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Contribution by Thailand

to the CSTD 2020-2021 priority theme on “Harnessing blockchain for sustainable  
development: prospects and challenges”

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**Priority theme 1: Harnessing blockchain for sustainable development: prospects and challenges**  
**24th annual session of the United Nations Commission on Science and Technology for Development (CSTD-24)**

**1. Thailand, its adoption of blockchain technology and SDGs**

Thailand has implemented a number of policies to harness the potential of the fourth industrial revolution known as Thailand 4.0 policy. "Thailand 4.0" is a visionary scheme that aims to transform the country into a valued-based and innovation-driven economy. Thailand 4.0 can be characterised by a digitised integrated business and social system and an advanced infrastructure. The plan emphasises technological innovation and education, assisting digital entrepreneurs, boosting internet access and retraining workers appropriately to the 21st century. The government is also cooperating with small and midsize companies and large businesses to ensure that fast-changing industries are up to international standards. As the country forges ahead on its Thailand 4.0 development agenda, firm government commitment and support for blockchain, coupled with the popularity of cryptocurrencies among Thais. Thailand has nowadays been home to remarkable progress in blockchain application – from logistics to banking to digital identity projects. We have identified 3 main blockchain projects in Thailand namely transportation and logistics, banking and finance, and digital identity, that we believe are valuable cases for other blockchain players in Southeast Asia.

**Transportation and logistics** - The State Railway of Thailand uses blockchain in the development of a dedicated communications system to increase the accuracy of its railway itinerary, while Thailand Post, to enhance the security of high-value parcels shipped through its logistics network. **Banking and Finance** - The Bank of Thailand (BOT) adopted blockchain technology with the objective of minimizing interbank settlement fees, meanwhile 22 banks in Thailand have come together to formalise the Thailand Blockchain Community Initiative (BCI), which will streamline Letters of Guarantee via a shared trade finance platform. **Digital identity** - The Electronic Transactions Development Agency (ETDA), Ministry of Digital

Economy and Society, embarked in 2019 on the Digital ID Project to develop a nationwide digital identification platform with aims to use blockchain-based timestamping to authenticate and verify the digital identities of Thai citizens.

Refer to the 2030 Agenda for Sustainable Development that includes 17 Sustainable Development Goals (SDGs), the projects of transportation and logistics related blockchain promote particularly Goal 11 - Make cities inclusive, safe, resilient and sustainable where opportunities are provided for all, with access to basic services, transportation, and all of that in a sustainable way. Meanwhile the projects of banking and finance are part of contribution to the achievement of the Goal 16 - Promote just, peaceful and inclusive societies. Blockchain enables the feature of transparency in transactions and the immutability of asset registration. Transparency can also assure that commerce and trade documents, as well as other relevant data, are accessible to the public and available for criticism, for better strategy-making in corporations and governments, in order to optimise trade and also to ensure standardisation. As regards the digital ID Project, using blockchain for that project can advance Goal 1 - End poverty in all its forms everywhere, since a lot of poor people in the world including Thailand do not have birth certificates or an official identity documentation. Blockchains can record biometric data where individuals enter their data and act as a tool enabling digital identity to be recognised in a proof of authority stage. Identities, which are recorded in blockchain, are immutable and cannot be falsified.

## **2. National ecosystem related to blockchain (national strategies, policies, laws and regulations)**

1. National Strategy (2018-2037)
2. Thailand 4.0 Policy
3. National Science, Technology and Innovation (STI) Policy and Plan (2012-2021)
4. Development of Digitality for Economy and Society Act, B.E. 2560 (2017)
5. Basic Law on Digital for Economic and Social Development (data protection, telecom and spectrum management, cyber security, computer crime, electronics transaction, digital government, digital ID, and digital trade and industry council)

### **3. Challenges to innovation and competence building in blockchain**

Like other countries, challenges exist regarding the implementation and use of blockchain technology across the economy, and blockchain activity expansion to other important major sectors of each country which would affect more people, e.g. in case of Thailand, agriculture (food security) and health and well-being. In terms of security, concerns exist over the security and privacy of user data. Data security will therefore be affected by the business model adopted, whether that be a monopoly or competitive market. Regulatory challenges exist for centralised standards and oversight. Proactive regulation is therefore essential. Regulation may be created in collaboration with international standards and bodies.

### **4. CSTD and its roles to contribute to harnessing blockchain for sustainable development**

1. Disseminating knowledge of blockchain for sustainable development.
2. Building global collaboration between institutions and member countries for the ability to recognise blockchain for sustainable development.
3. Addressing challenges and opportunities.

### **5. Contact persons of the agency responsible for blockchain projects**

Public: 1. Asst. Prof. Dr. Nuttapon Nimmanphatcharin, President and CEO, Digital Economy Promotion Agency

2. Dr. Kanchana Wanichkorn, Vice President, Office of National Higher Education, Science, Research and Innovation Policy Council

Private: 1. Dr. Pravate Tantisajjatham, Secretary-General, Thai Blockchain Association

2. Mr. Jirayut Srupsrisopa, Founder and Group Chief Executive Officer of Bitkub.com

### **6. References**

National Strategy (2018-2037)

Thailand 4.0 Policy

National Science, Technology and Innovation (STI) Policy and Plan (2012-2021)

Development of Digitality for Economy and Society Act, B.E. 2560 (2017)

Royal Decree on a Digital Asset Business, B.E. 2561 (2018)

Amendment to the Revenue Code (No. 19) B.E. 2561 (2018)

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