with other international instruments including governmental best practice recommendations.

The WCO concluded the maintenance process of the International Maritime Organization (IMO) Compendium on Electronic Business that contains technical standards for ship reporting. This work resulted in the creation of the IMO Reference Model that will connect with the WCO DM Derived Information Package (DIP).

Regarding technical assistance, WCO experts delivered national workshops in Colombia and Ukraine. In addition, a regional workshop on the WCO DM was held in Azerbaijan back-to-back with the WCO IT/TI Conference and Exhibition, with the objective of raising awareness on the WCO DM and enabling experiences to be shared on its implementation.

Single Window (SW)

WCO experts participated in different international forums, supported activities relating to the implementation of SW solutions, and promoted the use of WCO standards and tools, such as the SW Compendium, the WCO DM and the RKC ICT Guidelines. Their activities included:

- assisting Customs administrations in Belarus, Comoros, Jamaica, Mongolia, Uganda and Uruguay with projects aimed at establishing or enhancing national SW environments;
- conducting a workshop to help the five Members of the Eurasian Economic Union and the 26 countries of the WCO East and Southern Africa region to develop their respective SW systems, based on international standards and harmonized provisions in order to ensure interoperability;
- organizing, in cooperation with UNESCAP experts, the 4th UNNExT Single Window Masterclasses, gathering mainly Asia Pacific countries.

Non-intrusive inspection (NII)

The WCO Council endorsed the document providing a summary of the Technical Specification of the proposed unified X-ray file format (UFF) for NII devices, namely UFF 2.0. WCO Members are invited to require their suppliers to deploy the UFF 2.0 on equipment in use, if possible, and to include a UFF requirement in their tender documents for the procurement of NII systems.

Postal traffic

The WCO is closely working with the Universal Postal Union (UPU) on a number of issues of mutual concern, which, in particular, include the implementation of the exchange of electronic advance data between Posts and Customs, postal supply chain safety and security, e-commerce, and the quality of data in CN 22 and CN 23 declarations. In addition, to further enhance Customs-Post cooperation, the WCO Council adopted the "Joint WCO-UPU Guidelines on Exchange of Electronic Advance Data between Posts and Customs."

The two organizations provided support to Customs and Posts of Indonesia and Vietnam on the implementation of electronic advance data and on the implementation of the Customs Declaration System (CDS) that has been developed by the UPU's Postal Technology Centre. CDS allows customers to enter data about an item online, and enables Posts to supply Customs with advance data about a postal item. It also enables Customs to inform Posts about the action to be taken with respect to any given item.

In addition, a joint WCO-UPU Customs-Post Workshop was organized for the Latin American sub-region, with the aim of improving knowledge and strengthening the existing cooperative relationship, including the exchange of electronic advance data between Customs and postal authorities in the sub-region. Furthermore, joint WCO-UPU workshops for the Asia/Pacific region and the Caribbean sub-region were held to enhance capacities for countering the transportation of dangerous and contraband items in the postal chain.

E-commerce

The WCO Council endorsed the technical specifications relating to the Framework of Standards on Cross-Border E-Commerce adopted in June 2018, as well as other guidance material further enriching the Framework, such as definitions of certain terms used in the instrument, flow charts, business models, and case studies. An implementation strategy, an action plan and a capacity mechanism aimed at ensuring the widespread adoption and implementation of the Framework was also adopted.

The above-mentioned documents have been brought together in an E-Commerce Package, a "living document" that would be regularly maintained and updated. Work on a reference data set for e-commerce, revenue collection approaches, the roles and responsibilities of e-commerce stakeholders, and other related work will continue, and documents related to these areas are expected to be submitted to the Council for consideration in June 2020.

In terms of capacity building, WCO experts provided assistance to Moldova and Panama, assessing their Customs administrations' preparedness in managing e-commerce transactions effectively, and assisting them in developing an action plan. Moreover, a high-level regional workshop to promote and support the implementation of the Framework was organized for countries in the WCO Asia/Pacific region.

Also, a regional workshop on cross-border e-commerce was organized for the WCO Europe region to improve knowledge and strengthen the existing capabilities of Customs administrations in the region on issues concerning the implementation of the WCO Framework of Standards on Cross-Border E-Commerce.

Small Island Economies (SIEs)

SIEs, most of which are developing states, face specific social, economic, trade and environmental vulnerabilities and disadvantages associated with their small size, remoteness and proneness to natural disasters.

As part of activities aimed at supporting SIEs, the WCO Secretariat launched a dedicated initiative, and has organized sub-regional workshops for such countries located in the Indian Ocean region and in the Caribbean, and is planning to organize one more in the Pacific.

Going forward, a guidance for Customs administrations of SIEs is being developed by engaging relevant international and regional bodies and stakeholders, based on the specific needs and priorities of SIEs.

Study Report on Disruptive Technologies

The Study Report was developed by the Virtual Working Group on the Future of Customs, which has been operating under the PTC for the last four years. It aims to support Customs administrations in gaining a better understanding of what these technologies are about, how they are used today, and how they could potentially be used in the years ahead, by both Customs and other stakeholders in cross-border supply chains, for the purpose of securing, facilitating and boosting global trade, and ensuring proper revenue collection.

With this Study Report, the WCO is responding to a growing Customs appetite to learn more about the potential of disruptive technologies and ways in which they can manage their introduction. A robust strategy behind this technology will allow Customs to keep pace with the accelerating speed of IT advances, and to make full use of the opportunities they bring. Cooperation with the private sector is valuable and a number of recommendations have been laid out for consideration in this respect.

More information

facilitation@wcoomd.org

Capacity Building

WCO Mercator Programme

Since its launch in June 2014, the Mercator Programme has become the WCO's flagship capacity building programme aimed at assisting Member administrations implement the WTO Trade Facilitation Agreement (TFA) in a uniform manner. The Programme promotes harmonized implementation, provides "tailor-made" technical assistance and capacity building, and facilitates effective coordination amongst all interested stakeholders.

From July 2018 to June 2019, over 100 national capacity building, technical assistance, and training activities were delivered. As of June 2019, 46 WCO Members were already benefiting from multi-year (MY) Mercator partnerships under the tailor-made track that focuses on medium to long-term engagement and employs a project-based approach that includes a significant role for WCO-accredited experts, in particular WCO Mercator Programme Advisors (MPAs). The WCO currently has over 70 fully accredited MPAs, many of whom are regularly providing effective TFA implementation support through sustained engagement with beneficiary Members.

The WCO continues to refine the Mercator Programme to ensure it remains fully responsive to WCO Members' needs and implementation challenges, and that it continues to leverage the Organization's unique value-add, including its network of accredited experts as well as the WCO instruments and tools relating to effective and efficient TFA implementation.

Human resource development (HRD)

WCO e-learning platform: CLiKC!

A new version of the CLiKC! learning platform dedicated to Customs officers has been launched. It provides users with a comprehensive picture of the WCO's training material as well as the training opportunities available to its Members (see article published

in the June 2019 edition of WCO News or visit https://clikc.wcoomd.org).

Twenty-five e-learning courses on various Customs topics are now available via the platform, with four new courses having been added recently related to the Time Release Study (TRS), the control of passengers in an airport environment, small arms and light weapons (SALW), and gender equality. The CLiKC! platform currently has 23,000 registered users.

WCO Academy

The WCO e-learning portal aimed at building the Customs skills and knowledge of trade professionals and academia is now live at https://academy.wcoomd.org. The portal currently offers 14 e-learning courses covering key Customs topics and has successfully hosted a number of Webinars (an online conference facility).

Virtual Customs Orientation Academy (VCOA)

The VCOA provides newly recruited Customs officials with a 14-week tutored e-learning opportunity that addresses core Customs competencies, the concepts of clearance procedures and practices, international standards and conventions, and how to apply them effectively in the workplace. During the year under review, 35 more Customs officers successfully completed the WCO's online VCOA curriculum.

Fellowship and Career Development Programmes

Thirty-four officers participated in the WCO Fellowship Programme, the aim of which is to develop the abilities, skills and knowledge of Customs middle managers, to ensure that they can actively participate in the reform and modernization processes of their home administrations.

Regarding the WCO Career Development Programme, 10 Customs officials participated this year, working as part of the WCO Secretariat for 10 months as Professional Associates where they enhanced their knowledge, skills and international work experience. Participants also benefited from a study field trip to Japan.

Scholarship Programme and Executive Programme in Customs and Business Administration (EPCBA)

Twenty Customs officers participated in the Scholarship Programme, during which they studied at a number of different Japanese universities for a one-year Master's degree course focused on Customs related issues. With respect to the EPCBA, 10 officers attended courses on international trade and management at the Seoul National University in Korea.

Leadership and Management Development Programme (LMDP)

Four further LMD workshops were conducted during the 2018/2019 period. An additional five were delivered as part of the WCO Fellowship and Career Development Programmes. In addition, six Customs administration benefited from a "Top Executive Retreat," which is aimed at strengthening the capacity of Directors General and their top executive teams to lead and drive reform and modernization agendas.

Taken together, these activities have provided around 237 executive, senior and promising middle-level Customs managers with a better understanding of modern management approaches and their own personal leadership attitude and behaviour, based on improved self-knowledge and self-awareness.

The LMD Programme prioritizes a dual track approach where technical support goes hand in hand with organizational development, more specifically the development of modern leadership. A new approach to LMD support has recently been developed that aims to install a modern and inspiring management culture throughout the whole of an organization.

Integrity

Different types of missions were organized during the 2018/2019 period to respond to specific requests from WCO Members:

- an integrity assessment mission in Bermuda (July 2018);
- a support mission to Mauritius on "The Role of Leadership in Organizational Integrity" and on "Ethical Leadership" (September 2018);
- an Integrity self-assessment activity in the Bahamas (November 2018);
- assistance to countries of the East African Community (EAC) in reviewing their Integrity Action Plan, and evaluating the level of implementation of the EAC Code of Ethics in member countries;
- integrity diagnostic missions to Jamaica and Kazakhstan (March 2019).

In January 2019, the WCO and the Norwegian Agency for Development Cooperation (Norad) launched the Anti-Corruption and Integrity Promotion (A-CIP) Programme for 11 WCO Members: Afghanistan, Ghana, Ethiopia, Lebanon, Liberia, Mali, Mozambique, Nepal, Sierra Leone, Tanzania, and Tunisia. Eight member support missions and one regional workshop were also conducted.

To support WCO Members' efforts in implementing Principle 6 of the Revised Arusha Declaration on good governance and integrity in Customs, focusing on Audit and Investigation, the WCO gathered the experiences of some administrations into one publication entitled "Compilation of WCO Members' Integrity Practices on Internal Controls and the Relationship with External Controls."

Gender equality and diversity

The WCO has continued its work with the Virtual Working Group on Gender Equality and Diversity, established to gather examples of best practices and act as a platform for WCO Members to exchange information amongst one another. The Secretariat also developed a blended learning package advancing gender

equality in Customs that includes two tracks, one focused on training managers on gender mainstreaming and another on raising awareness through e-learning.

In addition, a second survey on gender equality and diversity was disseminated, which received a high level of response. The Secretariat also reviewed and updated the Gender Equality Organizational Assessment Tool (GEOAT) with the contribution of the Virtual Working Group to better align it to international practices. The WCO also participated in a number of events in the area of gender and trade to present its work, build networks, and share experiences with experts from other international organizations as well as national bodies.

Capacity Building Progress Report

The Report provides further details of the capacity building and technical assistance provided by WCO Secretariat staff and accredited experts during this reporting year. Part I of the Report lists activities undertaken in 2018/2019 per topic and per country, while Part II lists all the missions delivered per region and per country since the launch of the WCO Capacity Building Programme.

More information

capacity.building@wcoomd.org
www.wcoomd.org/en/topics/capacity-building/resources.aspx

Compliance and Enforcement

New Publications

Security Programme

Strategic trade

Under the Strategic Trade Controls Enforcement (STCE) Programme, the following training events were organized:

- 13 national workshops (Algeria, Azerbaijan, Bosnia and Herzegovina, Canada, Chile, Jamaica, Kazakhstan, Malaysia, Morocco, Peru, Tajikistan, Togo, and Tunisia);
- 1 training workshop for countries in the Western Balkans (Croatia, Bosnia and Herzegovina, Montenegro, and Serbia);
- 2 train-the-trainer workshops aimed respectively at English and Russian-speaking officials interested in being accredited as STCE Expert Trainers.

To date, 14 WCO Members have informed the Organization that their accredited trainers are delivering STCE events in their countries, whilst a further five Members have licensed the STCE training material from the WCO for use in their national training academies or programmes.

The Strategic Trade Control Enforcement (STCE) Implementation Guides have been updated and will be translated into four additional languages.

Small arms and light weapons (SALW)

Regarding SALW, three train-the-trainer workshops were conducted for nine countries in South East Asia. Accredited trainers then conducted national training workshop in Cambodia, Indonesia, Myanmar, the Philippines and Thailand where officers from law enforcement agencies joined their Customs counterparts for all or part of the training. These Customs administrations subsequently participated in two WCO coordinated operations targeting illicit shipments of SALW and during which four seizures of weapons and ammunition were made as well as drug seizures.

In June 2019, a two-year EU funded SALW project was launched in partnership with the Small Arms Survey and INTERPOL. The project looks to increase the capacity of members in the Middle East and North Africa region to restrict illicit arms movements.

Passenger controls

Two workshops on air passenger controls that focused on the use of advance information received from airlines (i.e. API and PNR) were organized for countries in South East Asia and the Pacific. Participants also addressed techniques used in baggage examination and in the questioning and search of persons. In addition, they learned how to use behaviour analysis and body language interpretation to identify high-risk passengers. Similar training was carried out in Uganda.

The WCO also supported Maldives Customs in the deployment and use of the Global Travel Assessment System (GTAS), to collect advance passenger information (API) and passenger name record (PNR) data. It also carried out several

missions in South East Asia, as part of the Asia Pacific Security Project, to assess the possibility of deploying the tool in those countries.

Explosive precursor chemicals

Under Programme Global Shield (PGS), an initiative aimed at building capacity to counter the illicit trafficking and diversion of explosive precursor chemicals and other components contained in improvised explosive devices (IEDs), three train-the-trainer courses were conducted for 59 officials from South East Asia. The accredited trainers of Bangladesh, Thailand, Indonesia, Cambodia, the Philippines and Myanmar already reported having delivering courses to a total of 170 officials.

Three operations were coordinated by the Secretariat, the first one being a pilot operation that took place in Bangladesh and the two others which followed gathering in total nine Customs administrations of South East Asia. Five seizures of explosive precursors were reported together with drug and weapons seizures.

Several trainings were held for countries of East Africa and the MENA region.

Two train-the-trainer workshops were organized for countries in the WCA region, which raised awareness on IEDs and related components as well as terrorist threats in the region. The workshops also included practical training on using equipment (spectrometers, field kits, etc.) as well as WCO tools such as the nCEN.

Equipment

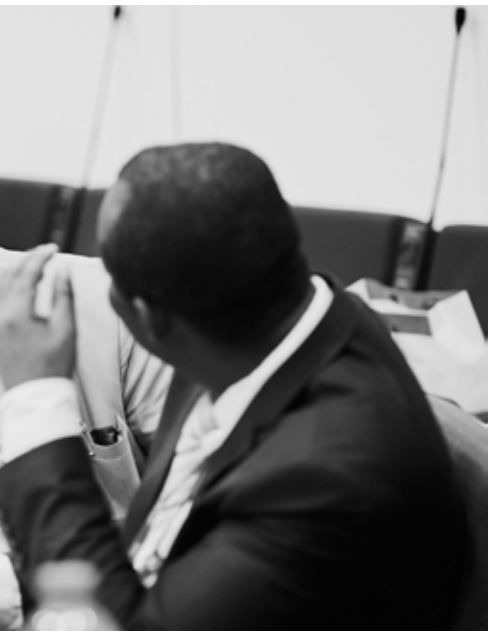
Some countries participating in the Asia Pacific Security Project were also given equipment. A total of 65 Raman Spectrometers, 19 Backscatter X-ray devices, 8 XRF precious metal analyzers and 1030 PGS Field Test Kits were distributed over the two-year life of the Project. In addition, anti-smuggling and inspection officers were trained on the usage and safety features of these technical devices.

Operations

Under PGS, an enforcement operation was conducted in Bangladesh. Moreover, INTERPOL and the WCO organized two other operations targeting bulk cash smuggling and arms trafficking: Operation TRIGGER MENA and Operation NEPTUNE II.

