General Assembly

Seventy-sixth session
Item 144 of the provisional agenda*
Joint Inspection Unit

Review of blockchain applications in the United Nations system: towards a state of readiness

Note by the Secretary-General

The Secretary-General has the honour to transmit to the members of the General Assembly his comments and those of the United Nations System Chief Executives Board for Coordination on the report of the Joint Inspection Unit entitled "Blockchain applications in the United Nations system: towards a state of readiness" (JIU/REP/2020/7).

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* A/76/150.

I.   Introduction

1.   In its report entitled "Blockchain applications in the United Nations system: towards a state of readiness" (JIU/REP/2020/7), the Joint Inspection Unit undertakes a review aimed at providing a contribution to the collective efforts triggered by recent overarching strategies on new technologies and the future of work. The review addresses the issue of innovation and the use of digital technologies by the United Nations system in an action-oriented approach.

II.   General comments

2.   Organizations welcome the report and its findings and appreciate the Unit's initiative to foster innovation and digital transformation through the adoption of new technologies and related processes.

3.   Some emphasize the importance of considering strategic and context-related requirements when adopting blockchain technologies and reiterate that the availability of good Internet bandwidth is a prerequisite for the deployment of blockchain solutions at scale.

4.   Privacy concerns and incompatibilities between the use of blockchain technologies, cybersecurity risk management and data protection frameworks are cited, particularly by some entities working in the humanitarian sphere, while other humanitarian organizations note that they do not experience privacy challenges or security incompatibilities when developing and implementing blockchain-based solutions.

5.   Entities recognize the cross-cutting nature of implementing blockchain projects (including operational, technological and legal perspectives) and stress the importance of considering the status of privileges and immunities and ensuring that their legal interests are adequately protected when adopting blockchain technologies.

6.   Organizations partially support the review's recommendations.

III.   Comments on specific recommendations

Recommendation 1

The governing bodies of the United Nations system organizations should ensure that, when applicable, the use of blockchain applications will be integrated, together with other digital technologies, into the innovation strategies and policies adopted by their respective organizations.

7.   Organizations note the report is addressed to their governing bodies.

8.   Entities promote the principle that all the adopted technologies should be considered holistically within the framework of an entity's digital architecture and avoid the creation of technological "islands".

Recommendation 2

The executive heads of the United Nations system organizations should ensure that the examination of possible blockchain use cases will be based on assessments of project risks, including with respect to relevant organizational policies and regulations on privileges and immunities, data protection, confidentiality, cybersecurity, system integrity and reputation.

9.   Organizations support this recommendation.

10.   With data protection as a core tenet of any blockchain innovation, entities promote assessing the legal implications of the potential use of blockchain and developing legally acceptable solutions going forward.

11.   A balance between that accurate risk assessment is essential in adapting a new technology at scale. However, there should be an enabling environment that allows for agile experimentation with new innovative solutions that are being tested and piloted at a small scale with acceptable failure parameters.

Recommendation 3

The executive heads of the United Nations system organizations, if they have not already done so, should endorse the "Principles for digital development" by the end of 2022, as a first step to ensuring a general common understanding of digital transformation at the organizational level, including the possible use of blockchains.

12.   Organizations support this recommendation, although some note that there may not be sufficient time to reach a consensus for its adoption by 2022 within those entities that have not yet endorsed the "Principles for digital development".

Recommendation 4

The executive heads of the United Nations system organizations should ensure that any decision on using blockchain should be based on an appropriate determination of the business case and of the most suitable solution, using as guidance a decision-making matrix (as described in the report of the Joint Inspection Unit, as well as any enhancements and/or adaptations).

13.   Organizations partially support this recommendation.

14.   Entities appreciate the utility of the decision-making matrix and suggest it be applied as a guide rather than as mandatory rules, given that other considerations, specific to each entity, are to be considered. For this reason, the decision-making matrix must be sufficiently flexible and more extensively elaborated, including elements such as value transfer, ongoing or long-running transactions, or processes to respond to the requirements and mandate of each entity.

Recommendation 5

The Secretary-General, in consultation with the executive heads of the United Nations system organizations, with support from the International Telecommunication Union, should assign, by the end of 2021, to a United Nations representative in charge of digital technologies and related issues, the task of following the development of blockchain interoperability standards and open-source projects aimed at blockchain interoperability, as part of an overall consideration of the policy implications of the technology and to work with all organizations accordingly.

