

features of the technology could enhance the cross-border management of MRAs by making it possible to automate the process of sharing AEO data among the parties to an MRA in real time and in a secure manner, and by providing a traceable mechanism that guarantees the integrity of data. The potential of the technology to facilitate the implementation of AEO mutual recognition agreements is currently being tested. A pilot project between Mexico and Costa-Rica (called Cadena) was launched in March 2018 with the support of the Inter-American Development Bank to create a common platform for the management of AEOs.

Can the technology facilitate the various dimensions of cross-border G2G interactions involved in customs clearance, in particular G2G exchanges of customs documents and certificates? Challenges related to cross-border G2G processes are, broadly speaking, of three types: technical interoperability, that allows IT systems to talk to each other at a technical level, regulatory issues, and data simplification and standardization. While Blockchain could help with respect to the former – under certain conditions – it can do little when it comes to regulatory issues. In fact, the latter will to a large extent determine Blockchain's ability to truly enhance G2G processes.

### ***(iii) Technical interoperability***

The move to digital documents, such as e-phyto certificates, has raised new issues of interoperability. In the paper world, such documents are simply presented in paper copies to the competent authorities. The move to digital documents requires the establishment of *ad hoc* "e-bridges" between competent authorities from the importing and exporting countries, which can be a complex and burdensome process. The creation of hubs, such as the e-phyto hub recently launched by the IPPC, can help manage the routing of connections, but such hubs do not provide a holistic, integrated approach – not to mention that such hubs may raise challenges in terms of administration (e.g. the need to trust a third party), financial implications regarding the management of the hub, and security (e.g. related to the single point of failure).

Can Blockchain facilitate such G2G processes from a technical point of view? The answer is not straightforward. Much depends on the actual technical setting at the national level on both the importing and the exporting sides. The ideal scenario would be one in which importing and exporting government authorities would be part of the same single blockchain. In such a case, no interoperability would be needed. Data could be exchanged directly from one party to another through the platform, based on the rules of the platform (see Figure 9, Scenario 1). Smart contracts could be encoded to share only certain types of data with other governments authorities and other participants in the platform. This scenario, which is the most ambitious one, is being tested by various actors in the field. One such