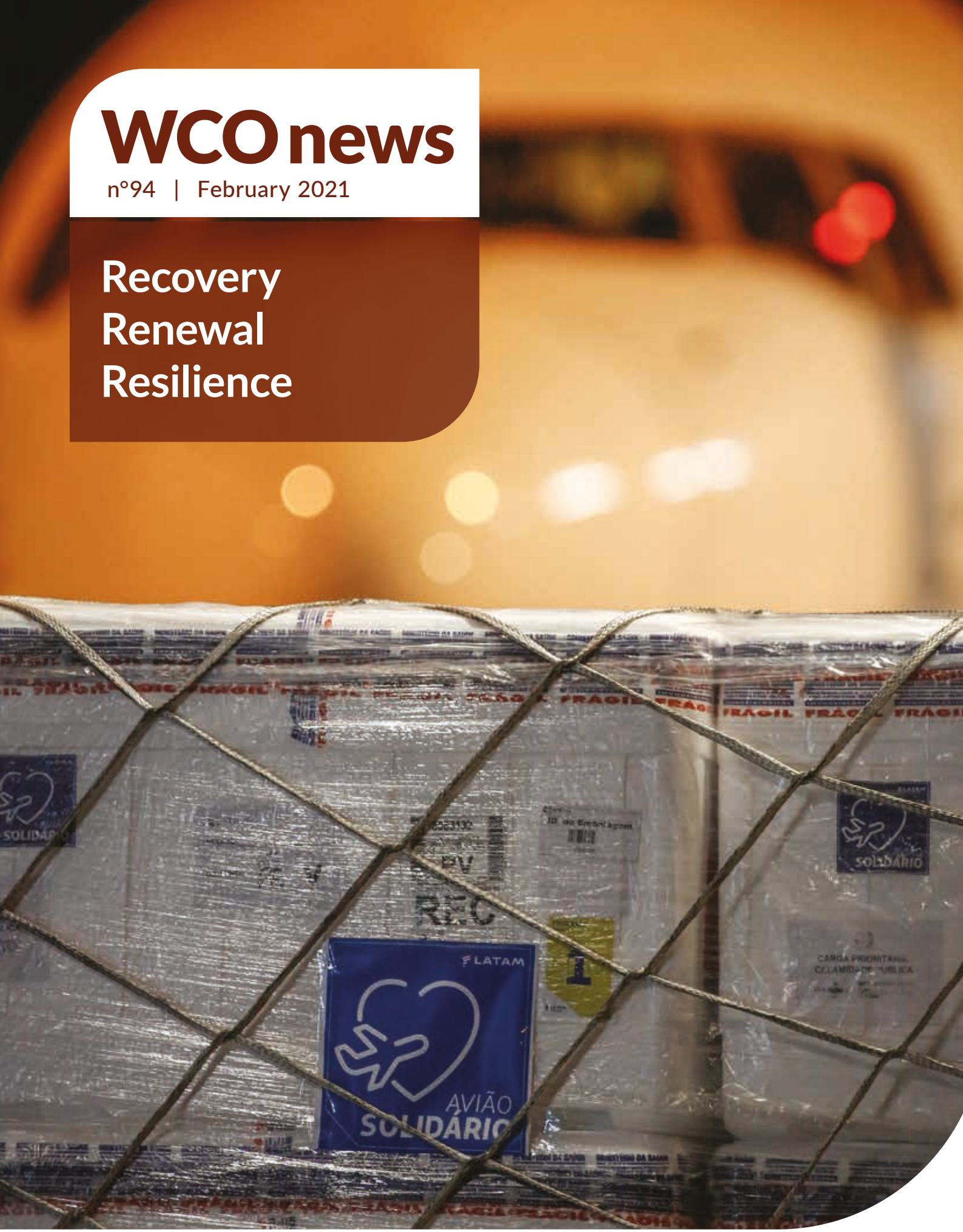
WCO news

n°94 | February 2021

Recovery
Renewal
Resilience



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Trader Register System (AXIS)

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Risk Management

is an intelligence-enabled system that helps Customs, Regulatory and Security agencies to automatically risk assess trade data (Goods declaration and Cargo data) and select them for control, also suggesting the mode of treatment.

Air Manifest

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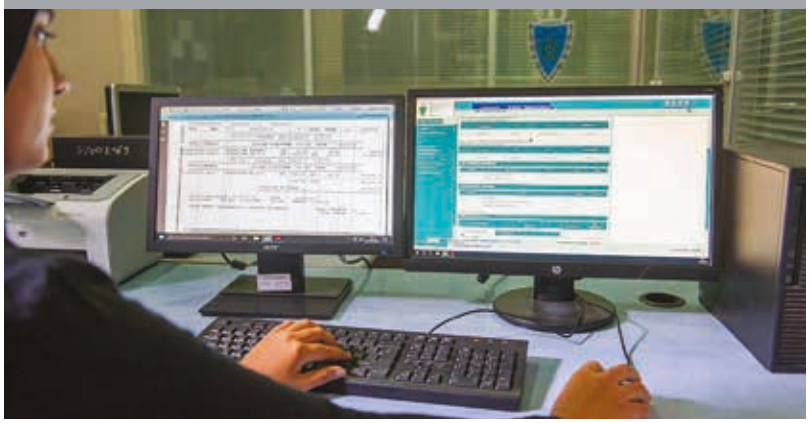

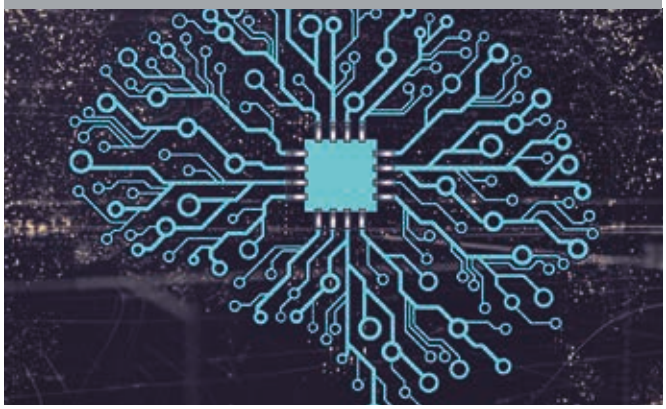

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Editorial note

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Illustrations Our thanks also extend to all who provided photos, logos and drawings to illustrate this issue.

Photo cover © Paulo Paiva / AGIF

Photo caption Containers carrying doses of one of the vaccines against COVID-19 are unloaded at Guararapes International Airport (Brazil) on 18 January 2021.

Design www.inextremis.be

The WCO launches its new strategic planning cycle

In December 2019, the WCO Policy Commission clearly expressed the need to strengthen the linkage between the WCO Strategic Plan, a document that sets the objectives and concrete targets to be met by WCO Members over a three-year period, and the Environmental Scan, which offers an annual view of the main global trends currently impacting Customs' operations or which could affect them in the future. In addition, through various WCO working bodies, Members have sought the use of a forward-looking methodology to prepare more effectively for the upcoming challenges and opportunities facing the Organization.

Strategic foresight

The future is difficult to predict, as clearly demonstrated by the COVID-19 pandemic. However, this unpredictability is not an excuse to be unprepared, especially now. Most observers agree that many managers and decision-makers from the private and public sectors could have better prepared their organizations to respond to the current health crisis and the myriad and complex issues it has raised.

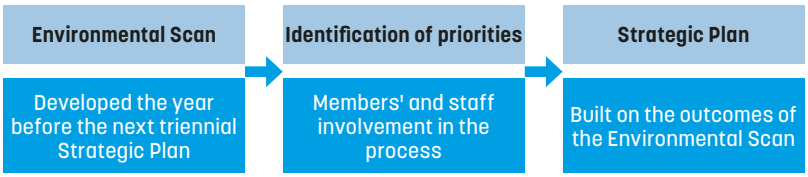
Although strategic foresight is still a relatively unknown concept within Customs administrations, it could represent the way forward by ensuring that Customs is equipped with the necessary regulatory and technical tools to respond adequately to a wide range of plausible futures. To quote the Organisation for Economic Co-operation and Development (OECD), "*strategic foresight is a structured and systematic way of using ideas about the future to anticipate and better prepare for change. It is about exploring different plausible futures that could arise, and the opportunities and challenges they could present. We then use those ideas to make better decisions and act now.*"[1]

The strategic planning cycle which recently commenced at the WCO has this very objective in mind: using foresight methodologies that enable the Organization to predict the future more accurately, thus ensuring that Customs and the WCO keep pace with the changing environment and continue to serve economic operators and governments.

A WCO strategy clearly linked to the global environment

To implement this approach, a document presenting a variety of potential scenarios and Customs' response to each of them will be produced. It will take the form of a new type of WCO Environmental Scan that will cover a three-year period and will feed directly into the Strategic Plan to be established for the period 2022-2025. WCO Members and the Secretariat will work together in drafting the document and will also consult with private sector representatives. To that end, in November 2020, the WCO Secretariat held a first round of four virtual regional meetings, with two more planned for the remaining regions in 2021. Separate meetings also took place between the WCO Secretariat's management team and the members of the WCO Private Sector Consultative Group in January 2021.

The Strategic Plan 2022-2025 will be developed on this basis, with the aim of setting priorities and targets for the Customs community. The WCO approach can be summarized as follows:



The next Environmental Scan and the Strategic Plan 2022-2025 will enable the WCO Secretariat and WCO Members to commit jointly to specific shared targets. The underlying objective is to reinvigorate the Customs community and ensure that it moves forward, in harmony, to meet anticipated and unforeseen challenges.

The new Environmental Scan will be presented for adoption to the June 2021 Policy Commission and Council. The Strategic Plan 2022-2025 is expected to be endorsed one year later, at the June 2022 Policy Commission and Council.

More information

http://www.wcoomd.org

1 *https://www.oecd.org/strategic-foresight*

Project TENTACLE: enhancing law enforcement capacity to tackle money laundering and terrorism financing

By the AML-CTF Programme Team, WCO Secretariat

Project TENTACLE, led by the WCO Secretariat and funded by the U.S. Department of State - Bureau of International Narcotics and Law Enforcement Affairs (DoS INL) -, aims to raise awareness of money laundering activities and schemes in the Customs area, as well as to augment the enforcement capabilities of Customs, financial intelligence units (FIUs) and police services. A joint effort with the Egmont Group for FIUs and with INTERPOL, Project TENTACLE focuses its efforts on money laundering and terrorism financing in Asia, Latin America, Africa, Eastern Europe and the Middle East.

Background

The global movement of illicit proceeds and terrorism financing are a widespread and proliferating threat to global security and to the stability of the global financial system. The International Monetary Fund estimates that the amount of money laundered on an annual basis is between USD 1.6 trillion and USD 4 trillion, which is equivalent to between 2 and 5 percent of global domestic product. The global economic impact of terrorism is also alarming. From 2008 to 2018, the yearly global economic impact of terrorism was approximately USD 58 billion[1].

Transnational criminal organizations (TCOs) and terrorist organizations (TOs) perennially exploit Customs nodes for the movement and laundering of illicit money generated by their illegal activities. Customs, as the first line of defense at external borders and inland ports of entry, have a crucial mandate to identify and prevent the movement of smuggled currency/currency equivalents, gems/precious metals and other items of monetary value across international borders.

Being cognizant of this growing threat, and the primary role that Customs play in combatting money laundering, the WCO established its Anti-money Laundering and Counter-terrorism Financing (AML-CTF) Programme in 2018 The AML-CTF Programme, which is the most recently established law enforcement programme in the Compliance and Enforcement Sub-Directorate, was created and designed to strengthen Members' capacity to combat money laundering and illicit financial flows.

In January 2019, thanks to financial assistance from the Japanese Customs Service CCF Fund, the WCO AML-CTF Programme launched Operation TENTACLE at the WCO Asia/Pacific Regional Workshop on Anti-money Laundering and Terrorism Financing in Kashiwa, Japan. The Workshop was attended by representatives of 19 Customs services, INTERPOL and the FIU Japan.

From 26 August to 6 October 2019, a subsequent Asia-Pacific operational effort was conducted with the support of the 19 Customs services concerned, and INTERPOL's Financial Crimes Unit. This led to the seizure and detention of over $5 million in a combination of currency and gold that were being smuggled across international borders by bad

1 *Global Terrorism Index, 2019.*

actors[2]. The operation also resulted in the arrest of 14 money launderers.

The success of Operation TENTACLE Asia-Pacific led to the establishment of Project TENTACLE, a three (3)-year effort to combat money laundering and terrorism financing in the Customs arena.

Project TENTACLE

Project TENTACLE, the primary operational effort of the AML/CTF Programme, is an initiative led by the WCO Secretariat and aimed at combating bulk cash smuggling and the smuggling of gems and precious metals. Additionally, Project TENTACLE places emphasis on the advancement of money laundering and terrorism financing investigations following border seizure events, as well as collaboration between Customs services and both FIUs and police services. The WCO Secretariat conducted its first Project TENTACLE AML-CTF Workshop for Africa in September 2020, and will hold another one for Latin American countries in collaboration with INTERPOL and the Egmont Group in January 2021.

Project TENTACLE improves regional security by conducting capacity building, enforcement operations and intelligence-enhancing efforts around the world. It not only aims to raise the capabilities of Customs delivering training in detection and investigative techniques, but also strengthens members' capabilities in financial crime intelligence and operational planning. The operational results of TENTACLE are tracked and uploaded into the FinCRIME Online library.

The FinCRIME Online Library

The FinCRIME Online library is the new WCO Customs financial crime tool and intelligence platform, hosted within the WCO Customs Enforcement Network (CEN).

- It serves as reference point for identified money laundering schemes that touch upon the Customs sector, such as the Black-market Peso Exchange, bulk currency smuggling, and trade-based money laundering (TBML) schemes.

- It highlights new trends and mechanisms for money laundering in the Customs realm, as well as concealment methods. Top Customs cases and alerts are also highlighted.

- It highlights salient, non-nominal seizure events connected to currency seizures, as well as seizures of currency equivalents, coins, gems and precious metals, and any seizures connected to TBML.

Customs-FIU Cooperation Handbook (CFCH)

The WCO and the Egmont Group jointly developed the CFCH to serve as a reference for Customs services and FIUs in combating money laundering and terrorism financing activities within the Customs arena. The WCO and Egmont Group simultaneously published the CFCH online on 27 March 2020.

The CFCH aims to enhance global joint targeting of money laundering in the Customs sector, such as bulk currency smuggling, gem/precious metals smuggling and TBML. Its objective is also to assist Customs services and FIUs around the world in creating more robust and formalized structures to combat money laundering and terrorism financing and develop better financial crime intelligence. The printed versions of the CFCH will be available in the near future in English, French, Spanish, Arabic, Portuguese and Russian.

Operation TENTACLE capacity building workshops

Project TENTACLE utilizes AML and CTF experts to conduct training workshops designed to raise the skillsets of front-line Customs officers and mid-level supervisors, as well as FIU analysts, in tackling currency smuggling, gems/precious metals smuggling and Trade Based Money Laundering (TBML). The Project also draws upon experts from FIUs and INTERPOL to support its capacity building efforts.

More information

enforcement@wcoomd.org

Available publications

WCO and the Egmont Group (2020). Customs – *FIU Cooperation Handbook* (available in English and French / Spanish, Arabic, Portuguese and Russian version in preparation).

FATF and OECD (2010). *International Best Practices: Detecting and Preventing the Illicit Cross-Border Transportation of Cash and Bearer Negotiable Instruments* (English, Arabic, Spanish, French).

Asia/Pacific Group on Money Laundering (2012). *APG Typology Report on Trade Based Money Laundering.*

WCO (2008). *Customs Enforcement Guidelines on Countering Money Laundering and Terrorist Financing* (English, Arabic).

http://www.wcoomd.org/en/topics/enforcement-and-compliance/activities-and-programmes/money-laundering-and-terrorist-financing.aspx

2 *Individual or entity with the prior criminal conviction, or who has been sanctioned by the court or regulator.*

Environmental enforcement: overview of WCO latest and future activities

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By the Environment Programme team, WCO Secretariat

As part of the WCO Environment Programme, the WCO Secretariat is working to solidify the role of Customs in environmental matters. Customs administrations are regularly reminded of the importance of implementing the various environmental agreements in force, existing training material is updated and new material developed, exhaustive capacity building is provided, and enforcement operations are organized.

But more still needs to be done to ensure the implementation of the various environmental agreements. United Nations Secretary-General António Guterres warned in 2019 that a "point of no-return" on climate change was in sight,[1] and the World Economic Forum reported in its Global Risk Report 2020 that environmental issues dominated as the most pressing compared to other categories of short and long-term risks (i.e. economic, geopolitical, societal and technological risks).[2]

This article presents the latest activities undertaken under the Environment Programme and provides an overview of future directions. The aim is to encourage those Customs administrations wishing to strengthen their enforcement capacities to engage with the WCO Environment Programme team in order to discuss their needs and opportunities for improvement.

Illegal Wildlife Trade

A number of sub-Saharan African, Asian, and South American Customs administrations participating in the INAMA Project, which aims to enhance Customs' capacity to counter wildlife trafficking by ensuring that all trade in wild plants and animals is legal, have been given the opportunity to follow training on the working methods used to combat fraud. These range from the identification of an offence to the storage of seized assets, including reporting, collecting and preserving evidence. This training has been developed and delivered as part of the WCO COPES Programme. To date, two workshops have been organized and held online due to the COVID-19 pandemic.

An additional COPES workshop was organized for some administrations in sub-Saharan French speaking Africa under the auspices of the International Consortium on Combating Wildlife Crime (ICCWC), which comprises the WCO, the CITES Secretariat, INTERPOL, the UNODC and the World Bank. ICCWC partners also organized several other webinars on a wide range of topics.

The component of the INAMA Project focusing on improving risk management practices in Malawi, Nigeria and Vietnam, and funded by GIZ (German Agency for International Cooperation), came to an end in December 2020. An online wrap-up meeting was organized with representatives of Nigeria and Vietnam to review their experience and the progress achieved, and to discuss future activities.

The joint WCO-INTERPOL Operation THUNDER 2020 saw 103 countries rally against wildlife crimes. The operation resulted in over 2,000 seizures of wildlife and forestry products, with

1 *Manzanaro, S. S. 2019. "COP25 in Madrid: UN Secretary-General Guterres Says Planet Is 'Close to a Point of No Return.'" Euronews, 3 December 2019. https://www.euronews.com/2019/12/02/live-un-leaders-anddelegates-arrive-in-madrid-for-the-climatechange-summit.*

2 *World Economic Forum. 2020, The Global Risks Report 2020, viewed 15 November 2020, http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf.*

a total of 699 offenders apprehended. Seized contraband included over 1.3 tonnes of ivory, over 1 tonne of pangolin scales (the equivalent of approximately 1,700 pangolins), 56.2 tonnes of marine products, 950 tonnes of timber (the equivalent of 87 truckloads), 15.9 tonnes of plants, and over 45,500 live animal and plant specimens.

Illegal waste and substances controlled under the Montreal Protocol

Operation DEMETER, which dates back to 2009, is perhaps the most well-known face of the efforts deployed by the Customs community to implement the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and the Montreal Protocol on Substances that Deplete the Ozone Layer, including the Kigali Amendment. This amendment commits countries to phasing down the production and consumption of hydrofluorocarbons (HFCs), which contribute to global warming and climate change.

Operation DEMETER VI saw the participation of 73 enforcement agencies from 71 countries, joining forces with regional and international partners. This concerted enforcement effort resulted in a total of 131 seizures, including more than 99,000 tonnes of waste and approximately 42 tonnes of substances controlled by the Montreal Protocol.

A number of articles have been published in recent issues of the *WCO News*[3] on illicit trade in waste, including one by the Secretariat of the Basel Convention explaining the latest developments in the international rules governing the transboundary movement of wastes, as well as the available support and activities.[4] The issue was also discussed extensively at recent sessions of the WCO Enforcement Committee.

The future

Throughout 2021, the WCO Secretariat plans to expand its Environment Programme activities thanks to new funding. Among other things, it will:

- continue assisting countries with building their enforcement capacities related to the fight against illicit wildlife trade. Funding has been received to provide assistance to the Customs administrations of Cameroon, Namibia, Nigeria, Uganda, Indonesia, Lao PDR, Malaysia, Vietnam, Brazil, Colombia, Ecuador, Guyana and Peru;
- support the Basel Convention's Plastic Waste Partnership[5] which seeks to promote the environmentally sound management of plastic waste by collecting and analysing information on transboundary movements of plastic waste, among other things;
- support the Environmental Network for Optimizing Regulatory Compliance on Illegal Traffic (ENFORCE)[6] established by the Parties to the Basel Convention. The WCO Secretariat became a full member of the Network in 2020.

Table 1 – Environment Programme Recent Activities

Event type	Number of Countries represented	Number of Officers participating
3 COPES Workshops	10 (INAMA) + 5 (ICCWC)	25 (INAMA) + 18 (ICCWC)
INAMA-GIZ component online wrap-up meeting	2	5
ICCWC Webinars	26	97
Operation THUNDER 2020	103	116 National Contact Points
Operation DEMETER VI	73	104 National Contact Points

Get involved

Member administrations wishing to receive support in the areas mentioned above are invited to contact the Environment Programme team. The team has adapted its working methods and can provide support and training on a remote basis.

More information

EnvironmentProg@wcoomd.org

Our Donors

- The European Commission's Directorate General for International Development and Cooperation (DEVCO)
- The UK Government's Department for Environment, Food & Rural Affairs (DEFRA)
- The U.S. Department of State's Bureau of International Narcotics and Law Enforcement Affairs
- GIZ (German Agency for International Cooperation)

3 *See in particular the article by the WCO Secretariat on the need to collect more data in order to obtain a clear picture of illicit international waste flows https://mag.wcoomd.org/magazine/wco-news-88/illegal-waste-trafficking-more-data-is-key-to-getting-a-better-grip-on-this-trade*
4 *https://mag.wcoomd.org/magazine/wco-news-91-february-2020/focus-on-the-transboundary-movements-of-wastes*
5 *http://www.basel.int/Implementation/Plasticwaste/PlasticWastePartnership/tabid/8096/Default.aspx*
6 *http://www.basel.int/Implementation/TechnicalAssistance/Partnerships/ENFORCE/Overview/tabid/4526/Default.aspx*

New documents added to the WCO E-Commerce Package

The WCO Council adopted the final documents missing from the WCO E-Commerce Package at its December 2020 Session. The documents are three Annexes to the Framework of Standards on Cross-Border E-Commerce Technical Specifications entitled "Reference Datasets for Cross-Border E-Commerce", "Revenue Collection Approaches", and "E-Commerce Stakeholders: Roles and Responsibilities".

The document on "Reference Datasets for Cross-Border E-Commerce" provides examples of datasets which Customs administrations are currently collecting, either as part of a pilot project or when implementing the Framework, to effectively track, target and identify small e-commerce shipments.

The "Revenue Collection Approaches" document describes and aims to provide a better understanding of existing revenue collection models.

The document on "E-Commerce Stakeholders: Roles and Responsibilities" provides a clear description of the roles and responsibilities of various e-commerce stakeholders to ensure transparent and predictable cross-border movement of goods. It does not place any additional obligations on stakeholders.

The WCO Council also endorsed the E-Commerce Framework of Standards update/maintenance mechanism, and the first edition of the *Compendium of Case Studies on E-Commerce* which includes 17 case studies offering practical examples of how Customs administrations address priority issues, such as exchange of advance electronic data, facilitation, safety, security and revenue collection (including de minimis levels).

Finally, the Council took note of the capacity building activities conducted by the Secretariat and of the key performance indicators which had been released in Spring 2020 and which will enable Customs administrations to assess their own level of implementation of the Framework.

More information
http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/ecommerce.aspx

Data Analytics course available on CLiKC!

An online data analytics training course on is now available in English and French via the WCO CLiKC! Platform in the eLearning section. Developed thanks to Korea Customs funding, the course is for Customs officials who wish to become entry-level data analysts. It is structured to build a comprehensive knowledge of a data science, to acquire practical knowledge and skills on handling data and to learn Python programming and the basics of machine learning models.

More information
https://clikc.wcoomd.org

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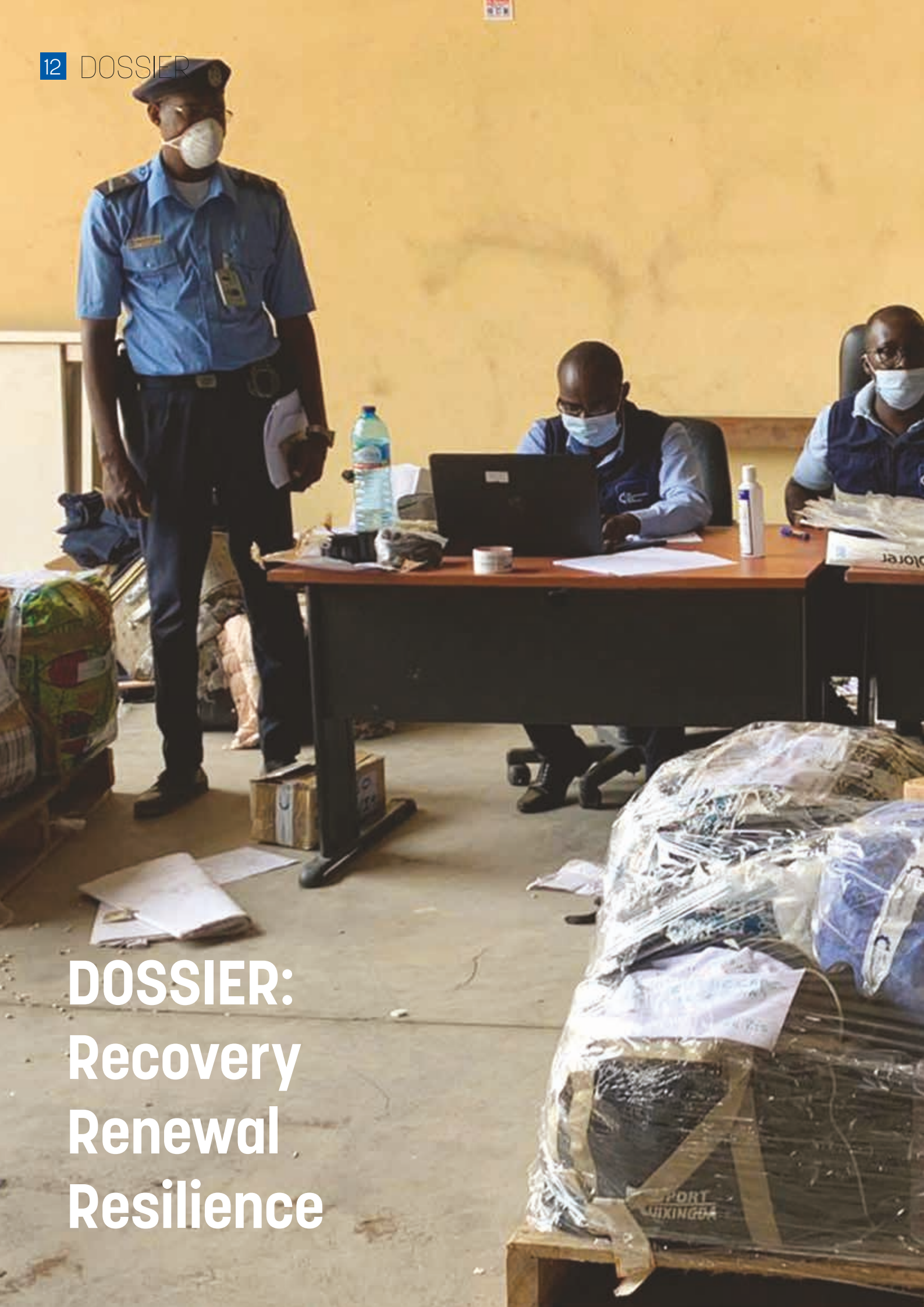

DOSSIER: Recovery Renewal Resilience


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A few words about the WCO theme for 2021

By Kunio Mikuriya, WCO Secretary General

Each year, the WCO Secretariat chooses a theme that is relevant to the international Customs community and its partners. The slogan chosen for 2021 is "Customs bolstering Recovery, Renewal and Resilience for a sustainable supply chain". It invites Customs administrations to contribute to finding a way out of the ongoing crisis generated by the COVID-19 pandemic and to rebuilding the economy against the new backdrop of greater focus on social distancing in daily life, working from home, digitization and the upsurge in e-commerce. The collective efforts by the global Customs community to address these challenges will renew the Customs system, make supply chains more sustainable and help the global economy recover from the pandemic.

