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## Economic Commission for Europe

### UNECE Executive Committee

#### Centre for Trade Facilitation and Electronic Business

#### First session of the Advisory Group on Advanced Technologies

Geneva, 02 July 2020

## Report of the online conference on the “Role of Advanced Technologies in overcoming COVID-19 disruptions in international trade”

### I. Summary

1. This virtual conference gathered online more than 100 UN/CEFACT experts from all around the world, to discuss how advanced technologies can help overcome trade disruptions caused by the recent pandemic of COVID-19. It is well known that the current pandemic has had tremendous effects on trade and cross border commerce. At the beginning of the pandemic, the Advisory Group on Advanced Technologies in trade and logistics (AGAT) created a questionnaire for UN/CEFACT experts, on how can advanced technologies help overcome commerce disruptions caused by COVID-19, through four questions:
  - What innovative approaches have you seen in relation to international trade and the current COVID-19 pandemic in your country?
  - What is the impact on the logistics of imports and exports in particular?
  - How can advanced technologies help overcome such disruptions? (Please provide examples, if possible).
  - How do you think that UN/CEFACT standards and recommendations can be useful in the current situation?
2. AGAT received 55 answers and elaborated a report based on the answers. The report and its conclusions are available as ECE/AGAT/2020/INF.5.
3. Advanced technologies are a way forward to promote a safer, healthier and more efficient trade in these challenging times. Advanced technologies can help make trade: contactless, paperless, trustable and more efficient as well as avoiding issues of lack of transparency, lack of personnel and lack of information exchange.
4. The conference was divided in three sessions to assess the results of this paper and the role of new technologies in the COVID-19 era: Standards and Interoperability, Digital Platforms and Digital Products. Each session was followed by a Q&A.

### II. Details of the Discussion

5. **Opening:** Opening remarks were made by Elizabeth Tuerk, Director of the Economic and Trade Division of the UNECE, as well as Sue Probert, Chair of UN/CEFACT and Stefano Quintarelli, Chair of the Advisory Group on Advanced Technologies in trade and logistics. Opening remarks welcomed the participants, emphasized the

importance of existing and developing tools and recommendations of UN/CEFACT and UNECE to resist COVID-19 and foster cross border trade (such as Recommendation 33 on Single Window and Projects to enhance transparency and traceability in the garment and footwear sector).

6. **Session 1** on Standards and Interoperability was moderated by Virginia Cram-Martos, UN/CEFACT Domain Coordinator. Virginia Cram-Martos emphasized the importance that interoperability can have to support international trade. She also mentioned the important tools the UN owns such as the UN Core Component Library (UN/CCL) that enables worldwide equivalency of interpretation of standards and procedures. She finally then mentioned that one important aspect of interoperability and standards has to be addressed: the legal aspect. This session will focus on how we can assess the legality and respect of rule of law in Standards and Interoperability.
7. The first speaker, Luca Castenalli, is a Legal Officer at The United Nations Commission on International Trade Law (UNCITRAL). He presented the work on model law and paperless trade implementation. The Model Law on Electronic Transferable Records (MLETR) aims to enable the legal use of electronic transferable records for cross border exchanges. The MLETR applies to electronic transferable records that are functionally equivalent to transferable documents or instruments. Transferable documents are paper-based documents or instruments that entitle the holder to claim the performance of the obligation indicated therein and that allow the transfer of the claim to that performance by transferring possession of the document or instrument. Transferable documents or instruments typically include bills of lading, bills of exchange, promissory notes and warehouse receipts. MLETR is secure, through Singularity (unable to cash twice), more efficient and less costly for global trade.
8. The second speaker was Thomas Nägele, Attorney at Law & Managing Partner, NÄGELE Rechtsanwälte GmbH. The main take-away is that technology, when assessed to overcome trade disruption, has to be looked at in a neutral manner (consider all advanced technologies possible and prevent setting one aside). Advanced technologies, through interoperability and the Token Container Model can have extensive advantages in a free of intermediaries' peer to peer communication allowing more efficiency, trust, certainty and neutrality (when a token is transferred, its rights are also transferred as well). States should implement laws that are technologically neutral in order to captivate all the possibilities to overcome trade disruption in the COVID-19 era.
9. The third speaker was Volker Krümpel, General Counsel & Attorney at Law at Minespider. This speaker notably focused on the compliance aspect of standards and interoperability. How can standards be compliant with the rule of the law and respect anti-money laundering as well as know your customer principles. One solution is to use new technologies such as blockchain to create trusted and non-falsifiable documents for international trade. One important aspect of this talk is also taking into account the educational aspect of all peers of blockchain nodes. All stakeholders of the global value chain have to be educated in the way to use the new and advanced technologies but also with regards to relevant laws and data protection measures such as GDPR. Another point of focus to make international trade respect the rule of law, is to promote the transparency and traceability of global value chains.
10. **Session 2** on online digital platforms was moderated by Maria Rosaria Ceccarelli, Chief of the Trade Facilitation section of the UNECE. She emphasised the importance of digital platforms to secure trade flows and promote data security.
11. The first speaker was Nena Dokuzov, Vice-Chair of the AGAT and responsible lead of the UN/CEFACT Chain Project. She put forward the fact that during COVID-19 pandemic, cross-border trade faces several issues in which we can include limited staff capacities, container incommodity as well as limited of information exchange. She highlighted the main results of the AGAT report published for this conference: The conclusions include; Digital platforms: better implementation and utilization of digital platforms which enhance supply chain and logistics information exchange and support business continuity and innovation, Digital products: development and implementation of digital products and use cases which are interoperable across borders to facilitate new needs arising due to COVID-19 and Interoperability: strong engagement of the cross-border interoperable ecosystem in creating, reviewing and adopting standards and policy frameworks which would enable the revitalization of global social and economic processes.