Terrorist financing

In conjunction with INTERPOL and the Financial Intelligence Unit (FIU) of Japan, a one-week anti-money laundering and counter-terrorism financing workshop was conducted in Japan, with 26 administrations from the Asia/Pacific region participating in the event. An enforcement operation, code-named TENTACLE, was conducted as a follow-up to this workshop. A similar workshop was also organized by the WCO for countries in the MENA region.



Regionally focused security projects

The Asia Pacific Security Project (APSP) that commenced in March 2017 ended in June 2019, and many of the workshops and activities reported above relate to this Project. The West and Central Africa Security Project (WCA-SP) began in April 2018 and a scoping mission was held in participating countries to assess the terrorist threats that they face, and effectively define countries' needs in terms of technical assistance, training and capacities (for example, equipment).

Revenue Programme

Post-clearance audit (PCA)

Together with the review of existing tools, PCA capacity building activities focused on hands-on training for system-based audits. An advanced PCA Package has been developed for auditors who already have basic knowledge on the PCA concept – exercises deal with audit planning, analysis of Customs data, review of business information, use of audit templates such as a systems questionnaire, audit reports, etc.

The Package also includes case studies on irregularities such as undervaluation, misclassification, origin fraud, and industry-specific issues. The Package was piloted in South Africa, where a systems-based audit approach was adopted in 2010 as part of the development of its Preferred Trader Programme.

Officers not acquainted with auditing practices can refer to the e-learning modules available on the CLiKC! platform or peruse the WCO PCA guidelines, and may attend an introductory workshop on PCA. Such a workshop was conducted in Armenia, Sri Lanka and Vanuatu, to help these countries develop their PCA capacities.

Diagnostic missions were delivered in Cameroon, Jordan, Qatar, Palestine, Pakistan, and Tonga. Additionally, a joint PCA and risk management diagnostic mission, the first of its kind, was conducted for Armenia and Eswatini. Based on the successful results of these missions, similar joint activities are being considered for the future. The WCO also participated in a PCA training event organized by the Netherlands Customs administration for representatives from China Customs.

Risk Management and Intelligence Programme

A Risk Management Diagnostic Tool has been developed, enabling a comprehensive review of a Customs administration's risk management policy, strategy and infrastructure (including implementation) to be undertaken. The tool will be submitted to the Enforcement Committee in March February 2020.

With regards to capacity building activities, the WCO supported 27 of its Members to

enhance the application of risk management in their respective administrations. Training was provided to officers in Algeria, Bahamas, Burundi, Côte d'Ivoire, The Gambia, Iran, Kazakhstan, Moldova, Nicaragua, Nigeria, Pakistan, Peru, Tanzania, Thailand, Uzbekistan Zambia and Zimbabwe, as well as in countries of the Pacific Ocean Islands, namely Fiji, Papua New Guinea, Samoa, Tonga, and Vanuatu.

Diagnostic missions to identify the strength, weaknesses and gaps in risk management systems and practices were carried out in Antigua and Barbuda, Belize, Eswatini and Guyana.

Drugs and Precursors Programme

Project AIRCOP

Twenty-two Joint Airport Interdiction Task Forces (JAITFs) are currently operational under Project AIRCOP, a project managed in conjunction with the UNODC and INTERPOL, which aims at strengthening the capacities of international airports to detect and intercept drugs and other illicit goods as well as to detect high-risk passengers, including foreign terrorist fighters (FTFs).

The teams regularly receive training, and their risk analysis capacities were once again tested during the running of Operation COCAIR VII. The creation of a JAITF in Costa Rica and in Cuba is also being considered, and an assessment mission has already been carried out in these countries.

UNODC-WCO Container Control Programme (CCP)

The CCP is a joint initiative between the UNODC and the WCO. Port Control Units (PCUs) established under the CCP are, at present, fully operational at more than 80 ports (including dry ports) in 50 countries. An integral and essential element of the CCP is to facilitate networking amongst the PCUs thanks to the WCO ContainerCOMM system, which provides the necessary infrastructure for the swift and secure exchange of information and intelligence electronically.

A separate joint programme on air cargo control has been deployed in 14 airports in various regions, with 4 countries scheduled to join the segment in the next months.

PCU and Air Cargo Control Units (ACCU) are regularly trained and, since 1 July 2018, 194 training activities on different techniques have been delivered to further develop their skills. In 2019, specific training on the illicit trade in timber in Latin America and Southeast Asia was launched.

Air cargo experts

As more and more WCO Members request training in targeting techniques in the air sector and in light of the many WCO programmes that now focus on this mode of transport, the WCO organized an accreditation workshop for experts in the profiling of high-risk passengers and cargo. Eight experts were accredited and will be able to support the WCO Secretariat in delivering capacity building activities in this area.

IPR, Health and Safety Programme

Eleven capacity building activities were delivered, taking the form of six regional or national seminars (Bahamas, Ghana, Senegal, and ASEAN Members) and five diagnostic missions (Afghanistan, Cambodia, Georgia, Laos, and Myanmar).

WCO experts also facilitated and/or supported more than 10 workshops held by other organizations such as World Intellectual Property Organization (WIPO), the US Patent Office (USPTO), the World Organization for Animal Health (OiE) and the United Nations Office on Drugs and Crime (UNODC), as well as the UNODC/WCO Container Control Programme (CCP).

One regional operation, code-named MIRAGE, was coordinated by the WCO over a nine-day period in 14 African countries, resulting in the interception of around 20 million substandard or fake products, the vast majority of which related to pharmaceuticals. In addition, WCO experts actively supported the annual global operation against illicit medicines, known as Pangea, which is led by INTERPOL.

The WCO also participated in the International Conference entitled "Respect for IP: Growing from the Tip of Africa" organized by WIPO in South Africa. An article highlighting some of the discussions held at the event was published in the February 2019 edition of WCO News.

Environment Programme

Operation DEMETER IV

DEMETER IV, which targeted illicit trade in hazardous waste, was conducted from 4 June to 8 July 2018 with the participation of 73 Customs administrations. Nine countries reported 134 seizures for a total of over 164,000,000 kg of hazardous waste. A formal de-briefing event was conducted in November 2018, during a workshop on environmental issues hosted at the WCO Regional Training Centre in Shanghai, China.

INAMA Project

Launched in October 2014, the INAMA Project aims to strengthen the enforcement capacity of targeted Customs administrations in Sub-Saharan Africa and Asia, while focusing on the illegal trade in wildlife, particularly endangered species listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

A first support mission was held in Togo to assess its enforcement capacity when it comes to species covered by the CITES and the fight against illegal wildlife trade, and to provide advice on the way forward. Monitoring missions were also carried out in Burkina Faso, Cameroon, Tanzania and Uganda to measure the implementation of the activities set out in the Work Plan developed in a previous stage as part of the Project, and to draft recommendations. In addition, WCO experts provided support to Mozambique and Sri Lanka in developing a training course on CITES and illegal wildlife trade as part of their national training curricula.

Furthermore, a tool to evaluate risk management capacities in relation to illicit wildlife trade was developed. It was used to evaluate Malawi and Vietnam's Customs administrations. Detailed assessment reports containing recommendations to be followed by both countries were elaborated.

Moreover, three workshops jointly organized with INTERPOL and aimed at strengthening operational inter-agency cooperation were held: one for Sub-Saharan African countries speaking English or Portuguese, another for those speaking French, and a third for Asian countries participating in the Project. Operation PRAESIDIO followed these events. Additionally, the WCO and INTERPOL joined forces to organize Operation THUNDERBALL, still with the same objective to strengthen Customs/Police cooperation.

Cultural Heritage Programme

The approach that was tested in the MENA region in 2017, where issues of security, development, and protection of cultural heritage were addressed together, was also used in the West and Central Africa (WCA) region. A workshop was first organized to analyse the security situation in the region, identify gaps in awareness and the skills of the Customs officers, and draft recommendations. On the basis of these outcomes and using the Training Handbook on the Prevention of Illicit Trafficking of Cultural Heritage (PITCH), training was then delivered.

A PITCH training event was also held in Cuba, under the auspices of the UNODC/WCO CCP Programme. In partnership with the OSCE, the Secretariat also organized training for four countries of Central Asia. It also contributed to the UNESCO-Carabinieri cross-border training for Romanian and Moldovan authorities, as well as to the Cultural Heritage Workshop for Iraqi Customs, law enforcement and security agencies organized by the EU Advisory Mission (EUAM) in Baghdad.

Moreover, fieldwork research was conducted in Burkina Faso and Niger. The results of this fieldwork have provided critical knowledge for the enhancement of the training provided in the region, and for feeding discussions at a strategic level.

Besides conducting training, the Secretariat staff contributed to the joint Customs/Police enforcement operation, code-named Pandora III, alongside INTERPOL, Europol, the Spanish Guardia Civil and Dutch Police. They provided operational coordination and analysis and developed a seizure report template compatible with CENcomm to ensure the harmonization of seizure reports by both Customs and Police.

The number of persons using the ARCHEO platform is growing. It currently has 270 users from almost 100 countries compared to 236 users from 90 countries in the previous reporting period. ARCHEO is used both to send alerts and warnings on possible trafficking as well as during investigations to support enquiries relating to the identification of cultural objects.

Another outcome of the work of the Programme is a growing number of requests by countries for cultural objects seized by Customs administrations to be restituted to them, request which received the support of the WCO.

Customs Operational Practices for Enforcement and Seizures (COPES) Programme

The COPES Programme covers issues relating to border security, collection of evidence, seizures, investigations, and prosecutions. Although not all Customs administrations have judicial investigation powers, they are intended to be beneficiaries of the Programme as an integral part of the Customs criminal chain. To overcome these legal and administrative differences, the programme targets staff from various enforcement agencies working at the border (Customs, Police and other agencies).

Training material has continued to be developed and now covers a very broad spectrum, ranging from an introduction to main enforcement concepts, to financial investigation, to criminal investigation techniques, and prosecution-related matters.

Over the 2018/2019 period, several trainings were organized at the request of Customs administrations, including administrations providing training themselves to foreign colleagues, or at the request of the managers of WCO enforcement programmes related to

drug, environment and cultural goods, and of the Container Control Programme.

To be more specific, four awareness raising regional seminars gathering senior managerswere organized, fourteen regional or national technical workshops for frontline officers and prosecutors, as well as two train-the-trainer workshops. Moreover, a capacities assessment was undertaken in one country.

Albania, Bangladesh, Burkina Faso, Burundi, Benin, Cameroon, Central African Republic, Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Gabon, Guinea, India, Indonesia, Jamaica, Japan, Kosovo, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mongolia, Montenegro, Niger, Peru, Senegal, Thailand, Togo and Tunisia benefited from the COPES Programme.

WCO tools

The CEN suite

The CEN suite includes three stand-alone applications, namely the Customs Enforcement Network (CEN), the National CEN (nCEN) and the CEN communication platform (CENcomm), which are compatible and complementary in nature – each supporting Customs with the digitalization of operational processes in the enforcement field.

During the 2018/2019 period, the nCEN was deployed in Lao People's Democratic Republic, Senegal, Saint Lucia, Jamaica, Serbia and Pakistan. The tool has been implemented in 35 countries, with 15 deployments planned in the months ahead. It has been improved with the addition of an automatic selectivity capability, enabling the system to automatically show connections between different cases (database entries) based on the nominal data fields and some narrative data fields. Further training on the system and on data analysis was also provided to the Seychelles and to the Philippines.

CENcomm remains a popular tool. During the 2018/2019 period, the communication platform was used during 92 operations as well as in the framework of several projects. A modernized version of the CENcomm application has been developed in order to improve the user interface, to enhance the security features of the application, to provide an offline working solution in light of frequent internet problems in different parts of the world, to assure compatibility with mobile devices, and to introduce functionality improvements to allow for better management and interoperability with other CEN applications.

WCO Cargo Targeting System (CTS)

The WCO CTS enables user countries to capture advance electronic cargo manifest information, and to perform risk assessment, profiling and targeting. To date, the CTS' maritime cargo capability has been deployed in 11 countries: Bahamas, Chile, Georgia, Jamaica, Kenya, Maldives, Panama, Philippines, Singapore, Sri Lanka, and Ukraine. In addition, the CTS' air cargo capability has been finalized and deployed in these countries.

During the 2018/2019 period, WCO experts worked to finalize the deployment of the tool in Kenya, assessed the implementation of the tool in Sri Lanka, trained trainers in Jamaica and the Maldives, and visited the Seychelles to plan the deployment of the tool.

Electronic Crime

New guidance material has been published: "Computer Investigation Guidance 2018," "Emerging Technologies Impacting Customs," and "Digital Device Examination Guidelines for Border Officials."

More information

enforcement@wcoomd.org

2019 WCO Photo Competition

"Rudolph the red-nosed reindeer has nothing to declare" is the caption of this year's winning entry from Finland Customs.

Elections: a new Council Chairperson and two new Directors

Centre:
Mr. Taeil Kang of Korea joined the Secretariat in October 2019 as Director of the Capacity Building Directorate

Right: Mr. Pranab Kumar Das of India will join the Secretariat in January 2020 as the Director of the Compliance and Facilitation Directorate

Far right: Mr. Dicksons Collins Kateshumbwa, Commissioner of Uganda Customs, was elected Chairperson of the Council.

Dubai Customs uses artificial intelligence to boost productivity

By Dubai Customs

Improving workplace productivity and helping people get their jobs done efficiently is critical for Customs administrations that have to deal with an increase in the number of cross-border movements, be it cargo or people.

With a forecasted growth in trade and travel being driven by EXPO 2020, Dubai Customs decided, in 2018, to leverage artificial intelligence (AI), using it to develop a tool that would enable it to observe work data and employee behavior as a means of identifying ways to reduce the time required to undertake a task while improving quality and maximizing staff productivity.

About the tool

Called the Productivity Engine, its features include:

- a calculator to measure the "ideal time" for a task to be completed, the ideal time being defined after analysing three years of data and continually adjusting it – the system can calculate the time required for each of the existing 7,400 task combinations and determine whether employees stay within the time limit;
- a time-stamped data analysis tool that enables individual and collective work patterns to be defined, as well as efficiency and productivity rates;
- a productivity predictor;
- leadership nudges (a nudge is an indirect suggestion or subtle reminder intended to influence people's behaviour);
- a time tracker that highlights productive and unaccounted time, and which notifies decision makers of productivity scores for each department and employee.

The system acts like a tiny coach sitting on a manager's shoulder throughout the day. And every now and then, the coach whispers something like, "this person did something great recently," or "this process could be improved."

The Productivity Engine produces a productivity score from four indicators:

- Ideal Time Adherence: The average time taken to complete a task or a combination of tasks is calculated. The higher the adherence time, the closest it is to the ideal time.
- Task Consistency: Determines if employees work in the same way each time or if their patterns change often. Higher consistency means a lower variability in the way that employees work, which means that they can be relied upon to perform predictably.
- Quality Impact: The question here is "Does an employee's work quality cause others to work more or less?" The objective is to ensure that adherence to the ideal time is not achieved at the expense of quality, which could negatively impact productivity further down the line.
- Capacity Utilization: "How much time in a day do employees work at the ideal time pace?" A lack of adherence to the ideal time negatively impacts the indicator, and could leave one with the impression that employees may not be using the time allocated efficiently.

The impact of bringing AI in to help with management functions is transformative. When having to assess the performance of an employee, managers can rely not only on their own personal experience and knowledge of the person, but also refer to the measurements given by the tool. They can also predict, with higher accuracy, what a task involves in terms of human resources.

Development process

To develop the tool, a specific team was put in place to work on a methodology and launch staff awareness-raising activities. It was first necessary to understand what productivity means for Dubai Customs, to identifying the output measures for various processes, and ensuring that Customs managers adhere to productivity outputs and drivers.

Photo by William on Unsplash

"Productivity Disruption Labs" were set up with the active participation of employees to identify opportunities for productivity increases and quick wins. Internal and external data were analysed to develop productivity benchmarks, and algorithms were built and tested to build the Productivity Engine.

Lastly, an application to be used by managers within the organization was built to enable them to easily access the Productivity Engine dashboard.

First outputs

Thanks to the collected data and knowledge gained, Dubai Customs has initiated several projects that directly impact the productivity of the organization. For example, it was able to identify and automate an action occurring 468,000 times per year and requiring 3000 hours. As a result, customer service was improved, and employee happiness increased as they were relieved from a repetitive and dull task.