Recovery, Renewal and Resilience

Safeguarding smooth flows of legitimate trade by facilitating efficient clearance processes will help support economic recovery from the current crisis and ensure a fiscal basis with fair revenue collection. We know that this cannot be done in isolation but rather requires the cooperation of all border agencies, the private sector and other supply chain stakeholders. Building on the lessons learned from our collaborative approach during the crisis, we should look at the way goods are cleared at borders from a fresh perspective, examine how we adapt workflows and procedures jointly with our stakeholders, retain our capacity to be agile in the face of changing business conditions and improve transparency about trade-related policy actions and intentions.

In the face of new challenges and threats, and especially give the rise of e-commerce, we need cutting-edge technological solutions and an innovative approach to bring about renewal enabling Customs to adapt in the face of changing demand - and to be future-proof. The COVID-19 pandemic has shown the importance of major concepts which we have been promoting for years, including all-digital and paperless clearance methods, the use of technology to indicate which imports might merit a more detailed inspection, and the implementation of automated, fast and effective controls.

People must, of course, remain at the heart of all strategies aimed at building resilience. The most important asset of an organization is its workforce. To achieve their missions, Customs administrations need a knowledgeable, well-trained, well-led, properly supported and therefore resilient workforce. A resilient workforce is one that is healthy (physically, mentally and emotionally), has high morale, is adaptable, finds purpose and meaning in its duties, and is both productive and engaged.

The top priority right now is to support the distribution of COVID-19 vaccines which has started being rolled out, with the process expected to last for many months to come.

Ensuring swift and reliable distribution of COVID-19 vaccines across borders

The top priority right now is to support the distribution of COVID-19 vaccines which has started being rolled out, with the process expected to last for many months to come. Customs clearance of vaccines and related supplies and equipment must be carried out pre-arrival and should follow the recommendations set out in the "Resolution on the Role of Customs in Facilitating the Cross-Border Movement of Situationally Critical Medicines and Vaccines", adopted in December 2020 by the WCO Council.

More guidance is provided in the joint statement I recently issued with the Secretary General of the International Civil Aviation Organization (ICAO), Dr. Fang Li, and which outlines a number of measures to be implemented by governments with the objective of expediting air cargo transport and distribution of COVID-19 vaccines. The WCO Secretariat has also published Harmonized System (HS) classification references for vaccines and related supplies and equipment.

Tools and guidance materials issued by the WCO Secretariat, partner international organizations and industry associations along with WCO Members' practices have been brought together on a page on our website.[1]

As Customs is also called upon to verify the safety of imported products and protect citizens from counterfeit medical products, the WCO Secretariat organized webinars with vaccine suppliers, during which the latter shared information about vaccine production and distribution processes, labelling and packaging requirements, and how to authenticate genuine products.

Last but not least, the Secretariat is organizing a second edition of Operation STOP, targeting the illicit trade in goods which are generally used to diagnose or treat COVID-19. You can consult an article on the first edition of the Operation, as well as several articles on product quality, conformity controls and cooperation between Customs and market surveillance agencies in the "Focus" section of this magazine.

Dossier contents

Let me now turn to the actual contents of this Dossier. It starts with an article by Moroccan Customs explaining the Administration's modernization journey and how COVID-19 allowed it to take full stock of the changes introduced.

This is followed by an article by the International Chamber of Commerce (ICC) on the digitalization

1 *http://www.wcoomd.org/en/topics/facilitation/activities-and-programmes/natural-disaster/covid19-vaccines-distribution.aspx*

of ATA Carnet procedures. It explains how the ICC ATA Carnet digital system operates, provides a general overview of its design and architecture, and gives a summary of progress made towards full implementation of the system.

Digitalization is also the subject of an article highlighting the need to review the current processes for implementation of the World Trade Organization (WTO) Sanitary and Phytosanitary Agreement and explaining how adoption of information technology to enhance workflows would benefit both the import and export economies, as well as trading partners. It illustrates the fact that many digitization projects are an opportunity to review procedures in place, enhance transparency and strengthen compliance.

The fourth article addresses impact assessment and is written by representatives of academia, the private sector and Customs. The authors present Montenegro Customs' pre-arrival processing procedure for authorized express parcel operators and explain how they conducted an impact assessment using a stakeholder needs analysis, from which key performance indicators were derived.

A groundbreaking initiative by Singapore Infocomm Media Development Authority and Singapore Customs is then presented in an article on TradeTrust, a set of governance and legal frameworks, document standards and a set of software components, all of which facilitate the interoperability of electronic trade documents and their exchange between different digital ecosystems.

This is followed by an article introducing a methodology for using machine learning to identify transactions involving strategic goods, though not declared as such. Given the data-dense nature of international trade transactions, Customs administrations are in an excellent position to exploit advances in machine learning in order to improve risk analysis, enforcement and outreach. I truly hope that this article will inspire Customs management and analyst teams.

The Inter-American Development Bank then gives us an update on CADENA, a project launched to enable the automatic exchange of information on Authorized Economic Operators (AEO) between Customs administrations having entered into a Mutual Recognition Agreement (MRA). It will be of special interest to those considering the use of blockchain, as the article draws some important lessons from the CADENA experience.

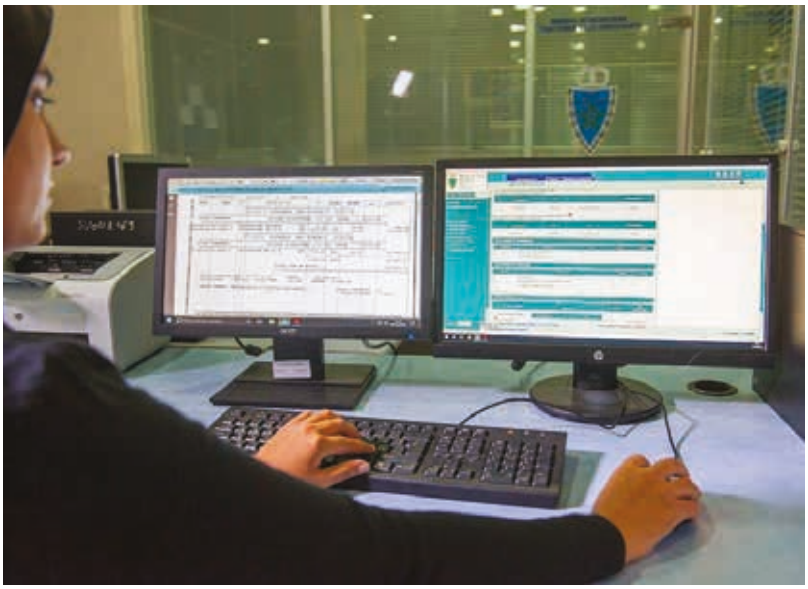
The last article sheds light on the capacity of Customs administrations to adapt to the current constraints facing them. It explains how Malaysia Customs has conducted a Factory Acceptance Test (FAT) of its newly procured scanners and radiation portal monitors (RPM) using virtual communication tools.

I would like to bring my comments to a close by sincerely thanking all the contributors to this Dossier, along with all the other contributors to the magazine. If we want to support governments and citizens as they try to emerge from the current crisis and move towards a healthier, more resilient and sustainable economic model, we must remain dynamic and strive for improvement. The varied initiatives and experiences featured in this magazine bear witness to the commitment by the Customs and trade community to do just that.

Dematerialization of Customs procedures: Feedback from Moroccan Customs

By Moroccan Customs

With its focus fixed on the capacity consistently to improve the service it provides to its users, Moroccan Customs has long been counting recourse to the new information and communications technologies among its strategic options. Today, the various projects undertaken to dematerialize its procedures have culminated in a fresh boost for trade facilitation. As of now, Customs clearance in Morocco is taking on a new dimension: simplicity of access and data use, speed, transparency, traceability and security of transactions, streamlining of control measures and reduction of archiving costs. Dematerialization has gone hand in hand with an alleviation of administrative formalities which, together, will allow operators to reduce the costs involved in processing Customs operations.



© Moroccan Customs

Approach adopted by Moroccan Customs

Dematerialization within Moroccan Customs was in its infancy back in 1978, when the Customs accounting system became computerized. However, the measure did not really take off until the introduction of the computerized Customs declaration. The full rollout of this feature became a reality in late 1991 when the Single Goods Declaration (SGD) would replace the dozens of printed forms in use at the time. Business processes gradually became automated. Then, 1998 formed the backdrop to a key stage in the automated Customs system: the introduction of automatic selectivity processes. For almost 30 years, the computer system underpinning the Customs clearance circuit continued to evolve, ultimately embarking on a new era in 2019: the era of complete dematerialization. Economic operators and government agencies overseeing international trade played their part in this transition. Since 1 January 2019, most of the stakeholders in the foreign trade ecosystem have been involved in the gradual and evolving process of digital transformation.

Complete dematerialization of the Customs clearance circuit

The launch of "paperless" Customs clearance was preceded by the gradual rollout of legal, procedural and technical prerequisites, which called for a commitment from all the Customs services. Some of the key objectives of the digital transformation strategy adopted include time and cost optimization, the streamlining of control measures, faster and simplified communication between stakeholders, improved working conditions and complete transparency of clearance operations.

In effect, the Customs clearance circuit of which the Customs declaration forms a part, regardless of the nature of the Customs regime concerned, has been completely reengineered. Once signed electronically, the declaration together with any annexes required by the Customs authority are submitted online and registered automatically in the Automated Customs Network Database (BADR). The computer system sends registration confirmation to the declarant. The control phase is subsequently initiated: the data from the declaration is analysed and cross-checked, litigation

proceedings might be lodged, electronic payment is made and removal of the goods takes place. This phase is also activated in the case of occasional declarations. Those operations conducted on an occasional basis and formerly processed manually will henceforth be registered on the Customs information system.

Gone are the days of queueing in person at Customs counters. The agents responsible for manual processing no longer need to look for and archive paper declaration records. Everything can be found on the system. Operational managers can complete all their work activities from their screens: documentary checks, valuation control, payment of duties and taxes, litigation proceedings, etc.

Inspectors have two screens at their disposal for viewing all the information essential for inspection and payment purposes. They may call on the services of central and regional teams to assist them in Customs clearance operations, including in the use of the hardware and software tools available to them.

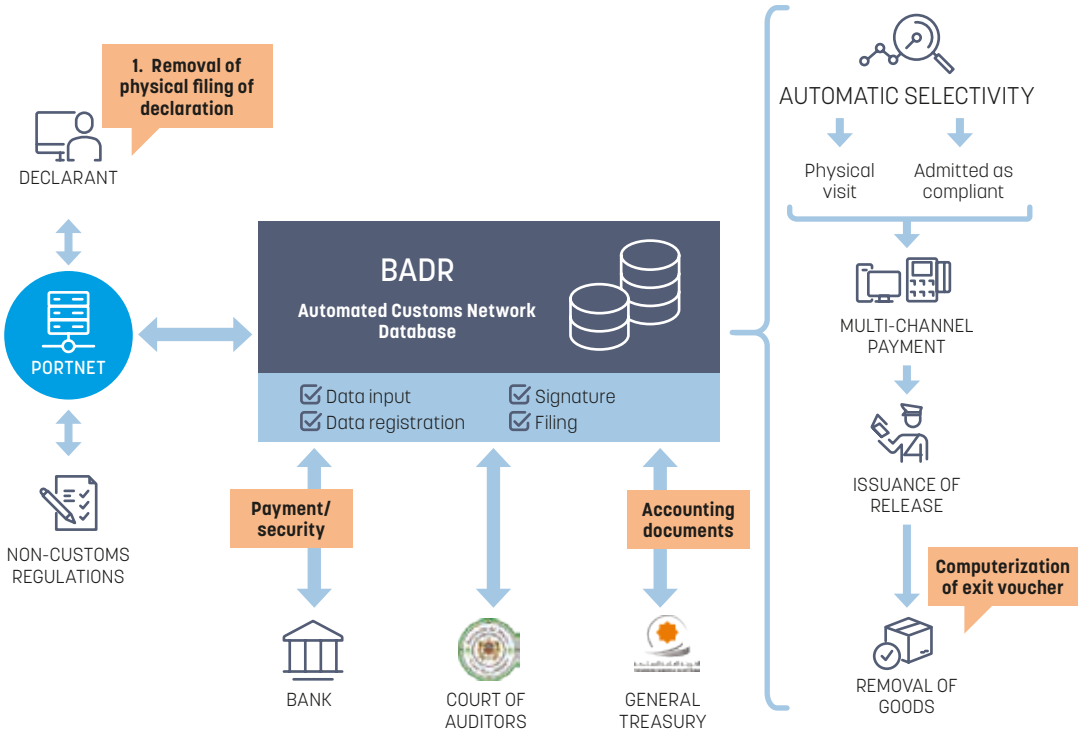
A package of online services

As regards external users, a number of meetings were organized for the benefit of the forwarding agents and economic operators. The benefits for those parties are well documented. Some of the services available online include consultation of the declaration circuit, access to the cost estimate for the Customs duties arising, notification of the release issued and auditing of Customs procedures with economic impact.

The online availability of these services has facilitated:

- reduced contact with customers: procedures governing declaration, control, payment and release all take place remotely, except in the event of physical verification;
- the easing of non-Customs formalities: initiation of non-Customs control measures is notified and their results shared electronically with the authorities responsible for auditing, either from system to system or by means of the Virtual Single Window for Foreign Trade if the authority concerned is connected to it;
- the availability of real-time information via the mechanisms for logging histories, alerts and electronic notifications;
- the transformation, on an organizational level, of Customs clearance offices into remote monitoring offices;

Figure 1: Dematerialized Customs clearance circuit



- the objective of minimizing human intervention: some tasks relating to data consistency verification, tasks involving assistance with entering declarations and checks relating to mandatory documentation or to the management of Customs privileges and concessions are fully automated;

- the streamlining of control: the enforcement and inspection services have at their disposal, in real time, all data and documentation relating to Customs clearance operations.

PORTNET National Single Window

Functioning as an electronic platform for integrating the information systems of all foreign trade operators at national and regional level (Customs, port authorities, port operators, shipping agents, freight forwarding agents, importers/exporters, oversight bodies, banks, etc.), this Single Window operates with a view to "going paperless" in foreign trade operations.

Software tools interconnected with the BADR Customs clearance system

Software tools have been developed which, together with the clearance system, shape an ecosystem in which it is possible:

- to provide Customs officers with all the devices needed for mobile working, that is to say, for completing tasks outside the office, in order to facilitate better organization of work and a reduction in the time needed for processing operations; Customs officers have all the tools they need for their work when they are equipped with a tablet;

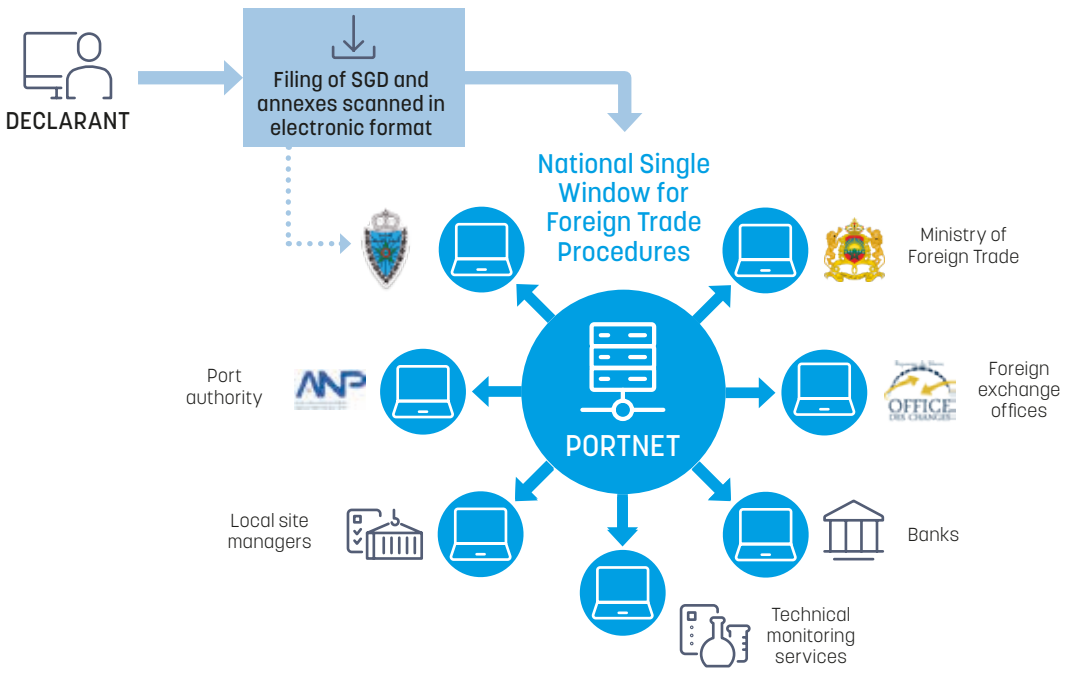
- to establish a risk management approach based on effective systems for the collection and analysis of information; one current study is focusing on the prospect of fine-tuning this approach by incorporating predictive analysis and additional data;

- to make available to the customers/users a digital channel for submitting their complaints and requests for information; this new method of communication, which forms part of the governmental plan for a national claims portal, facilitates increased traceability and monitoring of customers'/users' queries and the responses provided;

- for economic operators (business leaders initially) to monitor their Customs activities and operations closely, on a daily basis and in real time, via a digital platform known as "Diw@nati"; the platform will provide access to operations history, to the electronic documents associated with those operations (SGD, release, clearance certificate, authorization, receipt, etc.), to various online services (settlement of Customs debts, application for a particular authorization, filing

Economic operators will be able to monitor their Customs activities and operations via a digital platform known as "Diw@nati". It will provide access to operations history, to the electronic documents associated with those operations, to various online services, to Customs notifications, and to a service for messaging a Customs adviser.

Figure 2: "PORTNET" Single Window



of a complaint), to Customs notifications, and to a service for messaging a Customs adviser;

- to make available to the general public an application known as "Bayyan Liy@", which gives consumers the opportunity to ascertain for themselves that certain products put up for sale are genuine by verifying a number of details (for instance, the trade name, producer/importer, or the date of production/import); one particular bonus of this application is its effectiveness in combating smuggling and counterfeiting.

Multi-channel payment solutions

Customers/users can settle their outstanding Customs debts by various simple, swift and secure payment methods. In addition to the online method of payment by bank card, other methods are proposed, including payment by online banking (e-banking), by mobile phone (m-banking), by automated teller machine or even through bank branches and money transfer agencies (local service points).

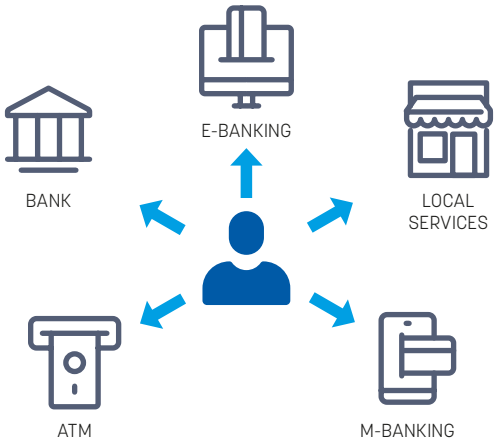
Irrespective of the payment method chosen, the process remains the same:

- the operator selects the outstanding amounts that it wishes to pay and creates a shopping cart to that end;
- a payment code is automatically allocated to the relevant shopping basket;
- the code is used by the operator to proceed to payment;
- as soon as the payment transaction has been confirmed, notification of the release is issued;
- on receipt of the debit notice from the bank account, the transaction is recorded;
- a receipt, generated automatically by the system, is sent via e mail to the payer's messaging address.

Dematerialization of bank security documentation

The automated management of payments, rolled out since October 2017, translates into a time saving for economic operators relying on bank security documents. At their request, banks input the bank security directly into the BADR system without the need to issue the operators with a document which would then be handed to the Customs services.

Figure 3: Multi-channel payment



Electronic signature

An electronic signature solution, certification for which is provided by the company Barid Al Maghrib, ascribes to documents bearing an electronic signature on the online BADR clearance system the same legal value as the equivalent physical documents signed by hand.

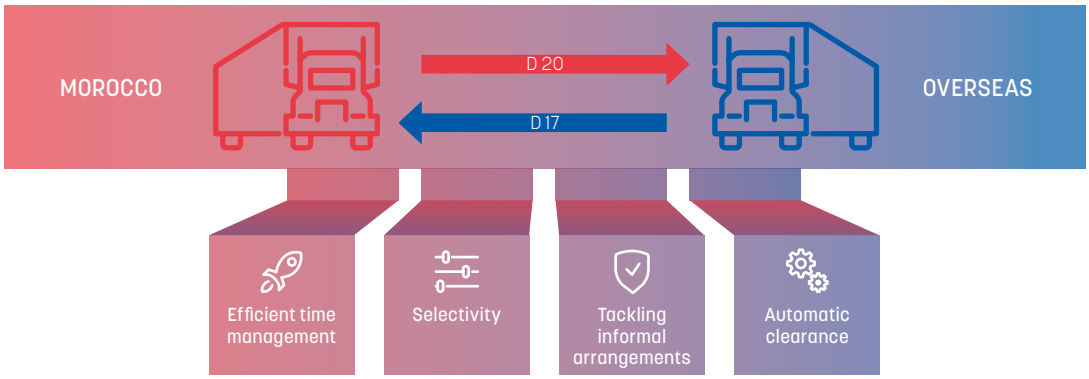
Using this solution makes it possible to guarantee:

- the identity of the signatory (identification/authentication of the signatory);
- the non-repudiation of the signed document by the signatory (by this mechanism, challenges regarding the effectiveness of dispatch of digitally signed documents can be avoided);
- the integrity of the signed document (impossible to alter it).

Cessation of manual processing in respect of temporary admission and export declarations for hauliers' vehicles

Since 1 October 2019, an electronic procedure has replaced the paper-based system used for a long time by hauliers to obtain simplified temporary admission and export declarations for their commercial use vehicles (known as "D17"s and "D20"s). The paper versions of these declarations, previously supplied exclusively by the Association Marocaine du Transport Routier International (Moroccan Association of International Road Transport), are therefore no longer in use.

Figure 4: Computerization of temporary admission and export declarations for TIR vehicles (triptychs)



Those simplified declarations can be used only by those International Road Transport (TIR) operators that are established in Morocco in relation to their operations involving:

- temporary export of their commercial use vehicles registered in Morocco;
- temporary admission of commercial use vehicles registered overseas and belonging to foreign transport operators, on the basis of a partnership contract.

They are still required to submit the relevant application (supported by an unsecured commitment) and obtain Customs approval.

The approved TIR operator is required to enter into and electronically sign these declarations for every operation involving temporary admission or export of commercial use vehicles. Their decision to participate in this arrangement is expedited by the advantages presented by the process' dematerialization in terms of cost, time and operational traceability.

Similarly, the computerization of the "D17" and "D20" declaration documents presents its share of advantages for the Customs services inasmuch as it has made it easy for them to identify those road hauliers operating internationally, to have oversight of their fleet of vehicles and drivers as well as of their movements, to ramp up checks through risk analysis, and ultimately to ensure greater compliance with the regulatory deadlines granted by Customs and better management of the discharging of declarations.

Vehicles registered overseas

Management of temporary admissions of vehicles registered overseas has been completely overhauled. Its integration into the BADR system has resulted in better oversight as well as simpler formalities for travellers, whether they are Moroccan nationals residing overseas or foreign tourists.

Computerized management of litigation proceedings

The process of litigation management, from the initial lodging of proceedings to their definitive resolution (drafting of reports, settlements, judicial proceedings, recovery proceedings and administrative proceedings), has also undergone computerization.

New data-related requirements

As part of the drive to establish a global control mechanism aimed at anticipating the Customs clearance of goods and thereby expediting their exit from Customs premises, hauliers have been required, since 1 October 2019, to give specific details in their summary declarations, including the four-digit tariff heading for the goods concerned.

Moreover, Customs now has access to export declarations for goods from the countries signatories to the Agadir Agreement (namely, Egypt, Jordan, Tunisia and Morocco). It can, as a result, enhance its management of risk by comparing the data on the import and export declarations.

Dematerialization of certificates of origin

In Morocco, certificates of origin are issued by the Customs Administration. Exporters simply apply for a certificate when drawing up the export declaration. The computer system then collects the data already entered on the declaration and requests that the exporter input only the outstanding information needed for it to process the application. This process reduces the risk of error.

The electronic certificate created in this way is registered on the Internet portal of Moroccan Customs. Any administration seeking to verify the authenticity of a certificate issued by Morocco therefore has only to consult the Customs website.

