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Recommendations and standards:
Implementation support material

Executive Guide on Smart Connectivity

Summary

The United Nations Economic Commission for Europe has established a cross-sectoral approach to the UN 2030 Agenda Sustainable Development Goals called "Nexus." Four Nexus were put into place, one of which directly supports the work of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) on "Sustainable Mobility and Smart Connectivity." This document provides a brief overview of how UN/CEFACT directly contributes to Smart Connectivity.

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I. Introduction

1.   Recent decades have seen impressive growth in all types of data exchanges between entities: governments, organizations, businesses, people, and things (via the Internet of Things). Technology, and the accompanying digitalization of information, has been the main driver behind this growth. At the same time, more than just technology is required for connectivity to be "smart". It also requires the simplifying, streamlining, and standardizing of connections along three dimensions: infrastructure, knowledge management and collaboration.

2.   The highest levels of smart connectivity are possible when processes are optimized in consultation with all relevant stakeholders and when electronic systems allow data automation based on clear semantic standards.

3.   Meanwhile, there are factors which prevent connectivity from becoming smarter, such as pre-existing legacy systems which may be costly to update; ignorance or lack of use of available semantic and syntax standards; processes not viewed from a facilitation perspective; or legislation and regulatory frameworks that do not always encourage cross-border cooperation.

II. Applications

4.   Over the past three decades, the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has developed a complete set of semantic standards which can help countries and companies achieve smart connectivity on three different levels.

5.   On one level, UN/CEFACT has developed guidance documents and recommendations in order to encourage a harmonized and streamlined approach to trade and promote the use of same or similar procedures across borders around the world. These include clear technical specifications on how to approach e-business exchanges.

6.   On another level, UN/CEFACT has been developing clear business process analyses of most trade- and regulatory-related operations. These allow all parties to understand processes in similar ways and enable easier application of e-business standards.

7.   On a final level, UN/CEFACT has developed a comprehensive library of data which can be used for any business exchange. Each data element has been harmonized between processes in order to optimize its reuse. These have been further organized into Reference Data Models allowing stakeholders to quickly and easily identify the information related to their processes (e.g. Supply Chain Management, Multi-Modal Transport, Cross-Border Management, etc.).

8.   Finally, these processes and their data are accompanied by standard electronic messages (syntax) which are available and ready to use.

9.   These standards are developed through an overarching public-private partnership of volunteer experts from all corners of the globe, thus ensuring the robustness of the standards proposed. When further requirements are identified, the standards can be enhanced but always remain backwards compatible. These standards are also made available free of charge on the UN/CEFACT website.

III. Benefits

10.   Smart connectivity is greatly enhanced when all parties use the same standards, ensuring a seamless exchange and a common comprehension of the information. The

UN/CEFACT comprehensive approach to electronic exchanges for trade and regulatory procedures allows all its messages to interact and connect all stakeholders along the supply, logistics and regulatory chains. Being open to any participants, and making all results available free of charge, ensures that everyone has a potential say in the development and everyone can benefit from the results.

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