Moreover, a Trade Support Committee was created with the mission to increase the volume of trade coming through Dubai by engaging with multinational corporations to solve any supply chain challenges that they might face. The work of the Committee resulted in an increase in throughput at Dubai's ports.

Expectations

In 2017, Dubai Customs conducted a productivity study, which highlighted that between 2010 and 2012 it had experienced impressive productivity growth attributed to the launch of a modern e-clearance system called Mirsal 2. Growth slowed down in the following years, reaching 1.7% in 2016. Thanks to the Productivity Engine, Dubai Customs is determined to boost its productivity again.

To handle the expected increase in movements of people and cargo driven by Expo 2020, without having to hire additional personnel, Dubai Customs needs to grow its productivity by 15% in both 2019 and 2020. Using the Productivity Engine, Customs expects to grow its productivity by 32.5% and save 1.3 million work hours annually.

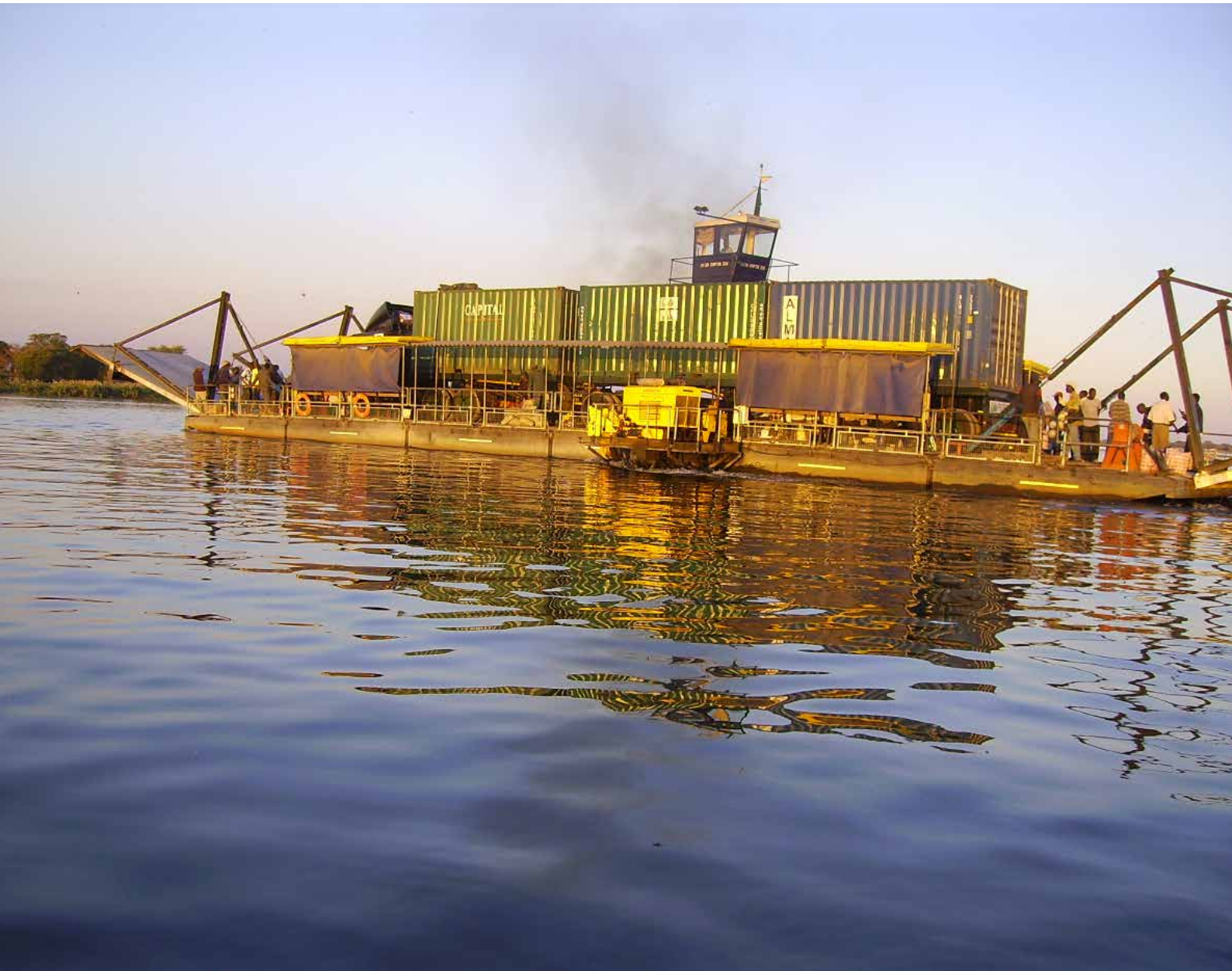
More information

www.dubaicustoms.gov.ae

Botswana's perspective on ensuring business continuity when transitioning from its Customs IT system to a more comprehensive national trade platform

By the Botswana Unified Revenue Service

The Botswana Unified Revenue Service recently implemented a new, modern IT system to manage their foreign trade operations. The migration from the old to the new system had to be smooth to ensure business continuity. This article presents the rationale behind the migration, looks at the challenges and lessons learned from the process, and highlights the benefits that accrued to the government and the trade community.



As part of a strategy to improve the country's trade competitiveness, Botswana's Cabinet approved, in early 2015, the establishment of a national Single Window in the country. The Botswana Unified Revenue Service (BURS) was designated as the lead agency in the operation of the national Single Window, which also replaced the existing Customs Management System (CMS).

At this time, BURS had been using ASYCUDA++ since 2002 for managing Customs declarations (for example, import, export, transit, and warehousing), suspense procedures, tariff and taxation, accounting (for example, cash, credit payments, and pre-payments of declarations), and reports. Additional application support features had also been developed over the years to meet business requirements.

To meet Botswana's needs, the Trade Facilitation Platform (TFP) was selected as the most relevant solution as it offered an end-to-end web-based suite of products that manages and facilitates trade processes between government and the trade community. In addition, the TFP encapsulated international best practices and industry standards, such as those of the WCO, UN/EDIFACT, the IMO and IATA, including a better user experience and a more modern, user-friendly interface.

Rationale for migrating to a new system

Several factors influenced the decision to move to a new system. Botswana's rankings in the World Bank's flagship report, Doing Business 2011, prompted measures that were aimed at further developing a conducive environment for undertaking business. The country was ranked 74 for "ease of doing business," and 157 for "trading across borders."

Spurred on by the World Bank's rankings and scores, Botswana recognized that the country needed to integrate more government agencies for better coordinated border management processes, while reducing costs for the government and traders, leading to a less burdensome trade regulatory environment that would stimulate economic growth.

Moreover, BURS needed a system that would be agile, easy to maintain, and with limited dependency on vendors. Faced with growing user requirements amidst an ever-changing global trade landscape, Botswana needed a system that would empower its users by enabling them to adapt easily and swiftly to changes in government policy and business rules, such as changes in tariff or Customs procedures, as well as to allow for integration with other systems, such as payment gateways, OGA (Other Government Agencies) systems, etc..

There was also a need to enable processes like 'guarantees,' 'transit' and 'free zones' to be fully handled end-to-end, to equip Customs with a high-performance and easy to administer risk management module, with the capacity to handle manifest and data reconciliation. The system also had to support business intelligence and post clearance audit-related activities, not forgetting that some functions like offence management and resource management (e.g., scheduling officers and officer productivity management) were lacking.

Main challenges and mitigations

It was of the utmost importance to ensure a smooth transition, and that there would be no business disruption when migrating from ASYCUDA++ to the TFP's integrated CMS (i.e. the Single Window + the CMS + the onboarding of other government agencies). However, with big vision comes big risks that could potentially jeopardize the country's trade ecosystem.

Some agencies may feel challenged with moving away from old habits when introducing a new system/user interface, and others may feel challenged by the entire new work process. Therefore, careful considerations and plans were put in place to identify gaps in advance, so that adjustments could be made to ensure a smooth migration and prevent any unplanned downtime.

Upon assessment, the project team, which was hired after a call for tender process, recommended that BURS follow a progressive roll-out approach. The implementation took place port by port, starting with the port that had the least transactions, in order to minimize risk. In three months, systems at all ports and land borders had been fully migrated.

The implementation took place port by port, starting with the port that had the least transactions, in order to minimize risk. In three months, systems at all ports and land borders had been fully migrated.

The functional modules of the system were rolled out in two phases, phase one was completed in 13 months, and phase two in 12 months. Phase two also involved onboarding other government agencies (training, data preparation, procedures and rules, system configuration, etc.), based on the readiness of each agency.

Moreover, transitioning to a new system entails complex data management. Data protection and retrieval were other challenges faced during the migration. This was a delicate task, especially since the amount and importance of data has grown significantly over the past 10 years, and will continue to grow in the years ahead.

Additional review with multiple levels of verification were also undertaken to prevent data loss during the migration. The TFP's integrated CMS archives necessary data, and its user interface was designed in such a way that users are still able to view and access previous ASYCUDA++ declarations seamlessly.

The new integrated CMS addresses several gaps, including LPCO (Licences, Permits, Certificates and Other) management. The absence of a common form for trade permits and licences made managing and harmonizing large amounts of data across various agencies an extremely complicated and daunting task.

Prior to the integrated CMS, Botswana struggled to coordinate clearance processes as each agency involved in the trade clearance procedure had its own forms and back-end processes, which were difficult to harmonize for speedier clearance. It was quite a challenge to consolidate the processes by eliminating those that were duplicated or overlapped. Different forms meant that traders had to spend time submitting them to various agencies on separate occasions.

With sound knowledge of other agencies' systems and processes, coupled with extensive experience in data harmonization and flexible LPCO data elements, the TFP consultants were able to effectively address the various agencies' requirements for data harmonization. Their LPCO requirements were simplified and harmonized through a flexible template-based mechanism, and their approval processes can be easily mapped out and coordinated with Customs release processes.

The highly configurable integrated CMS empowers agencies to define their permits and customize templates according to their requirements, which minimizes manual processes and forms. With function templates, LPCO data can be applied automatically from the system and integrated into another agency's host system, enabling users to submit data only once.

More notably, the TFP consolidates LPCO data and clearance declarations that are submitted electronically to the Customs authorities, helping to streamline all processes, improve coordinated action by Customs and other government agencies, and improve import and export clearance times considerably.

Benefits to the government

Fast implementation

The integrated CMS was implemented within a period of two years. Phase one of the implementation was completed in 13 months and connects seven key government agencies, with more agencies to be added as the project continues.

Reduced vendor dependency maintenance

Government agencies can develop new modules or enhance deployed modules on their own, reducing vendor dependency. The system's high degree of configurability allows self-servicing to onboard other government agencies, and is able to integrate with various agencies' existing systems, saving them from having to incur additional costs to develop a new system.

In addition, agencies involved in trade compliance management are empowered to adapt easily and swiftly to growing administrative requirements by configuring changes whenever there are revisions to trade regulations, Customs procedure codes (CPC), and tariff and business rules, without code changes.

Enhanced operational efficiency

The Dynamic Risk Management and Valuation Module enhances overall clearance speed by improving sensitivity to targeting, in order to reduce unnecessary intrusions. Customs, other government agencies and other key stakeholders are also able to coordinate and collaborate better as they all view the same data, and perform all their cargo clearance functions on a single central platform.

As Customs officers and officials from other government agencies are able to access data from a central platform (with different levels of access authorization, depending on the user), various stakeholders are able to collaborate better, especially when conducting inspections, which improves clearance speeds.

Leveraging data more effectively

With the implementation of all the CMS modules, BURS' back-end Customs operations have better visibility and coordination across departments, thus reducing paper dependency.

Non-permit issuing agencies have also been onboarded to the integrated CMS for data sharing across agencies. For example, Statistics Botswana can access trade statistics data, strengthening their policy and decision-making capabilities.

Benefits to the trade community

More cost-effective and less hassle for traders

Integrated with other government agencies, the single platform offers traders the convenience of filing declarations, applying for permits and licences, tracking consignments, settling payments, and managing interactions with Customs and other agencies without using multiple systems or making multiple trips to Customs.

Traders only need to print the release order once for Customs and other government agencies to release the goods, as the platform provides Customs and these agencies with enhanced visibility and facilitates their collaboration.

The systems of express courier services have also been integrated into the new system to enhance their productivity when submitting declarations, permits, etc. As no paper is involved, this enables them to offer faster and better customer service.

Traders are better informed

With improved predictability from effective cargo tracking, traders are able to respond quickly to shipment disruption and prevent unnecessary delays, claims and losses that potentially result in financial losses. If information is required by one of the parties to a transaction, it can be made available through the system. Various parties can access various data, depending on their authorization levels.

Traders are equipped to collaborate more effectively with their international trade partners

Traders can integrate their in-house systems with the integrated CMS, through what is called the "Cross-Border Services module." The tool extracts data from the packing list, commercial invoice or any other supporting documents to pre-populate the export or import declaration form.

Funding and deployment

The project was internally funded. As many activities compete for funds within BURS, a degree of prioritization had to be made, and this process took about two years to complete. BURS formulated a budget, based on extensive market research of similar trade facilitation systems.

A working committee and a high-level steering committee were created. The latter included six agencies, plus BURS, the project lead: (1) Ministry of Agriculture – Trade, (2) Ministry of Agriculture – Business, (3) Botswana Police Service, (4) Botswana Bureau of Standards, (5) Ministry of Investment – Trade and Industry, (6) Ministry of Health, and (7) BURS' Customs' department for issuing Certificates of Origin. External stakeholders also participated in the committee meetings.

Together with the external consultants, the BURS team set out the project management guidelines and prepared the planning documentation for review and approval of all parties. Weekly meetings were also scheduled with all key stakeholders. Any matters that could not be resolved by the working committee were escalated to the steering committee for speedy resolution.

Configurations and developments were carried out, based on business requirements. User acceptance tests were also performed when all necessary configurations and customizations had been completed. More requirements were

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Change management was an issue addressed early in the project implementation process. BURS conducted progress update meetings, workshops and seminars to keep all stakeholders informed. Articles were published in the media and e-mails were also sent to individuals.

triggered when business users went through these tests, but, at the end, all business scenarios were validated. Contingency measures and back-up processes were put in place in case traders were not able to use the new system for some reason.

Lessons learned

Phased rollout mitigates risk and supports business continuity

Botswana had to migrate and harmonize large amounts of data from a legacy system, and onboard multiple government agencies, which posed both technical and management challenges. It was crucial that BURS employed the right strategy to maintain business continuity during this process. Yet there are no simple rules for deciding deployment strategies, which play a significant role in the final outcome of a system migration.

Well-versed in deployment strategies across different countries and in varying environments, the TFP consultants recommended a two-phase roll-out approach to mitigate risks and avoid potential downtimes. Phase one of the rollout ensured that the Single Window system complied with Customs regulatory formalities, and was completed in 13 months. While phase two involved onboarding multiple government agencies once the Single Window had satisfied all Customs' needs.

Change management unlocks the full potential of the new system

Change management was an issue addressed early in the project implementation process. BURS conducted progress update meetings, workshops and seminars to keep all stakeholders informed about the new system and progress with the migration. Articles were published in the media and e-mails were also sent to individuals, to keep everyone in the trade community updated.

To ensure fast adoption and a smooth transition, the TFP consultants conducted training early and at key junctures while taking into consideration feedback and recommendations, to ensure user-friendliness. Train-the-trainer sessions were also conducted for Customs officers identified by BURS, who subsequently trained their colleagues.

Going forward with confidence

Moving from one major system, such as ASYCUDA++, to a whole new system, the TFP, was a bold move by the Botswana authorities. Many administrations prefer to rather plug more applications into an existing system, rather than change their system completely. The fact that Botswana actually did this, and in such a short time, demonstrates the buy-in that existed among all key stakeholders.

Moreover, what is also evident from the whole process, is the fact that service providers now have extended knowledge on how to build a Single Window system that includes an integrated CMS. The TFP is a "next generation" IT solution that will take Botswana forward in its efforts to improve its competitiveness.

"We are very glad that, despite a number of legacy issues, the project has been delivered on time and within budget. The TFP products incorporate international standards and best practices, which enabled us to jump-start our journey in providing world-class services to our trade community," said Molemi Pule, General Manager of Technical Services at BURS.

Indeed, BURS hopes that by sharing its experience of moving from a well-established system into the "unknown" in a very short period of time will inspire others faced with similar challenges. Taking advantage of available technologies is critical if Customs wants to move forward with confidence. While the task may seem daunting, nothing is insurmountable. Botswana can testify to this.