This procedure was phased in and completed in January 2021 against a backdrop of important discussions and intense negotiations between the teams at Moroccan Customs and their counterparts in the other countries parties to bilateral or multilateral agreements. The objective has been to bring those partner countries on board this project and to remove any obstacle to its successful conclusion (whether technical, procedural or agreement-related). At the same time, major IT-development work has commenced. One application has been developed to facilitate the remote authentication of certificates of origin, providing assurances to the operator that those certificates would not be rejected for reasons still connected with such authentication.

Electronic commerce and blockchain technology

In 2020, Moroccan Customs launched a cooperation project with DHL and the German International Cooperation Agency (GIZ Morocco) with a view to developing a platform relying on blockchain technology for collecting the data of each party to an international transaction (traders, express mail service, Customs, other stakeholders) and sharing it. Rooted in this ecosystem, procedures will be open to simplification and risk management will be enhanced, in particular as regards Customs valuation.

Becoming an indispensable logistics hub for the region

By means of the projects for dematerializing the foreign trade procedures, Morocco is setting its sights on becoming an indispensable logistics hub for the region, especially as regards the North-South flows of goods. In that connection, a number of partnership agreements promoting the Kingdom's maritime, air and land transport have been concluded between the main public and private stakeholders concerned.

As a key player in these projects, Moroccan Customs, in conjunction with professionals in the relevant sectors, has introduced a procedure for the Customs clearance of goods that is appropriate for all logistics arrangements. The essential focus is to proceed with dematerialization and simplification of Customs procedures, thereby nurturing the emergence of multimodal transport solutions, that is to say, combining transport by land, sea and air.

Conclusion

In 2019, the key performance indicators highlighted a significant improvement in the performance of services. The revenues collected have, in particular, risen by 2.88% in comparison with 2018. The current objective is to take advantage of the transformation to improve performance indicators in the areas of facilitation and control.

It can already be stated that litigation management capacity has broadly improved. One of the reasons for the increased pace of proceedings is the fact that all stages of litigation proceedings are now registered on the Customs information system.

The radical overhaul of the system by Moroccan Customs in terms of its dematerialization has also profoundly altered the relationship between the Customs officer and the economic operator or its representative. That relationship, which used to be a physical one, has, to all intents and purposes, become a virtual one. These new management methods have unburdened operators of any costly and needless trips, but have also provided the means for Customs officers to work in a better environment. This does not mean that the communication channels have been muted. On the contrary, they are stronger and more effective.

COVID-19 has acted as a catalyst, increasing the pace of change of stakeholders' procedures and conduct in the international trade system. It has also allowed us to take full stock of the changes introduced. In the midst of a health crisis, Morocco has encountered no problems in continuing to source supplies of essential products and basic necessities (such as food products, healthcare products, medicines and hydrocarbons); and the effective transition from a management of flows to a teleworking arrangement, facilitated by an efficient computing ecosystem, has had a significant and positive impact on the situation.

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Digitization of ATA Carnets: overview of the ICC pilot project

By Cyrille Bernard, Information System Architect, and Yuan Chai, ATA Carnet Manager, International Chamber of Commerce

The ATA[1] Carnet is an international Customs document that permits duty-free and tax-free temporary admission of most goods for up to one year. It enables countries, businesses and border agencies to expedite the Customs process by utilizing unified, ready-to-use declaration forms and eliminating the lodging of a guarantee, bond or cash deposit in the country of temporary importation. At the end of 2020, the ATA Carnet procedure has been implemented in 78 countries and Customs territories. In each one of them, the Customs authority appoints a National Guaranteeing Association (NGA) which guarantees payment of import duties and taxes in cooperation with foreign NGAs around the world. Under the NGA's umbrella, there can be multiple issuing associations (IAs) in each country to process Carnet applications. Processing fees apply as well as a surety bond which will be returned if the Carnet has been used correctly. The International Chamber of Commerce (ICC), the institutional representative of over 45 million companies worldwide, is responsible for administering the global guarantee chain affiliated with all NGAs.

Going digital

The ATA Carnet is still today a paper-based document, although its digitization (turning the physical paper into an electronic file) and the digitalization of the Carnet-based temporary admission process has been discussed for some years now. The fact is that, given the complicated

1 *ATA is an acronym of the French and English terms "Admission Temporaire/Temporary Admission". The ATA Carnet is established under the Customs Convention on the ATA Carnet for the temporary admission of goods (ATA Convention) and the Convention on Temporary Admission (Istanbul Convention)*

nature of temporary admission and the complexity of the data exchanges taking place among the various parties involved (ATA Carnet holders and representatives, issuing associations, national guaranteeing associations and Customs authorities), the task has proven to be challenging. The digitalization of the process must be done at an international level in an organized and coordinated way.

With this in mind, the WCO took the initiative some years ago to gather key stakeholders to discuss the creation of an electronic ATA Carnet (eATA) solution. ICC presented its eATA concept to the WCO back in 2016 and, with the support of the Organization, implemented an eATA pilot project in four countries, namely Belgium, China, Russia and Switzerland. Once the test phase is finalized, the innovative ATA Carnet digital ecosystem that ICC has designed is expected to grow quickly as more and more countries realize the benefits of moving from a paper-based process to a digital one.

How the eATA Carnet works

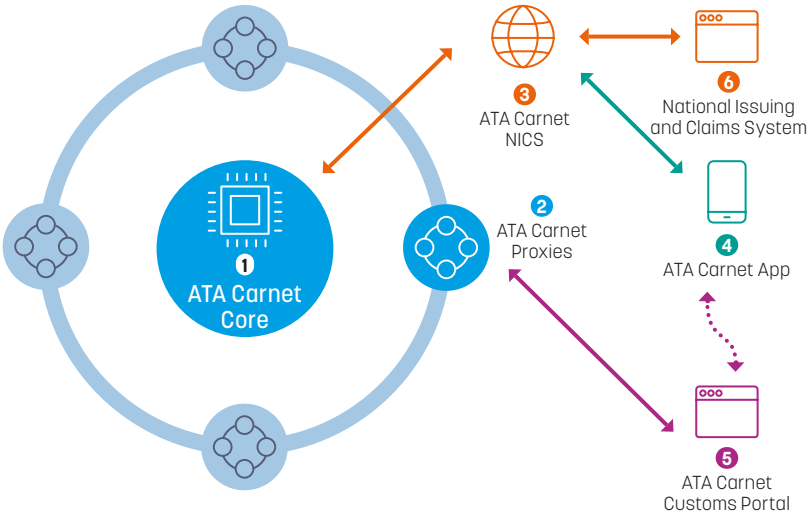
Let us take a look at the technicalities of the ATA Carnet digital ecosystem. Figure 1 provides a general overview of its design and architecture: the system per se is made up of five types of component (Exhibit 1-5), while a sixth component (Exhibit 6) represents the national tool(s) developed by each issuing/guaranteeing association.

The ATA Carnet Core (Exhibit 1) is the central IT system that links the other parts together and ensures that the exchange mechanism is secure and robust. This component includes various monitoring, reporting, alerting and analytics tools developed to enable ICC to manage the eATA digital environment.

ATA Carnet Proxies (Exhibit 2) strengthen the connection speed and enable each user to connect easily to the Core. ICC plans to deploy six proxies around the world. Each proxy will record a copy of all the eATA Carnets issued and can back up the other proxies in case of a technical failure.

The ATA Carnet NICS (Exhibit 3) provides an application programming interface (API) to enable each country to integrate its own national issuing and claims system (Exhibit 6) with the ATA Carnet Core. Six API bases have been built to cover the entire world. NGAs/IAs can either integrate their systems via one of the six API bases or be hosted separately.

Figure 1: The 6 components of the eATA digital environment



The ATA Carnet App (Exhibit 4) is the mobile application provided to Carnet users (holders/representatives). It is a secure wallet where users can store the eATA Carnets purchased from an IA/NGA and prepare border crossing declarations via the app. Each user has a profile and can therefore access the system via any connected devices. When an eATA Carnet is issued, users receive instructions on how to download it in the mobile application, and a QR code is created for each declaration. When crossing borders, users simply need to show Customs the QR code.

The ATA Carnet Customs Portal (Exhibit 5) is the component dedicated to Customs authorities. It provides both an API and a standard user interface to create and manage accounts for Customs offices and officers, manage border crossing operations and follow the lifecycle of eATA Carnets. Customs authorities can choose to use ICC's standard user interface. Customs authorities also have the option to process eATA Carnets using their own digital systems. To do so, they need to integrate their IT system with the ICC system, as IAs/NGAs do. In both cases, Customs authorities can also request ICC to set up a dedicated instance of the portal, that is a virtual computing environment dedicated to one organization and its workloads.

Last but not least, the National Issuing and Claims System (Exhibit 6) represents the digital tool(s) developed by NGAs/IAs and to be integrated with the ICC system. This component is not standardized, as each country has its own specific and unique way of managing issuance and claims. As a result of integration, data or information

received from or sent to ICC's ATA Carnet system is standardized.

Protecting information is critical

To protect from the various threats and vulnerabilities associated with digital processes, organizations must adopt safe and secure frameworks, methods, standards and best practices. ICC had to deal a wide variety of cyber security challenges to ensure that the ATA Carnet digital ecosystem could operate while guaranteeing data confidentiality, integrity and traceability.

ICC selected Microsoft Azure, a cloud platform that offers tremendous capabilities in terms of both functionalities and security. Microsoft Azure datacenters are top-tier (Tier IV), which means that they apply strict security and protection standards. To ensure data confidentiality and integrity, ICC has implemented several encryption mechanisms. Data is encrypted at rest and in transit to the best symmetric and asymmetric cryptographic standard. Identification, authentication and authorization are managed via digital certificates, which are electronic passwords that allow a person or an organization to exchange data securely over the Internet. Access to the various web interfaces and mobile applications is managed via multi-factor authentication (MFA), an authentication method that requires the user to provide two or more verification factors in order to gain access to a resource.

Managing such a complex digital environment requires proper management, orchestration and automation tools. That is why ICC is also implementing DevOps, a method to structure the deployment of fixes, optimizations, new functions and so on.

ICC has prepared a set of training materials for Carnet holders and national Customs authorities. A ticketing system was also set up in 2019 to support the deployment of the pilot project and its participants.

Pilot results and way forward

The very first temporary admission operation using the eATA Carnet was carried out successfully in Switzerland on 20 October 2019. Other operations soon followed in Belgium, China and Russia. In the four pilot countries, only selected Customs offices participated in the pilot phase.

The tests demonstrated that the eATA concept works well, and that the digital tools developed by ICC function as expected. To pave the way for national Customs agencies to adopt eATA Carnets, a standardized notification template was approved by the WCO ATA/Istanbul Administrative Committee on 16 November 2020. The template sets clear guidelines for governments and national Customs to activate the acceptance of eATA Carnets.

A key challenge during any pilot project is to carry out a sufficient number of operations for the pilot to be meaningful, the objective being to move with confidence to the full implementation phase. As international travel has been severely impacted by the COVID-19 pandemic, the volume of trade operations using ATA Carnets has dropped by 60% to 70%, and it has become difficult to find individuals and companies wishing to test the eATA solution.

It might therefore be necessary to continue the pilot project both with "real" Carnets (where the holder, goods and transaction exist) and "demo" Carnets (where the holder, goods and transaction are fictitious). In this way, pilot countries could continue testing the system and gathering user experience and feedback, and still be fully prepared for the implementation phase. To boost real transaction volume, it would also be helpful if more Customs offices could participate in the project. Those suggestions and plans will be discussed at the next WCO eATA Working Group meeting which will take place during the first half of 2021.

More information

https://iccwbo.org/resources-for-business/ata-carnet/e-ata-carnet-project/
wcf-ata@iccwbo.org

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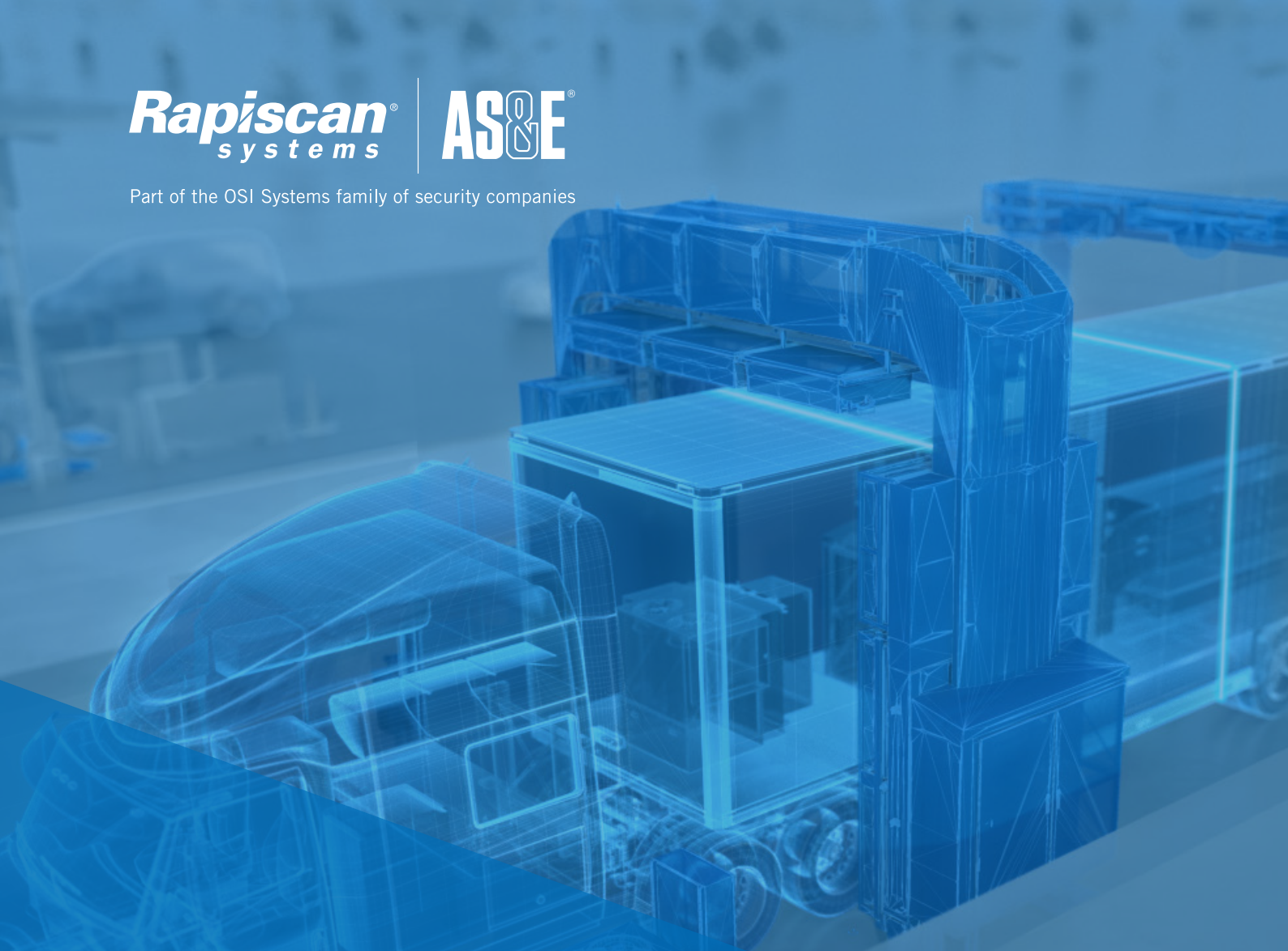

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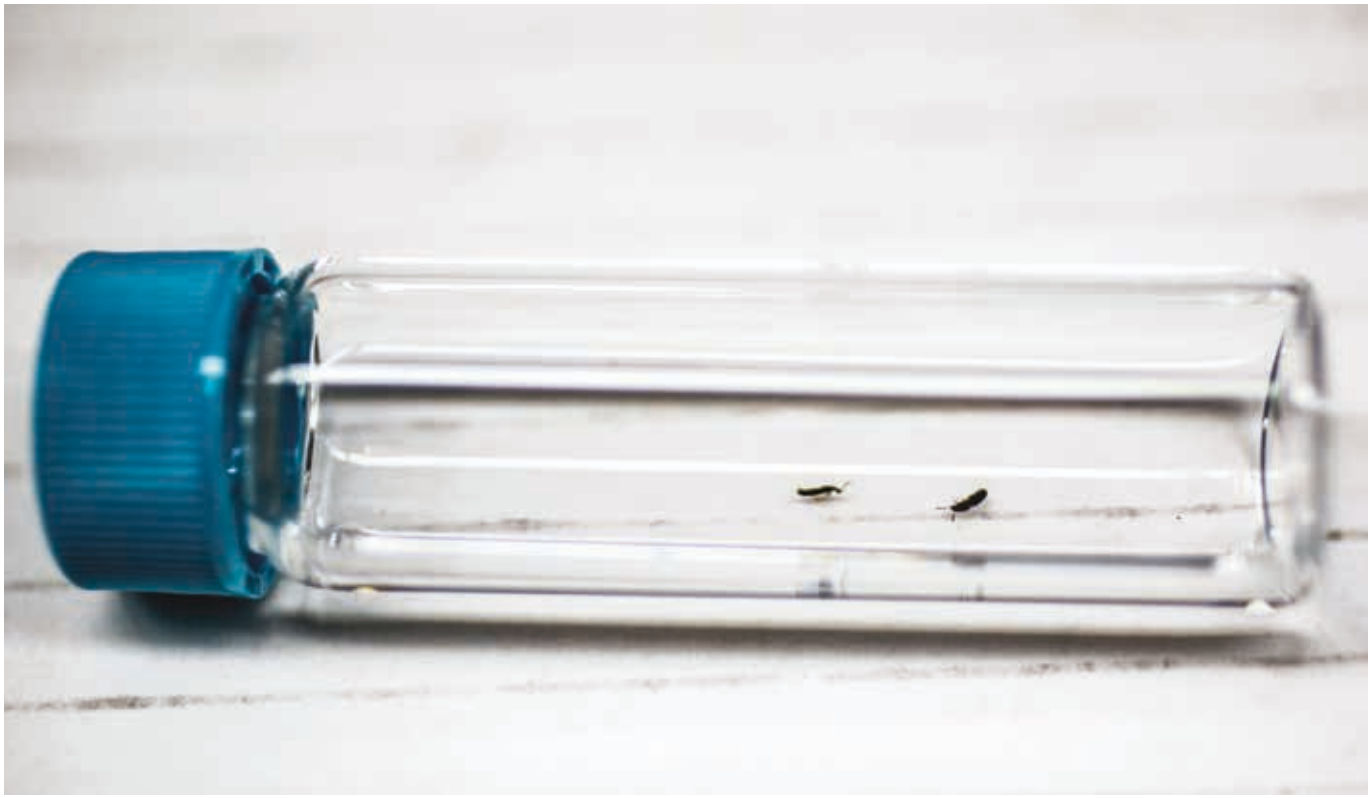


How digital tools can improve compliance with SPS measures

By Francis Lopez

Given increasing concerns about food security and food safety and the need to fight hunger and eliminate food waste, a review of the current processes for implementation of the World Trade Organization (WTO) Sanitary and Phytosanitary Agreement and adoption of information technology to enhance workflows would benefit both the import and export economies, as well as trading partners.

SPS Agreement and certification process

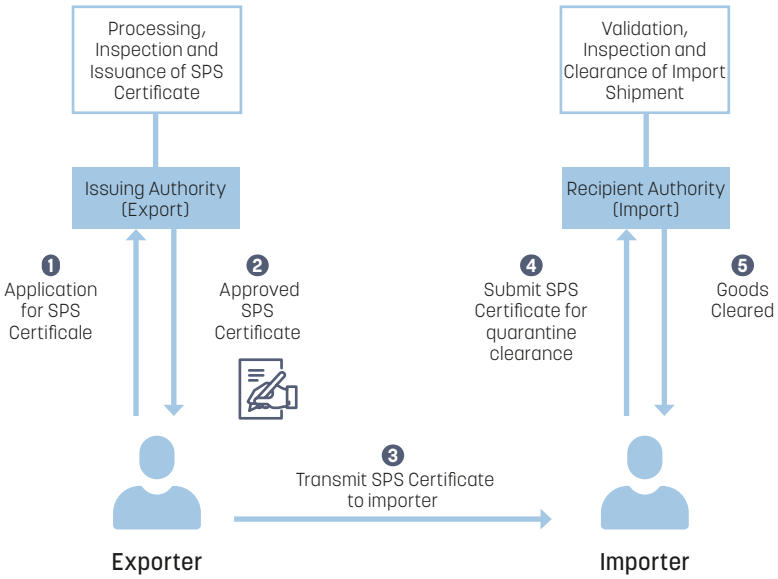
The aim of the WTO Sanitary and Phytosanitary Agreement (SPS Agreement) is for WTO Members to exercise their right to "take sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health" without imposing unnecessary barriers to trade. It typically applies to trade in, or movement of, animal-based and plant-based products within or between countries or Customs territories. Governments are encouraged to use international standards, guidelines and recommendations when developing SPS measures.

Many importing countries require a Sanitary/Phytosanitary Certificate which is an official document issued by a competent authority of the exporting country to the exporter. It certifies that the plants or plant products covered by the Certificate have been inspected and are free from pest and diseases. Other steps include applying for an import permit, submitting other certificates related to health and community safety, and

presenting the commodities for quarantine inspection before clearance for release.

The SPS governing bodies[1], under the Food and Agriculture Organization, have standardized the format and data contents of SPS certification on paper. The Certificate, based on the prescribed format and printed on paper, is issued to the exporter who then sends it to the importer for presentation to the competent authority of the importing country. The SPS Certificate workflow from the export authority to the import authority is depicted in figure 1.

Figure 1 - SPS certification workflow



Digitization of document flows

The SPS governing bodies have developed standards for digitization of SPS Certificates. The IPPC has developed ePhyto Certificates (ePhytos) and provides descriptions of the format and contents of ePhytos, the mechanism for their exchange and guidance on harmonized codes and schemes. The OIE has also developed standards for electronic veterinary certification and the Codex has done the same for food items.

Many countries have managed the transition to electronic SPS certification. All experts agree that before moving to a digital system, an effective paper-based certification system needs to be in place with adequate institutional capacity and clarity about roles and responsibilities. However, many countries still only accept paper certificates at import, including some countries that are actually capable of producing e-certificates. In such cases, a paper version of the certification will still be provided to the exporter for submission to the importer along with other documents. The importer will then, in turn, submit the paper SPS Certificate to the import authorities.

As with all initiatives for implementing paperless processes, the main challenges relate to:

- agreeing on institutional arrangements between parties involved in cross-border electronic information exchange (voluntary versus binding schemes/all agencies versus only identified agencies, etc.);
- establishing a supporting legal framework that officially recognizes electronic transactions and electronic forms of authentication, as well as addressing liability in the event of processing errors and for dispute resolution processes;
- building a sustainable business model with a clear revenue model; and
- agreeing on an electronic data interchange (EDI) standard, namely communication protocols and document structure standard, to ensure that IT systems cannot only issue electronic certificates but also accept and read certificates issued by other authorities.

To address some of these issues, in 2018 the IPPC embarked on implementation of the ePhyto Hub Project to enable the exporting National Plant Protection Organization (NPPO) to send phytosanitary certificates electronically to the central Hub, for retrieval by the recipient importing NPPO. Countries using the Hub do not have to establish bilateral agreements required for point to point systems. A generic national ePhyto system, i.e. GeNS, was similarly developed for countries which do not have a system to produce ePhytos and send them to the ePhyto Hub.

Cross-border exchange

When regulatory border agencies all have access to data through a national Single Window, Customs authorities can view the import permits issued by the

1 *Three international standard-setting organizations are recognized by the WTO SPS Agreement: the International Plant Protection Convention (IPPC) for phytosanitary standards; the Codex Alimentarius Commission for food safety standards (Codex); and the World Organisation for Animal Health (OIE) for animal health standards.*

quarantine authorities and, by the same token, the quarantine authorities have access to manifests and goods declaration data submitted by the importer. Upon arrival of the goods, Customs and quarantine officers both conduct verifications to prepare for clearance of goods. Customs officers focus on the goods declaration data and on tariff classification for the purpose of collecting the corresponding duties and taxes, while the quarantine officers focus on compliance of the import commodities with the prescribed SPS measures, and particularly with the SPS Certification issued by the export authorities.

Interagency cooperation and data exchange at the national level is well established in most countries. Looking beyond the exchange of electronic certificates, efficient cooperation processes are also required between authorities in the countries of import and export.

Import authorities sometimes ask the export authorities to replace the SPS Certificate. Reasons for rejection of the Certificate may be that it has been tampered with, is a fake, has expired or is no longer valid due to a change in the SPS measures of the importing country. This may result in additional storage charges for the importer. What is more, if the importer does not have proper storage facilities then spoilage and/or wastage of goods is likely.

As already stated, in an effort to facilitate controls and eliminate unnecessary delays in the release of cargo, SPS issuing authorities are providing quarantine authorities with electronic certificates, through direct exchange, by using platforms such as the ePhyto Hub or by providing access to their IT systems. However, the development of tools enabling enhanced exchange of information on rules and certifications could further improve the trade in agrifood products.

Enhancing transparency and compliance

Over and above facilitating exchange of information between authorities at the international level, there is also a need to provide transparency on SPS measures and, once again in this case, digital tools could prove a game changer.

Some private sector-led initiatives are worth mentioning. One of them is by the Pan Asian E-Commerce Alliance (PAA) which aims to promote and provide secure, trusted, reliable and value-adding IT infrastructure and facilities to enhance seamless trade worldwide. The PPA conceptualized a Collaborative Exchange Model to facilitate cross-border trade in agrifood products, whereby the SPS issuing authority and the import quarantine authority would share permit/clearance requirement data and SPS Certificate data.

In a pilot exercise between the respective Departments of Agriculture in the Philippines and Australia, the import permit issued by the Philippines was made available to the exporter based in Australia to ensure the latter was aware of the type of authorization issued to the importer and of the specific certification and procedural requirements for importation (e.g. the validity of the import permit based on the must-ship-out date). In addition, the SPS Certificate issued by the Philippines included the import permit reference number to facilitate verification, possibly through automated matching of the permit and certificate data, and to ensure that the above-mentioned SPS Certificate was compliant.

The process established during the pilot exercise enabled the exporter to eliminate risks of non-compliance of the goods with the import country's SPS measures. It illustrates the fact that many digitization projects are an opportunity to review procedures in place, enhance transparency and strengthen compliance.