12. UN/CEFACT has also developed a white paper on the use of blockchain in international and cross border trade. Key topic includes: Leveraging existing semantic standards UN/CCL and Architecture reference model to enable mapping of UN/CEFACT semantic standards to newer technologies, such as blockchain, IoT. This paper has been based on three bases: legal interoperability, technical interoperability and governance interoperability.
13. We The second speaker was Emmanuelle Ganne, Senior Analyst at the WTO. She presented possible blockchain solutions in trade area. As blockchain enables peer to peer interactions and stamped and records of each and every transaction, this technology enables to promote a paperless trade based on trust. Paperless trade is a point of focus of the UN/CEFACT through its Recommendation 14 recommending that Governments review national and international requirements for signatures on international trade documents, in order to eliminate the requirement for paper documents.
14. The main advantages include transparency, gain in speed and in efficiency, costs reduction, prevention of human error as well as prevention of delays (the latter being the most relevant in the COVID-19 era). Blockchain enables trade partners to be connected in real time in a more secure and efficient way. Blockchain can also improve traceability and transparency of global value chains, making sure human and labour rights are always respited and the faster clearance of medical products. Two platforms have been built that can help during the COVID-19 era. These platforms include the IBM Rapid supplier connect, in order to connect suppliers of masks with medical institutions and actors that need them (through blockchain: more efficient and trustable). The other platform used and developed is called TYMLEZ, in partnership with the Dutch government to promote transparency of the textile value chain.
15. The third speaker was Yoshiharu Akahane, Senior Manager at NTT DATA Corporation. This speaker emphasised the fact that his corporation is aligned with the UN/CEFACT recommendation on message format. This corporation would like to promote blockchain, mostly in western countries. Blockchain is a safe, secure and authentic method of compiling data information and exchanging between peers. NTT DATA delivers pioneering advisory and strategy services as well as practical design, delivery and integration solutions for clients seeking to explore blockchain technology. As an early adopter, the NTT DATA team helps clients integrate blockchain with other technologies. Additionally, the company develops unique blockchain solutions that are customized to fit the client's specific needs with a deep understanding of multiple industries and technology platforms.
16. **Session 3** focused on Digital Products. The section was moderated by Stefano Quintarelli, Chair of the AGAT.
17. The first speaker was Pieter Verhagen, Portfolio leader at Self Sovereign Identity, CCI. This speaker presented the COVID-19 Credentials Initiative (CCI). The purpose is to make public sphere opened to individuals again and safe for people in order to reopen society in a controlled and secure way. Much like a physical credential (e.g. the cards in one's wallet), a Verifiable Credential (VC) is an issued assertion containing a set of claims about an individual or organization. The unique value of VCs is that they are digitally native and cryptographically secure, making them a great privacy-preserving alternative to other types of credentials, if used responsibly. The VC's purpose is to make sure that individuals that want to enter a certain area, shop, locality are safe of COVID-19 (by sharing the proof that they have been tested). This social identity is secure, not transferable and based on trust in-between peers because it relies on the Blockchain technology (digital trust).
18. The second speaker was Mario Voivoda, CIO of Tolar Hashnet. HashNET is a scalable, fast, secure, and fair decentralized leveraging Distributed Ledger Technology (DLT) and consensus algorithm which keeps all positive characteristics of a blockchain technology while increasing throughput to more than 200,000 transactions per second. The speaker mentioned that they have created a phone application to establish certificates, in order to make public sphere opened to individuals again and safe for people in order to reopen society in a controlled and secure way.
19. The last speaker of the session was Jaroslaw Ponder, ITU representative for Europe, presenting The European Innovation and Knowledge mHealth Hub. This Hub is a joint collaboration between ITU, WHO and the Andalusian Regional Ministry of Health and Families (Spain), in digital health space. Its aim is to develop a consortium that communicates through new technologies (mobile phone), in order to help fight COVID-19. The

main areas of action of the mHealthassessment Frameworks are: Evidence-based mHealthsolutionson NCDs, Integration of mHealth into health systems Support to large-scale implementation of mHealth programmes Contributions to policy frameworks on mHealthtopics. The mHealth Club is composed of 12 countries with 60% of public institution, 30% of NGOs and 10% of from the private sector.

### III. Conclusions

20. The COVID-19 and its trade disruptions can be resisted and impact mitigated through new technologies such as Blockchain, IoT, Artificial intelligence, QR codes, Digital applications because these technologies promote a contactless way of working, protecting involved actors, while maintaining trade flows going on.
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