More information

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Controlling dual-use goods in a transit country: Lithuania's experience

By Rolandas Jurgaitis, Deputy Head of Customs Procedures, Customs Department, Ministry of Finance, and Enrika Naujoke, Director of the Customs Practitioners Association, Lithuania

Export controls are inherently challenging to implement, and no country has a perfect or fool-proof system. In this article, the Customs Department of Lithuania shares information about the specific challenges that the country is facing with dual-use goods, and the latest actions that have been taken to mitigate risks and improve compliance by trade operators.

Background

Since the early 1990s, a number of countries have participated in multilateral export control arrangements to produce guidelines for the control of strategic goods. These types of goods encompass weapons of mass destruction (WMD), conventional weapons, and related items involved in the development, production or use of such weapons and their delivery systems. Under these related items are goods with both civil and military applications called dual-use goods.

Under the various export control arrangements, lists have been compiled of dual-use materials, components, equipment, and technology that are subject to export controls. The European Union (EU) has consolidated these lists into one integrated dual-use list, the common EU list of controlled items, creating the most internationally adopted control list for these types of strategic commodities.

The EU regulation (No. 428/2009) requires dual-use items to be subject to effective control when they are exported from or transit through the Union, or are delivered to a third country as a result of brokering services provided by a broker resident or established in the Union.

Each entry on the list consists of a five-character Export Control Classification (ECN). The first character corresponds to the topical category for the item, the second corresponds to the type of item (for example, D = software), while the third character identifies the multilateral regime under which the item is controlled (for example, 0 = Wassenaar Arrangement). The remaining characters correspond to the description of the controlled item.

Sorting out which commodity is subject to export control requirements can be a cumbersome process for companies. To assist them, a correlation table between the ECN and TARIC, the EU's integrated tariff, has been developed. However, the relevance of correlations is so uneven, and not all correlations are equally indicative.

When the Customs tariff code indicates a correlation with the common EU list of controlled items, exporters must indicate whether the goods they are exporting are subject to export control or not by inserting special codes when filling in the Single Administrative Document (i.e. the EU Customs declaration): code X002 if goods are controlled, or code Y901 if goods are not controlled.

Moreover, the EU regulation also includes a "catch-all" clause for non-listed items, which could be used, for example, in a WMD programme (Article 4 of the EU regulation). An exporter must, therefore, notify the authorities

Non-Community dual-use goods that transit though the EC only, and as such through Lithuania, are usually not subject to a licence requirement. If some EU Member States require an authorization for all external transits of dual-use items, this is not the case in Lithuania.

if he is aware that dual-use items which he proposes to export, not listed in the list of controlled items, are intended, in their entirety or in part, for military end-use. The authority will then decide whether the export concerned should be subject to authorization.

Determining whether traders are compliant is a challenging task for Customs. Knowledge of both the Harmonized System (HS) and the ECN, as well as a solid analytical methodology, is necessary. In Lithuania, the situation is even more problematic due to the type of logistics operations carried out in the country.

A transit country

A Member State of the EU located along the Baltic Sea, between East and West, Lithuania is facing specific challenges when it comes to the implementation of EU export control regulations, especially since the bloc implemented restrictive measures against Russia in 2014, which impose an export and import ban on trade in arms, establish an export ban for dual-use goods for military use or military end-users, and curtail access to certain sensitive technologies and services that can be used for oil production and exploration.

Lithuania's geographical location favoured the development of a strong logistics sector and the establishment of a broad network of 189 freight terminals and Customs warehouses, dealing mainly with goods in transit.

In 2018, compared to 358,076 imports and 366,298 exports, more than 1 million transit operations were processed by the Customs Department. These operations include goods placed under the EU common transit procedure, covered by the TIR Carnet, transhipped within, or directly re-exported from, a free zone, in temporary storage, and directly re-exported from a temporary storage facility.

Let's highlight here that, regarding dual-use goods, it has been agreed within the European Community (EC) that the term "transit" shall be understood to mean the "transport of non-Community dual-use goods, which are introduced into the Customs territory of the Community for transport through that area to a destination outside the Community."

The risk of non-compliance with dual-use goods regulations is high for several reasons:

- When "Union goods" arrive at a freight terminal or in a warehouse for export, the terminal operator or the logistics company takes the role of a consignor/exporter in the export declaration, but often does not have sufficient information about the technical specifications of the goods and the circumstances of the sale and its parties to assess whether the

exported commodity requires a permit or not. Moreover, a large number of players in the logistics market are new and have little or no knowledge of international controls relating to dual-use goods.

- When "non-Union goods" arrive at a terminal or a warehouse for export, the consignment is placed under a Customs regime. For instance, temporary storage, transit, Customs warehousing, or re-export. Enforcing export control regulations is even more complex in such a case, as the compliance requirements must be understood and met by all the participants in an operation (forwarders, transportation companies, storage companies, Customs brokers, etc.). They must each hand over correct information and documents to the next party in the chain. In doing so lies the risk of mistakes occurring, especially when a re-sale of goods has taken place.

- Non-Community dual-use goods that transit though the EC only, and as such through Lithuania, are usually not subject to a licence requirement. If some EU Member States require an authorization for all external transits of dual-use items, this is not the case in Lithuania where authorities may, instead, prohibit the transit of non-Union dual-use items where they have reasonable grounds for suspecting from intelligence or other sources that the items are or may be intended, in their entirety or in part, for the proliferation of WMD or of their means of delivery, or for military end-use in a country subject to an arms embargo.

- The declarant does not have to select codes X002 or Y901 if the goods are in transit according to the EC definition given above. In fact, the transit procedure and the TIR Carnet do not even include this information.

Operation COSMO

Lithuanian Customs' enhanced focus on the issue has its roots in its participation in law enforcement operations organized by the WCO: COSMO (2014), and COSMO 2 (2018). The objectives of these operations were to detect and prevent illicit trafficking of strategic goods in international supply chains, and to assess the capacity of Customs administrations to enforce strategic goods regulations. To achieve this latter goal, all participants were asked to complete a national self-assessment of their national standard operating procedures and work practices in this area.

Based on these national self-assessments, it has become clear that the issue of strategic trade control enforcement was a new and challenging area for many WCO Members. Fortunately, the timing of the first COSMO operation coincided with the adoption by the EU of restrictive measures against Russia and enabled Lithuanian Customs to fully assess its capacity to enforce the measures.

Various areas requiring capacity enhancements were identified. These related to issues such as the lack of skills and insufficient technical/scientific knowledge of frontline officers to identify and detect dual-use goods. Although Lithuanian Customs does reach out to others, including local industries, that may have more knowledge, cooperation from foreign law enforcement entities and scientific institutions has not been very forthcoming.

To maintain the momentum and identify ways of improving the situation on the ground, Lithuanian Customs recently launched its own enforcement operation, code-named SPEK 2019, at the beginning of this year.

SPEK 2019

A three-stage approach was adopted for the operation, each focusing for a specific duration on one of the three commodities identified as problematic: anamide, glass and carbon fibre (duration 1 week); aluminium alloys (duration 1 week); and ultrafiltration membranes (duration 3 months).

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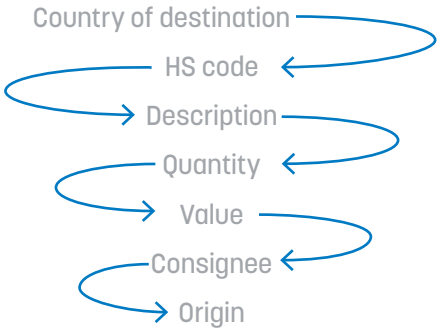
A risk profile was built for each of the commodities, and Customs officials received training on how to handle the clearance process when the pre-determined risk profiles were identified by the risk engine. The "Product Footprint" method was applied, and the sequence of actions is shown in the illustrative graph.

Graph: Product Footprint



The results of Operation SPEK 2019 are as follows:

- In five cases, the clearance procedure was stopped as the goods were listed as dual-use, but not declared as such, and an export authorization was requested for the procedure to take its course;
- Out of the 10 freight terminals that were randomly selected and audited, two were found not to be in compliance during two separate operations – a dispute is ongoing with one of them, while the other paid the pecuniary (money) penalty stemming from the infringement;
- The export of a non-listed item originating from an EU country was rejected.

The export that was rejected had to do with fibreglass mats, which were produced in another EU Member State and loaded for export in Lithuania. Fibreglass mats are not listed as dual-use goods in the EU regulation, but they can be used in certain military technologies and considered as falling under the catch-all clause for non-listed items.

In such cases, Customs takes into consideration the intended use of the product, the risk associated with the consignee, or the "sensitivity" of the destination country/region. In this specific case, as the consignee of the fibreglass mats was a company involved in the production of military equipment, Customs rejected the export and asked the consignor to present an export authorization.

Regarding SPEK 2019, the following observations were made:

- A significant number of logistics companies have insufficient understanding of their non-proliferation obligations, do not have personnel responsible for compliance, and, as such, do not assess the risks in the manner required.
- Some companies are knowingly involved in the export of dual-use goods, using Lithuania as a transit country in the hope that the authorities will not ask for an authorization.
- Citizens of some sanctioned countries set up front companies in Lithuania, to hide the link with their country and contract logistics companies to act as the consignor/exporter in export declarations.

Enhancing compliance and cooperation

A key challenge to the enforcement of export controls in Lithuania and in many countries relates to outreach and raising awareness. Aware that the private sector needs assistance in identifying, managing and mitigating risks associated with dual-use trade controls and in ensuring compliance with relevant EU and

national regulations, the European Commission (EC) released, in July 2019, a Recommendation on internal compliance programmes (ICP) for dual-use trade controls, under a Council Regulation. The EC guidance focuses on the seven core elements for effective ICP:

1. Top-level management commitment to compliance.

2. Sufficient organizational, human and technical resources with well-defined responsibilities.

3. Staff is regularly trained and informed on the issue.

4. A process is established to evaluate whether or not a transaction involving dual-use items is subject to trade controls, and to determine the applicable processes and procedures.

5. ICP must be reviewed, tested and revised if proven necessary, and clear reporting procedures in place about the notification and escalation actions of employees when a suspected or known incident of non-compliance has occurred.

6. Proportionate, accurate and traceable recordkeeping of dual-use trade control related activities is essential, including for documents not required by law (e.g., an internal document describing the technical decision to classify an item).

7. Internal procedures must ensure the prevention of unauthorized access to or removal of dual-use items by employees, contractors, suppliers or visitors.

Each core element is further detailed by a section 'What is expected' that describes the objective(s) of each core element, and a section 'What are the steps involved?' that further specifies the actions and outlines possible solutions for developing or implementing compliance procedures. This document concludes with a set of helpful questions pertaining to a company's ICP, and a list of diversion risk indicators and "red flag" signs about suspicious enquiries or orders.

Lithuanian Customs provides advice to all parties that deal with export control regulations, in order to facilitate compliance with the EC Recommendation. Customs officials also regularly organize events on the subject or participate in events organized by associations or private sector training providers. In addition, they contribute to the monthly journal "Customs Law for Practitioners" issued by the private sector, to share their knowledge and shed light on specific regulations.

Feedback from participants in training events has been very positive. The main challenge, however, lies in educating employees and companies who show no interest in the issue and who do not want to attend seminars or follow online training courses. Unfortunately, for these types of actors, audits and penalties may be the result of their reluctant attitude.

More information

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Feedback from participants in training events has been very positive. The main challenge, however, lies in educating employees and companies who show no interest in the issue.

Russian businesses commit to creating a better trade environment

By the Russian Federal Customs Service

A new tool has been developed in Russia to help create an enabling trade environment: the "Charter on Fair Participation in Foreign Economic Activity." The Charter is the result of a series of complex consultations between government and business representatives on how the latter can back up government efforts to enhance the trade environment and, in particular, support the Russian Federal Customs Service (FCS) in the implementation of specific measures, known as the "10 Steps to Meet Business."

Customs Development Programme

The "10 Steps to Meet Business" measures form a specific section of the Customs Development Programme, which provides the roadmap through which the FCS intends to improve operational efficiency, mitigate corruption risks, reduce traders' administrative burden, and create a level playing field for legitimate businesses.

Implementation of the Customs Development Programme by the FCS has already translated into the establishment of 16 Customs clearance locations, called Electronic Declaration Centres. By January 2020, only these centres will remain active, while all the old Customs centres will be closed permanently.

Today, traders must submit their declarations electronically to one of the Electronic Declaration Centres, although paper declarations for specific types of clearance (transit, TIR Carnets, passengers' personal goods, postal items, and means of conveyance) are still accepted at the old Customs centres in some cases.

In addition, infrastructure, including the checkpoints, has been modernized and new sophisticated processes adopted with the integration of databases, the standardization of data and messages, the creation of personal accounts for each of the trading companies, and

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Staff working at one of the Electronic Declaration Centres.

the setting up of communication channels with all State agencies and traders.

To monitor the implementation of the Customs Development Programme, 41 key performance indicators (KPIs) were identified. Those referring to the section "10 Steps to Meet Business" include the sharing of online submissions of declarations, and the sharing of automatically released electronic declarations (see table).

Charter on Fair Participation in Foreign Economic Activity

The Charter was drafted by the four biggest business associations in Russia with the strong support of Leonid Lozbenko, Chairman of the FCS Public Council[1], Russian Customs' consultative body that aims to develop a robust and sustained engagement/partnership mechanism with business, as encouraged by the WCO in its Customs-Business Partnership Guidance.

It sets out simple principles that signatories commit to applying, in order to support the FCS in achieving some of the Customs Development Programme deliverables, such as the ones related to clearance time, and digitalized and automated declaration processing.

Businesses signing the Charter commit to comply with Customs rules and regulations, to provide the FCS with reliable data, and to demonstrate zero tolerance towards companies that commit offences, such as evading the payment of Customs duties and fees.

The Charter is open for signature by national or foreign companies involved in foreign economic activity as well as by business associations, including non-commercial organizations. The process can be done online through a website: www.dobro-ved.ru. So far, 1,780 companies and 173 public associations have signed the Charter, a testimony to the increased level of confidence that the business community has in State activities.

Through the Charter, the FCS will be able to enlarge the pool of traders considered compliant and categorized as low risk in the automated risk management system. Several benefits are available to signatories, including access to an expanded list of electronic services provided by the FCS, one of which is being notified of the level of risk (low, medium or high) that has been assigned to a company within the risk management system. The notification is sent to the personal account created for each signatory by Customs.

As signatories are granted higher levels of trust, clearance of their shipments should be fast. Of course, if a company is found not to be compliant with the law, its risk scoring will change. It will also be known as an offender who misused the State's trust. The business association and the trade union to which the company belongs will also take specific actions against it. Hence, failing to comply with the provisions of the Charter creates an internal follow-up and investigation.

The Association of European Business was the first foreign entity to sign the Charter on 21 February 2018 in Moscow. As highlighted by

1 *Public Councils are advisory bodies attached to ministries or other government agencies. Their main goal is to identify socially significant issues, to discuss them, and to achieve particular results. The FCS Public Council was established in 2015 and consists of 21 representatives from public organizations and business.*

"10 Steps to Meet Business": Examples of Key Performance Indicators

KPI	Unit	2018 (plan)	2018 (actual)	2019 (plan)	2019 (2Q) (actual)	2020 (plan)
The share of electronic declarations submitted to e-declaration centres	%	30	33,60	60	63,00	95
2. The sharing of e-declaration centres located in State-owned areas	%	80	89,60	90	96,70	100
3. The share of automatically registered electronic declarations for exported goods	%	60	82,80	70	86,60	99
4. The share of automatically registered electronic declarations for imported goods	%	30	36,20	60	34,40	99
5. The share of automatically released electronic declarations for exported goods filed by low-risk traders	%	40	46,90	60	44,00	80
6. The share of automatically released electronic declarations for imported goods filed by low-risk traders	%	25	26,60	50	28,10	80
7. Percentage of transactions flagged by the risk management system, where inspections led to a tax adjustment, an administrative offence, or a criminal offence	%	43	43,70	45	48,47	50
8. The share of automated risk indicators (indicators can be managed manually as well)	%	82	82,30	85	84,76	90
9. The share of payments done through the trader's personal account in the Customs system	%	50	74,16	75	99,57	100
10. The share of criminal cases initiated by the Customs Service's enforcement units	%	86	92,20	88	95,70	90

its Chief Executive Officer, Frank Schauff, at the time he signed the Charter, the Customs Development Programme and the Charter also aim to reduce corruption by minimizing contact with Customs officers, specifically through the complete digitalization and automatization of the cross-border clearance process.