Figure 2 – PAA SPS Exchange Model

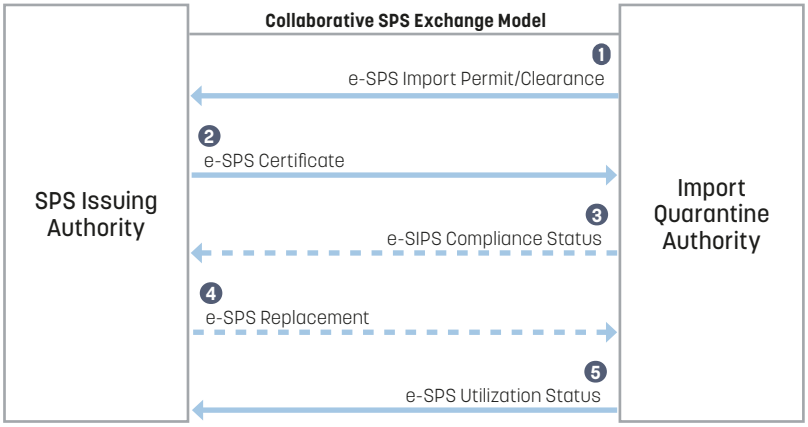
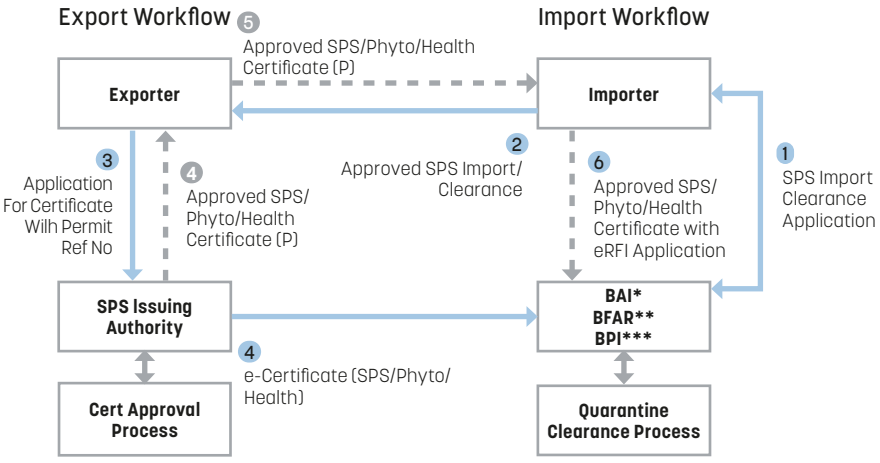


Figure 3 – PAA pilot workflow



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What the example of Montenegro's new pre-arrival processing capabilities tell us about Customs performance measurement

By Andrew Grainger, Karl Bartels, Tanja Boskovic, Stojanka Milosevic, Maja Rackovic, Cezary Sowinski and Steven Pope[1]

In June 2019, the Montenegro Customs Administration (MCA) implemented a new Customs clearance procedure that uses pre-arrival data to fast-track Customs clearance of express cargo. Within just a few months, this pre-arrival processing (PAP) system enabled the MCA to improve its capability significantly, allowing it to clear parcels within one hour of arrival. Inspired by the project's success, stakeholders wanted to gain a deeper understanding of how the improvements in performance had been achieved. They also wanted to find out whether any general lessons could be drawn for the purpose of assessing Customs performance. The findings of the ensuing impact assessment, conducted from April to October 2020, were recently presented at the WCO PICARD Conference 2020. This article provides a brief summary of those findings.

1 *The views expressed in this article are the authors' own and do not necessarily represent those of their organisations*

The new PAP procedure

Montenegro's pre-arrival processing procedure was developed as a project with the German Alliance for Trade Facilitation and piloted in collaboration with DHL (see Box 1). It currently allows authorized express parcel operators to submit an electronic import declaration in advance, prior to the arrival of the aircraft. The data is declared in a consolidated format and is used by Customs for risk assessment and Customs clearance. At present, the PAP procedure cannot be used to clear goods whose import requires licensing before or after arrival in the country.

Below is a step-by-step description of the procedure:

- Prior to loading:
  - Company receives shipment instructions (booking details) from its customers along with standard information about the goods. The customer also provides additional documents necessary for import clearance (e.g. commercial invoice, proof of origin documents, etc.).
  - Supporting documents are scanned and stored electronically by the company. Copies of supporting documents are also affixed to the relevant parcels.
  - Company analyses all relevant data to make sure that the correct amount of import duties is paid (thus avoiding any penalties or additional fees on behalf of its customers).
- On or immediately after loading:
  - Company prepares a consolidated electronic manifest (e-manifest) that, in addition to standard master air waybill data, includes details about the Customs value and the requested Customs clearance procedure.
- Prior to landing:
  - Company notifies Customs and declares the shipped goods by using the consolidated e-manifest.
  - Customs draws on the information provided in the consolidated e-manifest to conduct a risk assessment.
  - Based on this assessment, Customs decides whether to ask for electronic copies of additional supporting documents, whether the parcels need to be inspected or whether they can be released upon arrival.

Highlights

1. The impact assessment identified several useful quantitative key performance indicators (KPIs). Apart from the faster clearance rate, other useful KPIs analysed during the assessment included efficiency gains and Customs' increased hit rate, as well as cost savings and the express operator's ability to make improvements to its service guarantees to the benefit of shippers.
2. The structured analysis of stakeholder needs yielded further insights in terms of assessing individual stakeholders' strategic objectives and subsequent expectations regarding the procedure being implemented. The methodology of the assessment consisted, to a large extent, in learning and in building trust among the key stakeholders, which in turn achieves a greater impact and helps ensure a positive trajectory for the future.
3. The new methodology developed during the assessment could potentially be applied to other trade facilitation measures as well. Key elements include mapping stakeholders' needs, clustering these needs into main themes and identifying corresponding KPIs.
4. The assessment's results and methodology could potentially make a contribution to the ongoing work on Customs performance measurement.

Box 1 - Main stakeholders

- Montenegro Customs Authority (MCA): adopted the new PAP procedure
- DHL: private-sector champion supporting the introduction of PAP
- Fedex, TNT and UPS: other express operators consulted by the MCA
- German Alliance for Trade Facilitation: public-private partnership promoting TF (www.tradefacilitation.de)
- GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH): Secretariat of the Alliance and MCA's implementation partner

- Upon landing
  - The company is responsible for ensuring that goods do not leave its premises without Customs clearance. With this responsibility comes a requirement for the company to provide a financial guarantee.
  - Parcels not declared on the consolidated e-manifest (e.g. because they are subject to import licencing requirements or were loaded at the last minute without being added to the consolidated e-manifest) must be declared using: (a) a full Customs declaration; or (b) a simplified declaration (under special arrangements for authorized operators).
  - Parcels that have been selected by Customs for inspection are presented to Customs. Upon satisfactory inspection, goods are released by Customs.
  - Upon Customs release, the company delivers the goods to their recipients.

The implemented PAP procedure is a significant departure from the pre-existing paper-based control system. At the time of concluding the assessment, 7% of all of the country's imports were handled using this procedure. Data from DHL show that the rate at which parcels are cleared within 1 hour of landing has improved from 25% in 2015 to 53% in 2019.[2]

Impact assessment

The focus of the impact assessment was on analysing the various stakeholders' needs and available data (both quantitative and qualitative) as well as identifying any useful performance indicators that lend themselves particularly well for application elsewhere. It thus served a dual purpose: acquiring a broader and deeper understanding of the results and developing a methodology that could have other applications. Multiple iterative evaluation cycles with key project partners revealed four main themes and a corresponding set of key performance indicators (Table 1).

Results of the impact assessment

The impact assessment identified additional quantitative KPIs, in addition to the clearance-on-arrival rate, as follows:

Table 1: Identified themes and KPIs

Themes	Analysed key performance indicators (selected)
Alignment with international practice	• KPI 1.1 – Compliance of output in line with international obligations for the implementation of PAP measures • KPI 1.2 – Implementation of special procedures for air express cargo operators in line with international obligations
Outcome and impact on operations: (i) Customs (ii) express carriers (operators)	(i) • KPI 2.1 C – Reduction in the number of paper-based Customs declarations needing to be processed by Customs • KPI 2.2 C – Cost savings for Customs because officers do not have to re-key data manually (ii) • KPI 2.3 C – Improved compliance levels and lower inspection rates • KPI 2.1 O – Improved clearance-on-arrival performance • KPI 2.2 O – Reduced time in Customs storage
Learning	• KPI 3.1 – Collaborative partnership between the public and private sectors • KPI 3.2 – Learning from being able to submit declarations electronically • KPI 3.5 – Shared learning experiences at international level
Outcome and impact on economy and society	• KPI 4.1 – Impact on the country's economic development • KPI 4.2 – Economic benefits to consumers • KPI 4.3 – Economic benefits to businesses

- Inspection rate declined from 11% to 8%, and, in parallel, the hit rate rose from 1% to about 8.5%.
- Customs had an efficiency gain of 212 person-days per year.
- Reduction in express operator's costs of about 10%.

Insights into the MCA's more strategic objectives based on the four main themes identified can be summarized as follows:

1. Alignment with international practice: Being compliant with the WTO Trade Facilitation Agreement (Article 7.1 on Pre-arrival Processing and Article 7.8 on Expedited Shipments[3]), meeting policy demands arising from European Union membership aspirations (Union Customs Code Article 171 entitled "Lodging a customs declaration prior to the presentation of the goods"[4]) and implementing the WCO's Revised

2 *MCA indicated a rate of 65% in 2019 (probably calculated by excluding goods subject to import requirements that are not eligible for the PAP procedure).*
3 *https://www.tfafacility.org/article-7*
4 *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32013R0952*

Kyoto Convention pre-arrival standard (3.25[5]) were highly relevant for setting MCA priorities and developing motivation. Implementing the new PAP procedure does not yet enable the MCA to implement all these provisions, but is a significant step in the right direction. For DHL, motivation was largely driven by guiding corporate social responsibility (CSR) ambitions and support for trade facilitation-related initiatives.[6]

2. Operational outcomes and impact: This theme overlaps with the quantitative KPIs mentioned above. A key outcome for the MCA was that a significant volume of import declarations can now be handled electronically without the need to process paper documents manually. For express operators, the procedure that has been implemented has led to a significant improvement in service capabilities. However, there is still scope for further improvements. The additional application of PAP to goods that are subject to import licencing requirements would, for example, yield substantial additional gains.

3. Learning: All key stakeholders highlighted the importance of learning as an outcome of the project. For the MCA, it not only helped to build trust, it crucially also demonstrated the value of cooperation with the private sector and of digitizing Customs procedures. For DHL, much of the motivation was about developing an illustrative case study that could serve as a successful model for other countries to follow. For GIZ, gaining insights into the effectiveness of the project approach was extremely valuable.

4. Outcome and impact on the economy and society: There was some anecdotal evidence of benefits for consumers and businesses in Montenegro (e.g. the ability to deliver critical spare parts without delay). Evidence of economic benefits on a macro level could not be found. Given that Montenegro's economy is largely focused on services and tourism, and the country has a relatively low volume of imports (one flight per day), this is hardly surprising.

What was observed, however, was that the demonstration and learning effects have an impact that reaches far beyond the new PAP capabilities. The illustrative utility of such a system encourages support for trade facilitation efforts worldwide. The approach has already been emulated by four countries in the region and is being implemented on a larger scale worldwide.

Implications for Customs performance measurement?

Drawing on a methodology first presented at PICARD 2017,[7] the approach of the impact assessment complements prevailing evaluation methodologies in trade facilitation where the focus often tends to be limited to factors such as time and costs[8] or remain fixed on more extensive macro-economic modelling.[9]

The results show that taking a closer look at the needs of stakeholders can yield additional insights that may be used to inform the debate on Customs performance measurement. Two related considerations that could be explored further are:

1. Selecting and calibrating the relevant sets of quantitative KPIs for Customs performance may benefit from a structured analysis of stakeholder needs.
2. Interpreting Customs performance in relation to sustainability and broader economic development may require subtle forms of analysis. Results that are grounded in stakeholder needs analysis may provide the "best possible" insights for this, particularly if quantitative data are limited or largely confidential.

In the case of Montenegro, the iterative approach, using stakeholder needs analysis from which to derive KPIs and the dialogue that emerged as a result of identifying these KPIs, was highly effective, mainly due to the openness and supportiveness of the stakeholders involved.

All key stakeholders highlighted the importance of learning as an outcome of the project. For the MCA, it not only helped to build trust, it crucially also demonstrated the value of cooperation with the private sector and of digitizing Customs procedures.

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TradeTrust: accelerating the digitalization of international trade

By Infocomm Media Development Authority of Singapore and Singapore Customs

Singapore is spearheading the implementation of TradeTrust, which is a framework comprised of a set of globally accepted standards to facilitate the digitalization of documents used in international trade and logistics and their interoperability, and also a set of software components that connect to a blockchain backbone IT infrastructure. Economic operators and public and private institutions using TradeTrust will create a global network of trusted partners for the exchange and verification of digital trade documentation across borders. The ultimate objective is to enable a more seamless flow of goods between trading nations and reduce the inefficiencies and complexities generated by the use of paper-based documentation, making cross-border trade simpler and safer.

Measures taken to combat the COVID-19 pandemic have caused disruption to businesses on an unprecedented scale. This global health crisis has demonstrated that digitalization is no longer just an option – it is a critical necessity for businesses to operate and survive. Although much progress has been made by Customs and trade operators in terms of digitalizing processes, the truth is that paper documents are still widely used between different border administrations, buyers, sellers and other actors involved in the international supply chain.

For example, the Bill of Lading (BL)[1] is still provided in hardcopy in many countries, creating inefficiencies. It requires time and money to courier the BL document to destination ports of discharge, plus there are risks of the BL getting lost in transit, which may cause the trader to incur demurrage costs.

1 *Document issued by a carrier to acknowledge receipt of cargo for shipment. A paper Bill of Lading has three functions: it serves as a receipt, it contains or constitutes evidence of the contract of carriage and it serves as a document of title.*

The reason why paper documents are still in use is that in many cases there are many standards for the electronic format of these documents, and no easy way to verify the provenance and authenticity of electronic documents that are presented to the authorities.

The dematerialization of transferable documents (which confer the right to possession of an asset) such as electronic BLs (eBLs), has proven to be particularly difficult. If eBLs are still not widely used in the international trade ecosystem, it is largely because of the lack of consistency with regard to legal recognition in different jurisdictions. This makes it difficult to recreate electronically their function as documents of title, passing rights and obligations along a trade chain. Even when the parties use digital solutions to exchange BLs, they often have to convert the electronic documents back to hardcopies when they reach different jurisdictions.

TradeTrust

To address these challenges, Singapore's Infocomm Media Development Authority (IMDA) came up with the idea of creating a set of governance and legal frameworks, document standards and a set of software components, all of which facilitate the interoperability of electronic trade documents and their exchange between different digital ecosystems.

This initiative, called TradeTrust, was developed in collaboration with, and through support from, local and global partners. These range from governments to international organizations (such as the International Chamber of Commerce), technology and solution providers, and industry (e.g. shipping carriers, shippers and financial institutions).

The foundation on which TradeTrust rests is the ability to trace the provenance of digitally-issued documents and verify their integrity. This "notarization" foundation is provided by the OpenAttestation framework, which offers a method for documents issued to be considered cryptographically trustworthy and can be verified independently. Once a file has been created, the fingerprint of the signed TradeTrust file is then committed to a Document Store smart contract, which serves as an immutable ledger. This signed TradeTrust file is then distributed to recipients, who will be able to verify the file on https://tradetrust.io simply by dragging and dropping it into the Web interface.

TradeTrust consists of four components which work in concert to give the network's participants trust and legal certainty with regard to the digital documents that are exchanged.

1. *Legal harmonization to ensure the legal validity of digital trade documents across various countries and jurisdictions*

The adoption of a legislative framework for Electronic Transferable Records in all countries participating in TradeTrust is necessary to enable a shift towards a paperless trade environment. Singapore is currently amending its Electronic Transactions Act (ETA) to provide legal certainty to electronic negotiable instruments like the eBL and recognize them as valid title documents. The ETA will adopt the Model Law on Electronic Transferable Records (MLETR)[2] of the United Nations Commission on International Trade Law (UNCITRAL) - a legal framework that countries can harmonize their legislation to, that enables the recognition of electronic equivalents of paper-based transferable documents. The amendment of the ETA was recently passed in the Singapore Parliament and is targeted to take effect in the first half of 2021.

2. *Development of international standards to facilitate the interoperability of digital documents exchanged across different solutions and ecosystems*

TradeTrust standards for the creation of documents are aligned to international standards developed for digital trade documents e.g. United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and the International Organization for Standardization (ISO).

3. *Accreditation structure to provide a set of internationally accepted rules and policies to certify solutions to meet the requirements of the law*

The ETA sets out provisions for IT implementations (including those that make use of TradeTrust standards) dealing with transferable records. Hence, an accreditation framework and structure will be explored to accredit technical solutions that deal with electronic negotiable documents such as eBLs to ensure that they meet the legal requirements.

2 *https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_transferable_records*

4. Open-source software that can easily integrate backend solutions to the TradeTrust network

TradeTrust currently connects to a public and permissionless blockchain which can be consulted via a web interface. Software has been developed, and is available under open-source licensing terms on GitHub (www.github.com/TradeTrust). The industry will be able to integrate the software into their platforms or digital solutions to connect to the TradeTrust public blockchain network.

Benefits of TradeTrust

TradeTrust can bring several benefits to the global trade, finance and logistics community. Public and private bodies using the TradeTrust standards via solutions connecting them to a public and permissionless blockchain backend will be able to interoperate with the other network members and achieve:

- increased efficiencies: all TradeTrust-standard documents can be verified on TradeTrust-standard web interfaces, removing the need for repetitive checks by various parties to confirm the legitimacy of documentation when received through indirect channels;
- reduced operation costs and time: the digitalization of paper documents reduces the friction, costs and time required for printing and transporting documents between parties.
- TradeTrust will also support the emergence of new service offerings. As it works with the existing ecosystem formed by various systems, enabling them to interoperate as well as to ensure the legal validity of the electronic instruments that they exchange, TradeTrust can:
- support the convergence of physical, financial and document chains, making the automation of key processes possible, such as automating payments or releasing of funds through the use of smart contracts; and
- enable operators to leverage the transparency and integrity of the transport chain. For example, insurance providers could apply dynamic pricing when risk is known.

Examples of use cases and applications

Singapore's Infocomm Media Development Authority (IMDA) is working with local and international partners in applying TradeTrust to facilitate existing cross-border processes and enable digital trade transactions. Some examples of practical implementation are described below.

Verifying the authenticity and provenance of government-issued trade administration documents

A trial was launched in November 2020 by the Australian Border Force and IMDA in order to test the exchange of TradeTrust standard electronic certificates of origin where:

- electronic certificates were generated in accordance with TradeTrust standards via the ABF-developed Intergovernmental Ledger (IGL) system
- the electronic certificates were sent to Singapore businesses participating in the trial as well as Singapore Customs for their feedback on the multiple verification methods afforded by the TradeTrust framework ranging from QR code scanning to dragging and dropping of the electronic certificates into both the IGL or TradeTrust Web interfaces.

These various verification methods allowed Singapore businesses as well as Singapore Customs to be assured of the authenticity and provenance of the files, without all using a common platform.

Performing Title Transfers on eBLs

IMDA and the Maritime and Port Authority of Singapore (MPA) are currently leading the effort to conduct trials on eBLs with the support of Singapore Customs and industry partners. Two trials are of particular interest.

The first one is related to CamelONE Trade Finance, Singapore's one-stop multi-bank portal which enables businesses to submit a single, standard application to various banks[3] offering trade services. The CamelONE portal is available via the Networked Trade Platform (NTP), Singapore's one-stop trade and logistics ecosystem. It is connected to NTP's secure repository, where all trade-related documents can be safely stored, including BLs. This connection enables data reusability and optimizes the ease and speed of filling in multiple applications.

As explained, the challenge around eBLs is to digitally recreate their function as documents of title, passing rights and obligations along a trade chain. The aim of the trial is to use the TradeTrust blockchain to facilitate the verification of the chain

3 *https://www.vcargocloud.com/our-solutions/camelone-trade-finance*

of endorsements and title transfer functionalities for the banks and the clients.

Transferable documents carry with them the title pertaining to the physical assets; it is therefore imperative that the transfer of title from one party to another in the physical world is similarly achieved in the digital world. To do this, the BL is tokenized as a non-fungible token on the blockchain and the change of title ownership correctly reflected. For transfers of title, participating parties are required to create a cryptographic wallet to transfer, receive and hold non-fungible tokens. The transfer of title is effected through the transfer of the non-fungible token to the wallet of the receiving party. The non-fungible token would ultimately be destroyed after the final recipient has taken possession of the physical assets represented by the non-fungible token and there is no longer any use for it. The TradeTrust framework is developed to be flexible enough to support a variety of transferable documents used in various banking arrangements in Trade ranging from Letters of Credit to Documentary Collections.

Transferable documents

1 **Document Type** 	2 **TradeTrust File** 	3 **Tokenisation** 	4 **Storage** 
Digitised Transferable Document (payload agnostic) • Contains title and entitle the owner to make claim • Examples: bill of lading, warehouse receipt, promissory note	**Transferable document is encapsulated in TradeTrust file** • Transferable document will have a unique token that represents the title of the physical asset indicated by the document	**The "title" of the asset pertaining to transferable documents will be tokenised into a non-fungible token on the public blockchain**	**TradeTrust file is stored off chain**

The second trial was one conducted between the IMDA, MPA and the Port of Rotterdam Authority, which jointly organized a workshop in April 2019 to explore potential use cases for eBLs and discuss implementation challenges. More than 20 organizations, including government agencies, shipping lines, technology players, banks and members of the Singapore Shipping Association, were represented at this workshop. They decided to undertake a Proof of Concept (PoC) to simulate the transfer of title for eBLs from a shipper to a consignee between Rotterdam and Singapore. This simulated transaction was carried out in March 2020. As a next step, the trial will demonstrate the practical use of eBLs by shadowing a live shipment along the Singapore to Rotterdam trade lane. Change management is easier since the transmission or exchange of electronic trade documents or digital data do not take place primarily through the blockchain but rather via traditional methods such as through their internal system, e-mail, file transfer, or central storage.

How to get involved

The TradeTrust source code is distributed under an open source licence. Users may download and use it freely under the open source licensing terms. The current TradeTrust reference implementation uses the Ethereum blockchain and there will be a fee incurred when the fingerprint of the signed TradeTrust file is recorded at the Ethereum network, e.g. when the carrier issues an eBL. Parties performing document verification, i.e. reading from the blockchain will not be charged. In the future, as TradeTrust develops, blockchain networks other than Ethereum may be used.

Join the TradeTrust network and incorporate the TradeTrust source code into your applications or systems (available at www.github.com/TradeTrust). Contact us at tradetrust@imda.gov.sg to co-create solutions and new use cases with us using TradeTrust.

More information

https://tradetrust.io

Improving Strategic Trade Detection and Classification through Machine Learning

By Christopher Nelson

Ensuring the enforcement of a national strategic trade control (STC) system is a key requirement for all Customs administrations. Strategic goods comprise weapons of mass destruction (WMD), conventional weapons, and the materials, technology and equipment that may be used in their development or delivery. Many of these commodities have both civil and military applications and are called dual-use goods.

In a well-functioning STC system, traders apply for permits or licences as required, proactively comply with trade control obligations, and commerce proceeds. However, traders' compliance with the law may not be perfect, and enforcement agencies must be able to identify trade transactions that involve strategic goods to ensure they are in compliance with national regulations and international security obligations.

Such an endeavour is challenging for various reasons. Trade in strategic goods is a very small portion of global trade. Although the stakes are high, identifying controlled goods which have been intentionally or unintentionally misclassified or not properly declared, diverted through transshipment points, or otherwise hidden, is extremely burdensome. One of the main reasons are the primary nomenclatures that exist to classify such goods. As each is designed with different fundamental objectives, they do not correlate well.

In the United States, for example, the Department of Commerce uses identifiers called export control classification numbers (ECCNs) to categorize items that are subject to export control regulations. These ECCNs predominantly contain strategic goods. US Customs and Border Protection uses the Harmonized Tariff Schedule of the United States (HTSUS), which is based on the international Harmonized System (HS). Attempting to link ECCNs with their HTS codes is a difficult task. The HTS-ECCN relationships are rarely one-to-one. A strategic good could be shipped under a host of HTS codes, and an HTS code could contain multiple ECCNs. Moreover, many controlled items involve dual-use industrial and scientific equipment or material defined by technical specifications in technical documents, and HS code descriptions hardly ever contain such specifications.

The combination of these factors makes it a challenge for State authorities to detect potential illicit transfers of strategic goods. Screening transactions based on inexact, static correlation tables between HS codes and codes used in control lists, or based on information on parties to the transactions, is not sufficient for a comprehensive STC system.

The methodology proposed in this article suggests utilizing the vast amounts of transaction data which every government collects, along with machine learning, i.e. the process of teaching a computer system how to make accurate predictions when fed data.

Machine learning and international trade

Identifying transactions involving strategic goods lends itself to solutions developed for a common machine learning problem: outlier detection. Outlier detection is used in a wide variety of applications, such as credit card fraud, suspicious traffic in cyber security, disease detection, and many other problems where the target is behaviour outside the norm. Since strategic trade is such a small proportion of overall trade, transactions involving controlled goods can be considered outliers. Such transactions are not only uncommon, but they are also likely to stand out from others since the goods traded are generally technically sophisticated materials and equipment. This can present itself through higher unit values, lower quantities, specific trading partners and other characteristics that distinguish strategic good transactions from others.

The following section outlines a basic approach for using machine learning to identify transactions involving strategic goods but not declared as such. It uses historical trade data on transactions of goods with and without ECCNs. The models created as an outcome of the process are then applied to new transactions to provide a predicted probability that they relate to a specific strategic good. This is a supervised learning approach; one is training models on historical data where one already knows the outcome – the shipment has an ECCN and contains a strategic good or it does not have an ECCN and does not contain a strategic good – and applying it to new cases[1]. A short summary of the methodology is outlined below. For convenience, the codes in the HTSUS are referred to as HS codes.

Methodology

1. Set priority

This approach creates a machine learning model for a specific strategic good, based on its ECCN. The process can be repeated to create a portfolio of models that can be used to classify transactions involving many different strategic goods. The first step in the process is to identify the strategic good for modelling, based on its ECCN.

