Conclusion
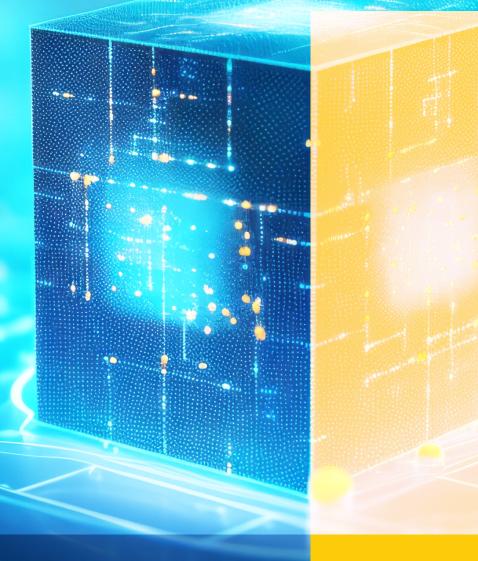
The emergence and use of blockchain technology in several domains today have triggered policy, regulatory and technical debates among Government stakeholders around the actual usefulness of the technology. Ongoing debate around the value of the technology has pushed certain Governments to ask important questions on whether and how the technology could help in areas such as trade facilitation in their countries. The present guide offers a succinct outline of key areas for consideration in the implementation process, including technical, policy and regulatory considerations. While the implementation of blockchain can be a daunting task for Governments, the potential efficiency gains from the technology within trade facilitation could be extensive.

Trade facilitation measures that may require a blockchain should be ascertained through a needs assessment, while a country's level of preparedness to adopt and use the technology should be established through a technical, regulatory and policy readiness assessment. This prepares countries to address gaps and discrepancies – whether legal, infrastructural, attitudinal or regulatory – in order to support a smooth and successful implementation of the technology.

While blockchain is suitable for most Government trade facilitation needs, the feasibility of implementing the technology in certain environments, especially in the context of developing countries can vary. Thus, it is necessary to ascertain whether prerequisite infrastructure such as electricity and internet connectivity are readily available to support the real-time data engines that come with blockchain networks. In the event that this prerequisite infrastructure is not well-established in the country, specific design choices may be required to overcome this challenge, such as the development of applications on a public blockchain network instead of a private

blockchain, or the designation of special zones specifically designed to support Government critical infrastructure.

Blockchain may not be suitable for all Government trade facilitation needs. Some trade facilitation needs such as information availability for transparency could best be provided for through trade portals on a conventional web application or mobile application. Wherever possible, a conventional web application should be used because operating a fully functional private blockchain can be prohibitively costly and may not be efficient for some trade facilitation purposes.

The use of a multi-stakeholder approach in the implementation process is a key policy consideration. Blockchain is by default a multi-party digital infrastructure and trade facilitation measures usually require a multi-agency approach. Thus, taking a multi-stakeholder approach in both the implementation and utilization of the technology is the most crucial policy dimension of the process. This will ensure both the success of the implementation and the sustainability of the use for trade facilitation purposes. Furthermore, the use of public private partnerships (PPPs) in the implementation process can bring Governments a number of benefits such as cost savings, innovation, capacity-building benefits and risk management.

Governments and private sector actors still face numerous challenges today in implementing blockchain networks. These challenges can relate to cost, the availability of talent and expertise, stakeholder unpreparedness or regulatory and policy gaps. For the technology to work within the adopted environment, these challenges must be identified and resolved in time it to avoid implementation hurdles and suboptimal use of the technology.