



PERMANENT TECHNICAL  
COMMITTEE

PC0685Ea

(HYBRID MEETING)

235<sup>th</sup>/236<sup>th</sup> Sessions  
25-29 April 2022

Brussels, 7 March 2022.

### **FUTURE OF CUSTOMS**

**- WCO/WTO Study Report on Disruptive Technologies 2022 -**

**(Item V. on the Agenda)**

#### **SUMMARY**

##### **Purpose of document**

The World Customs Organization (WCO) Study Report on Disruptive Technologies was adopted as a living tool at the June 2019 Council Sessions. Three years later, the Study Report has been updated in partnership with the World Trade Organization (WTO), with the aim of covering the overall international trade context in which Customs administrations play an important role.

The draft Study Report 2022 reflects latest developments, including the results of WCO's 2021 Annual Consolidated Survey (ACS), lessons learnt and recommendations stemming from the round of WCO's regional online experience-sharing workshops held in 2021 and 2022, as well as updated and new use cases provided by Members and other stakeholders.

##### **Action required of the Permanent Technical Committee (PTC)**

The PTC is invited to:

- discuss and, if appropriate, endorse the updated WCO/WTO Study Report on Disruptive Technologies, subject to further input and contributions provided by delegates.

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## **I. Introduction**

1. The first version of the Study Report on Disruptive Technologies was published by the WCO in 2019, and had the objective of raising awareness within the Customs community of the latest technologies and their potential, providing practical examples and use cases, but also sharing some more aspirational and innovative propositions on their use in the future.
2. Bearing in mind the fluidity of the topic, the Study Report was meant to be a living document, to be updated on a regular basis to include lessons learnt and recommendations stemming from ongoing discussions. Hence, the WCO embarked on updating the Study Report in order to incorporate some of the developments and findings from the past three years.
3. In early 2021, the WCO partnered with the WTO in the work on disruptive technologies, which resulted in collecting information on the use of three particular groups of disruptive technologies by Customs through the WCO Annual Consolidated Survey (ACS) 2021 and in developing a joint paper "The Role of Advanced Technologies in Cross-border Trade: A Customs Perspective", which was presented to the PTC in October 2021. Consequently, the two organizations decided to work together on updating the Study Report on Disruptive Technologies, as well, in order to include the latest developments, while ensuring the broader trade perspective was well considered.

## **II. The objective of the update**

4. The Study Report on Disruptive Technologies 2019 focused on seven technologies: blockchain, internet of things, artificial intelligence and machine learning, biometrics, drones, virtual reality and 3D printing. It looked into what each technology is about and how they are used in general. More importantly, it explored their use in the Customs and border management environment, the risks and benefits, as well as their potential use in the future. Lastly, the Study Report included 20 use cases provided by Members, stakeholders and information from open sources.
5. It is evident that the uptake and piloting of disruptive technologies since 2019, in particular of blockchain, internet of things, artificial intelligence and machine learning, has been significant, including in the Customs domain. However, it is felt that there are still opportunities for upscaling their implementation, which is why the WCO, the WTO and other stakeholders are looking into these and other technologies, with an eye towards identifying the key benefits for supporting international trade and economies more broadly, as well as identifying ways in which they can assist Customs administrations in fulfilling their objectives, such as ensuring trade facilitation, safety, security, and fair revenue collection. Numerous initiatives, including webinars, online conferences, policy documents and capacity building work, have been carried out by both organizations in the past three years, with the aim of supporting their Members in these endeavors.
6. Bearing in mind the many developments, including pilots and proof of concepts (POCs), which have taken place in the meantime, it was felt important to provide an update and ensure that Members, the trading community and other stakeholders are well informed about the latest developments on the ground.
7. The update carried out jointly with the WTO ensures that the discussions around digitalization of Customs and border management are viewed within a broader framework of paperless cross-border trade and initiatives aimed at digitalizing global supply chains.
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8. Finally, with the WCO having dedicated 2022 to scaling up Customs digital transformation by embracing a data culture and building a data ecosystem, it is considered that the updated Study Report will complement WCO's numerous efforts in building a data-driven culture in Customs.

### III. Updates provided

9. The 2022 Study Report builds on the one published in 2019 with lessons learnt, new experiences gained and contributions provided by Customs, the private sector and other stakeholders. The updates include the following:
  - a. *Introduction to the Study Report* has been supplemented with initiatives undertaken by both the WCO and the WTO individually and jointly since the publication of the Study Report in 2019. Links provide supplementary information to relevant publications, projects, programs, events and other initiatives.
  - b. *Chapter on Holistic use of technologies for Smart Customs of the future* was introduced to provide some examples of how the latest technologies can be used in a holistic manner to address some of the challenges of Customs, including cyber security issues, identity, data collaboration and other. The chapter also introduces some emerging concepts such as robotic process automation, low code automation, high-performance computing and others.
  - c. *Chapters on individual technologies* have been reviewed and updated with more recent insights, statistics, graphics and images. Findings from the WCO's 2021 ACS and the WCO/WTO paper "The Role of Advanced Technologies in Cross-border Trade: A Customs Perspective" have been reflected under the respective technologies.
  - d. *Chapter on Recommendations* was updated to include in particular messages emanating from the more recent discussions in both WTO and WCO events, including the round of WCO regional workshops on disruptive technologies, which were aimed at collecting use cases and lessons learnt.
  - e. *Chapter on Strategy Behind Technology* was further expanded, including a part dedicated to cooperation with the private sector and academia.
  - f. *Annex on Use Cases* was also expanded. Some of the existing ones were updated, while those considered redundant, were removed. New use cases that describe some of the latest projects were provided by Members from all six WCO regions, the private sector and academia.

### IV. The Way Forward

10. PTC delegates are invited to discuss the updated Study Report on Disruptive Technologies and provide further input and findings that would be incorporated before its submission to the Council in June 2022.
11. The 2022 WCO/WTO Study Report will serve as an important reference for Customs and cross-border trade projects based on the use of latest technologies. Its findings will be

further promoted in both WCO and WTO forums, with the first joint promotional webinar being planned to take place in July 2022.

**V. Action required from the PTC**

12. The PTC is invited to:

- discuss and, if appropriate, endorse the updated WCO/WTO Study Report on Disruptive Technologies, subject to further input and contributions provided by delegates.

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