2. Data collection and HS-ECCN baskets

After the ECCN is selected, data for transactions with this ECCN in the shipping documentation would be pulled together for a specified timeframe. A wide range of features can be selected to develop this model, including the HS code, exporters/recipients, destination, weight, quantity, value, etc. Once this data is gathered, one would create a "basket" of the different combinations of the ECCN and HS codes. This basket would show how often a particular HS code is utilized by exporters for transactions involving the ECCN (i.e. 45 per cent of transactions involving strategic goods classified under ECCN X were shipped using HS code Y). This allows one to identify the HS codes that are actively being used by exporters for transactions involving a strategic good, as opposed to a correlation table that says what the HS code for a strategic good should be.

The HS-ECCN baskets will often contain HS codes that are used for a transaction at a very low rate. To avoid the inclusion of too many edge cases in the next step, a cutoff correlation percentage is designated to determine the most relevant HS codes in use for the particular strategic good.

Once the high correlation HS codes are identified, data would be pulled from all transactions with these HS codes without an ECCN for the same time period from which one drew the transactions with ECCNs. This assembles the universe from which one can model the characteristics of trade in the strategic good.

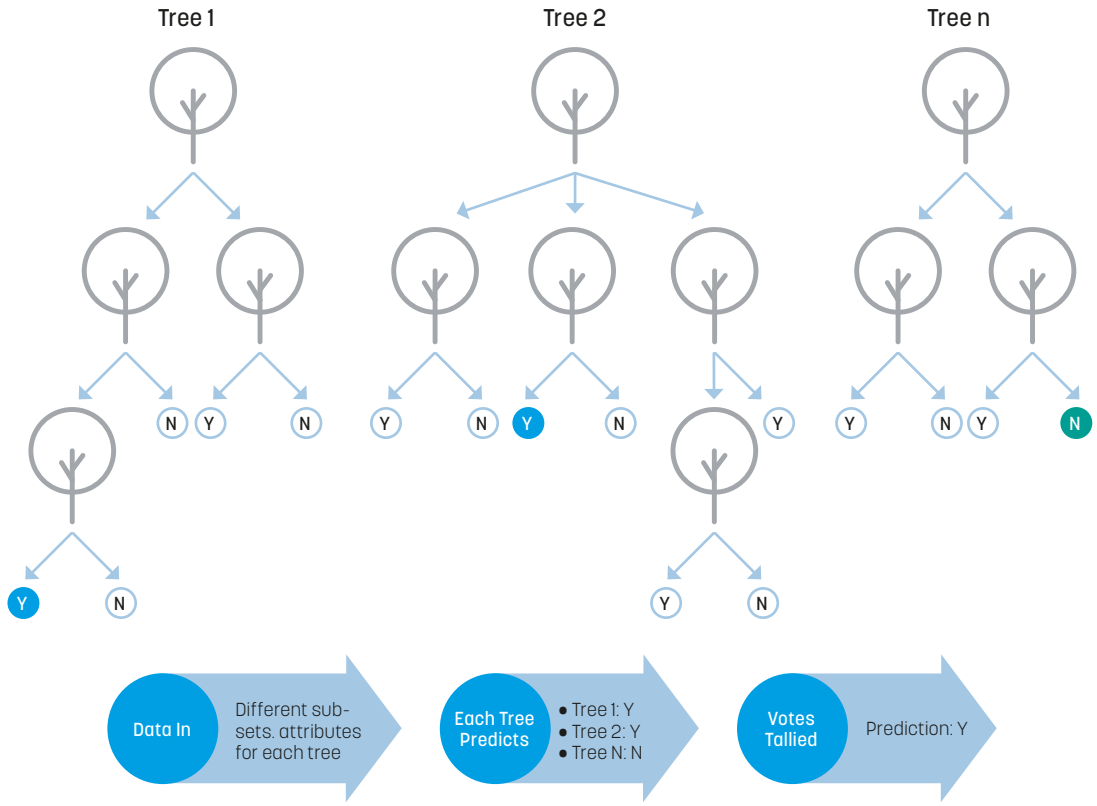
3. Resampling

The number of transactions involving strategic goods is greatly outnumbered by those that do not. In other words, there is a majority class (those that do not have an ECCN) and a minority class (transactions that have an ECCN). In machine learning, highly imbalanced data like this can

Screening transactions based on inexact, static correlation tables between HS codes and codes used in control lists, or based on information on parties to the transactions, is not sufficient for a comprehensive STC system.

1 *"Knows the outcome" is a generalization. This is based on the quality of the data collected, adherence to legal licensing procedures, and declarations of ECCNs on shipment documentation. There are intentional and unintentional errors resulting from this, but this model uses the correct declarations to create a model and then apply them to other transactions, which is designed to uncover these issues.*

Figure 1: Random Forest algorithm



have adverse effects on modelling and traditional measures of performance. To adjust for this, the transaction data should be resampled to bring the minority class more in balance with the majority class. For this purpose, this methodology uses the Synthetic Minority Over-Sampling Technique (SMOTE)[2], which identifies similar examples in the minority class and creates new instances by combining the features of an existing case with features of its neighbours. Rather than duplicating transactions to oversample, this technique provides new, synthetic examples of the minority class.

4. Model training – Random Forest

Once prepared, the data is ready to be used to create a model. Here, Random Forest is used to predict whether a transaction involves a strategic good. This algorithm creates many decision trees based on randomly selected features and data samples to determine whether a transaction is classified as involving the strategic good or not. The outcome of each decision tree is then compiled and, as one is dealing with a binary classification, the final classification is that chosen by the majority of the decision trees. Figure 1 presents a simplified representation of the Random Forest algorithm.

5. Performance measurement, adjustment, and iteration

The algorithm would be trained on a subset of data, and performance would be measured against another subset reserved as a test set. Based on the results, parameters or features could be changed to increase performance. Once the approach has been tested for a particular strategic good related to a specific ECCN, it can be used iteratively to create models for a broad portfolio of strategic goods and applied as new data arrives.

Benefits and potential applications

Given the data-dense nature of international trade transactions, State authorities around the world are in an excellent position to exploit advances in machine learning to improve risk analysis, enforcement and outreach. As more transactions are recorded every day, the models created to classify strategic goods can improve, be adjusted, and reworked under the same methodological

2 *For details on SMOTE, see Chawla et al., Journal of Artificial Intelligence Research, Vol. 16 (2002), pp. 321-357.*

construct. In addition, since this approach proposes the use of State-centric data, the models will inherently be designed to identify strategic goods in the context of that State, taking into account geography, trading partners, and industrial capabilities. The recent expansion of distributed computing and cloud-based services allows for State authorities to analyse and create models for a much larger portion of data than could be handled even five to ten years ago.

The methodology described in this article has a wide variety of useful applications. From an enforcement perspective, this approach would allow for better profiling of transactions using real-world data and for optimizing inspections or end-use checks. Moreover, modelling based on a select set of high priority strategic goods could enable Customs to enhance resource allocation and provide data-based justifications for further scrutiny. This approach would also allow for States to better understand common trade flows for strategic goods and identify common end-use destinations or transshipment points.

In addition, the methodology could also support internal compliance programmes and be used to design outreach efforts that would improve STC efficiencies. Indeed, a key challenge to the enforcement of export controls in many countries relates to outreach and raising awareness. The private sector needs assistance in identifying, managing and mitigating risks associated with strategic goods, and in ensuring compliance with regulations. Based on the models trained through existing data, it would be possible to identify transactions that fit the profile of a strategic good but for which no licences were requested by the importer or the exporter. Customs could then contact the entities involved in these transactions to start a dialogue and propose training on export control regulations. It could also identify common trade flows for these unlicensed transactions that meet the strategic good profiles, and initiate international outreach and training.

Since the methodology uses a basket of HS codes, it could also be used to complement existing HS-ECCN correlation tables and improve these correlations system-wide. First, the HS-ECCN baskets add "weight" to correlations based on historical transactions involving strategic goods. It can identify which HS codes are used in practice and at what rate, adding a layer of detail to the one-to-many or many-to-many static correlation tables. Second, the HS-ECCN baskets would identify common correlations and misclassifications of strategic goods that could be used for outreach efforts or to propose future HS amendments to bring the HS and ECCNs closer together.

As more data is collected and outreach and enforcement efforts become more targeted, the machine learning models would be likely to increase in performance, creating a cycle of improvement. Leveraging the large amount of data already collected by States and machine learning models could improve STC systems. Focusing not only on enforcement, but also using this approach for outreach, could improve detection capacities and foster a more secure international trading system.

More information

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For further details on the methodology used, see the author's article in the World Customs Journal (Volume 14, Issue 2, September 2020)

About the author

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Improving data sharing with blockchain

By Sandra Corcuera Santamaría, Michelle Moreno, and Marcos Allende, Inter-American Development Bank and LACChain

Towards a digital transformation

COVID-19 has put immense pressure on traders and supply-chain managers and has highlighted the need for more traceability and visibility in trade transactions, and for more interoperability in IT systems, including those of logistics providers. Progress in these areas will be crucial to enhance Customs operations. Customs itself has learned a number of important lessons, and the crisis has boosted its digital transformation processes and the adoption of new technologies.

This article provides an update on a project launched to enable the automatic exchange of information on Authorized Economic Operators (AEO) between Customs administrations which have entered into a Mutual Recognition Agreement (MRA). Since 2018, with the support of the Inter-American Development Bank (IDB)[1], AEO programme officers and information technology (IT) specialists from Colombia, Chile, Costa Rica, Mexico, and Peru Customs have been developing an application[2] called Cadena, designed specifically to improve the exchange of information between Customs.

CADENA was design as a blockchain-based solution, to leverage the clear advantages that this technology offers for the management of the AEO certificates under the implementation of MRAs. CADENA enables to record and share information between a group of Custom administrations according to an agreed protocol, with each exchange of data being secured and protected by

1 *https://blogs.iadb.org/integration-trade/en/blockchain-trade-safer/*
2 *https://publications.iadb.org/es/revista-integracion-comercio-ano-24-no-46-diciembre-2020-blockchain-y-comercio-internacional-nuevas-tecnologias and https://mag.wcoomd.org/magazine/wco-news-87/cadena-a-blockchain-enabled-solution-for-the-implementation-of-mutual-recognition-arrangements-agreements/*

a secure channel and an immutable audit trail in a blockchain network. For the IT specialists, this represented a unique opportunity to learn about the implementation and use of the technology.

As the project has now reached maturity, with three more Customs administrations (Bolivia, Ecuador, and Guatemala) joining at the beginning of 2021, it is a good time to share the lessons learned during the process with the wider Customs community.

How it works

As soon as a company AEO certification is approved, a Customs officer in country A uploads information on that company to CADENA. The application automatically sends a notification to inform Customs in country B, with which Customs in country A has signed an MRA. Customs officers from country B can access the data related to this new AEO through CADENA. Alternatively, CADENA can be automatically populated via APIs[3] with data from an AEO certification module in an automated Customs management system or an Electronic Single Window. The application could also interact directly with the Customs risk management system in country B via APIs. As the system has been instructed to consider AEOs to represent a low risk in terms of security and fraud, the company would immediately benefit from a lower level of inspection. Any change in the status of the AEO will be also notified through the same path.

CADENA greatly facilitates the operational implementation of MRAs by ensuring that a company's certification, as well as the suspension and cancellation of this status, are registered in real time and shared with all Customs administrations which are signatories to an MRA. The administrations with access to CADENA now have a digitalized, automated, secured, and reliable mechanism for sharing information on AEO certificates. Data integrity is optimized as access to the data is protected and managed by granting different roles and permissions to users[4].

Learning throughout the process

According to ISO, there are three different types of blockchain networks: public permissionless, public permissioned, and private permissioned. This taxonomy refers to who has the ability to be a user of, or run a node on the blockchain (a node is a computer that shares a copy of the blockchain and is synchronized with the others). Each type of blockchain places a different level of importance on anonymity, immutability, efficiency, and transparency.

CADENA was implemented in two phases and has evolved over time as blockchain technology has progressed. The first version of CADENA was built on top of a private permissioned blockchain during the first year of its implementation, from 2018 to 2019, proving to be successful in allowing the real-time exchange of data between Customs. However, some challenges were soon identified. These revolved mainly around some of the limitations of the technological infrastructure, which required Customs to be responsible for its maintenance, including technical troubleshooting, onboarding of new entities, and financial sustainability. This had a high impact on the governance, maintenance, data privacy, sustainability, and further scalability of CADENA.

Realizing the limitations that CADENA and other IDB projects were facing, in 2018 the IDB Lab launched LACChain[5], the Global Alliance for the development of the blockchain ecosystem in Latin America and the Caribbean. LACChain developed a public permissioned blockchain infrastructure using Hyperledger Besu[6] (an Ethereum client) that is compatible with other similar initiatives such as the European Blockchain Service Infrastructure[7] (EBSI) developed by the European Commission, and ALASTRIA[8] in Spain. The LACChain blockchain network is provided by the IDB Lab and its partners (both public and private) as a public good for Latin America and the Caribbean. The LACChain team guarantees the governance, maintenance, data privacy, sustainability, and scalability of the network, and that entities using it can benefit from a reliable infrastructure on top of which they can develop any blockchain solution.

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3 *Tools that specify ways in which software can interact with an application such that the data from the latter is available in the former. APIs interact with the target application exclusively through the back end.*
4 *W3C Decentralized Identifiers https://w3c-ccg.github.io/did-spec/; W3C Verifiable Credentials Data Model https://www.w3.org/TR/verifiable-claims-data-model/ ; The Decentralized Key Management System (DKMS) https://github.com/WebOfTrustInfo/rwot4-paris/blob/master/topics-and-advance-readings/dkms-decentralized-key-mgmt-system.md*
5 *www.LACChain.net*
6 *https://www.hyperledger.org/use/besu*
7 *https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/EBSI*
8 *https://alastria.io/en/*

Table 1 - Main Features of CADENA using LACChain

• Public-permissioned blockchain network using Hyperledger Besu-Ethereum protocol.
• CADENA has decentralized infrastructure components, which are not dependent on a provider, and allows individual subscription of each country in the cloud of its preference or in a local server.
• CADENA is an autonomous application managed by each Custom administration.
• CADENA uses open-source smart contracts for easy inclusion of new Custom administrations.
• CADENA is a standard application with the possibility of being customized by each user.
• CADENA has authentication of users at the application and at the node level in the blockchain.
• CADENA has security and privacy at the application and at the blockchain level (self-sustaining - the role of a general administrator is not necessary).
• In CADENA, each Custom has the ownership of its node deployed in LACChain and permissions at blockchain level (execution of smart-contracts). Customs have the potential to deploy other blockchain applications through its node and interact with other nodes within the LACChain network.
• CADENA can scale easily and include other Customs.
• CADENA can interoperate within the network and potentially with other networks.

This was ideal for CADENA, and, in 2019, entering the second phase, the CADENA team opted to use LACChain as the technological infrastructure. Custom administrations found in LACChain optimal autonomy and a sustainable infrastructure, as well as capabilities for further scalability to other users, and interoperability with other solutions and applications which might opt to be deployed on the LACChain network. LACChain main features are its openness, publicness and decentralized nature. It is also low cost for the user because it is not based on transactions fees. It is not anonymous, not based on the use of cryptocurrencies and bonded to laws and regulations. Table 1 shows some of the main features provided by LACChain to CADENA.

Each Customs administration deploying the CADENA application has ownership of its node, in other words its own access point to the LACChain blockchain network. Permissions exist at the node and LACChain level (execution of smart contracts). Every time a Customs administration generates information to be exchanged with other Customs administrations through CADENA, the application connects to the LACChain platform and calls up a smart contract that contains the logic showing which Customs administrations need to receive the information. The data is then exchanged over a private and secure sidechain, and the cryptographic proofs are registered in the LACChain public ledger. This enables data to be processed without overloading CADENA. Customs therefore has a more secure real-time solution for the exchange of information, and an immutable ledger that guarantees the integrity of the data.

LACChain also offers Customs the possibility of deploying other blockchain applications and connecting them with all of the applications developed by public or private entities also using the regional network.

Lessons learned

Customs administrations and other public and private entities which have a role in securing and facilitating the supply chain and are considering the use of blockchain can learn valuable lessons from the CADENA project. In addition to the importance of using a technological infrastructure that facilitates simpler governance and maintenance, allows the implementation of regulatory frameworks, and addresses data privacy and user authentication, the project has shown how important it is to:

- use international standards such as the WCO Data Model and the WCO Trader Identification Number (TIN) when developing all of the data sets to be exchanged;

- use international standards such as W3C Decentralized Identifiers to develop a digital identity for users;

- build onto national regulations, processes, and international guidelines;
- narrow the proof of concept (PoC) to a specific challenge that requires multi-stakeholder interactions to test and validate the solution, and only then add other functionalities and participants. In other words, start small;
- adopt an inclusive co-creation process in which specialists from the business, technical and even legal areas participate to guarantee regulatory alignment, functionality of the processes and the technological viability of the solution;
- consider the proof-of-concept phase as a learning process and opportunity to develop knowledge about the potential of blockchain technology with a view to scalability down the road;
- remain engaged in the global technical discussions, contribute and be generous. The overall success of the technology depends on the level of adoption by others and on not making the same mistakes;
- iterate and establish milestones for functional and integration tests while implementing the proof of concept to identify areas for improvement;
- opt for open-source solutions and document them in shared repositories (Githubs);
- be willing to be flexible and take some risk during the proof-of-concept phase. Technical solutions and services which are not foreseen at the beginning of the project should be incorporated during the development phase as and when they become available;
- develop a strategy to validate the cybersecurity of the application and its components.

Way ahead

CADENA has also been built with the capacity for other government entities and even the private sector to access specific data following a process of authorization and authentication. This opens up the possibility to develop further functionalities within the application. CADENA can also be integrated with legacy Customs systems and with other IT systems through an API.

At the same time, other applications embedded in different infrastructures and blockchain networks are being developed, such as B-Connect (another solution for the exchange of AEO data developed by MERCOSUR countries) and the European Blockchain Service Infrastructure. Accordingly, ensuring interoperability will once more be at the heart of the future developments of CADENA and LACChain.

More information

https://www.iadb.org/en

About the Authors

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Malaysia Customs conducts online Factory Acceptance Test

By Asha Menon, Royal Malaysian Customs Department

In Malaysia, the use of technology to support Customs operations has increased steadily over the last few years. As in many countries, the COVID-19 pandemic has catalyzed this trend and the use of online communication tools and technology, such as non-intrusive inspection equipment, has become an imperative for the Royal Malaysian Customs Department (RMCD) for service continuity.

The Department has recently used a video conference system to perform an online Factory Acceptance Test (FAT) of its newly procured scanners and radiation portal monitors (RPM). Due to travel restriction, it was impossible to carry out the FAT at the manufacturers' sites or at the site where the scanner and the RPM are built.

The FAT was supervised by the Deputy Director General of Customs, Mr. Mohd Yunus Charlie Charington. It took place over a week and was carefully prepared with the manufacturers to ensure a smooth process without compromising quality. All tests were carefully examined and adapted with each process detailed and ordered to enable the RMCD to determine whether the equipment was functioning properly. The FAT was a collaborative effort with experts from different government agencies (Atomic Energy Licensing Board, Ministry of Finance and local universities) participating to make an informed decision. All the parties involved were able to communicate and share real time data with almost no disruption.

The RMCD believes that it is important to keep an open mind and be flexible when faced with adversity. Online communication tools have proven to be very useful in organising meetings, training officers, and conducting capacity building remote missions. By conducting an online FAT, the Department is confirming that quality remote testing is also possible.

Thanks to technology, the RMCD is confident that it can continue with its modernization programme and meet the Government and the Ministry of Finance objectives even in times of crisis. The Administration stands ready to provide more information about the online FAT and other uses of technology. It encourages those who would like to share similar experiences to get in touch.

More information

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Waste trafficking: suggestions to improve enforcement

by China Customs

It is estimated that the world population has surpassed 7.4 billion, generating over 10 billion tonnes of varying types of waste per year. Waste can be traded at international level as long as commercial transactions are in compliance with the rules set by the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal as well as with any additional national requirements which Parties to the Convention may decide to introduce. With 187 Parties, the Convention has near universal application, as transboundary movements with non-Parties are usually prohibited.

On 1 January 2018, China introduced a ban on 24 types of solid waste and scrap, including metal scrap, plastic waste and e-waste headed for the country's recycling processors which had handled nearly half of the world's recyclable waste for the past quarter century. The move was part of the efforts deployed by the government to improve the waste recycling system and was coupled with initiatives to promote the sorting of household waste and green and low-carbon lifestyles.

This is in line with the preamble of the Basel Convention which provides that the most effective way of protecting human health and the environment from the dangers posed by such waste is the reduction of their generation to a minimum in terms of quantity and/or hazardous potential and that hazardous wastes and other wastes should, as far as is compatible with environmentally sound and efficient management, be disposed of in the State where they were generated.

Fewer seizures

Data show a decline in waste imports following the entry into force of the ban: there were 13.49 million tonnes of solid waste imported into China in 2019, representing a 39.8% decline compared with 2018. Most of this was made up of waste paper (10.36 million tonnes), imports of which dropped by 39.1%. Imports of metal scraps (3.12 million tonnes) dropped by 41.5%.

Tackling illicit trade in waste has been the focus of China Customs for many years. As part of Operation Blue Sky, during specific periods of time between 2017 and 2020, China Customs strengthened its enforcement capacities for dealing with the import of materials that do not meet the government's definition of recyclable. In 2019, 372 criminal cases were initiated for waste trafficking relating to the import of a total of 761.8 thousand tonnes of waste. This number declined year after year with a 22.6% and 50.88% year-on-year reduction respectively. In 2020, the number of criminal cases dropped to 217.

China Customs also mobilized the international Customs community by initiating Operation DEMETER in 2009 with the support of the WCO Secretariat. The Operation has since been organized on a regular basis and benefits from the support of the Secretariat of the Basel Convention and its Regional Centre in Beijing (China), INTERPOL, Europol, the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL), and UN Environment's Asia and the Pacific Office. During Operation Demeter VI, in 2020, participating administrations reported 119 infringement cases connected to the illegal movement of waste, and 12 connected to the illegal movement of ozone-depleting substances and hydrofluorocarbons (HFCs).

Challenges

Waste trafficking into China seems to have been curbed. Nevertheless, China Customs like other Customs administrations is still encountering a number of obstacles when it comes to waste enforcement, which can only be solved by cooperation.

Repatriation of waste

The first is repatriation of intercepted illegal waste shipments. The Customs Administrations of China, Indonesia, Malaysia, the Philippines and Vietnam have managed to repatriate several illegal shipments to the source countries or regions. However, authorities often report a lack of support from the importer and/or exporter of the waste as well as an absence of joint monitoring of the whole repatriation process.

Lack of quality data

The second challenge is the lack of quality data collected at international level. Illegal waste trafficking is a little-known business as countries do not share enough information on seizures and legal cases. Organizing operation DEMETER on a regular basis has enabled the WCO to obtain seizure reports from Customs administrations, which are then fed into the WCO Customs Enforcement Network (CEN) database. However, the amount of data collected during the course of an operation is obviously not enough to gain a really good picture of the trade, and merely provides a snapshot of what is happening on the ground.

Lack of impact measurement

The third challenge is that there is little knowledge of the impact of Customs enforcement on the waste industry. Have the entry into force of the ban and effective enforcement contributed to improving the waste industry and building a recyclable economy? Answering this question would require Customs to sit down with private sector representatives and environmental policymakers. The Secretariats of the WCO and the Basel Convention could join forces and conduct more policy research on this issue.

Way forward

Another DEMETER operation is due to take place in 2021, and it is hoped that Customs administrations will once again join together to demonstrate their commitment to fighting illegal waste trafficking.

To optimize enforcement operations both at global and domestic level, China Customs would like to offer the following suggestions:

1. Cooperation mechanisms with police, environmental authorities, other law enforcement agencies, the private sector and the public should be established. In China, under the National Anti-Smuggling Programme, the Customs Administration has set up communication mechanisms with other law enforcement agencies to ensure a whole-of-government approach and proper information sharing.
2. Public awareness campaigns on the impact of waste should be developed. China Customs has organized public events highlighting the problems posed by the illegal trade in waste.
3. Cooperation with the private sector should be promoted, since business plays an important role in disposing of and repatriating seized waste.
4. Training on risk analysis and intelligence sharing must be delivered at national and international level to enable law enforcement officers to work more efficiently.
5. Information on regulations and procedures must be provided to the waste management industry to improve compliance.
6. More quality data should be reported to the WCO CEN for a better grasp of the latest trends in the illicit waste trade worldwide.

More quality data should be reported to the WCO CEN for a better grasp of the latest trends in the illicit waste trade worldwide.

More information

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Single Window and Service Level Agreements facilitate cross border trade in Oman

By Oman Customs

During the past four years, the Oman Directorate General of Customs has been working on the Bayan system, the IT solution used by border regulatory agencies to process all trade procedures and declarations, and issue import permits and licenses. While deploying the system, the administration also signed service level agreements with regulatory agencies. These two initiatives enabled it not only to increase the quality of the services provided to economic operators but also to accelerate the release of goods.

System components

The Bayan system consists of the following components:

- an integrated Customs administration system containing more than 30 applications for handling all Customs procedures on a secure network.

- an electronic single window environment linking all regulatory agencies and parties involved in a trade transaction (government agencies, shipping and handling companies, commercial banks, port and airport operators, clearance companies, and Customs warehouses).

In appreciation of the services and facilities it provides, the system was awarded in 2018 with the "Sultan Qaboos Award for Excellence in e-Government Services".

Training

One of the challenges in implementing the Bayan System was to provide all parties connected with the necessary training on using the system. For example, some needed to understand how to issue import or export permits, while others needed to set up the risk management system. Each government agency had to enter its risk indicators and profiles in the system and to maintain them.

Service Level Agreements

The Directorate General of Customs wanted parties in charge of issuing import and export permits and ensuring compliance with specific regulations to speed up the work pace. To have them adhered to a specific time to decide on whether to issue a permit or agree on the release of consignments, it decided to sign service level agreements with more than 48 governmental departments representing more than 17 ministries.

The agreements signed with border regulatory agencies stipulate performance indicators related to the time taken to deliver service and notification methods:

1. Issuance of permits: Upon receiving through the Bayan system a request for an import or export permit, the competent authority has to review the request and respond within a period not exceeding 24 hours. After this period, the system automatically issues the permit, and the permit applicant is notified via e-mail and phone text message.
2. Response time of other regulatory authorities to conduct an inspection: When a shipment is selected for inspection, the response time should not exceed two hours. After this time, if the inspection has not been initiated, the system will release the goods and indicate the agency in charge of the inspection where the shipment is to be stored to allow inspection to occur at the operator's premise.