Pathway to strengthen the Customs-business partnership

The FCS hopes that this way of engaging business entities, through the conclusion of a charter, may be of interest to other countries, one that they may choose to emulate as part of their efforts to strengthen the Customs-business partnership.

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GTAS implementation: an historic milestone for the Maldives

By Mohamed Afzal, Chief Customs Officer, Maldives Customs Service

The Maldives Customs Service recently installed the Global Travel Assessment System (GTAS), an advance passenger data risk assessment system that enables advance passenger information (API) and passenger name record (PNR) data to be collected and analysed. In this article, the Customs Service explains how this project took shape.

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Being an island nation with limited economic resources, the Maldives largely depends on tourism as its main source of national income. Millions of tourists visit the country annually, ensuring its economic viability. However, with so many arrivals, the country is also exposed to numerous risks as some travellers have been found to be involved in illegal activities.

To counter the threats that could potentially harm the country and its citizens, the Maldives Customs Service decided to strengthen its risk assessment capacities by moving from a manual risk management system for passenger control to an electronic passenger data exchange system, enabling the collection and analysis of API and PNR data.

Implementation journey

Up until 2017, the Maldives Customs Service did not have a clear action plan for the implementation of an API and PNR transmission and processing system. But in October 2017, a representative of the Customs Service attended a workshop of the WCO Asia Pacific Security Project (APSP) in Bangkok, Thailand, where he had an opportunity to meet the project managers and discuss the needs of his administration.

Over the weeks that followed, the Maldives Customs Service kept in touch with the project managers to facilitate planning for the work that lay ahead. Finally, in March 2018, WCO experts visited the country to assess the possibility of installing the Global Travel Assessment System (GTAS). The system was donated to the WCO by US Customs and Border Protection (CBP), which also provides technical support for the implementation of the software.

With the financial support of the APSP, a service provider was contracted for a period of three years to collect API and PNR data from all international airlines servicing the Maldives, and then enter it into the GTAS. A dedicated GTAS project team was also set up within the Maldives Customs Service. The implementation stage required a number of conference calls with the WCO, CBP, and the service provider. In addition, several information sessions were held for all stakeholders, to ensure their ongoing support for the project.

Of particular importance for smooth implementation of the project was, of course, the engagement with airlines, which were kept up to date through emails and several meetings during the whole process. Airlines were given a "grace period" to comply with the API/PNR regulations. The regulations required the airlines to provide both API and PNR data, in accordance with WCO and ICAO standards. After approximately one and a half years of continuous work, success was achieved when API was finally received and passed through the GTAS system.

The initial API test message was received on 20 June 2019 from Etihad Airways, and the first "live" data was received on 23 June 2019 from Maldivian, the national airline of the Maldives. At the time of writing, 85% of airlines have begun providing API to the Maldives Customs Service. Regarding PNR data, the first data was received in August 2019 from Air Asia.

Training was provided by WCO and CBP experts to Maldives Customs officers in charge of risk analysis on how to use the GTAS. Administrators were also appointed and trained to manage and maintain the tool. Along with Customs officers, training was also provided to officials from the Police Service, Immigration, and the National Defence Force. Discussions are now underway about arrangements for these agencies to benefit from the new capability.

Challenges encountered

During the one and a half year implementation period, a number of challenges were encountered in implementing the GTAS in the Maldives. In particular, constraints stemming from legal, financial, technical, and time related issues.

As there was no legal framework in place to require airlines to provide API/PNR data, Maldives officials had to draft appropriate API/PNR regulations, which needed approval from the Attorney General's Office and the President's Office. The regulations were finally published in the Government Gazette on 27 August 2018.

Thereafter, the technical challenge of implementing the GTAS began. Despite the fact that today, many countries require airlines to provide API/PNR data, the airlines serving the Maldives were not able to provide the data within the time period given to them. However, by maintaining regular contact with the airlines, the Maldives Customs Service was eventually able to bring them all on board.

Moreover, some airlines are still not able to transfer PNR data for flights coming from the European Union (EU) due to the bloc's data protection regulations. Reaching a bilateral agreement between the Maldives and the EU is, therefore, a priority action for the Maldives Customs Service.

Successes and future improvements

Receiving and risk assessing API/PNR data is an historic milestone for the Customs Service, the aviation industry and the nation as a whole, as it will contribute to the security of the Maldives while facilitating passenger flows. Use of the system has already enabled several offenders to be identified – for example, on 1 September 2019, Customs intercepted two drug couriers from South America, identified as high-risk by the GTAS.

However, there is still a lot more work ahead. With the ongoing support of the WCO and CBP, regular system checks and upgrades will be undertaken. The risk assessment criteria used in the GTAS will also need to be continually monitored and updated in response to newly identified risk indicators and intelligence.

To ensure the uninterrupted receipt of API/PNR data from all airlines, Maldives will also need to continue to work collaboratively with existing and new airlines. Furthermore, maintaining data security and privacy will continue to be given the utmost importance by the Customs Service and other relevant authorities.

Of particular importance for smooth implementation of the project was, of course, the engagement with airlines, which were kept up to date through emails and several meetings during the whole process.

US CBP representatives and Maldives Customs officers during a training session

In addition, the Maldives Customs Service is actively participating in the WCO/IATA/ICAO API-PNR Contact Committee in order to share experiences with other Customs administrations.

Appreciation and recognition

This huge accomplishment was achieved with the assistance of many who deserve appreciation and recognition. The Maldives Customs Service extends its thanks to the WCO Secretariat for facilitating the GTAS implementation project, to CBP for providing technical support and working tirelessly during the implementation phase, and to the Government of Japan for providing funds.

Without a doubt, many officers of the Maldives Customs Service also deserve recognition for their tireless efforts in making the implementation of the GTAS project a success. This includes the Commissioner General of Customs, Mr. Ahmed Numan, and his management team for their tremendous support of the project.

More information

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Saudi Arabia engages cross-border trade boosters

By Adel Baraja, General Manager, Marketing and Customer Experience, Saudi Customs

The Saudi economic and social reform plan, called Saudi Vision 2030, aims at inducing long-term economic growth that is not reliant only upon oil exports. Saudi Arabia is the largest market in the MENA region and a gateway to a region of over 424 million consumers. Leveraging its unique geographic position, the Kingdom wishes to become a global logistics hub and has made trade facilitation one of the three pillars of its Customs strategy, with the improvement of infrastructure and digitalization as key enablers.

Saudi Customs is the official body mandated to realize this ambitious goal by managing the movement of trade and travellers crossing Saudi Arabia's land, sea, and air ports. Its mission is to contribute towards stimulating the Saudi economy while protecting society by ensuring efficient management of trade operations, enhanced revenue collection, and good customer care.

Among recent measures taken to facilitate the exchange of goods across the country's borders is its participation in TradeLens, a blockchain powered platform, the establishment of new bonded zones, and the launch of the Improved Clearance Programme.

Integrating the Single Window into TradeLens

Since 2017, Saudi Customs had been actively engaging in the digitalization of its clearance procedures and its handling of shipments. An electronic national system for the management of cross-border trade operations, called FASAH, has been developed. It acts as a Single Window environment, connecting all organizations involved in the regulation of trade such as environment, commerce, agriculture, Customs, and the Ports Authority.

Lately, FASAH was integrated into TradeLens, a blockchain-enabled solution that was jointly developed by Maersk and IBM, enabling all organizations involved in an international maritime shipment to simply and securely exchange shipment events and documents in real time.

Information from TradeLens is pulled into FASAH automatically, removing the need for the

Bonded zones spread across Saudi Arabia

submission of an import or export declaration. Moreover, TradeLens allows Customs and other government agencies to piggyback their supervision processes on top of existing commercial information exchanges.

As soon as a maritime container is stuffed in one of the Saudi Customs Port or in the exporting country, Saudi Customs is able to pull the purchase order and packing list from TradeLens and use them to risk assess a shipment. Access to earlier, more complete, immutable data improves the effectiveness of targeting processes, facilitating legitimate trade, increasing compliance, and improving Customs' efficiency.

On 13 May 2019, Saudi Customs oversaw the departure of the first shipment managed through the new mechanism. The shipment departed from Saudi Arabia's King Abdulaziz Port in Dammam en route to Rotterdam, while its data and documents were received and handled by all FASAH-connected agencies through TradeLens.

Saudi Customs believes that the solution will transform the shipping industry in the region, making it faster, transparent, and more efficient. In addition, Customs plans to expand its participation in TradeLens to include other ports, and apply it to importing as well as exporting.

Bonded zones to boost trade

Another pillar the ambitious reform plan capitalizes on is the expansion of bonded zones and bonded warehouses, which allow companies to store merchandise for three years during which the goods may either be imported, exported, or re-exported. Some semi-manufacturing operations are also accepted. After the three-year period, the contract can be renewed. The zones offer companies various features and traditional benefits such as:

- the suspension of Customs duty and tax payments;
- the possibility to carry out light manufacturing processes on goods;
- the submission of export declarations without an export manifest;
- the (re-)export of goods through a port other than the actual port of entry;
- the possibility to sell the goods to clients registered in a bonded zone;
- the removal of the need for foreign investors to register locally in order to store goods.

The measure has been accompanied by a robust regulatory framework, which has been aligned to the Gulf Cooperation Council's (GCC) laws as well as international standards, opening a whole new array of opportunities for trade in the region.

The regulation allows goods to be transferred between GCC bonded zones without the need to settle duties in the country of departure. Additionally, these bonded zones may be used for light manufacturing processes, including disassembling, assembling, embossing, testing, mixing and any other minor manufacturing activities, as long as the Harmonized System (HS) codes of the goods on which the processes were performed do not change from the initial codes upon which the goods entered the bonded zone. Furthermore, goods may be sold and purchased inside bonded zones or transferred from one bonded warehouse to another without any tariff being charged.

The establishment of these new bonded zones carries tremendous benefits that would shift the Kingdom's positioning on the world's logistics map by supporting exports, attracting foreign and local investment, and opening new markets.

Two bonded zones are currently operating: one in Riyadh and the other at King Abdulaziz Port in Dammam. Another in Rabegh is set to begin operations in 2020. In addition, in January 2019, Customs signed several Memoranda of Understanding with local authorities to develop more bonded zones.

Improved Clearance Programme

Another trade facilitation initiative is the Improved Clearance Programme (ICP), which aims to streamline Customs clearances through pre-arrival electronic submission and the completion of inspections in 24 hours.

The programme reduces the number of required supporting documents to just two (invoice and bill of lading), which must be submitted through FASAH. Traders can track their shipments through the MASAR application. In 2019, thanks to the programme, 80% of Customs declarations were cleared in less than 48 hours, compared to an average of eight days in previous years.

Saudi Arabia hopes to further streamline its Customs clearance procedures and reduce clearance time to two hours over the next two years. The objective is to attain a higher ranking in the global Logistics Performance Index: from 49 to 25, in addition to securing its status as a key player in international trade.

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E-commerce security and safety concerns require forceful action

By the WCO Secretariat

The flow of consignments delivered by postal operators or express courier services, sometimes over borders, is increasing at a rapid rate. Most of the consignments are small and generally of "low value." The fact that the value is low often means not only are they exempt from duties, but also that only minimal information is required to be provided when the goods enter a country. The situation compromises Customs enforcement capacities to protect society from security and safety risks. As the WCO recently published guidance material under its E-Commerce Package, this article looks at how we can reconcile the need to secure our borders and facilitate e-commerce by putting adequate measures and tools in place.

E-commerce has come a long way since Michael Aldrich created online transaction processing in 1979. The term refers today to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions. From a Customs perspective, it is used to refer to the sale of physical products online, including illicit ones.

Driven by the increase in internet users worldwide as well as smartphone and mobile penetration, e-commerce has revolutionized the way businesses and consumers market, sell and purchase goods, providing a vast choice of products as well as advance shipping, payment, and delivery options. There are now even specific terms to refer to mobile-commerce (M-Commerce) and social media commerce (S-Commerce)[1].

Today, it is widely recognized that the growing e-commerce sector is beneficial to economies, providing new growth engines, developing new trade modes, driving new consumption trends, and creating new jobs. It has especially opened up growth opportunities to micro, small and medium-sized enterprises (MSMEs) in terms of wider access to foreign markets by lowering entry barriers and reducing operational costs.

Copyright: US Customs and Border Protection

Cross-border business-to-consumer (B2C) e-commerce is expected to grow by 27% between 2018 and 2019. A large part of this trade consists of consignments delivered by postal operators or express courier services, sometimes over borders. Most of the consignments are small and generally of "low value," although the definition of this low value varies from country to country.

According to the International Post Corporation (IPC) survey, 84% of cross-border goods bought online are classified under Universal Postal Union (UPU) terminology as packets travelling in the letter-post stream weighing up to 2 kg, and

1 *S-commerce integrates social media into e-retail sites and adds e-commerce functionality to social networks. Approximately 18% of e-commerce takes place via social media.*

83% of the total packets transported by postal operators (parcel-post and express mail service products) are valued under 100 US dollars.

The fact that the value is so low means not only are they exempt from duties (being below *de minimis* thresholds), but also that only minimal information is required to be provided when the goods enter a country. The exponential increase in the number of such shipments, whether they are transported by postal operators or express courier services, presents a number of new challenges to governments and businesses alike.

Low value does not mean low risk. The same risks associated with traditional trade apply to e-commerce, at the same time there are new risks associated with safety and security. But today's enforcement capacities and regulatory frameworks were not designed to deal with a world where millions of businesses and individuals engage in billions of micro-transactions, often resulting in shipments of small parcels from small businesses or individuals to other small businesses or individual consumers.

In such circumstances, many shipments containing goods that are prohibited or which infringe the law pass undetected. When flagged for review, shipments can be held up for hours, or even days. But e-commerce merchants who compete on timely delivery are anxious to keep merchandise moving. The pressing question is how to effectively manage this time-sensitive flow of goods without straining control operations as well as the capacity of logistics service providers, and without creating complex procedures and a heavy workload for small businesses and individuals who have limited capacity to meet complex trade regulations.

A pertinent question, therefore, arises: how can we reconcile the need to secure our borders and facilitate small business trade in an increasingly digital world?

Safety and security risks

As revenue collection is still a priority for many Customs administrations, revenue-related issues are often raised Customs representatives when discussing the impact of e-commerce development on their administrations. However, one should not forget that e-commerce is also creating safety and security risks.

Vendors may split and/or under-value consignments to keep the value of an individual shipment below the specified reporting threshold. Goods may also be shipped in containers via air or sea, placed in bonded warehouses, and then exported in small quantities below the de minimis threshold once an e-commerce order is received.


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These low-value orders can be consolidated and shipped in truckloads. No advance notice is required and the driver can simply present a paper manifest to Customs at the border. If, according to the manifest, every shipment on the truck meets the de minimis criteria, then no formal entry is required, and no Harmonized System (HS) commodity codes need appear on that document. The carrier is responsible for preparing the manifest based, in part, on information received from the foreign shipper(s). That information may well be incomplete, a common problem with e-commerce shipments.

More and more seizures of illicit substances and goods in the mail segment are being reported to the WCO. Some of the goods illicitly traded are extremely harmful to society, such as drugs, arms and ammunition, chemical substances, explosives, prohibited food, plants, animals and their parts, and intellectual property rights (IPR) infringing goods.

As reported in the WCO Illicit Trade Report[2], the number of seizures of psychotropic substances/drugs and counterfeit items transported via regular, express mail and parcels continues to grow. The amounts transported are rather small compared to other modes of transport, but the number of seizures made using this mode is huge in comparison to other modes, as the statistics for 2017 show. This mode of transport was used in:

- 57.9% of psychotropic substance reported seizures;
- 43.2% of cocaine reported seizures;
- 54.8% of IPR infringing product reported seizures.

The 2019 OECD Report[3] on Trends in Trade in Counterfeit and Pirated Goods further indicates that "small parcels sent by post or express courier are a prime and growing conduit for counterfeit goods" From 2014 to 2016, small parcels accounted for 69% of Customs seizures, up from 63% from 2011 to 2013.

This element of e-commerce exists due to the perceived anonymity offered by some internet platforms, the ease of sale and purchase, the fragmented and direct nature of selling and buying, confidence in supply due to efficient delivery solutions, the inadequacy of legislative frameworks, and a belief that enforcement agencies will not follow up or intercept small or low value shipments. New methods are also being utilized, including the use of social media and person-to-person encrypted chats, to facilitate illicit trade.

