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ITU issues guidance on the adoption of blockchain

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“We are providing potential blockchain adopters with a clear view of this new technology and how it could best be applied,” says Wei Kai, China Academy of Information and Communications Technology, Chair of the ITU Focus Group on the ‘Application of Distributed Ledger Technology’.

Use cases of blockchain and distributed ledger technology (DLT) are emerging in telecom, finance, energy, supply chain and government, to name just a few of the many sectors interested in DLT application.

“Our aim has been to help industry and government undertake their DLT journeys with greater certainty,” says Wei Kai.

The Focus Group has developed a toolkit to serve all DLT innovators and practitioners, recognizing that DLT applications will take a wide variety of forms.

DLT terms and definitions will provide the foundation for greater cohesion in the development and application of DLT.

A set of ‘assessment criteria’ will support efforts to understand the strengths and weaknesses of DLT platforms in different use cases.

A high-level DLT reference architecture details the key elements

of a DLT platform to build clarity around how DLT platforms should be described and assessed.

The group has documented and analyzed some 60 use cases of DLT, an analysis that includes insight into the relevance of DLT to the pursuit of the United Nations Sustainable Development Goals.

It has also offered a framework for the consideration of DLT's regulatory implications. And it has forecast future technological developments in view of their expected impact on DLT.

< Download the guidance documents free of charge >

The most promising use cases?

"We are still at the very early stages," says Wei Kai. "With the exception of cryptocurrency, we don't yet see any killer apps."

The guidance documents analyze DLT use cases of maturities ranging from ideas and concepts to Proofs of Concept and full-fledged implementations.

"DLT is so broad, it's very difficult to compare the different use cases," says the Focus Group's Vice-Chair, Suzana Maranhão, Brazilian Development Bank.

"Supply chain, however, looks to be an area where DLT applications could deliver considerable benefit in the near term. The Focus Group received many use cases in this field."

With all participants sharing the same view of supply chain data, DLT can increase the efficiency of supply chain management and greatly simplify dispute resolution.

DLT's tamper-proof chain of events can strengthen traceability, increasing the transparency of products' provenance and limiting the time and expense required to verify conformance with quality standards.

And in their simplest form, adds Maranhão, these DLT applications do not require a transfer of assets, with the result that there are far fewer regulatory implications.

“Use cases involving an exchange of assets have more complex implications, and they are maturing more slowly as a result,” says Maranhão.

A new world without central authority?

Blockchain and DLT can support trusted exchanges without a central authority to intermediate these exchanges. Innovation in the field has the potential to support a shift towards more distributed models of establishing trust.

“But the idea of a new world without need for central banks or governments is simply too radical,” says Wei Kai. “We will see a compromise between this new world and traditional law and regulation. It will be more evolution than revolution.”

ITU is the United Nations specialized agency for information and communication technology (ICT). Its global membership includes 193 Member States and some 900 leading companies, universities, and international and regional organizations.

“ITU’s diverse membership will help us to strike an appropriate balance between different stakeholders’ interests,” says Wei Kai.

“ITU international standards will be influential in meeting the dual objective of supporting DLT innovation while respecting the purposes of established institutions.”

The power of standard terms and definitions

The Focus Group has brought together a diverse range of interests, from governments and their regulators to multinational companies, civil society organizations, and SMEs and start-ups.

“It was a very honest and open exchange of views,” says Skylar

Hurwitz, consultant at Jelurida and founder of Demetrius Consulting, two of the many SMEs that participated in the Focus Group.

Hurwitz highlights the value of the DLT terms and definitions agreed by the Focus Group.

“DLT projects tend to use the terms friendliest to their platforms,” says Hurwitz.

“This Focus Group was the first neutral place to collaborate on standard terms and definitions. Marketing was put aside, recognizing the potential to move towards international standards.”

Hurwitz makes an example of the definition of ‘smart contracts’.

“It’s empowering. With the support of an agreed definition, we can now progress to the next stage of comparing the different types of smart contracts and their competitive benefits.”

Join the ITU standardization community

ITU Focus Groups are open to all interested parties. These groups accelerate ITU studies in fields of growing strategic relevance to ITU membership.

The guidance documents developed by the Focus Group were approved by last week’s meeting of the ITU Telecommunication Standardization Advisory Group.

These documents will support ITU standardization in working groups including Q22/16 (Distributed Ledger Technologies and e-Services) and Q14/17 (Security aspects of Distributed Ledger Technologies).

ITU standardization for blockchain and DLT will benefit from ITU’s efforts to accommodate SMEs and start-ups with a pilot project offering free-of-charge participation. This pilot project will be

succeeded by a new category of ITU membership for SMEs characterized by a greatly reduced membership fee.

< Learn more about the SME programme >

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