Conclusion

Oman Customs had to demonstrate its leadership capacity during the development of the Bayan system. It managed to listen to all parties involved and respond to their needs while keeping in mind that it had to reduce costs and shorten the time required for the clearance of goods. Several studies measuring the impact of the implementation of the system have shown that this very objective was achieved. In one of the seaport, for example, the average time required to release goods went from 7 days to few hours only.

© Brazil Customs

Assessing the cargo release process: Brazil shares its experience

By Brazil Customs

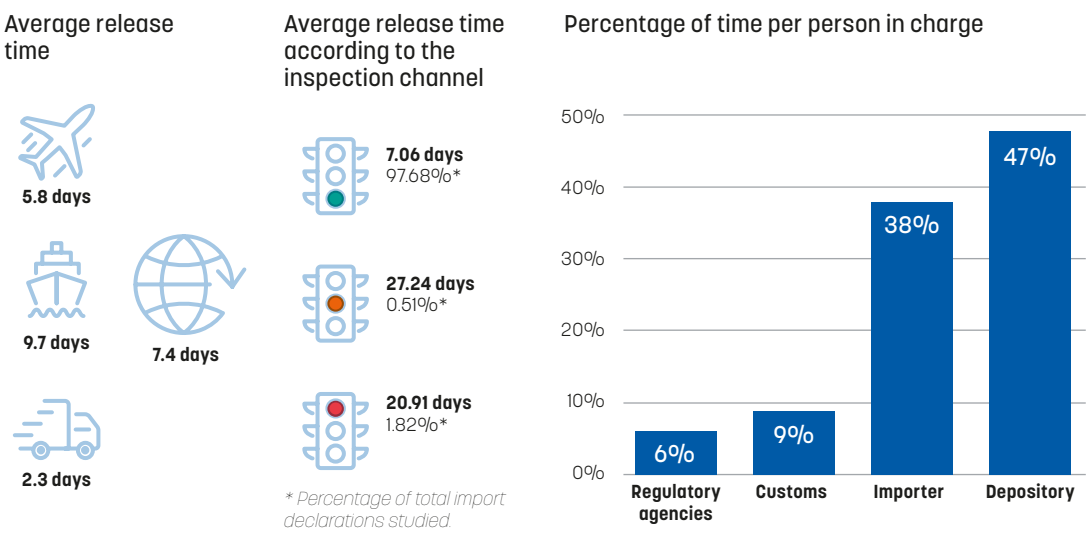
At the Viracopos International Airport

The WCO has long emphasized that the Time Release Study (TRS) is a useful tool with which a country can assess the performance of its Customs administration, border regulatory agencies, port authorities, trade operators and various service providers, in terms of the clearance process. In this article, Brazil Customs shares its experience on conducting its first TRS.

Undertaking a Time Release Study (TRS) is an effective way to obtain a wide range of information and insights related to the clearance process and the processing of trade transactions by the various actors involved. Although the tool was developed by the WCO years ago, Brazil Customs did not launch its first TRS until 2019. In fact, the Administration had been using another methodology to measure the time required to release goods. That methodology, whilst sharing some similarities with the TRS, was not satisfactory: it focused on the Customs perspective only, and did not take into account all the entities involved in the import process (e.g. licensing agencies and private sector bodies).

After undertaking two assessments using the methodology, the Customs Administration finally turned to the WCO TRS. Previous attempts to assess clearance performance had prepared the ground, and decision-makers were already sensitized to the importance of collecting data on the time required for the release of goods. In particular, they were aware of the importance of measuring performance against the target release times set out in various projects, and of assessing the impact of statutory and administrative changes on trade behaviour over time.

Figure 1



Challenges

The Administration was faced with numerous challenges during the preparation and implementation phases of the TRS:

- High-level support had to be secured, as conducting a TRS requires resources, as well as the capacity to instruct other agencies and participants.
- There was a lack of personnel to run the Study, and the Administration had to release officers from some of their existing duties to enable them to focus on the TRS project.
- Effective partnership had to be established with the private sector representatives participating in the Study to ensure that they felt involved and collected the required data.
- Modifications had to be made to the Customs IT system in order to have access to and extract all the required data.
- Some agencies involved in the clearance of goods had difficulties in collecting the required data.
- It is possible to run the Study in adverse situations; however, Brazil Customs preferred to launch its first TRS when the necessary conditions were all met.

Methodology

The Study was conducted at all border crossing points where clearance takes place. The exception to this was the road mode of transport, for which data was collected at the two main points of entry of goods, representing approximately half of the total volume imported in this mode. The data relates to the time taken from the arrival of the goods in the country to their actual physical exit from the bonded warehouse. It was collected for three modes of transport (sea, air and road) and four "inspection channels".

Four main flows were identified and the import process of each flow was broken down into different stages in order to precisely identify those responsible for each of the procedures and, consequently, facilitate the identification of opportunities for improvement in processes and performance.

Bearing in mind the degree of digitization of Brazil Customs and trade stakeholders, as well as the massive amount of data which needed to be collected and the number of entry points involved, it was decided that all the data should be collected electronically. Data was collected from the Customs IT system and then shared with all the entities participating in the Study, who were asked to supplement it. In total, data was collected on more than 300,000 declarations. Once adjustments were made to reduce this volume of data, that figure fell to around 260,000 declarations.

Findings

The main findings of the Study in terms of release times are presented in Figure 1. The average time for a cargo to be released is 7.4 days. Clearance times increase according to the inspection channel (green, yellow or red). Import processes

that present a higher Customs, sanitary and/or phytosanitary risk have more complex import flows. The highest average release times were identified in these processes, which represent less than 3% of the sample.

The Customs clearance stage, where responsibility lies with the Customs Administration, accounts for less than 10% of the total time measured. The actions which are the responsibility of private agents, notably importers or their representatives (Customs brokers), international carriers and depositories, represent more than half of the total time spent in all flows analysed.

It seems that many opportunities exist for the various private sector entities involved in the importation process to speed up the release of cargos. Diligent action by importers and/or their representatives in carrying out procedures for registering declarations, delivering the goods after clearance and handing of documents to Brazil Customs and other relevant agencies has the potential to generate an average reduction of more than 40% of total times.

Opportunities also exist to review performance indicators developed to assess the impact of introducing future reforms and tools. For example, the project team in charge of the development and implementation of Brazil's Single Window Programme, the main tool for modernizing and reducing bureaucracy in Brazilian foreign trade, had set the objective of reducing the time required to release goods in the maritime sector from 17 days (the average time being taken) to 10 days. The TRS findings show that it takes 9.7 days meaning that the objective set could have been more ambitious.

Other key findings are:

- The processing times for some procedures differ from one Customs office to another. There is a need to identify the reasons for such disparities and develop best practice in order to harmonize the way procedures are applied.

- The time required by importers or their representatives to register the import declaration, and the time required to deliver the cargo to them, represents roughly 80% of the total average time required. In light of this evidence, Brazil Customs needs to start a dialogue with the private sector to understand the reasons for such processing times.

- The import procedure is still based upon a series of sequential steps, and this impacts negatively on the time required for clearance. The Single Window project team has mapped the existing sequential process, and a procedural change is expected to be introduced as part of the project implementation.

- An imbalance has been identified in the distribution of workloads among Customs units. There is a need to redistribute tasks among national and regional teams. One of the constraints to take into account is the available IT infrastructure, as some tasks require access to specific tools.

- There are gaps in terms of technological infrastructure and IT services among public bodies. This will be resolved with the implementation of the Single Window environment.

Authorized Economic Operator

A specific section of the TRS was dedicated to the time required to release consignments from importers who had received Authorized Economic Operator (AEO) status. Another section dealt with consignments for which regulation was the responsibility of the health authority and the agriculture authority, and for which importation required licensing before or after arrival in the country.

The TRS shows that, while normal operations take an average of 207.38 hours between cargo arrival and delivery, AEO operations flow 32.37% faster on average in all modes (140.25 hours). One of the benefits offered to certified AEO operators is "Clearance on Water", a special clearance method for the sea mode of transport that allows for advance registration of the import declaration. The Study proved that these sea mode operations achieved a significant time reduction of 72.47% on average. However, the use of Clearance on Water is limited to imports where no licensing is required, or the licensing procedure is carried out before registration of the declaration. The Government's decision to involve other Government agencies in the AEO certification process by implementing the "Integrated AEO Programme" is a window of opportunity, as it will enable operators certified as Integrated AEOs (in terms of Customs and the respective consenting body involved in the operation) to use Clearance on Water for imports subject to licensing.

Diligent action by importers and/or their representatives in carrying out procedures for registering declarations, delivering the goods after clearance and handing of documents to Brazil Customs and other relevant agencies has the potential to generate an average reduction of more than 40% of total times.

Representatives from the public and private entities involved in the TRS are preparing its implementation

Transparency

The results of a TRS and any other performance measurement activity should be published. Standard 9.1 of the WCO Revised Kyoto Convention provides: "The Customs shall ensure that all relevant information of general application pertaining to Customs law is readily available to any interested person." This idea is reiterated in the WCO Transparency and Predictability Guidelines, which list the "results of performance measurements" among the information that Customs is encouraged to publish.

Not only should results be made public, but "experiences in measuring average release times, including methodologies used, bottlenecks identified, and any resulting effects on efficiency" should be shared, according to Article 7 (paragraph 6.2) of the WTO Trade Facilitation Agreement.

In Brazil, the methodology and the results of the TRS were presented during an online event[1] which brought together high-level representatives from various domestic institutions, private sector entities and international organizations, including the WCO. As well as this event, a webinar was organized for those looking for more detailed information. Both were viewed by thousands of people. The TRS report, various presentations and the Study's anonymized bulk dataset are available to the public on the internet[2]. Publicly communicating results can be a very effective motivation factor for all actors involved in the process of clearing goods and enable accountability and transparency obligations to be met.

1 *Brazil Customs Youtube channel www.youtube.com/watch?v=8eOnHfvepAk&t=979s.*
2 *https://receita.economia.gov.br/dados/resultados/aduana/estudos-e-analises/time-release-study-brasil.*

Indirect benefits

The TRS results can be useful in many areas.

Research

The Study dataset could be of interest to academia. By analysing the anonymized bulk data, it would be possible to make new findings and even to refute some of the conclusions, or to come up with new recommendations.

Human resources

Numbers are a universal language. They reflect an intelligible and neutral understanding about what is happening on the ground. The work of Customs officers is reflected in the TRS. With the data collected, it is possible for those at managerial and executive level to shed light on situations and practices that were previously only discussed hypothetically. The Study made it possible to establish a dialogue with the objective of building engagement and increasing a sense of ownership of projects. Issues and needs identified could be addressed by adapting procedures, providing tools or delivering training.

Customs-Business partnership

The Study makes it clear that the actions and improvements of procedures by public agents are not enough, given that a large proportion of bottlenecks relates to private agents' responsibilities. Since there is a common interest in making the release of goods more agile, public officers and private sector representatives should see this as an opportunity to build better relations and to collectively find answers to issues identified in the Study.

Bringing in tangible data in support of the policy debate

The conclusions and recommendations from the TRS were included in the action plan of the National Committee on Trade Facilitation (NCTF). In this way, a technical study has entered the political sphere and will help shape reform.

In Brazil, besides the NCTF, there are Local Committees on Trade Facilitation (LCTF). These are managed by local Customs units and serve as a forum to discuss facilitation initiatives at the local level and to address local issues. They also have to report to the NCTF the questions which require decision or guidance from national level. Data collected during the TRS provides new insights into the local realities, and the Local Committees are expected to discuss measures to be taken to tackle issues identified in the Study and to monitor their implementation.

Conclusion

Carrying out the TRS in Brazil was challenging, but the benefits it brought to the cross-border trade community, as well as to the country as a whole, were worth it.

The TRS is seen as an ongoing process and Brazil Customs is committed to conducting a TRS regularly. The main bottlenecks identified in the TRS have already been mapped and, as already said, for most of them, medium-term solutions are already being developed. Once they are implemented, it will be important to measure again the release process to assess the gains obtained. In other words, the TRS is expected to act as a trigger and baseline for the assessment of future developments. Hopefully, upcoming editions of the Study in Brazil will reflect these advances and improvements.

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Communications and collaboration tools: understanding the risks and opportunities

By Eric Lebegue & Lilian Gaichies, Streamwide

As private and public entities are being forced by the coronavirus to move their communications and file sharing to online collaboration platforms, they should be aware of the potential security threats they face and of the need to use professional tools in order to ensure the security of their IT environment and compliance with data protection regulations. In addition to addressing security concerns, professional communications tools currently offer a wide range of functionalities which enable organizations not only to improve information flows but also to automate processes, keep control of their data, facilitate reporting and maintain visibility over their mobile workforce at all times.

The use of audio and video technology to communicate with people who are not physically present in front of us is nothing new. In most countries, Customs frontline officers have, for some time now, been using digital communications tools that enable them to talk to and exchange data, including audio, photos and videos, with their head office. This trend has accelerated since the COVID-19 pandemic began in early 2020. With governments requiring people to work from home wherever possible in order to prevent the spread of the virus, virtual communications have become the norm.

Some of these communications tools provide customized and professional solutions, but employees have frequently been left with no other alternative than to rely on mass-market applications. Given that employees, companies and organizations are likely to continue these new working practices, even once the pandemic is over, in view of the benefits they offer, it is crucial that the security risks attendant with the use of these tools are fully understood. Mass-market applications are simply not designed to be secure at user level, and their users risk exposing themselves to serious cybersecurity and privacy compliance issues.

Customs administrations using these kinds of tools could put themselves at risk in terms of, for example, data leakage or security breaches. Lone worker safety, confidentiality of negotiations, product and transportation safety, and operator trust and confidentiality are at stake where unsecured telecommunications systems are in use.

Another reason why private and public entities, especially those for which collaboration is essential in view of their highly distributed and mobile workforce, should turn to professional applications to secure their communications channels is that such tools currently offer a wide range of functionalities which enable these organizations not only to improve information flows but also to optimize processes, keep control of their data, facilitate reporting and maintain visibility over their staff at all times.

Main issues

There are three majors problems related to the use of mass-market products as opposed to professional applications.

1. Security vulnerabilities: The IT security and privacy measures or certifications the service provider has in place may not be sufficiently robust to ensure that outsiders are prevented from accessing their systems. Popular consumer messaging apps, for example, do not contain the critical encryption and security protocols required to lock down communications. This also applies to mass-market video-conferencing tools. Meeting links can be intercepted, allowing unauthorized individuals to execute automated attacks, and, if no password is required to join a meeting, the intruder will be instantly added to the call. Hackers can impersonate legitimate business accounts, phish user credentials, steal data and infect employees' computers with malware in a matter of minutes.
2. Data sovereignty: This concept poses another challenge, as data are subject to the laws of

the country in which they are physically stored. Messaging or video-conferencing applications collect, store and process data. In general, organizations using mass-market applications do not know exactly where their data is being processed or stored or by whom, which might result in their infringing data protection laws. For example, organizations established in the European Union must comply with the GDPR[1] which requires that all data collected on EU citizens must be stored either in the EU or within a jurisdiction that has similar levels of protection.

3. Too many applications and systems: Most mass-market communications and collaboration tools serve only one or two functions, and organizations therefore often must subscribe to multiple platforms to cover all their needs. The use of different applications and tools is time-consuming and generates inefficiency, which ends up frustrating employees and increasing the risk of errors. Employees spend more time managing applications than they do getting the work done. In addition, most service providers offer tools designed for personal use, with basic subscription plans and very little support. There is often a limit on the number of licences, and the pricing policy is generally not flexible enough to adapt to operational needs. Such a situation ultimately lends itself to less than adequate security practices. Organizations must realize that they are taking risks by failing to adopt a comprehensive approach towards their business communications and collaboration technology strategy.

Solutions

Organizations, especially those with a highly distributed and mobile workforce, therefore need to have a clear strategy in place and to provide employees with professional tools in order to combine collaboration, productivity, security and compliance. Use of a single secure and professional communications and collaboration tool is preferable. It is possible to replace existing cloud-based and mass-market applications with a solution that is kept under the control and management of the organization using it.

Such business applications should:

- use advanced encrypted communications and protocols preventing vulnerabilities and protecting the data privacy of all users;
- provide secure URL links;
- comply with regulatory transparency requirements and provide a clear, unambiguous, permanently updated and easily accessible privacy policy;
- offer on-premises and SaaS (Software as a Service) solutions;
- when delivered as SaaS, ideally store data on servers located within the customer's own jurisdiction, making him subject only to his domestic privacy laws;
- replace multiple applications with a secure, all-in-one business solution to enable the user to save time and effort;
- allow sessions with no time limit.

Functionalities

In terms of functionalities, some tools enable teams located in different places both in and outside a country to communicate easily using instant messaging, whiteboarding or call conferencing. Of particular interest to Customs administrations are push-to-talk (PTT) communications which work similarly to classic radio communications devices. PTT applications can turn any smartphone into a virtual radio device capable not only of mimicking the use of a walkie-talkie, but also of interconnecting different radio networks. Users who are required to switch to such networks can do so using their smartphone and do not need to carry additional radio equipment.

When using PPT, all you need to do is press a button in an app, and you can instantly talk to whomever you want. There is no need to unlock your phone, enter your access code, scroll through your contacts, wait for the phone to connect and then inevitably leave a voicemail for a colleague who does not answer, leaving you with no real confirmation that they will actually receive the message.

In addition to PTT, professional communications tools include all the functionalities officers need, whether they work at their desk or in the field: screen sharing on a mobile device or PC, chat groups, exchange of documents, photos, videos or any other content in real time, and video streaming

1 *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).*

from a variety of different sources (drone, camera, PC, etc.).

Furthermore, the following functionalities are of particular interest to organizations such as Customs administrations with a mobile workforce:

- Real-time localization and communications: Officers working in a control centre should be able to see field officers' locations in real time and to identify which employees are the closest to a given address on a map. If a state of emergency is declared, control centre officers should be able to use a PTT app to contact employees or a mobile team who are near the scene of an incident, and the team in the field should be able to transmit live video stream to the control centre.

- Safe reporting process: When officers are on a mission abroad and are unable to use a private network to communicate, they can use the Internet to connect from any device to a secure "mission platform" where they can prepare and share confidential reports and other information.

- New telephony software: The latest telephony software can turn any electronic device into a fully-fledged, integrated system, bridging the gap between smartphones, desktop phones, computers and radio equipment.

Interoperability

In most countries, there are two types of communications networks available to public entities:

- Legacy narrowband professional mobile radio (PMR) networks are mainly private networks reserved for government use. They are built to meet the specific coverage area and capacity requirements of a particular business or organization. Organizations usually invest in PMR networks because communications are a business or a mission-critical tool. Aside from public safety agencies, which include law enforcement agencies, this may apply to transportation, utilities, oil and gas, petrochemicals, mining, logistics and industrial concerns. Such networks are driven not just by coverage (including inside buildings, basements and tunnels) and capacity, but also by availability. An emergency alert or call simply must get through every time, so minimizing network downtime is paramount.

- Long Term Evolution (LTE) networks are generally built and operated by mobile network operators (MNOs) and are largely aimed at serving a mass-market consumer subscriber base. MNOs deploy their networks under a licensing agreement entered into with the government and provide a "best-effort" service designed to balance the business requirements of their shareholders to maximize returns while still meeting their licence obligations. These networks can be public or private. Entities other than MNOs can also install and operate a private LTE.

In the past, Customs administrations had to cope with the limitations of each system. Nowadays, however, the mobile communications landscape is changing. A new industrial standard for mission-critical push-to-talk communications is now shaping the future of public and private networks. The cellular mobile phone standards specification body, the Third Generation Partnership Project (3GPP), has been developing standards (known as MCPTT standards) to introduce the unique attributes of mission-critical PMR technology into the 4G LTE standard and on into the 5G standard. This will bring traditional PMR-type functionalities into the mobile cellular domain, while ensuring that security requirements are met. For example, mission-critical push-to-talk technology over LTE provides the same functionalities as over PMR with the same level of security. 3GPP standards for mission-critical services (MCS) now cover video, data, messaging and location services.

These standards help technology service providers to develop communications solutions that enable government agencies to use public cellular networks where available and their private compatible networks where necessary, and allow officers to use a single type of device covering all their operational needs.

Conclusion

The ability to communicate from any place, at any time and on any device is crucial for all organizations. However, in deciding which solutions to use, they should give equal priority to security and functionality. Fortunately, professional messaging and collaboration solutions currently exist that remove barriers to collaboration while offering secure and efficient workplace communication tools.

More information

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Organizations, especially those with a highly distributed and mobile workforce, need to have a clear strategy in place and to provide employees with professional tools in order to combine collaboration, productivity, security and compliance.

Harmonization of procedures is still work in progress

By Anna Gayk, Enrika Naujokė and Borys Kormych

The authors of this article argue that harmonization should be high on the agenda both of those who make, and of those who enforce, legislation. To illustrate, they explain some of the issues faced by businesses due to the lack of harmonization of rules, or to the non-harmonized implementation of these rules. Three topics are addressed: the difficulty of identifying preferential rules of origin for a given HS code; the process to obtain a Customs registration number in the European Union; and the implementation of the AEO Programme in Ukraine.

The lack of technical updates of product-specific rules of origin (PSR) causes unnecessary efforts and uncertainty for businesses

Trade agreements and arrangements are made for businesses. It follows logically, therefore, that any provisions aimed at providing businesses with direct benefits (e.g. lower rates of Customs duties for certain goods) should be easy for importers and exporters to use and implement. In particular, the provisions of a trade agreement that relate to rules of origin have to be manageable, that is, understandable and workable in practice.

Whilst businesses have had to resign themselves to the fact that multilateralism is now on hold, they are still hoping for, and claim, simpler and more generous product-specific rules of origin (PSR)[1,2].

A major problem comes from the fact that the classification of goods, and determination of origin of goods, are closely interlinked. Typically, the requirements for determining origin are specified for individual products or product categories which are identified according to their respective Harmonized System (HS) code. Classification of goods is, therefore, of the utmost importance in establishing which Rules of Origin (RoO) apply to a good. Moreover, in many cases, the RoO to be applied will refer to a change in tariff classification (CTC) at chapter, heading or subheading level, a criterion which requires correct classification of the final manufactured product and the input materials used in its production.

When drafting the PSR, negotiators must therefore decide which version of the Harmonized System is being used. Sometimes, this information is explicitly contained in the agreement text itself. Usually, however, that is not the case, and importers and exporters are left to deduce which version is being used.

It is well known that the HS undergoes numerous changes - usually every five years - in order to ensure that it remains up-to-date and adapted to current trade practice. As a rule, these HS amendments are not reproduced within the PSR of trade agreements. There are only rare examples of such transpositions being made. A more probable situation is that PSR are updated in the context of the adaptation or revision of an existing agreement, and are then shifted to a newer HS version (sometimes not even the latest one). Usually, however, the PSR agreed at a particular point in time remain fixed and unaltered from then onwards.

1 *DIHK-Concept Paper for Modern Trade Agreements – Increasing Utilisation of Preferential Customs Tariffs; Association of German Chambers of Commerce and Industry (Deutscher Industrie- und Handelskammertag e.V. (DIHK)), Berlin, August 2020. Available at: https://www.dihk.de/resource/blob/13358/accdb62998fda08ab985bd3c50a43a7f/concept-paper-for-modern-trade-agreements-data.pdf.*

2 *Handelsabkommen der EU: Potenzial noch nicht ausgeschöpft? Interview with Geraldine Emberger and Urszula Maria Stepkowska, DG Trade, European Commission, in: FOREIGN TRADE, 3/2020, p. 57ff., Mendel Verlag*

If updates of the RoO are not provided by the parties to the agreement, traders have to refer to different editions of the HS for the purposes of origin determination when intending to claim preferential treatment. This is important as, following amendments to the HS, a product may not fall within the range of (sub)headings or the chapter indicated in an FTA text as being eligible for preferential tariff treatment, or it might fall under another origin criterion. The process can also impact on existing CTC rules. It is, of course, undisputed that the impact of an HS amendment varies depending on the granularity or level of detail of the agreed rules of origin: rules that refer to HS subheadings will be impacted to a greater extent than those referring to HS chapters or headings.

For traders who want to use an FTA, this poses a problem in terms of maintaining and updating their materials master data, which records all materials that they buy, procure, produce, and keep in stock. If the master data contains an identification code used to classify items for Customs purposes, every time the underlying nomenclature is amended, the changes have to be reproduced in the master data. However when claiming preferential treatment, the classification of the master data items will have to be aligned on whichever HS version is used in the FTA invoked. If a new type of good covered in an FTA is added to the master data, it will be necessary to check whether that good has to be classified differently depending on the HS version used.

Another possibility would be for the company to prepare its own correlation between the product-specific rules laid down in an FTA and the different HS versions. However, such a correlation would not constitute a legal text and would not be binding; this exercise would therefore have to be performed at the company's own risk.

Both solutions require huge efforts, as well as staff who are well trained in classifying goods and who have detailed knowledge of the HS and its different versions.

It is astonishing that the majority of today's trade agreements do not offer a solution to this serious problem. It is an issue that concerns not only economic operators, but also Customs authorities when conducting audits on preferential origin. Finding solutions would benefit everyone involved.

It would be a real gain if technical updates of PSR were provided for in trade agreements by default. The current reluctance to update PSR might be caused by the parties' fear that this would re-open discussions on the agreed rules themselves. But that need not happen, and could be avoided if technical updates were jointly agreed beforehand as a standard procedure.

In 2015, the WCO published the *Guide for the technical update of preferential rules of origin*[3]. It was updated in 2017 and complemented with tables correlating different editions of the HS, indicating the necessity of, and applicable methods for, technical updating, according to origin criteria. Unfortunately, the Guide has not been widely used so far. Today, companies and Customs authorities worldwide still have to undertake complex updating operations to ensure compliance with preferential rules of origin. Such a situation is neither comprehensible nor sustainable from an efficiency and compliance point of view.

Obtaining a Customs registration number in the EU

In most countries, to be able to engage with Customs, it is necessary for importers, exporters and other actors in the supply chain to obtain a Customs registration number. This is sometimes called, for instance, an Import Export Code (IEC), as in India, a Customs Registration Number (CR Number), as in China, or an Economic Operators Registration and Identification (EORI) number, as in the European Union. Usually, but not always, the number is quite simple to obtain (in some countries the process may take only a few minutes). We propose here to take a look at the issues faced by some companies which need to obtain the EORI number in the European Union (EU).

The legal definition of the EU EORI number is set out in Article 1(18) of Commission Delegated Regulation (EU) 2015/2446: "'Economic Operators Registration and Identification number' (EORI number) means an identification number, unique in the customs territory of the Union, assigned by a customs authority to an economic operator or to another person in order to register him for customs purposes".