E-Commerce Package

Existing legal and regulatory frameworks, systems and procedures were designed to support business-to-business (B2B) transactions and are not fit to deal with the new realities – B2C transactions and C2C transactions. Some of the Customs procedures are not designed to enable risks to be measured or to accommodate small enterprises and consumers, whose trade operations are more sporadic than large and mid-size companies, and whose trade compliance capacities are more limited. They may not enable Customs to undertake proper risk assessments on the ever-increasing number of parcels.

To guide administrations in developing strategic and operational frameworks for e-commerce or enhance existing frameworks, the WCO developed a Framework of Standards on Cross-Border E-Commerce[4] as well as other guidance material further enriching the Framework such as definitions of certain terms used in the instrument, technical specifications, flow charts, business models and case studies, brought together into an E-Commerce Package. Some of the key provisions of the Framework are presented below.

Risk identification

Given that each administration has its own priorities, the nature of the risks need to be established with other relevant government agencies as well as ways to identify shipments of illicit or prohibited/restricted goods purchased via e-commerce channels. Moreover, Customs should, where appropriate, share information related to these risks with other Customs administrations, in order to assist them in improving their ability to determine risk indicators and analyse risks.

2 *http://www.wcoomd.org/en/topics/enforcement-and-compliance/resources/publications.aspx*
3 *http://www .oecd.org/gov/risk/trends-in-trade-in-counterfeit-and-pirated-goods-g2g9f533-en.htm*
4 *http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/ecommerce.aspx*

Advance electronic data

The existence of *de minimis* reporting thresholds means that shipments falling under a certain value are exempted from some documentation. The identity of the receiver is required, but that of the buyer, which may differ from the receiver, may not be required, especially in cases of consolidated manifest-based simplified clearances. This makes it harder to screen importers for wrongdoing. Nor is the HS commodity code required in all cases; a written description is deemed sufficient. This somewhat incomplete information or the unavailability of advance electronic information constrains Customs authorities' ability to analyse risks and target suspicious shipments.

The key to ensuring effective and efficient management of cross-border e-commerce lies in access to timely and accurate information, ideally from its source. The Framework stipulates the exchange of advance electronic data for effective risk management between Customs and parties to a transaction, as well as the use of data analytics and other cutting-edge technologies to identify suspicious transactions, including the use of non-intrusive inspection (NII) equipment during inspections.

As key intermediaries in the cross-border e-commerce chain, e-platforms/marketplaces, express carriers and postal operators could play a significant role in providing timely and accurate advance electronic data to Customs, carrying out due diligence on their customers (sellers/buyers) and on goods being sold/bought and conveyed, making consumers, the public and other stakeholders aware of the various regulatory requirements, and mutually exchanging risk profiles, where possible.

This may require establishing an electronic interface with the Customs IT system, and the realignment/adjustment of business processes to effectively meet the new regulatory requirements, based on the Framework's standards.

PLACI

A lot of shipments are transported across borders by postal operators or by express courier services using the air transport mode. To deal with the security threats associated with air cargo and mail, some countries now request what is called "Pre-loading Advance Cargo Information (PLACI)"[5] to be submitted to them for all air shipments, prior to loading onto the aircraft. The WCO adopted standards for the submission of PLACI by various entities in the air cargo supply chain, including postal operators and express courier services, and added them to its SAFE Framework of Standards to Secure and Facilitate Global Trade in 2015.

Postal context

Given the largely manual processing environment in the postal sector and the lack of electronic advance data (EAD), there are greater challenges in terms of timely and effective risk management of potential risks (e.g., safety and security), as well as efficient release and clearance.

In order to assist Customs administrations and postal operators in moving forward with EAD implementation, the WCO and the UPU have developed, among other tools, joint Guidelines on the Exchange of Electronic Advance Data between Posts and Customs[6] and a joint WCO-UPU Customs-Post EDI Message. Going forward, the WCO and the UPU are developing joint WCO-UPU guidelines on data capture and data quality in the international mail environment.

While continuing to support Customs and postal operators in moving towards EAD, the UPU and the WCO also jointly train their Members in order to strengthen their capacity in effectively tackling drugs and related risks in the mail mode.

5 *7+1 dataset as contained in Annex III to the SAFE Framework of Standards*
6 *http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/tools/joint-wco-upu-guidelines.aspx*

For example, they recently conducted joint regional workshops focused on safety, security and opioids/drugs around the word.

Data analytics

Some Customs administrations are already using data analytics tools, artificial intelligence and machine learning to better deal with risk assessing the many packages they are faced with every day. This best practice with regard to the application of data analytics in risk assessment, prediction and targeting continues to be shared through WCO committees and publications, in order to help other administrations leapfrog technological advancements.

In this arena, there are also potential collaboration opportunities between Customs administrations and logistics operators to leverage synergies and domain expertise. For example, an MoU should be signed between Customs and express couriers and postal operators for curbing illicit trade, for the identification of potential risks or unusual and suspicious patterns, and for implementing controlled deliveries.

Customs administrations should also share relevant information, where possible, with trusted e-commerce stakeholders to ensure the most effective partnership between public and private sector targeting efforts. For example, sharing information on repeat offenders with e-commerce stakeholders enables them to close offenders' accounts and remove their products.

Also, to some extent, sharing non-nominal information on concealment methodology, routing or sensitive goods with e-commerce stakeholders could enable them to identify potentially risky shipments and report such to Customs.

Inter-agency cooperation

Customs' cooperation with other relevant agencies is particularly important for identifying and interdicting illicit and non-compliant goods moving through e-commerce channels. The Framework also encourages Customs administrations to work with other relevant government agencies to establish procedures for analysing and investigating illicit cross-border e-commerce activities, with a view to preventing and detecting fraud, deterring the misuse of e-commerce channels, and disrupting criminal organizations.

The dynamic e-commerce environment often requires real-time response or intervention by all relevant government agencies (including ministries and agencies responsible for agricultural, food and environmental safety) to ensure that legitimate goods are rapidly cleared and risks effectively managed with minimal intervention and delay.

Additionally, governments should establish cooperation frameworks between and among various national agencies through relevant electronic mechanisms, including a Single Window, as appropriate, in order to provide a cohesive and coordinated response to safety and security risks stemming from cross-border e-commerce, thus facilitating legitimate trade.

Cooperation between Customs administrations and other law enforcement agencies, with the support of relevant e-commerce stakeholders, should be enhanced, enabling them to carry out joint investigations at the national and international level. This cooperation may further extend to the exporting country where the relevant parties are located.

Partnership with the private sector

Customs administrations should work in partnership with e-vendors/platforms/marketplaces to detect online transactions of illicit goods, to detect and combat Customs fraud, and to strengthen efforts (e.g., legislative frameworks) to initiate appropriate actions against parties who engage in online trade in contraband.

Another potential way forward could be to expand and promote authorized economic operator (AEO) programmes in the e-commerce environment as a means to further enhance supply chain security. Currently, most AEO programmes are not open to e-commerce platforms or marketplaces and to postal operators.

Communication

There is clearly a need to disseminate information on safety and security risks as well as the responsibilities associated with cross-border e-commerce through comprehensive awareness-raising, communication, and education and outreach programmes targeting the different actors in the industry, e-platforms/marketplaces, carriers, and the public.

Conclusion

Customs administrations are urged to implement the Framework of Standards on Cross-Border E-Commerce, and can count on the support of the WCO Secretariat while doing so. They are also encouraged to share their experiences on the standards contained in the Framework that they have decided to implement.

Experiences may be shared in a number of ways: by submitting articles to the WCO News magazine, at meetings of WCO working bodies, or by submitting case studies to the Secretariat. The Secretariat is already collecting WCO Members' case studies on the implementation of the Framework of Standards, to create a 'living repository' of global practices.

Indeed, with not only revenue, but also national security and safety at stake, it is more than time for Customs authorities across the globe to take forceful action.

More information

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Investing in leadership should be an unwavering priority for all Customs administrations

By Kateshumbwa Dicksons,
Commissioner of Uganda Customs and Chairperson of the WCO Council

Leadership development programmes are crucial to the lasting success of every organization. To support its Members in this field, the WCO has developed a Leadership and Management Development Programme. In this article, the Commissioner of Uganda Customs shares his experience with the programme, and explains why investing in leadership development should be an unwavering priority for all Customs administrations.

In 2011, while serving as the Assistant Commissioner in charge of Customs Audit, I was privileged to attend the WCO Fellowship Programme, held at the Headquarters of the WCO, alongside colleagues from other Customs administrations. During our six-week stay, we participated in a Leadership and Management Development (LMD) workshop, undertook a research study on a Customs topic of choice, and visited a Customs administration for a practical field study.

Being in a leadership position in my home administration at the time, I was quite excited by the components of the LMD workshop and, most importantly, the approach to leadership and management adopted by the WCO as well as its delivery mechanism. As such, I took a lot of interest in the issue, knowing that knowledge gained on this subject would be invaluable in the workplace.

Actioning knowledge gained back home

When I returned to Uganda, I recall the first action I took was to rally my team in order to go through the "visioning" process that I had been introduced to. Together, we began to eagerly develop the division's vision and mission. Visioning entails setting out a picture of the future in a participatory manner, the objective being to come up with breakthrough ideas by way of a team interacting in an open environment.

I also endeavoured to implement the project that I had developed during my research study at the WCO. Not only did I implement this project, I also started an in-house programme for my staff to encourage an internal discussion about leadership, using WCO material and the experience that I had gained. This programme involved early morning sessions from 7:00 am to 8:30 am daily.

My staff were quite impressed, and took a lot of interest throughout the three-month duration of the in-house programme. After that, I introduced early morning e-learning sessions, using the WCO CLiKC platform. Thanks to these two initiatives, the Customs audit team grew into a very professional and highly motivated team, reflected in the high performance results that ensued.

Later on, I enrolled in the WCO LMD Expert Accreditation Programme, successfully going through the stages. As a result, I was able to facilitate high-level strategic workshops for the Customs administrations of Eswatini and Namibia. At the same time, my administration benefitted from three LMD workshops in which about 60 senior and middle management leaders from across the Uganda Revenue Authority (URA) participated.

Investing in leadership development is the only sure way to sustain Customs administrations in the future, and this is the best legacy a Director General can leave to his or her organization.

Photo by Honey Yanibel Minaya Cruz on Unsplash

Positive impact of the LMD programme

Personally, I strongly believe that the LMD Programme largely contributed to my success in leadership at the URA and at the international level. I took a keen interest in ensuring that the concepts I had learnt were put into practice. Indeed, the visioning process I undertook with my team enabled us to refocus the whole division and, because it was a team effort, we all owned the vision, which ensured that we lived up to what we had developed.

In 2015, I was appointed the URA's Commissioner of Customs. I believe that the leadership qualities I had demonstrated as Assistant Commissioner and which were enhanced by my participation in the LMD Programme played a big role in the appointing authorities entrusting me with this new role, one that I knew would be challenging, but which I gladly took up.

I have also taken on various leadership roles at the regional and international level, always ensuring that I exercise the same level of consistency as a leader. Being the current Chairperson of the WCO Council, everyone looks up to me to exercise leadership in the house while steering the discussions for the greater betterment of Customs globally. This I have pledged to do without any reservations.

The lives of URA staff who benefitted from the LMD workshops have also been positively impacted. We have seen most of them take on more senior positions within the Authority, teaching their teams, sometimes by pure example, what they had learned. Moreover, the LMD Programme has also brought in some level of consistency in leadership practice.

Indeed, because of the critical mass of leaders and upcoming leaders that went through it, there is a level of harmonization and a common understanding of some key aspects of leadership among managers. This has strengthened the URA and helped us to manage succession planning better. I know, without doubt, that even when I leave the Authority, a new crop of capable leaders is ready to take on the responsibility while maintaining the same culture.

Thanks to strong leadership, Uganda Customs has successfully implemented about 13 reforms in the last four years. These reforms have been driven internally and fully embraced. We have now embarked on enhancing leadership capacity at the lower management ranks, targeting supervisors and station heads with the objective of building a critical mass of young leaders to take on future higher leadership roles.

Recommendations for consideration

Customs worldwide, in my opinion, largely focuses on building the capacity of staff in technical matters – e.g., valuation, classification and rules of origin, among others – while giving much less attention to building leadership capacity. Against this background, we have also seen, over the years, that many Customs administrations continue to invest in technologies and reforms to better themselves. However, to sustain the reforms and aspirations, leadership is critical. Like we say at the URA, everything starts and falls on leadership.

Moreover, research has shown that an organization may enhance the capacity of

its staff, build systems, and implement good reforms, but still end up losing staff not because of the organization itself, but rather because of its leaders. Staff may feel that they are not valued, because managers aren't exercising proper leadership. At the end of the day, this becomes a risk to the organization, because it is unable to retain good staff.

I am, therefore, fully convinced that the emphasis we, Customs administrations, place on technical capacity building, should also be placed on leadership. The WCO LMD Programme provides us with an opportunity to strengthen our skills in this domain and build consistency in practice across our administrations. Some Customs administrations may nominate only lower-level managers and not senior managers to participate in the LMD Programme on the assumption that the latter know it all and don't need any leadership upskilling. This may be a misconception.

In the above regard, I strongly advocate and recommend that every Director General of Customs should actively encourage senior managers to attend the LMD Programme. Investing in leadership development is the only sure way to sustain Customs administrations in the future, and this is the best legacy a Director General can leave to his or her organization. What would we leave if our organizations crumble, because the managers that follow us cannot lead them into the future?

I also believe that the WCO should strengthen the LMD Programme further, to ensure that it is able to meet WCO Members' current and future expectations. In addition, there is a need to expand the pool of experts in this domain. We may also consider the introduction of a shorter two-day version of the workshop to attract more Directors General and senior managers, which will potentially result in a strong uptake of leadership concepts and practices at the highest level.

More information

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Perspective on risk management systems for Customs administrations

By Chris Thibedeau, Chief Executive Officer, TTEK Inc.

As a vendor who designs and deploys border processing systems, we have seen many Customs and border administrations make significant investments towards optimizing and modernizing their border processing capabilities and methodologies in an effort to meet the demands of today's fast-paced international trade environment.

Some administrations build, for example, Single Window environments with automated control mechanisms for licences, permits, certificates and other documentation (LPCO) required by other government agencies (OGAs). But while this can help reduce release times and promote trade facilitation, the other key variable involves the introduction of an effective risk management regime.

Selectivity is key

The landscape of risk management technology solutions for Customs administrations varies widely. In some instances, we find smaller economies and lower GDP nations not using risk-based decision making at the border. The approaches used instead prompt for random inspections or the use of rudimentary approaches driven by older unsophisticated systems.

In addition, we see many countries embrace border decision making where "selectivity" is being driven by random selection and/or percentage assignment, using red, yellow, and green lanes within their current trade platforms. Therefore, we should question whether these systems allow for effective controls.

Random assignments for inspection are simply not effective, yet have emerged as a way for

many Customs administrations to manage the growing volume of trade arriving at their borders. To compound the problem, some widely used systems automate this obsolete approach to border management, and refer to it as a "risk management module." It simply would not be appropriate to call this type of functionality a "Risk Management Module," and yet this is often the case.

Conversely, in some instances, we find that Customs officers are often prompted to review and/or inspect all cargo with an equivalent degree of scrutiny. We should recognize that risk aversion in these situations defeats the principles of risk management and can hinder efforts to facilitate pre-approved and/or low-risk trade. In our view, this approach has the following shortcomings:

- costly in resources as it applies the same degree of intensity to all threats;
- constrained in that it forces a lower degree of inspection intensity overall due to the uniform treatment of all cargo and passengers;
- creates a high incidence of officer error due to a greater workload;
- realizes fewer enforcement results – while some may expect high levels of inspection and intervention to yield exceptional results, evidence and experience suggest otherwise;
- encourages normally law-adhering entities to circumvent the system, in order to hasten the cross-border transit of their goods;
- creates opportunities for criminals to circumvent and avoid interdiction by making Customs reactions predictable;
- slows the supply chain down, and hinders economic growth;
- does not scale;
- fails, ultimately, to achieve efficient, secure border management.

Based on the two examples provided, we might conclude that inspecting all shipments, or inspecting some using random percentage assignment, are simply not effective controls, nor does it support the principles of risk management.

Based on the diagnostics conducted to date by intergovernmental organizations globally, many experts recommend that Customs administrations (1) further cultivate selectivity by using sound automated risk analysis and targeting, (2) conduct post-clearance audits to monitor system processing and adjust risk profiles, and (3) integrate new expert systems for anti-smuggling.

