United Nations

Economic and Social Council

ECE/TRADE/C/CEFACT/2020/14

Distr.: General
12 February 2020

Original: English

Economic Commission for Europe

Executive Committee

Centre for Trade Facilitation and Electronic Business

Twenty-sixth session
Geneva, 4-5 May 2020
Item 7 (d) of the provisional agenda
Recommendations and standards:
Implementation support material

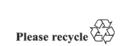## Executive Guide on Enhancing Quality of Supply Chain Data

Summary

Getting quality data is essential in order to ensure that regulatory controls and releases are done on the correct basis. But often the information is being requested from an actor who only has second-hand or third-hand data. Following several projects within the European Union, the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has developed a standard in order to capture data at the source in order to improve such quality. This document describes the principles of Data Pipelines and how they can enhance the quality of data.

Document ECE/TRADE/C/CEFACT/2020/14 is submitted by the UN/CEFACT Bureau to the twenty-sixth session of the Plenary for noting.

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I. Introduction

1. The supply chain of today is much more complex than it has ever been, yet data flows are still built around traditional paper-based processes that no longer satisfy today's requirements. Data is often rekeyed several times by multiple parties and is typically open to interpretation or watering down as the information flows along the supply chain. As volumes of trade increase, commercial parties require better visibility into their supply chain movements, and border agencies must manage more clearance and risk assessment demands.

2. The information getting to these parties is often third or fourth hand and rarely comes from its original source. Certain information, such as consignee, may be true on a transport document, however the same information would be incorrect for regulatory purposes – but this is the information often being communicated in today's environment.

3. A Data Pipeline concept has been elaborated through multiple projects and tested within the European Union in order to capture data from the right person at the right place at the right time, and to make it available to other stakeholders on the supply chain.

II. Applications

4. The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) project on Data Pipeline has developed a White Paper to describe this principle, to provide guidance on the basic principle involved and to outline how to build such a pipeline. It defines input waypoints when information would be added into the pipeline, and by whom, and output waypoints when information would be extracted from the pipeline (often resembling a documentary procedure). One of the basic principles is that information should be added by its source and not modified afterwards. Data such as the names of parties (buyer, seller, transporter, etc.) as well as the description of the goods are reused in many processes along the supply chain, but these processes reuse the data which was originally provided by the sales contract. These other processes (warehouse, transport, regulatory) should not modify the data already in the pipeline, but simply add whatever information is relevant to their process and not already present in the pipeline.

5. The UN/CEFACT Data Pipeline project has also developed a detailed Business Requirements Specification to describe the choreography and business processes behind this principle in order to allow anyone to build such a system. The project has also developed a standardized data set for such exchanges based on the Core Component Library and Multi-Modal Transport Reference Data Model.

III. Benefits

6. The use of the UN/CEFACT Data Pipeline standard will allow all actors in the supply/logistics chain to exchange accurate data coming from its source. This will, in turn, improve visibility, operations, regulatory controls, etc. The use of the UN/CEFACT e-business standards in this area ensures that all information is fully interoperable with all transport, supply chain and regulatory processes.

IV. More information

7.	UN/CEFACT Data Pipeline White Paper:
http://www.unece.org/fileadmin/DAM/cefact/GuidanceMaterials/WhitePaperDataPipeline_
Eng.pdf

8.	UN/CEFACT Data Pipeline eBusiness Standard: tbc

- European Union projects: https://www.selisproject.eu/;

- http://www.coreproject.eu/;

- https://cassandra-resilience.eu/moodle/local/cassandra/project.php