A company needs an EORI number to submit a Customs declaration or when requiring a Customs decision in the EU. Economic operators established

It is astonishing that the majority of today's trade agreements do not offer a solution to this serious problem. It is an issue that concerns not only economic operators, but also Customs authorities when conducting audits on preferential origin.

3 *Guide for the technical update of preferential rules of origin – How to update the existing Preferential Rules of Origin in relation to changes in the Harmonized System. Available at: http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/origin/instruments-and-tools/guidelines/guide-for-updating-the-preferential-rules-of-origin-en.pdf?*

in the Customs territory of the Union should request the assignment of the EORI number to the Customs authorities of the EU county in which they are established. Economic operators not established in the Customs territory of the Union will get this number from the Customs authority of the EU country responsible for the place where they first lodge a declaration or apply for a decision. The EORI number is valid throughout the EU. It makes Customs controls more effective by enabling trade operators to be identified through a single a number, common to all EU Member States.

The EORI number itself may be the same in all EU Member States. However, what about the application process? The answer to this question is that application varies from country to country, and companies need to undertake some research to find out which country provides the most appropriate procedure.

Let us imagine that a Swiss company plans to supply raw materials to its processing sites located across several EU countries. The company sees an economic benefit in acting as the importer here, although it is not established in the Customs territory of the Union. When looking at the procedure to obtain the EORI number, it discovers that there are differences among EU countries[4,5]:

- In some EU Member States, the EORI number is assigned automatically when the first Customs declaration is submitted. There is no need to complete and submit an application. In others, submitting an application form is necessary.
- In some countries, in addition to the application form, additional documents are required. The nature and number of documents required varies. For example, a document certifying the registration of a business is usually required, but the requirement related to the legalization or certification (use of apostille) of this document differs.
- Member States that do not request additional documents usually ask the applicant to provide various identification numbers in order to access information stored in online databases.
- In some EU Member States, the EORI number can be requested by telephone, in others, in paper form, and in others only by electronic means.
- Applications must be completed in the local language only, but some countries accept English.
- The time required for obtaining an EORI number varies from 10 days to a few minutes.
- Economic operators not established in the Customs territory of the Union can request an EORI number, but some countries will ask the operator to prove the existence of activities in the Customs territory of the Union.

There are still many non-harmonized procedures in the Customs Union which oblige businesses to constantly adapt to different legal and procedural requirements. Will the situation change in the future?

In September 2020, the European Commission launched a new Customs Union Action Plan which covers the period up to 2025 and includes a number of initiatives in areas such as risk management, managing e-commerce, the promotion of compliance and "Customs authorities acting as one". By "acting as one", the Commission means only the rolling out of modern and reliable Customs equipment and the setting up of a new reflection group to help prepare for future crises and challenges, such as unanticipated global developments and future business models. Nonetheless, we quite like the choice of words. It could also set a new direction: in the future, businesses should expect the various Customs authorities to act the same way, as one Customs authority[6].

AEO in Ukraine

The introduction of the AEO Programme in Ukraine is used here to shed light on the significant gaps that exist between the way standards are conceived at the international level, and their practical application at the national level. It illustrates the fact that the implementation of standards at the national level depends, to a great extent, on the understanding of the standards by decision makers, on national constraints and concerns, and on national governance principles.

Ukraine introduced the AEO status in its Customs Code back in 2012. However, the AEO provisions of the Customs Code were never applied, and a law "On Amendments to the Customs Code of Ukraine with Regard to Certain Matters of Functioning of Authorized Economic Operators" was passed in 2019. It provides for two types of authorization:

4 *EORI National Implementation. Available at: https://ec.europa.eu/taxation_customs/sites/taxation/files/eori_national_implementation.pdf.*
5 *"What you need to know about the EORI number and national differences in EU countries", by Jovita Dobrovalskien, in Customs Compliance & Risk Management Journal for Practitioners in Europe, Issue 2, April / May 2020. Available at: https://www.customsclearance.net/en/articles/what-you-need-to-know-about-the-eori-number-and-national-differences-in-eu-countries.*
6 *https://ec.europa.eu/taxation_customs/sites/taxation/files/customs-action-plan-2020_en.pdf.*

- AEO with the Customs simplifications component (AEO-C); and/or
- AEO with the security and safety component (AEO-B).

AEO status can be granted to an entity established in Ukraine and participating in an international supply chain (manufacturer, exporter, importer, Customs representative, carrier, freight forwarder, or Customs warehouse authorization holder).

It is important to understand the motivations of the main stakeholders involved in the 2019 revision of the regulation. On the Government side, amending the AEO regulation was primarily motivated by the need to align it with the EU legislation[7]. During the discussions on the AEO Bill, if Members of Parliament did talk about partnership, security and facilitation, they promptly shifted their attention to possible abuse of the law and to the protection of the State's fiscal interests. In particular, they demanded the removal of discretionary rules that could lead to abuse of powers by Customs, and called for provisions to secure against the possible flow of illegal imports or exports through AEOs[8]. Overall, they expressed a certain lack of confidence in the integrity of the Customs Administration and of traders.

Once the new law was adopted, a Resolution was drafted, detailing the procedural rules and the methodology for assessing the compliance of AEO applicants with the AEO Programme's criteria and requirements, as well as the documents to be provided. The AEO Programme came into being at the end of July 2020.

This resulted in a very complex AEO authorization procedure and in the introduction of a three-year transitional period during which access to the AEO-C Programme (Customs simplification) was limited to exporters or importers that "are manufacturers of goods destined for export". Moreover, the new law limits the number of applications that can be simultaneously under review to 10 for the first year, 20 for the second, and 30 for the third. The Customs Administration is to publish on its website depersonalized information on the number of applications received and on the status of assessment procedures for each applicant. Finally, during the transitional period, Customs is to respect specific time frames when assessing the compliance of an applicant. In contrast to typical procedural deadlines (which are framed in terms of not exceeding a certain number of days), the application review time is set directly (i.e. it cannot be less or more than a specific number of days). Accordingly, the pre-review of an application is to take 30 days, and the assessment procedure 120 days. Thus, an authorization can be obtained in five months.

Such rules seem to act as a deterrent to traders who are considering applying for AEO authorization. According to the information published by the Customs Administration, at the time of writing (February 2021), only one application for AEO authorization has been submitted[9].

The introduction of the AEO Programme impacts all traders, whether they are considering obtaining AEO status or not. Currently, Article 259 of the Customs Code of Ukraine provides declarants who meet certain criteria with the option of placing goods entering the Customs territory under a specific Customs procedure by lodging a preliminary Customs declaration (known as type EA). This allows them to take the goods to their premises directly, without having to present them to the Customs office. The same option exists for export. The new AEO regulation provides that this procedure will only be available to AEOs-C once the transitional period ends. Businesses benefiting from the simplification, but which are not manufacturers, cannot apply for AEO status during the transitional period and will lose access to the procedure for five months.

The value of international standards is not in question here. Rather, it is the possibility of harmonizing national regulations beyond a certain degree, when their practical implementation at the national level reflects the agenda and concerns of decision makers, as well as the level of resources of an administration. This calls for more exchange between administrations on the challenges related to practical implementation, and for the identification and promotion of best practices.

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7 *Association Implementation Report on Ukraine. Joint Staff Working Document, European Commission, Brussels, 12.12.2019. SWD (2019) 433 final. p. 13. Available at: https://eeas.europa.eu/sites/eeas/files/swd_2019_433_f1_joint_staff_working_paper_en_v4_p1_1056243.pdf.*

8 *Ostrikova T. European instruments are good, but their good work requires a strong Customs service, 2019 [In Ukrainian]. Available at: https://samopomich.ua/ostrikova-yevropejski-instrumenty-dobri-ale-dlya-yih-dobroyi-roboty-potribna-sylna-mytna-sluzhba/.*

9 *Status of conformity assessment and number of registered applications of enterprises for authorization of an Authorized Economic Operator. State Customs Service of Ukraine. Available at: https://customs.gov.ua/deiaki-pitannia-funktsionuvannia-avtorizovanikh-ekonomichnikh-operatoriv.*

Transforming Customs operations management teams into strategic players

By Customs4trade

Within companies, Customs operations management teams are typically slow to adopt new technology. Yet by adopting trade software solutions, they could centralize and automate their Customs and trade compliance processes and harness the value of data, saving time and money and informing strategic decisions. Although this article mainly addresses companies, it is also of interest to Customs administrations who want to understand the solutions and tools that are available on the market and that enable companies to modernize their Customs and trade compliance processes.

Data has become an integral part of all aspects of our lives. It is collected wherever we go, from the websites we visit to the loyalty programs we join, the apps we use, and the messages we send. It is then analyzed and used by business owners to optimize the effectiveness of marketing, sales, and operations. However, in order for the data to be useful, it must be structured - meaning it must be organized or stored in a pre-defined format. Structured data can be easily searched, allowing companies to perform analytics or obtain insights that would identify room for improvement, predict trends, and detect errors - the things that today's companies truly need to remain competitive.

Customs data - are you in control?

As a company, if you are in control of the data required for Customs compliance, you are ahead of the game. But often compliance data is unstructured, sprinkled across internal systems as well as across ancillary systems belonging to Customs brokers, Customs authorities, community service providers, and port community systems. These systems are often not integrated, making data collection cumbersome and time consuming. Historically, this has held Customs operations managers back, prohibiting them from obtaining a full overview of their operations.

Structuring data through collection and centralization is game-changing. Data can be analyzed to reveal insights into metrics and KPIs that can enable growth and inform decisions on sales, procurement, the supply chain, operations, and more. It can be fed back into other source systems, for example ERP[1] systems or WMSs[2], making each system smarter.

While other departments within a company have been reaping the benefits of data analysis for years, this is a new realm for Customs and trade. Armed with these insights, Customs operations management teams have the opportunity to increase their relevance, shifting their role from cost center to strategic player. Imagine what you could do if you had insights into potential duty savings, guarantee thresholds, stock levels, declaration status, and exactly where each of your shipments were in transit, all at the touch of a button.

Using machine learning to ensure data quality

Of course, the value of these insights is directly related to the quality of your data, and when you are gathering data from multiple sources, quality poses a major hurdle. You need to trust the parties providing the data as well as check and validate the data before it is fed into the centralized "single source of truth" system. Data should be verified to ensure it is accurate, relevant, complete, current, and consistent. This is accomplished most efficiently with machine learning. By gathering data from previous behaviors, machine learning builds statistical models based on that data and generates suggestions that become more and more targeted as more data is gathered.

While some may think of machine learning as a new technology, it was actually adopted by prominent industries back in the early 1990s. It is relied on by the medical sector to extrapolate accurate dosages for medication, by post offices to translate and process handwritten addresses, and by our friends Siri, Alexa, Cortana, and Google Assistant for speech recognition. Health organizations, scientists, and think tanks around the world turned to machine learning to fight the battle against COVID-19, using it to support forecasting models, contact tracing, and drug development.

In the realm of Customs, machine learning is an excellent tool to detect anomalies and mistakes in the data provided. It can be used to improve data quality, increase accuracy and efficiency in the Customs declarations process, reduce human error, detect significant differences in the value of goods, and suggest better classification codes to reduce costs - and the more it is used, the smarter it gets.

Machine learning use cases

Detect significant differences in declared Customs values of similar articles

The Customs value of a given article in a declaration is based on its invoice value plus or minus certain adjustable cost elements. The expected behavior is that the invoice value or adjustable cost elements may differ slightly due to changes in materials costs but will not fluctuate significantly. However, incorrect costs may be entered into the source system due to human error, resulting in substantial differences in value. These may get lost in the multitude of transactions, posing potential financial risks, including inflated duty and penalties for incorrect valuation. Machine learning can detect these anomalies by comparing the Customs value of each unique item identifier, or item ID, to the value of that ID in recent similar flows.

Detect differences in classification behavior for items

In master data, item IDs may have a classification code for a classification type, e.g., classification type TARIC with classification code 1511909900. The expected behavior is that different item IDs with very similar item descriptions would mostly have the same classification code for a given classification type. With tens of thousands of items, however, it is challenging for a classifier to detect small differences. Machine learning can help standardize the classification codes used for similar products and suggest better classification codes to reduce costs.

Prepare for changes with simulations

As new formalities take effect, knowing the implications in advance helps businesses prepare for necessary adjustments. Machine learning allows companies to simulate declarations and other procedures by applying proposed parameters. In the case of Brexit, machine learning can apply future

While other departments within a company have been reaping the benefits of data analysis for years, this is a new realm for Customs and trade. Armed with these insights, Customs operations management teams have the opportunity to increase their relevance, shifting their role from cost center to strategic player.

1 *Enterprise resource planning (ERP) refers to a type of software that organizations use to standardize, streamline and integrate business processes across finance, human resources, procurement and other departments.*
2 *A warehouse management system (WMS) is a software application that helps control and manage the day-to-day operations in a warehouse.*

changes to Customs flows, revealing areas that pose the risk of non-compliance and associated delays. Simulations are also helpful in preparing for free trade agreements, for example calculating and estimating origin savings if a preferential rate were to be claimed.

Centralized data plus automation

Adopting a software solution that houses all of their Customs data and allows them to automate Customs processes opens up a variety of opportunities to companies. When it comes to making a choice, companies naturally want to right-size the solution and pricing for their current needs but it is important to think globally to allow room for expansion. This means selecting a multi-country solution that serves as a centralized repository for all Customs data, allowing stakeholders from around the world role-based access in their native language. Solutions that take a modular approach allow companies to start with the features and functionality they most need, for example automating declarations, and add other capabilities, for example special procedures and analytics, as their capacities mature.

Customs automation can have a significant financial impact, providing a relatively rapid return on investment even for companies with limited trade. For example, a small-to-medium sized business handling an estimated 5,000 declarations a year across three different countries for direct filing can realize an annual savings of € 91,500 compared to using a Customs broker. Plus, Customs operations managers have the added benefit of regaining control of their data, opening even more doors for efficiency and growth. See the white paper *Customs Brokers or Software Solution* for further examples of cost savings.

What the future holds

Customs operations management teams are typically slow to adopt new technology; however, more and more are abandoning paper processes in favor of digital, catapulting the value of automation into the spotlight. Automation and machine learning provide efficiencies that are unmatched by manual processes and will therefore play a key role in the future management of Customs and trade processes, allowing all stakeholders involved to grow and operate more efficiently.

In addition, harnessing the value of data is quickly becoming essential to remain competitive. By adopting a Customs system that centralizes, standardizes, and consolidates data, companies and Customs operations management teams can regain control of their Customs operations as well as analyze data via dashboards and reports in order to improve Customs-related processes, promote efficiencies, and open the door for growth. All of these technological advances allow valuable resources to be allocated to more strategic initiatives, providing greater value to the business. Data-driven Customs solutions are already being used by market leaders. This is the future of Customs for all.

More information

https://www.customs4trade.com/

FOCUS: Product Quality and Safety

All countries have regulations to ensure that non-food products available on the market do not endanger consumers and workers. In this section of the magazine, we asked market surveillance authorities and Customs administrations to share their experience regarding controlling the compliance of imported products with safety and quality requirements. To introduce the topic and give an overview of the different offences observed, we start this section with an article on Operation STOP. This global enforcement operation targeted illicit trade in medical products, especially those generally used to diagnose or treat COVID-19.

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Photo: An officer from Colombia Customs laboratories is conducting a test.

Operation STOP: Achievements and future prospects

By the WCO Secretariat

In April 2020, the WCO Secretariat drew up a list of medical products which are generally used to diagnose or treat COVID-19, with their respective HS codes. The aim was to help governments to get an overall idea of trade in and stocks of these suddenly much sought-after products and to allow them to monitor and speed up their movement, whether on import or export, or in transit.

The Secretariat was aware that high demand for these products would lead to the appearance on the market of new producers, exporters and importers who were not familiar with the conformity arrangements and standards, leading to an upswing in trade in counterfeit and non-compliant goods. It therefore quickly called for Customs enforcement services to take part in the Operation STOP initiative.

A total of 99 administrations responded to this appeal. Some participating countries already had Port Control Units (PCUs) and Air Cargo Control Units (ACCUs) established under the Container Control Programme (CCP), run jointly by the WCO and the United Nations Office on Drugs and Crime (UNODC). Units located in countries participating in the operation therefore naturally took part.

Preparation stage

An indicative list of targeted products and their HS codes was drawn up. These were, in particular, test kits, reagents and diagnostic test instruments, protective clothing, thermometers, medical devices, and drugs and precursors used to treat the illness. Illicit medicines in general were regarded as targeted products.

Checks were carried out on all means of transport ensuring the import, export and transhipment of goods, and on all entry points, i.e. land borders, ports, airports and dry ports, Customs warehouses and other approved premises, free zones and centres run by postal operators and express parcel services.

As for any WCO operation, a preparatory stage preceded the operational stage to enhance Customs officers' knowledge of the targeted products and their supply chains. A dedicated training module entitled "Identifying and combating exploitation during the crisis" was drawn up by the Container Control Programme management team. This provided an overview of current products and the risk management techniques to be applied. Some 20 webinars were organized to train participants.

The pharmaceutical companies involved were Novartis, Servier, Pfizer and Sanofi, as well as UL (Underwriters Laboratories), a company responsible for security certification schemes for products. These firms shared their expertise on how to distinguish medicines, precursors and authentic and certified medical products with over 1,000 Customs staff. Particular stress was placed on checking the packaging of goods during unloading or during checks on warehouses or storage facilities. One of the companies represented also provided the risk indicators developed for certain medicines such as hydroxychloroquine and azithromycin,

global demand for which has risen strongly during the pandemic.

At national level, targeted product HS codes were forwarded to the risk management system so that alerts on the arrival of consignments for documentary or physical checks were sent to Customs and health agency personnel. In line with information shared via CENcomm, the analysts of participating administrations were able to develop new risk indicators on the basis of the information provided. The investigation agencies, meanwhile, provided their colleagues on the frontline with administrative, legal and operational support.

Cooperation

Given that product quality and conformity control is the responsibility of organizations other than Customs, particularly health agencies, it was essential to establish close cooperation between the latter and national Customs administrations. Participating administrations upstream of the operation were therefore asked to ensure that mechanisms for exchanging the data and information required for effective cooperation were in place.

Operational stage

The operational stage lasted approximately two months. Thanks to the group created on the WCO CENcomm secure communication platform, participants were able to exchange real-time information on seizures and detentions.

As usual, an Operational Coordination Unit (OCU) monitored the work of the teams on the frontline and drew up fortnightly information bulletins to provide participants with an overview of their daily results. In cases arising out of suspected infringements of intellectual property rights (IPRs), the OCU ensured that the Customs administration and the rights owner were in contact so that the procedure ran smoothly.

Results

A total of 51 administrations carried out 1,683 seizures or detentions, with 12 administrations reporting the broad majority: Qatar, the United Kingdom, Peru, Portugal, China, Togo, the United States, Denmark, Norway, Nigeria, Namibia and Hungary.

The products seized or detained included the following:

- over 307 million units of medicine, mainly antibiotics, anti-inflammatories, painkillers, antidiabetics and antimalarials; medicines more specifically used to prevent or treat COVID-19 were also seized or detained, such as hydroxychloroquine, quinine sulphate, azithromycin, dexamethasone and "Lianhua Qingwen Jiaonang", a medicine patented by the National Health Commission of China that has received marketing authorization in over 10 countries and Customs unions;

- close to 50 million items of personal protective equipment, including over 40 million masks of all kinds, nearly 7.5 million pairs of gloves, 94,909 thermometers and 58,517 test kits;

- almost 3,000,000 litres of sanitizer gel.

Many targeted products did not meet health authority regulations, a considerable number being detained because they lacked marketing authorization, a declaration of conformity or a licence from the competent health authorities.

Many batches of medicines were also worded in a language foreign to the country of importation, which is not authorized by most public health authorities. Other products did not bear the required information. The Customs service of the Czech Republic, for example, detained 600 infrared thermometers at Prague Airport which did not have a batch number or production date.

In such cases, according to the national legislation, goods could be returned to the dispatcher. Exchange of information is therefore extremely important to ensure that goods rejected in one country is not dispatched to another country that shares the same health standards.

Attempted smuggling and false declarations of goods or quantities were also recorded. Importers sought to gain from tax and duty exemptions on certain products and from the fact that their Customs clearance was expedited. Other false declarations were linked to restrictions imposed on the import and export of certain products. Qatar Customs, for example, discovered that an importer had knowingly declared an erroneous HS code (3401.30 - Organic surface-active products and preparations for washing the skin) to avoid the restrictions on imports of hand sanitizers based on a 70% solution of ethyl alcohol.

The crisis has led to the emergence of many opportunistic intermediaries who have no experience in the medical supplies sector and little knowledge of the products they resell.

In certain countries, only authorized authorities can import goods such as test kits, a limitation avoided by some importers by the use of an erroneous HS code. At Pristina Airport, the Kosovo Customs, for example, intercepted 500 test kits declared merely as "laboratory reagents". Neither the commercial invoice nor the Customs declaration referred to their real commercial description as "SARS-COV-2 IgG/IgM kit". The Kosovo Health Ministry is the only institution authorized to import COVID-19-related reagents, and therefore test kits.

Other interesting cases should also be noted:

- 75 COVID-19 test kits found in express mail by Customs in Argentina were declared as computer peripherals.

- Cocaine concealed between the fabric layers of face masks was discovered by Her Majesty's Revenue and Customs (HMRC) in the United Kingdom in a package handled by a postal operator.

- 19,800 tablets of medicines used to treat COVID-19 were seized by Portuguese Customs in the port of Leixões in a shipment that was declared as LED lamps.

- Dietary supplements declared as masks were seized at the airport by Namibian Customs.

- 1,574 thermometers concealed in a car were seized by Customs in Peru during a check at a border crossing point.

- Various medicines were discovered at Heathrow Airport in the United Kingdom, including controlled drugs (28 kg of amoxicillin, 7 kg of paracetamol, 3 kg of omeprazole, 2 kg of hydrocortisone and 2 kg of gentamicin) that were packed in bottles of Gaviscon and other medical solutions, the export of which is not subject to prior authorization. The dispatcher was a London company, while the addressee was a pharmaceutical company in Somalia. The goods were concealed in a batch of 11 items weighing over 150 kg and declared as containing shampoo, hair vitamins and Regaxidil (an anti-alopecia, which is not on the list of medicines).

- Bottles of COVID-CURE medicine, developed by Archbishop Samuel Kleda but which lack official approval, were seized during export by Cameroon Customs.

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- Six types of medicines, some of which had no indication as to composition or dosage, were seized in the logistics centre of an express mail company in China, concealed in a package from Australia that should have contained baby formula.

- Large undeclared quantities (214,613 units) of tramadol, a synthetic opioid, and its substitute socomol were found by several African Customs services.

Offences relating to IPR infringements

A total of 107 cases of infringement of intellectual property rights were reported for a total of 196,237 items. Certain products fell into the category of COVID-19-related products targeted during the operation. Hungary, Japan, Germany, the United Kingdom and Austria intercepted protective masks bearing registered trademark names or acronyms. In the United States, where the UL conformity label is a registered trademark, cases of IPR-related infringements were also reported in relation to COVID-19 test kits. Cyprus Customs reported seizures of counterfeit medicines, while Saudi Arabia Customs reported seizures of protective equipment bearing a registered trademark acronym or name.

Need for information

Since Asia-Pacific region countries are the main producers of medicines, reagents and medical supplies used in combating COVID-19, they represented the broad majority of countries of departure of goods seized or detained, mainly

because of lack of authorization to enter the market or the failure of products to comply with the rules in force in destination countries.

Because import formalities and national standards for medicines and medical supplies vary considerably between countries, importers who lack experience in the sector and who are under time pressure have sometimes purchased products without knowing the supplier, without verifying their conformity and without familiarizing themselves with the procedures to be followed. Certain importers have also been misled and have never received the goods purchased.

The lack of visibility of the supply chain is also problematic. The crisis has led to the emergence of many opportunistic intermediaries who have no experience in the medical supplies sector and little knowledge of the products they resell. Some have even produced invalid conformity certificates, i.e. certificates issued by certification bodies not qualified to certify medical products, while others have produced false certificates that are passed off as originating from a certified company.

Conclusion

The participants agree that the operation allowed them to improve their targeting ability by facilitating the exchange of information between countries. It also became clear, however, that certain countries had to improve their ability to draw up reports, since the quality of information reported via CENcomm is sometimes not good enough to be used by analysts and investigators. The operation also highlighted the importance of rapid and effective cooperation between border agencies, particularly in times of crisis. The WCO Secretariat will continue to follow closely the seizures reported by Customs administrations and intends to develop a second operation to stimulate the sharing of information.

More information

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Controlling product safety and security in times of COVID-19

by Anna Abbinante, Anti-Fraud and Customs Controls Directorate, Italian Customs and Monopolies Agency

Market surveillance system

In Italy, responsibilities for market surveillance are met by the Ministry of Economic Development (hereinafter MISE), as well as by other sector-specific agencies, such as the Ministry of Health, which is in charge of assessing the conformity of medical devices, and the Italian Medicines Agency (AIFA) and Institute for Occupational Safety (INAIL), which are in charge of assessing the conformity of Personal Protective Equipment (PPE).

Market surveillance agencies must ensure that circulating products are regularly subject to controls, either through a review of product documentation and/or (where appropriate) through physical checks and laboratory testing. However, the authority responsible for controls on products entering the European Union, in terms of their compliance with quality and safety requirements, is the Italian Customs and Monopolies Agency (hereinafter referred to as Italian Customs). The latter can suspend the release of products if it is suspected that these are unsafe and/or do not comply with the legislation, or do not fulfil documentation and marking requirements.

Where the release for free circulation is suspended, Italian Customs must immediately notify the competent market surveillance agency, which is given three working days to perform a preliminary investigation and to decide if the products can be released or must be detained for further checks on their safety and conformity. The market surveillance agency's final decision is then notified to Customs, which releases, seizes or resends the goods accordingly.

The Standard Operational Procedures (SOP) Manual was updated in 2019 to ensure that all Customs offices apply the same procedures, and to guarantee uniform and high-quality border controls. The Manual provides Customs officers with detailed instructions on how to carry out controls, including on product safety and conformity requirements.

This operational set-up has forged strong cooperation between Italian Customs and the market surveillance agencies, and in particular with MISE. A Customs officer is seconded at MISE as a liaison officer. Given the diversity of products covered by safety and conformity requirements, assessing the compliance of a product can be a challenge. Specialized training sessions are organized for Customs officers by various specialist agencies. MISE facilitates the work of Customs by sending appropriate information on high-risk product categories, high-risk economic operators or manufacturers, and any other relevant information that will facilitate the identification of suspected unsafe or non-compliant products at the border. MISE staff also support inspection officers during physical controls, and provide advice and quick responses on technical issues. This cooperation has been formalized by an agreement between the two bodies. The other market surveillance agencies also work with Customs on the basis of similar agreements. In addition, associations of right holders provide technical support to public bodies when needed.