Let me explain what we mean by expert systems here. This market industry categorizes risk management systems by the manner in which they exploit data. Expert systems include functionality for deductive logic (lookout and watchlist vetting), inductive logic (identification of risk profiles, anomalies, and intelligence indicators using risk scoring), and predictive modelling (automated historical trend analysis to derive predictive models and scenario-based targets). Each of these methodologies is explained later in the article.

Identifying threats

While we design and deploy risk management systems for Customs and border agencies, we believe it's important for our clients to tell us which probable threats they are trying to prevent. Some countries place a focus on threats to health, safety, and security, while others focus on fiscal-related threats that include smuggling, undervaluation, misclassification, and misdeclaration of origin.

If the goal is to achieve economic prosperity, it seems clear that this can be realized through effective targeting and inspection controls, while simultaneously promoting pre-approved and low-risk trade. The right data, robust analytics, and a sound decision-making framework can provide Customs and a sovereign State with the confidence that the right decisions are being made strategically, operationally, and tactically by their officers at the border.

As many of our clients still place a large focus on revenue leakage on imports, revenue evasion is only one of many threats occurring at the border. Others include security, narcotics, sanitary and phytosanitary safety, health, agricultural and environmental impact, commercial disruption, chemical weapons precursors, dual-use goods, prohibited items, weapons and ammunition, intellectual property, endangered species, antidumping, and more.

There is very limited use of data at the disposal of Customs officers, even though the data is there. As a result, many systems simply do not provide actionable insight to officers in the field.

Today, these various pending threats are not systematically analysed or managed by Customs administrations and OGAs, with which Customs must coordinate and make interoperable clearance and release decisions on goods at the border.

Data use

When one analyses a Customs and border administration's current state of selectivity, inspection, and overall risk management approach, it becomes clear that there is very limited use of data at the disposal of Customs officers, even though the data is there. As a result, many systems simply do not provide actionable insight to officers in the field.

Larger and modern economies often seek to improve their analytics capabilities with additional data and advance commercial information. While this includes traditional declarations and cargo reports, the data set is often enhanced with additional supply chain data to improve end-to-end supply chain visibility, including bayplans (ship stowage map), container status messages, conveyance reporting, and more.

This additional data and advance commercial information allows a Customs administration to begin "virtualizing" the border, and has spawned centralized analytical units, called National Targeting Centres or NTCs.

Three types of analytical approaches

We believe there are three analytical approaches for data exploitation that can be applied separately or together: the deductive, the inductive, and the predictive approach.

Deductive approach

The first level approach used by many embraces "Deductive" reasoning, which is based on generalized principles that are known to be true and form a specific conclusion. Watch list vetting or OGA commodity targets use a deductive logic. This is because the scientific conclusion or intelligence work to corroborate and predict an outcome has already been performed by another user group. Customs is simply using the information to flag the data when it emerges from the system.

Most risk management systems begin with an initial deductive approach, which is seen as the initial layer of risk assessment. Here is an example: 40 barrels of "chemical cleaning agents" are imported in a 20-foot "dry van" container. The tariff classification code identifies the product as "Arsenic Trichloride," which falls under the Australia Group Chemical Weapons Precursor List. The container is then detained, pending an investigation on the consignee and delivery address, as well as a potential permit violation.

In the above-mentioned example, Customs administrations have already pre-determined that the commodity is a potential threat. As such, this becomes a simple vetting process against inbound data. When the information is presented, the transaction is flagged to an analyst for action.

Inductive approach

The next layer of analysis, called "Inductive" reasoning, moves from specific instances to a generalized conclusion. Successful targeting systems employ a process of triage (determining priority) to eliminate low-risk shipments from being viewed, with a narrowing process that continues to lead to an outcome that may suggest the pending threat is a smuggling event.

Inductive systems use risk engines or rule management systems to run risk indicator rules against a data set. A risk scoring logic further ranks transactional data in order of risk (high/medium/low), which then facilitates an analytical triage for operational decision support.

This triage is then performed to select shipments of interest for closer scrutiny or inspection that could include a documentation check, a physical inspection, or both. Much

like a doctor completing a diagnosis following tests, the results of a Customs examination should be collected in real time and used to validate the reasons for selectivity. This ensures that the system is always updated, and pulsing with the latest smuggling threats and trends.

The following is an example of a targeting system that uses inductive logic: a container vessel "Northern Celebration" is destined to arrive in port in the next 48 hours and files a cargo manifest. The system scores the transaction as 163pts (red/high risk) due to the following:

- Place of receipt = Source country for narcotics.
- Port of loading = Source country for narcotics.
- Container transhipped/re-handled in a port with weak security measures.
- Commodity = Known cover load.
- Commodity inconsistent with container type.
- Gross weight is less than 63% of the maximum payload.
- One-to-one relationship between shipper and consignee.
- Delivery address = P.O. Box number.

Customs refers the container for a full de-stuff due to the suspicions presented within the data. The cargo inspection is non-resultant, yet upon closer scrutiny of the internal reefer unit, 61 kg of heroin/opiates are found concealed within it. Customs then seize the drugs and attempt a controlled delivery in cooperation with the police.

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A few systems operate in this manner today, including the US Customs and Border Protection's "Automated Targeting System" (ATS), the Canada Border Services Agency's "TITAN" system, and the US Navy's "Computer Assisted Maritime Threat Evaluation System (CAMTES)." Building a rule library is key to help derive risk-based decision making in an organization, in order to conduct inductive analytics and generate/share alerts based on a set of predefined and user customizable rules.

It has taken our firm several years to develop and accumulate what now totals in excess of 65,000 proprietary rules, working across many threat types, for narcotics, illegal migration, security, intellectual property rights infringements, and revenue leakage.

Predictive approach

Finally, let's consider the third level of analysis, which we refer to as "predictive modelling." A predictive model draws upon all available historical data, and forms a relationship with the data on file linked to historical seizures, penalties, forced payments, enforcement actions, and other resultant inspections. This analytical tooling provides a wide variety of statistical (linear and nonlinear modelling, classical statistical tests, time-series analysis, classification, clustering, etc.) and graphical techniques.

Once the predictive model is applied to a large volume of data (e.g., more than five-plus years), the model should be re-run on the inbound data (i.e. all data reported on file in the last 24-48 hours), and any shipments that are deemed a match should be flagged and referred for closer scrutiny or inspection.

While healthcare and financial industries are embracing an approach that uses machine learning and artificial intelligence, we see very few Customs administrations embracing this form of analytics in an effective manner.

However, there are many challenges in this area. They include establishing a data warehouse environment of historical transactions, baselining and an agreement on a definition of common enforcement actions with relevant stakeholders, and automating the re-running of the predictive model on inbound data as a machine learning process.

Let's give an example scenario using predictive analysis. In 2019, Customs and seven OGAs determine all significant enforcement actions to include:

- cargo control violations exceeding a penalty of 1,200 US dollars;
- smuggled goods exceeding 1,200 US dollars in the evasion of duties and taxes;
- all narcotic seizures;
- all monetary seizures greater than 10,000 US dollars in cash;
- all weapon and ammunition seizures;
- all CITES infractions;
- all fraudulent LPCOs;
- all seizures of prohibited items.

A data environment is established to store the last seven years of import declarations and cargo reports. Data Scientists then establish a predictive model, using a quantitative approach for historical trend analysis. Technologists then architect a process to re-run the model against all inbound data (about 14,000 transactions on file in the last 24 hours).

Two in-transit containers are identified as a match and flagged to the Customs analysts on shift at the NTC. The analysts refer the two 20-foot containers for inspection. Scanner teams image the contents of both containers at the port of arrival. One container has an anomaly in the image near its front wall. Upon offload, the container is measured and found to be only 18-foot in length. Upon closer scrutiny, the container appears to have a false wall and 2-foot void. The wall is dismantled and reveals 749,000 US dollars in cash.

A predictive approach uses quantitative analytics to determine a model. The statistical and mathematical process far exceeds what

any normal person is capable of, and adds an extremely powerful layer of analytics that many believe is the future of risk management for border agencies. Today, few countries are currently embracing machine learning and artificial intelligence, using predictive modelling.

We believe in a "stepping stone" process designed to advance the capacity and maturity of a Customs administration. This begins with a deductive logic, which is then layered with an inductive framework of rule sets and risk scoring, and is then finally wrapped with a predictive modelling capability to automate outcomes for historical trend analysis. The result is an ensemble model we believe can more accurately derive real-time threats better than any other systematic approach available today.

Our risk management system is developed on these fundamentals and further includes a field reporting application for phones and handhelds to collect the results of inspections, whether non intrusive or fully intrusive in nature. By collecting the right data at the right time, our framework dynamically tunes the scoring for our rule sets in real time, to ensure the system is always pulsing with the latest smuggling threats and trends.

Resultant inspections (seizures, penalties, warnings, etc.) automatically increase the score for the risk indicator rules that influenced the referral; whereas non-resultant inspections utilize a decaying formula to decrease the scores for those risk indicator rules that fired. This proprietary framework methodology essentially automates post seizure analysis and the activities performed by strategic analysts and risk management committees today.

When you merge this dynamic risk management functionality with electronic Single Window platforms, the result is an extremely powerful tool for coordinated border management between Customs and other government agencies. This strengthens security and border controls, prevents or helps to recoup lost revenue, and decreases release times at the border, resulting in measurable improvements to trade facilitation. This is where Customs administrations can focus and get the biggest bang for their buck.

For companies like us, we need assistance from the WCO, the WTO, UNCTAD, the World Bank, and other intergovernmental organizations, to allow us to strengthen the current systems in place. No one, including us, is interested in replacing the current trade platforms. Rather, we believe these systems should be retained as the system of record for trade filing, accounting, release, and clearance processing. At the same time, we would like the opportunity to enhance and strengthen these systems for their member countries, to ensure they are modernized with the most leading-edge technology and approaches available.

Conclusion

All Customs administrations should develop robust targeting and selectivity solutions, which become the core decision-making tool to identify high-risk commercial shipments before arrival at the border. These systems should leverage lookouts, watchlists and alerts, as well as configurable business rules, such as known profiles and intelligence or risk indicators, as well as scenarios formed through predictive modelling, machine learning, and artificial intelligence.

However, the confusion and rudimentary functions introduced by less sophisticated systems has, unfortunately, delayed maturity to a more suitable solution. The better "mousetrap" is often never realized, leaving developing countries using obsolete approaches and technology. It would, therefore, be prudent for intergovernmental organizations like the WCO to develop a modern baseline set of requirement guidelines for its Members to adopt when seeking risk management systems. Without this functional checklist, the better mousetrap never emerges.

More information

https://ttekglobal.com/risk-management

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WCO Academy

Customs e-learning for the private sector

about

WCO Academy, as private sector's point of access to the World Customs Organization's expertise, offers a wide range of Customs e-learning courses, real-time training via webinars and many other tools and features including Global Customs News and Forums

contact

https://academy.wcoomd.org/
academy@wcoomd.org

how

Learners access courses, certificates and forums directly through their dashboard

Companies and Universities provide access to their staff and students respectively through customized, co-branded environments

Associations, training centers and others, cooperate with WCO Academy to distribute Customs knowledge to the private sector globally

available courses

Harmonized System courses
- HS - Industry & Construction
- HS - Chemicals
- HS - Agriculture & Agrifood
- HS - Textiles
- HS - Art & Jewelry

WCO Data Model courses
- Course 1 - Managers
- Course 2 - Practitioners

Customs Valuation courses
- Course 1 - Valuation concepts and transaction value
- Course 2 - Advanced valuation methods

Revised Kyoto Convention Courses
- General Annex
- Specific Annexes

Single Window courses
- Course 1 - Practitioners
- Course 2 - Managers

More courses
- Rules of Origin
- Transfer Pricing
- Temporary Admission
- WTO Trade Facilitation Agreement
- SAFE & AEO
- Transit
- TIR System

Key points from the WCO's newly-launched technology event

By Laure Tempier, WCO Communications Unit

In June 2019, experts in Customs, trade, transport, logistics and technology gathered in Baku, Azerbaijan, to discuss matters relating to the various technologies used to manage flows of goods, people and means of conveyance across borders, with a focus on both technological products, services and tools that are primarily physical and those that derive their primary value from data.

This newly-launched annual event, which merged the WCO's long-running IT Conference & Exhibition with its newer Technology & Innovation Forum, has the same broad objective, namely a platform to inform Customs on existing tools and services, to discuss implementation challenges and costs, and to raise awareness about the latest trends and future developments.

The process of "selling" specific technologies usually means selling a vision, convincing people to adhere to that vision, and then informing them about the technologies that can be used to implement the vision. Participants, therefore, did not only get the opportunity to test and understand how solutions and equipment work, they were also asked to think about a vision and how to adapt their business models accordingly, including anticipating the future.

Below are just some of the ideas gleaned from the event.

Data is the new oil and free flow of data is needed

Customs has a lot of information at its disposal. The first information they collect is pre-arrival declaration information related to shippers, consignees, values and commodities, i.e. typical manifest information. Additional information is collected at arrival, through the Customs declaration and through various sensors, including non-intrusive inspection (NII) systems. If Customs or another agency decides to check the cargo, the inspection results will also be added to this pot of information.

However, Customs does not always use this data in a suitably combined manner. For example, Single Window systems may not include inspection data. Therefore, a time of transition will be faced in looking for solutions to combine all this data. Interestingly, the NII industry has been creating new products that provide richer data sets, with some systems now combining various X-ray technologies, displaying the generated data set on one user interface.

The X-ray image file itself is enriched with additional external data to generate a more informed outcome. NII industry leaders have developed platforms, which not only enable images to be adjudicated remotely, but also allow for the integration of data, including data stored in Single Window systems, as well as data from inspections, images, radiation monitors, biometrics and weight scale devices, to name a few.

Single Window systems are now seen as the main aggregator tool for collating data, such as that from the invoice, the bill of lading or the packing list, among others, received from an importer or exporter's enterprise resource planning (ERP) system to prepare regulatory documents. One of the systems presented at the conference had the following key functionalities:

- It can notify a trader of any additional data that is required to fulfil a submission.
- It can apply risk rules to flag shipments that display known risk characteristics, where discrepancies exist between information on the manifest and the declaration.
- It uses artificial intelligence (AI) to identify unusual "behaviour" in declarations, including correlations or similarities with previous shipments that were mis-declared.
- It can run a network analysis and identify associations with blacklisted individuals, entities or locations.

Participants did not only get the opportunity to test and understand how solutions and equipment work, they were also asked to think about a vision and how to adapt their business models accordingly, including anticipating the future.

Advanced risk management tools are also becoming more and more sophisticated. One of those dedicated to monitoring means of conveyance is able to mine and display an incredible amount of information, such as, for the maritime sector, current positions of vessels, history and previous movements, vessel ownership, and the nature of the cargo.

Digitalization of paper documents is easy

A lot of information is still available on paper and this information needs to be extracted and the document reconstructed in a digital format such as Excel or Word. This is now an easy process, and can be done using a phone camera, for example.

You ain't seen nothing yet

Even in this era of "big data," one might say "you ain't seen nothing yet, just wait until the Internet of Things takes hold and really expands." The term "Internet of Things" (IoT) is used to describe an environment in which sensing objects send data to an application, data that can then be used to create situation awareness and enable applications, machines and human users to better understand their surrounding environments. The understanding of a situation, or the context, potentially enables applications or humans to make more intelligent decisions.

IoT is already everywhere, and is expected to grow. Connected devices are widely used for supply chain management to track assets, monitor cargo condition, and control its environment such as the temperature. It enables a log of wood, for example, to be followed along its transformation chain from the place where it was harvested to the place where it will be sold.

Connected devices are also used for fleet management to gather data on the locations and operations of vehicles in real time, as well as to control sensitive parts such as engines, to predict maintenance or optimize repair operations. A spare part of a plane can be ordered before it arrives, and a truck system failure can be identified and actions automatically initiated according to pre-determined workflows to send help or a new truck, including informing the place of destination and authorities of expected delays if necessary.

Visual recognition intelligent service

Thanks to visual recognition tools, one can teach a machine to recognize goods, such as arms or bad grains. Add to this the capacity to read and translate text, and one gets a technology that can see what the object is and read what is on it.

This is how a fridge can identify what it contains. Some scanners today take images and apply this technology to recognize items: at an airport for example, or when cargo is loaded. If one combines the image and other information

related to the content, origin, or owner of the cargo, one can determine risk and take action according to the level of risk.