15.   Organizations partially support this recommendation.

16.   Organizations note the importance of keeping flexibility in the new standards developed and introduced in the blockchain technology landscape in view of the fast-evolving technologies.

17.   To the extent that this recommendation envisages the development or updating of regulations, rules and standards governing blockchain, entities agree that it would be useful to collaborate among the United Nations system organizations. However,

an action of this nature requires a robust interagency consultative process and a detailed analysis of the implications, and achieving this by the end of 2021 is not a realistic timeline.

Recommendation 6

The governing bodies of the United Nations system organizations should encourage Member States to engage with the United Nations Commission on International Trade Law in its exploratory and preparatory work on legal issues that relate to blockchain in the broader context of the digital economy and digital trade, including on dispute resolution, which is aimed at reducing legal insecurity in that field.

18. Organizations note that this recommendation is addressed to the governing bodies.

19. However, the United Nations Secretariat notes that its Office of Legal Affairs, through the International Trade Law Division, serves as the substantive secretariat of the United Nations Commission on International Trade Law (UNCITRAL). In this role, the Division has been supporting UNCITRAL in carrying out exploratory and preparatory work on legal issues related to the digital economy. While maintaining a technology-neutral approach, UNCITRAL has provided guidance on the enactment and implementation of its texts using blockchain solutions. The explanatory note to the UNCITRAL Model Law on Electronic Transferable Records (2017) specifically addresses issues such as pseudonymity and integrity of the record with respect to blockchain. The outcome of the UNCITRAL digital economy work may be compiled and used to provide guidance to entities of the United Nations system on the legal aspects of blockchain in a manner akin to the Notes on the Main Issues of Cloud Computing Contracts,[1] which address the main issues of contracts for cloud computing services between business entities for end use.

20. UNCITRAL is also developing a "legal taxonomy", which defines key topics associated with emerging technologies and applications used in digital trade, identifies the actors involved in their use, assesses the legal regimes engaged and identifies gaps that might warrant international harmonized solutions through future legislative work.

21. Exploratory work carried out so far has found that, while the use of blockchain calls attention to governance and data protection issues, it is the use of blockchain-enabled applications such as smart contracts (and automation more generally), online platforms and digital assets (including cryptocurrencies) that raise novel legal issues that would benefit from international harmonized solutions. UNCITRAL is currently considering a proposal to develop an international legislative text on automation and artificial intelligence, including smart contracts. The Secretariat remains ready to support the efforts of Member States to engage with UNCITRAL in this work.

Recommendation 7

The executive heads of the United Nations system organizations that have developed blockchain applications – in line with the call by the Secretary-General in his Road Map for Digital Cooperation for the United Nations to deploy digital public goods – should follow, whenever possible, open-source principles when they develop software and make available the codes to other United Nations organizations.

22. Organizations partially support this recommendation.

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[1] Available at https://uncitral.un.org/cloud.

23.   Some entities underscore the importance of defining the "open-source" principle for each particular blockchain project development, as this may vary based on practical or technical constraints, security and privacy concerns and the dynamics of the people and networks in that space.

24.   Adopting an unrestricted open-source strategy to blockchain-based systems may unintentionally cause further fragmentation of blockchain applications among organizations, losing the advantages of the network effect.

25.   One entity places the implementation of recommendations 2 and 4 as the prerequisite for the actualization of proposed recommendation 7.

Recommendation 8

The executive heads of the United Nations system organizations, through the relevant coordination mechanisms, including with support from the United Nations International Computing Centre, should consider the adoption of a non-binding interagency blockchain governance framework for use by interested organizations, with a view to ensuring coherent and consistent blockchain approaches across the system by the end of 2022, including for projects that may involve multiple United Nations organizations.

26.   Organizations support this recommendation and recognize that inter-agency collaboration is essential to considering this recommendation.

27.   Entities enjoy different views on the nature of blockchain governance framework, while recognizing the United Nations International Computing Centre's unique expertise and the potential role the Digital and Technology Network (DTN) of the High-level Committee on Management may play to spearhead this initiative.

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