COVID-19

When the COVID-19 pandemic hit Italy in early 2020, Italian Customs was required to strengthen its controls on goods identified as critical in the fight against the virus, with the aim of stopping the import of illegal, unauthorized and dangerous products that could jeopardize public health. A new agreement was signed with MISE to boost Customs controls on Personal Protective Equipment and medical devices, as well as facemasks. To ensure enforcement efficiency, a series of measures were adopted.

First, risk analysis of certain types of goods was strengthened. The Customs Attaché at the Italian Embassy in China was required to provide data and information on companies authorized to produce products related to COVID-19, as well as on companies involved in fraudulent practices. To do so, the Attaché set up a direct line of communication with Chinese Customs and with the Chinese Chamber of Commerce in Italy. Italian Customs also developed risk profiles on the basis of intelligence collected nationally, as well as from other countries, the European Anti-Fraud Office (OLAF) and the WCO.

Secondly, as a temporary measure, the list of mandatory documents accompanying Customs declarations was supplemented for some products, and additional certificates sometimes required, with the aim of guaranteeing the high standard of products intended to be used in public health and by citizens. For example, a declaration related to the final destination of the goods was required. This enables Italian Customs to speed up controls on importations intended for critical private and public services, such as hospitals, retirement homes, civil protection authorities and military bodies.

Thirdly, specialized training sessions were provided for Customs officers in charge of clearing and inspecting the goods. Various services within Italian Customs were asked to provide exceptional support to field officers in order to speed up the control procedures. Teams within the market surveillance authorities (Ministry of Economic Development, Ministry of Health and Institute for Occupational Safety) seconded Customs officers to evaluate conformity with EU and national standards as per the normal procedure. The Customs Chemical Laboratory also worked hard to increase its support capacity, especially in order to assess the quality of facemasks, whose import volume increased exponentially. So too did right holders and private bodies, which even helped assess the information provided on documents and the goods themselves.

The Customs controls triggered further checks and investigations. Raids were carried out at business premises and warehouses likely to stock substandard, counterfeit and other illegal products.

Fourthly, the number of checks on targeted goods was increased and, on a regular basis, specific instructions were provided to Customs officers to boost the efficiency and effectiveness of document-based controls and physical inspections. For instance, further instructions were provided regarding existing procedures for sending samples to the agency in charge of providing technical opinions/advice, for requesting technical support from chemical laboratories, for the handling of goods, for the safe collection of samples, and for reporting information and data for risk analysis purposes.

Fifthly, controls were also strengthened on the validity of the CE mark, and on declarations of conformity. Such controls require the consultation of "notified bodies" designated to perform specific conformity assessment procedures and to grant CE marking certificates[1]. The list of designated notified bodies is available in the Commission's NANDO information system.

Sixthly, laboratory staff know-how, as well as testing facilities, were made available to other European Union Member States needing to assess the quality of facemasks but with little experience in this area. The existing mechanism for exchange of information between EU Member States is used to share the results of analysis (unless access to the information is restricted by the judicial authority, in which case a special authorization is needed).

On another note, considering the emergency context, Customs also had to ensure the observance of temporary export control measures adopted by the Italian Government in order to ensure that all the necessary goods and products aimed at fighting the spread of COVID-19 were available on the national market.

Results

Table 1 lists the number of products seized from January to October 2020. Most of them were sub-standard and dangerous for users. In general, forged EC certificates of conformity accompanied the import declarations.

Table 1 - Products seized from 1 January 2020 to 23 October 2020

Goods/products	Seized units
Masks	12,844,213
Gloves	3,520,680
Sanitizing gels	100
Medical gowns	241,800
Protective glasses	145,600
Protective suits	1,152
Face shields	9,000
Lung ventilation devices	1,840
Infrared thermometers	4,727

The Customs controls triggered further checks and investigations. Raids were carried out at business premises and warehouses likely to stock sub-standard, counterfeit and other illegal products. Several traders and companies were found to be unreliable operators, and their legal representatives were reported to the competent judicial authorities as alleged perpetrators of crimes against public health. Ongoing investigations are focusing on organized crime involving the trade in illegal and counterfeit products and medicines.

Special attention was given to manufacturers and distributors who used false and forged EC certificates of conformity and fake compliance certificates, and who intentionally abused business and public trust. Some companies have seen the increased demand for some products as an opportunity to make easy money, and it is important to ensure that they receive appropriate penalties.

Way forward

The experience gained during the crisis will undoubtedly enable Italian Customs, as well as the market surveillance authorities, to enhance their interventions against illegal products and to better protect citizens. We are strongly convinced that controls can be improved only through increased exchange of information and knowledge sharing. The development of a tool enabling the secure and easy flow of information between all the parties involved in the certification and importation of products which are required to conform with health, safety, and environmental protection standards before they can be sold within the European Economic Area would enable enforcement authorities to greatly improve the way they work.

1 *Once this assessment is done and certification received, manufacturers can add the CE mark to their products and lawfully place them on the EU market. Not all products are required to have CE marking.*

Market surveillance authorities and Customs administrations should consider leveraging the benefits offered by blockchain technology when developing such a tool, especially to ensure the authenticity and correctness of certificates and conformity declarations.

Although no COVID-19 test kits were ever seized, Italian Customs is looking into the supply chain of such products and is collecting intelligence from other countries and from the industry to strengthen risk indicators. It is worth nothing that there are no agreed standards regarding the composition of such kits and that the authorities can therefore only seize kits if they contain dangerous or prohibited products, or on the basis of labelling and packaging infringements.

Vaccines are another product which is being carefully examined with the help of manufacturers and distributors. The main risk is the sale of fake vaccines on the internet. The most efficient way to combat such a phenomenon is to raise public awareness on the vaccine distribution policy and on the danger of these products. Italian Customs has worked in the past on communication campaigns highlighting the danger of illegal toys and medicines. Such campaigns involved public figures, such as singers and actors. A new campaign on fake vaccines will soon be launched, and Italian Customs is also working with the Italian Medicines Agency (AIFA) and health professionals to spread the message.

More information

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Food and feed safety: identifying missing links to unleash the full benefits of cooperation

By Esther Enning, Senior Inspector, Netherlands Food and Consumer Product Safety Authority (NVWA)

In the Netherlands, the Customs Administration supervises the flow of goods that enter or leave the European Union (EU) via the country's external borders. "Supervision" is to be understood in a broad sense, and includes all acts aimed at establishing compliance with the wide range of legislation that governs international trade in goods with the EU.

When it comes to ensuring the compliance of imported products with EU safety requirements – an activity known as "market surveillance" – Dutch Customs cooperates with several specialized agencies. For these market surveillance agencies, the supervision of imported goods is only one among many tasks. They must also ensure that the goods available on the market, whether or not they are imported, comply with the complex system of rules and legal requirements covering their production, processing, storage, transport and sale.

Among these market surveillance agencies is the Netherlands Food and Consumer Product Safety Authority (NVWA), which monitors the safety of food, feed and consumer products and enforces regulations related to animal welfare and nature. In the area of food and feed safety, supervision extends throughout the food and feed chain, from farm to fork, and includes imports of agricultural raw commodities such as soy. Controlling imported goods is a particular challenge for the NVWA, considering the volumes of non-EU goods that enter the Netherlands daily, mainly via the Port of Rotterdam and Amsterdam Airport (Schiphol).

Cooperation between the NVWA and Dutch Customs is facilitated by covenants signed at ministerial level. Although enforcing regulations at the border is not the NVWA's core business, we would like, in this article, to open the discussion on how to improve this cooperation, especially in the area of joint risk analysis, taking the example of food and feed safety.

Mandatory versus risk-based controls

The EU food and feed safety regulations distinguish between two types of controls at the EU's external borders:

- mandatory controls on goods from certain third countries, due to a known or emerging risk or because there is evidence that serious non-compliance with the relevant rules might be taking place. This type of control is referred to in this article as Type 1 controls. Products subject to Type 1 controls are listed in various regulations. The list of products and their designated origins is updated frequently.[1] Examples of identified risks are pesticide residues in goji berries, salmonella in black pepper, aflatoxins in peanuts, palm oil containing Sudan dye, or sulphites in dried apricots.

- risk analysis-based controls to ascertain that known risks are dealt with, and to shed light on new risks. This type of control is performed on the basis of the National Control Plan[2] and is referred to in this article as Type 2 controls.

Cooperation mechanisms

In the Netherlands all consignments must be presented to Customs, which carries out the risk assessment. Close cooperation has been established between the NVWA and Customs in order to conduct Type 1 and Type 2 controls efficiently, in line with EU regulations which require the implementation of "a common integrated system of official controls".[3]

Let's take Type 1 "integrated (non-)veterinary control" as an example. The EU regulations stipulate that consignments of products subject to Type 1 controls must be notified to the competent authority prior to their arrival at the external EU border. The authority has to check the documentation for all consignments, and a prescribed percentage of them will undergo a physical inspection. If the Dutch Customs officers reviewing the documentation suspect non-compliance in the case of a consignment of products subject to Type 1 controls, they will hand the case over to NVWA officers who are stationed next door, at the same location, in order for them to handle the consignment.

Implementing Type 2 controls also requires close cooperation, as the NVWA lacks information about the consignments that enter the EU, but does have information about the risks posed by certain products, countries of origin, exporters or importers, as well as information on seasonal patterns. Customs has information about the supply chain, and can identify anomalies in trade flows. Establishing the risk management strategy is therefore a joint effort. By combining information, both agencies can monitor and manage risks. Based on the joint risk analysis, Customs knows which consignments to draw to the NVWA's attention if they enter the EU. The NVWA is duly informed, and decides on the optimal moment for supervision in order to have the minimum impact on trade flows – this may be at the time of entry into the EU, during transport or temporary storage awaiting the definitive Customs procedure, during a Customs procedure, or after release for free circulation in the internal EU market.

A first step towards seamless supervision

Until the early 2000s, the decision to inspect consignments subject to Type 2 controls occurred after a Customs declaration for release for free circulation was lodged. Customs would suspend the release for free circulation when it had reason to believe that the consignment might present a risk, awaiting instructions from the NVWA. This caused unforeseeable delays and frustration to importers.

The NVWA started looking for a better way to proceed, and decided to change the timing of the decision to perform an inspection, so that it would occur before the goods arrived in the EU. Traders would be notified before the goods arrived. This approach would enable them to anticipate a foreseeable delay.

Although controls are organized to be as seamless as possible for trade, the joint risk assessment process does have scope for improvement. Even though they share a mutual ambition to address risks efficiently and effectively, Customs and the NVWA do not share the same nomenclature of goods or the same system of identifying companies.

1 *For example, Regulation (EU) No. 2019/1793, Regulation (EU) No. 284/2011.*
2 *Based on regulation (EU) No. 2017/625, Article 44(1), first sentence https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32017R0625&from=EN#d1e4939-1-1.*
3 *idem, (56).*

Improving joint risk assessment

Although controls are organized to be as seamless as possible for trade, the joint risk assessment process does have scope for improvement. Even though they share a mutual ambition to address risks efficiently and effectively, Customs and the NVWA do not share the same nomenclature of goods or the same system of identifying companies.

Different nomenclatures

When classifying goods, the two authorities speak a different language. Customs uses the Combined Nomenclature (CN), which is based on the WCO Harmonized System and covers all goods. Other agencies use different coding systems targeting a specific sector, or targeting goods with certain attributes. Most of the time, these classification systems have different levels of granularity.

Let's take the example of feed additives. The EU lists in a publicly available register all the feed additives that can be imported. The products vary from basic commodities (e.g. ferric oxide) to very complex preparations (e.g. "preparation 6-phytase produced by *Komagataella pastoris*"). When comparing the 1,557 entries listed in the register in July 2019, around half of the feed additives (48%) match a single CN code. The rest combine two or three products in the CN codes – for instance, one additive can be made of an oil, an essence and an extract. In the most extreme example, one code (2102.1090.10) represents 122 additives (they are all different enzymes).

The same issue exists with wildlife commodities. A considerable proportion of these are classified into broad categories in the CN, instead of being placed in smaller, well-defined taxonomic units. This lack of trade code granularity limits the ability to monitor wildlife trade.[4]

Also, the sphere of use of the goods is not always detailed in the goods description in the Customs nomenclature. Sphere of use can sometimes be a classification criterion in the CN, but not always. Although such information is often not important to Customs, it can be critical to national authorities. For example, in the Netherlands the intended use of facemasks – medical, professional or domestic – determines which of the three national authorities is in charge of controlling the product's compliance.

Sometimes, reviewing the documentation submitted with the Customs declaration will be enough to clarify the matter, and determine whether an inspection should take place, but not always. This gives rise to uncertainties and divergent interpretations as to the nature of the goods being imported, and sometimes leads to discussions about which authority is competent.

Companies' codes

Customs and market surveillance authorities also use different codes to identify companies. Businesses and people wishing to trade must use the Economic Operators Registration and Identification (EORI) number as their identification number in all Customs procedures when exchanging information with Customs administrations. Market surveillance authorities, as they focus mainly on the internal market, rely on their national identification system, which does not necessarily match the EORI numbers. To overcome this difference for the purpose of joint risk analysis, other data elements (such as addresses) must be reconciled. However this does not always work: sometimes the chosen data element is not available, e.g. because it is not mandatory to report it, and sometimes typing errors impede the matching of data.

Enhancing cooperation with Customs is worthwhile

Although practical obstacles exist, it goes without saying that for market surveillance authorities, close cooperation with Customs is worthwhile assuming that the legal preconditions for exchanging data are met.

Undertaking a joint risk analysis with Customs can provide insights into domains and risks that a market surveillance agency would not gain by itself, based solely on the analysis of its own data. For instance, Customs data can reveal that importers unknown to the surveillance agency are trading in risky products which fall under its supervision. Equally, thanks to joint risk analysis unnecessary controls can be avoided by showing that an importer does not trade in risky products. This results in an efficient use of resources and less hassle for traders.

Inspections can therefore be better informed and tailored. The inspector knows what to look for, and what not to look for! Compliance can then be established in the least intrusive manner possible.

4 *Chan, H., Fischer, G., Yang, F., & Zhang, H. (2015). Improve Customs Systems to monitor Global Wildlife Trade - Widely used trade codes lack taxonomic granularity. Science, Vol. 348 Issue 6232, 291-292: https://www.researchgate.net/publication/275037458_Improve_customs_systems_to_monitor_global_wildlife_trade.*

Traders, who are also tax-payers, can see that public resources are well-managed and that controls are well-prepared and justified.

Joint risk management also enables authorities to detect fraud cases and new offenders. Research in the field of food safety has proven that simply performing a larger number of random inspections is not effective in detecting fraud.[5] By pooling data and expertise, agencies can identify inconsistencies and anomalies that may be indicative of fraudulent actions[6] (Scherpenisse, Schram, & van Twist, 2017) which would otherwise remain unnoticed.

Conclusion

The duty of cooperation is formally enshrined in the EU regulations on the border controls performed to ensure that imported products meet regulatory requirements. For many years Customs has been given, and has played, a leading role in coordinating the actions of regulatory agencies at the border. Improving cooperation between the agencies responsible for matters of safety and security, human and animal health, and the economy and the environment, is one of the key goals of the Netherlands' strategic Customs policy plan.[7]

In practice, policies supporting the concept of Coordinated Border Management have given rise to initiatives such as the Dutch Single Window for Trade and Transport. Nevertheless, besides enabling the use of a legal framework and technological tools, there is more to be done to improve joint risk management. In particular, a uniform system for the identification of goods and companies should be developed. This would require efforts from both sides, and would necessitate the involvement of the WCO and relevant EU institutions. This represents an ambitious undertaking, but the expected benefits are huge in terms of enhanced supervision capacities and trade facilitation. Now that the work related to the implementation of new rules and procedures with the United Kingdom has been completed, it may be time to start looking into this matter.

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5 *Gussow, K. (2020). Finding food fraud: Explaining the detection of food fraud in the Netherlands. Amsterdam: Vrije Universiteit Amsterdam.*
6 *Scherpenisse, J., Schram, J., and van Twist, M. (2017). Tijd, toezicht en techniek: Temporele uitdagingen van digitalisering voor de NVWA. Den Haag: NSOB.*
7 *Heijmann, Ensing, van't Veld, and Neggers (2015). Coordinated border management in the Netherlands. WCO News 76.*

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Nigeria: two agencies, one mission

By Mohammed Babandede, Deputy Comptroller of Customs, and Afolabi Aderemi Basiru, Deputy Director at NAFDAC

In Nigeria, the authority responsible for ensuring that foods, drugs, cosmetics, medical devices, chemicals, detergents and packaged water leaving or reaching Nigeria's shores meet prescribed quality standards is the National Agency for Food and Drug Administration and Control (NAFDAC). NAFDAC officials inspect products at international gateways – airports, seaports and land borders – as well as at production plants owned and operated by manufacturers both of processed foods and pharmaceutical products.

Another line of defence is the Nigeria Customs Service (NCS), which is also mandated to combat the import of substandard goods, among many other things. The NCS supplements the work done by NAFDAC; however, it does not replace the latter's oversight, control and surveillance of regulated products.

The establishment of a good working relationship between the NCS and NAFDAC has set in motion effective and efficient control processes enabling both agencies to safeguard human health and protect the environment. This collaboration is especially welcomed in times of crisis, such as the COVID-19 pandemic. The fact that NAFDAC staff are working alongside their NCS counterparts in Nigeria's ports of entry to conduct product quality controls is crucial to ensure that goods deemed essential to combat the COVID-19 pandemic as well as perishable goods reach their destinations on time.

Progress made

The NCS has developed effective clearance processes for products that require NAFDAC certification and approval. All regulatory agencies involved in the implementation of cross-border trade regulations have access to import and export data via the Nigeria Single Window platform - the Integrated Customs Information System (NICIS). They are required to input updated risk indicators to the application risk engine, develop importer


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risk profiles and share intelligence with each other when appropriate. In this way, NAFDAC is able to monitor trade transactions, manage licences and issue electronic permits via the platform, while the NCS is able to complete release formalities prior to the arrival of perishable or time-sensitive goods, such as vaccines, imported by a NAFDAC-licensed company. If the NCS decides to conduct an inspection, it can request that NADFAC and any other regulatory agencies participate in the examination of the goods.

As for NAFDAC, it has taken several measures to expedite inspections:

- processing the issuance of electronic licences via the Single Window;
- requiring importers to input the Approval Reference Code stated on their NAFDAC e-licences on "Form M", a mandatory document to be completed by all importers for importation of goods into Nigeria;
- developing automated verification and validation systems for documents and licensing, in order to detect forgeries;
- equipping officers with technology devices and access to laboratories.

In addition, both agencies have established quarterly, bi-annual or annual joint staff training focused on collaborative sharing of skill sets, technical expertise, manpower, resources and information.

Key obstacles

All these initiatives have strengthened the capacity of the NCS and NAFDAC to translate the concept of cooperation into tangible and effective actions and to facilitate effective emergency responses.

Although the partnership between the NCS and NAFDAC has yielded tangible benefits, there are nevertheless obstacles that have hampered service delivery. These range from limited capacity to test products to poor information and communications technology (ICT) connectivity. The most significant obstacles are listed below:

1. Risk to life: officers' safety is constantly being threatened by disgruntled importers and declarants, many of whom belong to organized crime groups.

2. Lack of non-intrusive inspection equipment: there are currently no functional scanners and cargo inspection is carried out manually, which is a cumbersome and time-consuming process.

3. Lack of onsite or mobile laboratories at ports of entry to enable product analysis: there is one central laboratory in each of Nigeria's 36 states; however, the time required to test products is rather high given the volume of requests received.

4. Constant changes in tactics employed by criminals, such as variations in mode of concealment, country of origin and means of shipment.

5. Poor infrastructure, especially a dilapidated road network: traffic builds up on the roads, meaning that ports remain congested. Lorries take a long time, sometimes days, to exit ports.

6. Lack of motivation among enforcement staff as officers are not being commended for outstanding achievements.

7. Porosity of the country's borders, which are difficult for officers to monitor.

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Technology in times of pandemic

By Milena Budimirovic and Vyara Filipova, WCO Secretariat

WCO events went digital in 2020, including the WCO annual conference dedicated to technology, recently rebranded as the WCO TECH-CON. The theme of the 2020 edition[1] was dictated by the circumstances, and the 50 speakers were asked to share their experience of how technology had helped them manage the new constraints and challenges created by the COVID-19 pandemic. Below are just some of the ideas gleaned from the event which attracted 1300 participants from 142 countries.

Accelerating the use of technology

Representing Customs, the private sector, international organizations and academia, all speakers agreed that the use of technology had accelerated since the beginning of the crisis, and that a number of lessons could be drawn from the previous few months. They echoed the conclusion of consulting firm McKinsey & Company, along with many others, who noted that "responses to COVID-19 have speeded up the adoption of digital technology by several years and many of these changes could be here for the long haul"[2].

The pandemic has also provided an opportunity to internalize the idea of digitization, which was always an option, but not necessarily a priority, for governments and their agencies. Customs administrations have used the opportunity to advance digitalization initiatives that were already underway, as well as to instigate new

1 *The conference was held from 11 to 13 November 2020*
2 *https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever*

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technology projects to eliminate the use of hard copies and cash, for example. It has proven to be a very transformative period. In some instances, governments have made major changes and the private sector has struggled to keep up.

Keeping officers and clients safe

The pandemic has called for solutions to ensure that officers not working remotely, and the people they come in contact with, such as drivers or declarants, do not spread the virus. These solutions include the use of infrared fever measuring equipment, protective shields, and safe passage booths. Some administrations have devised a regional driver tracking system, allowing for COVID-19 test results performed on lorry drivers to be sent in advance of the arrival of the driver in the neighbouring country. Others have turned to remote monitoring tools such as drones, cameras and other devices to enable their officers to reduce physical movements and contact.

It was also felt that there was an opportunity to leverage technology for the benefit of Authorized Economic Operators (AEOs), including for validating and re-validating their status in a remote manner, and supporting implementation of Mutual Recognition Agreements/Arrangements (MRAs), thus facilitating cross-border trade.

Advance electronic information is key to efficient clearance

Systems enabling the reception and sharing of pre-arrival information are considered to be the main tools enabling Customs and other agencies to speed up clearance and provide priority passage for critical consignments.

The event highlighted the fact that small and medium-sized enterprises (SMEs) often do not provide Customs with advance electronic information. In some countries, it may be necessary to help SMEs identify ways of submitting information in advance and thus benefitting from faster clearance.

Technology is an interagency cooperation enabler

The event recognized the role of single window solutions in facilitating interagency cooperation during the clearance process. It also pointed to the benefits of centralizing and sharing inspection data on a single platform.

Accepting electronic documents has been a game changer and should continue

Many administrations decided to allow the submission of electronic certificates and permits during the pandemic, rather than the paper form. Some participants pointed out that scanned copies could be challenging to process, as optical character recognition (OCR) or Artificial Intelligence technology was needed to extract digital data. Private sector representatives expressed the need for Customs to continue maintaining such practices even after the crisis, and to work towards the digitization of all trade-related documents. The need to build a proper legal framework and develop international standards was also mentioned.

Managing cross-border e-commerce transactions

The biggest challenges were encountered with data availability to Customs and data quality, especially with the tremendous growth of e-commerce transactions where there are new and not yet clearly identified trading patterns requiring higher sophistication and accuracy of data analytics techniques for improved risk management.

Importance of data standards stressed once again

Commercial operators should not be asked to use specific data formats and requirements every time they interacted with a public body, as this generates additional compliance costs. Participants were reminded that, to respond to this issue, the WCO Data Model (DM) had been developed as a compilation of clearly structured, harmonized, standardized and reusable sets of data definitions and electronic messages. It was intended to meet the operational and legal requirements of cross-border regulatory agencies, including Customs, which were responsible for border management. Devised jointly by Customs and the private sector, the WCO Data Model is critical for successful data exchange at both the national, bilateral and multilateral levels.

Blockchain promising but pace of adoption slow

One of the prevailing topics of the WCO TECH-CON was the deployment of blockchain technology. It was widely agreed that this technology is very useful and could help give life to the concept of a data pipeline, which would contribute to improved risk analyses and better controls, and ultimately greater trade facilitation. However, as one speaker noted, while big carriers are investing in and backing blockchain solutions for electronic documents of title and electronic trade finance, there is a need for public blockchain platforms to onboard the small and medium stakeholders. Despite the opportunities it promised, only a limited number of Customs administrations have embarked on pilots, and even fewer on full deployment of platforms based on the technology. Harmonized regulatory frameworks and neutral blockchains were seen as conditions for the uptake of the technology.

Connecting systems should be a priority

The digital format of the information collected from various IT systems can differ. Regulatory bodies such as Customs authorities could theoretically have access to data-rich ecosystems managed by public and private entities, and be able to record the journey of a shipment along the supply chain. However, this goldmine of information is not as valuable if there is no standardized and up-to-date means for Customs to collect and interpret this data.

Shift to teleworking

Most administrations adapted quickly to the new circumstances, with the staff starting to work from home. Members had to increase their bandwidth and reached out to providers for support in obtaining collaborative on-line tools. Clear benefits such as reduced commuting time, in many cases more efficiency, increased possibilities for participation in on-line trainings and events were observed. However, there was agreement that inability of inspection staff to telework, potential security breaches, poor internet connection and lack of opportunities for informal discussions and networking, was a clear disadvantage, especially for officers joining the administrations for the first time.

Need to keep an open mind

Flexibility was a word that was heard a lot during the three days of the conference: when discussing the platforms developed to collect and analyse data, when reviewing processes and workflows in the event of incidents, and when looking at possible measures to respond to a constraint, such as the need to limit physical contacts while enabling safe movements of goods and the people moving them.

The speakers supported a strong role for the WCO in continuing to be a platform for Customs multilateral cooperation and sharing of experiences on digitization. There was also an expectation that Customs should take the lead in promoting digitization not only with public entities, but also with private sector stakeholders participating in international trade.

Technology makes it possible to recalibrate procedures, training, and deployment of staff, among other things. With this in mind, the WCO Secretariat will continue to stimulate the exchange of information on the various technologies used to manage the flows of goods, people and conveyances across borders, and on progress made towards a digital supply chain. Most articles in this edition of the WCO Magazine relate to the implementation of technology, another testimony of the importance of technology for the Customs and trade community.

More information

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