

case of doubt, the immutable nature of Blockchain makes it possible to easily track and audit transactions.

### **Compliance management**

Blockchain could make it easier to determine the provenance of products – and thereby to prove compliance with, for example, preferential treatment granted under free trade agreements – and help reduce fraud, inaccuracies and errors (see Section 4.2(a)).

### **Identity management**

Blockchain could facilitate the verification of identities of businesses and individuals, including authorized economic operators (AEOs).<sup>26</sup>

Blockchain's potential to enhance the efficiency of border procedures and B2G transactions at the national level is multifaceted. Various organizations, such as UN/CEFACT, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the World Customs Organization (WCO) are exploring how the technology could be implemented and integrated with existing customs systems and certification processes, and IT companies and government agencies are partnering to investigate the potential of the technology via the development of proofs of concepts and pilot projects. However, while Blockchain can provide the tool to administer border procedures and single windows at a national level in a more efficient, transparent, and secure manner, the real challenge will be to make cross-border G2G processes more efficient.

### **(ii) The hope for easier cross-border G2G processes**

Cross-border electronic B2B transactions are common and have been underpinning economic globalization since the advent of the internet, but electronic cross-border G2G exchanges supporting supply chains are still in their infancy (Stokes, 2017). Blockchain's decentralized nature is seen with hope by many actors in the field as an opportunity to help overcome some of the challenges that make cross-border G2G processes complex or risky.

The technology could prove interesting, for example, to alleviate the risks associated with certain types of cross-border G2G processes, such as the sharing of information related to authorized economic operators. Implementation of AEO mutual recognition agreements (MRAs) hinges on various challenges, including the manual process of sharing sensitive and/or confidential data with low standards of security and integrity, the difficulty to establish the provenance and traceability of the data and to guarantee secure access, the inability to grant AEO benefits in real time, and the inability to react in real time when a suspension occurs, with all the consequences that this may have on the security of the supply chain (Corcuera-Santamaria, 2018). The specific