Trade Facilitation Innovation Days 2023

19-20 September 2023

Pitch for Trade Facilitation Innovation

Title of TFID 2023 Session	Reducing Risks and Trade Barriers with the Trading Compliance Checker
Title of Innovation	Trading Compliance Checker
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Description of the Innovation (max 1,000 words)	International trade presents a higher level of complexity when compared to domestic trades. Regulations, procedures and trade documents vary from country to country. These country-specific frameworks are subject to constant updates due to the evolving nature of global trade. As a consequence, organizations involved in international trade and logistics must adeptly navigate a complex network of rules and protocols to ensure compliance with different policies. This situation is further complicated by the very same way in which the information regarding trading regulations of distinct countries is distributed and made accessible to companies. Different country-specific norms are published on diverse platforms, predominantly in natural language, which is primarily understandable by humans and not easily interpreted by machines. This poses a challenge. Since machines cannot understand the information contained in documents exclusively written in natural language, they cannot efficiently process, connect,

	retrieve, and compare the relevant data dispersed across various platforms. As a result, end-users are left to explore a web of unstructured data where information is kept implicit in different disconnected and not interoperable silos. The ever-changing nature of regulations, coupled with the difficulties in readily access pertinent data and the absence of automated support for assessing operational compliance have profound implications on global trade. These include supply-chain delays, increased costs for entities involved in international trade, missing opportunities, reduced economic growth, and the risk of incurring additional costs due to non-compliance with trade regulations and policies. To resolve the aforementioned problem, we propose the development of a solution mentioned here as *Trading Compliance Checker* (TTC). The solution will make use of semantic-technologies to help organizations involved in international trade and transport to find, understand, and process regulatory information, while allowing them to automatically verify the conformity of their operations with regulations. The *Trading Compliance Checker* will comprise the following components: (A) the *Regulation Library,* (B) the *Policy Workbench* and (C) the *Compliance Engine.* The capabilities of each component of the *Trading Compliance Checker* are briefly explained in the subsequent part. The *Regulation Library* will collect and maintain all relevant up-to-date regulations. It will serve as a repository for *Policy Workbench*. The *Policy Workbench* will enable to encode the written text in regulations into a machine-understandable format by using the *Regulation Editor* and *FLINT* ontology. The *Regulation Editor* and *FLINT* ontology have been developed by leading scientists in the field of law and computer science. While *FLINT* empowers machines to grasp the meaning of regulatory information and engage in reasoning processing, the *Regulation Editor* supports the encoding of norms into the expressiveness of the *FLINT* ontology. By using semantic technologies, *FLINT* ontology and the *Regulation Editor* facilitate the automate linkage of pieces of information published on different platforms, and the transformation of implicit and hard-to-reach information into explicit, easily accessible and interconnected knowledge regarding norms. Ultimately, the *Compliance Engine* will enable the automated verification of the compliance of trading transactions and operations while providing support to users in efficiently carrying out their day-to-day activities. Unlike existing solutions in the market, the *Trading Compliance Checker* will deliver an easy-to-use integral solution that checks all regulatory aspects of international transactions, while providing users with automated support in vetting transactions and access to the full audit trail of their operations. It will empower small and big companies to engage in international trade fairly, mitigating the risk of legal violations. It will play a crucial role in ensuring that policies and regulations are easily retrievable and within reach of all interested parties while fostering the minimization of trade barriers.
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