Machine learning requires access to a lot of data

Aggregating data into one single platform will enable one to move towards machine learning. Indeed, one needs a lot of data to leverage the technology, which is directly related to pattern recognition and computational learning.

The development of algorithms to discover anomalous behaviours in real-world transactions or processes requires access to information related to the goods, the image if any, and the final inspection decision as well as feedback.

Intelligent systems can also predict the arrival or positions of ships, by combining information related to the reputation of the shipping line, encounters at sea, changes in the speed of a route, the bill of lading, or weather conditions.

You need huge data storage and processing capacity

To do such prediction requires a lot of capacity to store and process data, especially if one wants to predict the positions and the arrival of fast-moving objects such as planes, as one will need multiple updates per second, per plane.

The use of machine learning systems, in terms of hardware and software, was until recently out of reach for most, but the rise of cheaper data storage, cloud and non-cloud, that makes the same massive data sets available from the same source, changed the game. Moreover, the power that one now has to process data has also improved, with solutions such as Hadoop boosting the processing speed of data analysis applications.

A data lake allows you to inject any type of information

In building risk management frameworks, one wants to combine all sorts of data from different sources. Thus, the "data lake" is a new approach – a central repository for storing large amounts of raw data that can be analysed when needed.

It is typically used to store data that is generated from high-velocity, high-volume sources in a constant stream – such as IoT – and when an organization or entity needs a high level of flexibility in terms of how the data will be used. Unlike a "data warehouse," a data lake has no constraints in terms of data type, which can be structured, unstructured, or even semi-structured.

IoT requires a secure solution

Internet connectivity is a two-way street. With connected devices becoming a gateway to homes, workplaces and sensitive data, they also become targets for attacks. The industry's concern about the security of connected devices has been late in coming, and one of the problems with such devices is that most have no security capabilities whatsoever.

However, a technology provider has developed a solution, combining a secure microcontroller (the brain of the device), operating system and cloud service to improve the security of IoT devices.

A standard format now exists for X-ray images to be shared

A unified X-ray file format for NII devices – codenamed the Unified File Format (UFF) – has been developed, in cooperation with the WCO, by four NII vendors: L3, Nuctech, Rapiscan Systems AS&E, and Smiths Detection. The first version of the standard is called UFF 2.0.

It will be further developed depending on the rate of its adoption by Customs administrations who have been invited to require their suppliers to deploy the UFF on equipment in use, if possible, and to add the specifications of the UFF 2.0 in their tender documents for the procurement of NII systems.

IoT is already everywhere, and is expected to grow. Connected devices are widely used for supply chain management to track assets, monitor cargo condition, and control its environment such as the temperature.

Each of the four vendors participating in the UFF initiative developed a UFF 2.0 converter and a UFF 2.0 viewer – software enabling the conversion of native NII images to the UFF, and respectively the viewing of UFF images with all the tools and functions available in the original image viewing/processing software.

The UFF will significantly facilitate the interoperability of NII equipment supplied by different manufacturers, as well as the exchange of NII outputs within and between Customs administrations. The UFF will also be instrumental in developing the large databases or libraries of images that are, inter alia, necessary to train analysts or machines equipped with an automated detection application.

5G will be a key enabler

5G is an umbrella term used to categorize the next generation of wireless communication, offering networks that are 100 times faster (to move more data), connect a lot more devices at once (for sensors and smart devices), and feature five times lower latency (to be more responsive). In the immediate future, this standard will mean clearer video conferencing, faster downloads, and never losing service in a large crowd.

More importantly, further down the road, 5G has the potential to revolutionize aspects of life by supporting more data-intensive activities, such as the IoT. 5G will provide the infrastructure for handling thousands of devices simultaneously, from mobile phones to equipment sensors, video cameras to smart street lights, and interconnected traffic lights to autonomous vehicles.

Data processing in an environment such as airports, where time is a constraint, will benefit greatly from it. It will also be crucial to move and process data of significant size such as scanned images. Finally, it will be a key foundation point if one is going to use technology such as blockchain and AI.

RDF-based technologies will enable diverse data to be connected

Integrating real-world data into the Web and providing web-based interactions with IoT resources was also discussed under the umbrella term "Web of Things." The idea is to connect the sensor, actuator and other devices to the World Wide Web, enabling web-based access, tasking, and alerting.

Connecting this diverse data, however, presents an ever-growing challenge, and the greater potential of IoT will not be achieved without standards-based vocabularies and reference data that can be mapped and connected to each other.

This is where technologies based on the Resource Description Framework come in. Their strength is in connectivity. They enable diverse data from different applications to be brought together easily. With the semantics of data directly accessible to applications, each can interpret merged data according to its needs.

Be ready for global information sharing

The current level of collaboration is still too low to get all the effectiveness needed to manage risks properly. Hopefully, this will change, which means that platforms being developed need to be able to connect to each other. In such a connected landscape, all actors would have access and be joined up to one single source of "truth" through a single domain, where they would gather information and harvest it.

Machines will learn from each other

Machine learning needs to be embedded in the workflow. Let's take the example of two machines dotted with learning capacities working separately, one managed by Customs and the other by another national agency or foreign country. One will need a sort of "supra machine" to learn from both, and blend the intelligence build of each machine, without the need to transfer any data.

AI-as-a-service opens new doors

AI-as-a-Service is a concept that comes from the medical industry where images are not read at the location where an X-ray is taken. It implies sharing information with a third-party vendor. For example, when it comes to cargo or baggage, one country could upload images and related data onto a server. A service provider will then process the data using algorithms tamed to read specific anomalies and render a decision for a receiving administration before the cargo or baggage arrives.

It would be especially relevant when dealing with air passenger bags, which are automatically scanned: an AI machine would scan the scanned images and process data while the plane is in the air. At destination, an administration would receive the outputs of the analysis and the list of bags flagged.

Energy fueling advanced technologies should be green and renewable

Most technology solutions are energy-intensive. When considering their deployment, one should first ensure that energy is available, and that it is produced in a green and renewable way with a view to minimizing the repercussion of the investment on the environment.

Research on the impact of technology mainly focused on blockchain and more especially Bitcoin's environmental footprint. In 2018 alone, the running of Bitcoin mining around the world took as much energy as that necessary to fuel Ireland's total electricity spend in the same year. One single bitcoin transaction requires as much energy as that needed to power 31 United States households in a day. The number goes up to 1 million transactions, in a day!

However, some argue that, if Bitcoin requires a digital-labour intensive process with excessive energy demands, blockchain does not necessarily. In any case, the energy systems that are fueling the transition towards advanced technologies should make use of the right energy sources.

Facial recognition is spreading prodigiously

It is used in applications to compile albums of people who hang out together, at airports to verify who you are, to unlock your mobile phone or confirm your identity for a bank transfer, to know who is at your door, to spot missing persons, or find people in crowds and on city streets. For example, if a suspect is picked up, police officers can upload the person's mugshot and search CCTV footage to potentially trace the suspect's movements back to the scene of a crime.

Advertisers are also in on the act. Thanks to facial recognition, billboards can now serve up ads based on an estimate of your sex, age and mood. But how did it get everywhere? Advances in three technical fields have played a major part: big data, deep convolutional neural networks, and powerful graphics processing units, or GPUs. Customs administrations use facial recognition mainly at airports to scan passengers, quickly identifying those that need to be controlled.

It is also used by the transport industry to monitor drivers. Cameras mounted on the dash monitor if the driver's head starts to tilt or his eyes start to close for too long, or if his head position is not right or his eye line is not straight ahead, or if his blink rate has increased, and even how many occupants are in the vehicle. The system will then decide if any intervention is needed, which could be in the form of an audible warning or a light, a vibration of the seat or steering wheel, and possibly even a slight take-over of the vehicle controls – slowing the car down or moving lane to a lower speed.

Logistics and transport companies are ready to embrace the blockchain

Trade facilitation is still very government-driven, but the increased number of pilots leveraging blockchain technology to manage cross-border transactions show that the logistic and transport sector is ready to be more active in the development of solutions, providing more transparency about data upstream in the supply chain as well as real-time visibility across the end-to-end journey of a shipment, with the aim of increasing efficiency and reducing operational costs.

The notion of "Internet of Logistics" (IoL) is also much talked about. The initiative, driven by air and maritime transport companies, aims to transform peer-to-peer message-based

communication towards multi-party data sharing to increase shipment visibility.

Only blockchain platforms able to become hyper-connected ecosystems will survive

A blockchain is a type of distributed ledger technology (DLT) with a specific set of features, including a shared database (log of records) shared by means of blocks that form a chain. As various and sometimes competing blockchain platforms develop around the world, they must also interact.

Integration between different platforms will be necessary to maximize their benefits. Integration means that two or more DLT platforms can transfer an asset with the confidence that its uniqueness and state are kept consistent. It would also allow a consistent state of a data element on two or more DLT systems to be maintained simultaneously.

Be ready to transform your business

Administrations willing to harness the power of technology have to transform their business and change how they operate and deliver value to customers. Digital transformation is all about business transformation.

A roadmap to harness the true capabilities of technology needs to be developed, which includes a cloud policy, a data sharing plan, workflows explaining what needs to be done, and mapping how the technology will be used to do so, as well as the value proposition for customers.

The transport industry is going to transform

The transformation of transport will first be characterized by the growing use of the autonomous truck, a sector in many countries desperate for drivers and still suffering from inefficient transport systems. In Africa, the truck will not go totally driverless, but the technology will be used to support drivers, especially with long-distance hauling or on dangerous roads where they cannot stop.

Drone usage will also spread, especially for the delivery of cargo to remote areas with no infrastructure to accommodate manned cargo planes or with inadequate or poor road infrastructure, resulting in low road utilization. Africa is leading the way in terms of drone usage with the world's first commercial drone delivery service having begun operations from a hill in the middle of Rwanda.

Zipline, a San Francisco-based robotics company, delivers blood by drone to almost half of all Rwanda's blood transfusion centres, with orders being made online, or by text, phone or WhatsApp. The South African National Blood Service will shortly be using drone technology for the same purpose. Kenya's Astral Aviation uses a 2,000 kg payload drone that can travel up to 1,200 km, solving the logistics challenge of transporting cargo to remote areas.

Next event

The 2020 WCO technology event will be held in the first half of June 2020 in Bali, Indonesia. Keep checking the Events Section of the WCO website for further details. If you missed this event, the WCO looks forward to welcoming speakers, delegates and exhibitors alike to the next one.

More information

communication@wcoomd.org

Calendar of Events

NOVEMBER

Technical Committee on Customs Valuation	4 - 8
Information Management Sub-Committee	11 - 12
Technical Experts Group on Non-Intrusive Inspection	13 - 14
Working Group on Performance Measurement	14 - 15
Revised Kyoto Convention Management Committee	18 - 20
Global Conference on Origin, Iquique (Chile)	19 - 20
Working Group on Revenue Compliance and Fraud	21 - 22
Harmonized System Review Sub-Committee	25 - 29

DECEMBER

Policy Commission, Seoul (Korea)	3 - 5
WCO/UPU Contact Committee, Berne (Switzerland)	9 - 11
Revised Kyoto Convention Working Group	9 - 13
Security Conference	10 - 12

JANUARY

Scientific Sub-Committee	14 - 17
eATA Working Group	20
Global RILO Meeting	21 - 22
CEN Management Team (CENMaT) Meeting	23 - 24
Data Model Project Team	27 - 31

FEBRUARY

3 - 4	Technical Committee on Rules of Origin
3 - 4	Technical Experts Group on Air Cargo Security (TEG ACS)
4 - 7	SAFE Sub-Groups
10 - 14	Revised Kyoto Convention Working Group
17 - 18	Audit Committee
19 - 20	Working Group on the Use of Additional Languages at the WCO
20 - 21	Integrity Sub-Committee
24 - 28	Enforcement Committee

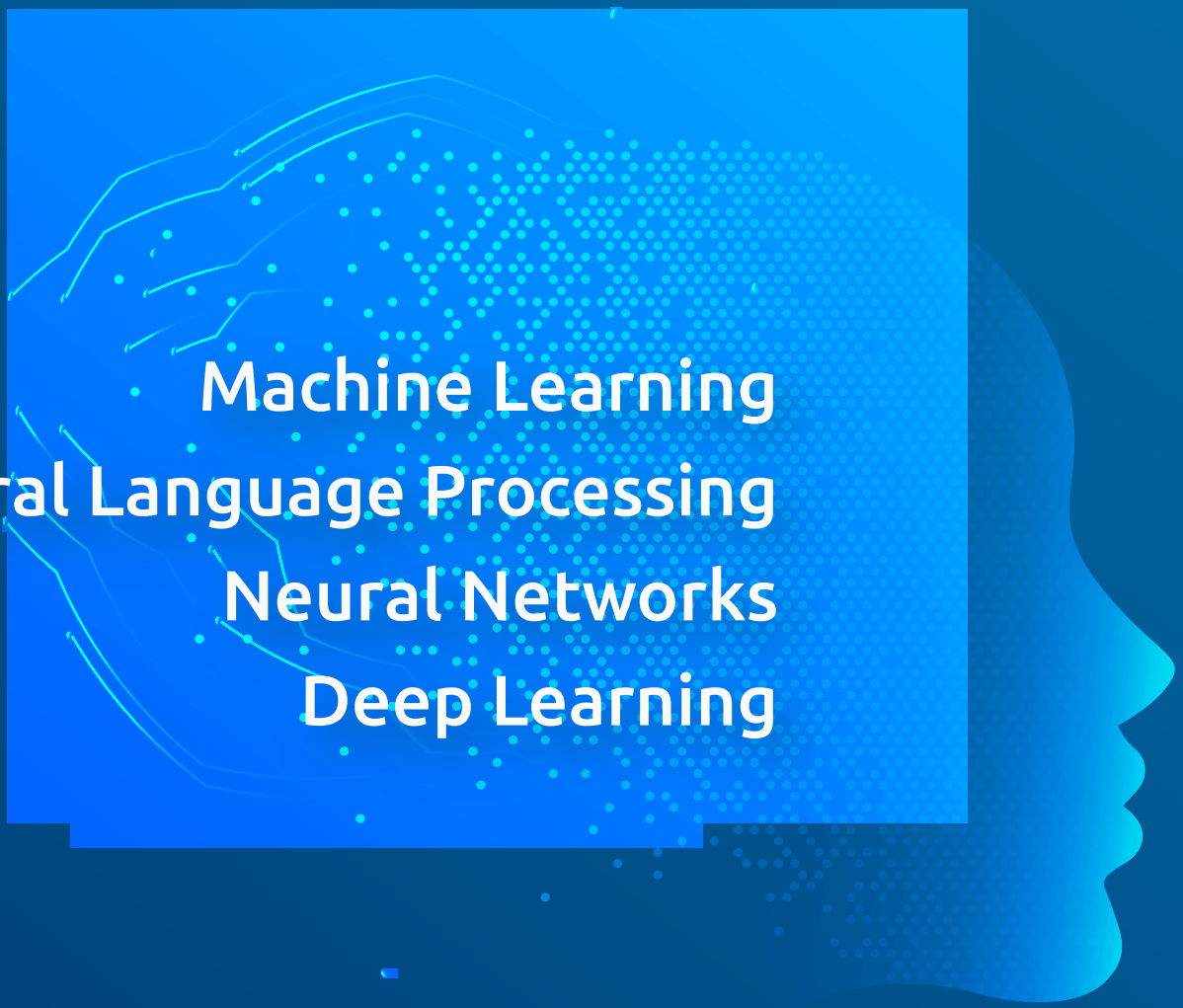
MARCH

2 - 3	Regional Offices for Capacity Building/Regional Training Centres /Vice-Chairs Global Meeting
4	Joint Session Capacity Building Committee and Agreement on Trade Facilitation Working Group
4 - 5	Agreement on Trade Facilitation Working Group
4 - 6	Capacity Building Committee
9 - 10	Working Group on Accessions
9 - 10	Harmonized System Committee Working Party
11 - 20	Harmonized System Committee
10 - 12	Global Authorized Economic Operator Conference, Dubai (United Arab Emirates)
23 - 24	Private Sector Consultative Group
24 - 26	SAFE Working Group
30 - 3 April	Revised Kyoto Convention Working Group

It should be noted that WCO meetings are mentioned for information purposes and are not all open to the public. Unless otherwise indicated, all meetings are held in Brussels. Please note that these dates are indicative only and may be subject to change. The WCO meetings schedule is regularly updated on the WCO website.

Artificial Intelligence

State-of-the-art technology for Customs



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