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**WIPO Blockchain Whitepaper**

**Annex II: Survey Report**

INTRODUCTION

The aim of this survey was to gather industry information to support the writing of a whitepaper on the use of blockchain in IP ecosystems. This whitepaper will identify how blockchain technology can contribute to establishing robust, streamlined, cost-effective, inclusive, and transparent IP processes in the era of digital transformation.

The present survey was conducted from July 2020 to August 2020. Regarding participation, the number of survey answers totalled 546. After a data cleansing process[[1]](#footnote-1) a total of 434 entries were discarded following the criteria listed below:

* Disqualified: 9
* Test: 4
* Empty, non-contact detail entries: 340
* Duplicated entries from the same user: 28
* Non-relevant partial answers (only those entries where more than 20 out of 63 questions were answered): 53

After this process, the final number of responses was 112, with 82 completed and 30 partially relevant entries[[2]](#footnote-2).

The survey questions were divided into six blocks: (1) general information, (2) blockchain knowledge within the organization, (3) implementation of blockchain technology, (4) benefits and challenges, (5) specific questions for IP offices and other governmental organisations, and (6) specific questions for the IP industry in relation to their business in the IP value chain. The summary of each question block is explained below. General statistical explanation and analysis of the survey responses throughout the document are followed by selected, illustrative quotations from respondents, which exemplify the spirit of responses received.

GENERAL INFORMATION

This section centres on profiling participants and the role they play within the IP ecosystem. As questions 3 and 4 show, the vast majority provide IP legal services (44%) and management services (39%) focusing on the protection and management aspects of the IP ecosystem.

BLOCKCHAIN KNOWLEDGE WITHIN THE ORGANIZATION

About the level of awareness and knowledge of blockchain technology, out of 112 participants: 50 (45%) know little about its main concepts and advantages, 38 (34%) have substantial knowledge about the technology, and 15 (13%) consider themselves blockchain experts.

Among technical experts, when asked about the most valuable blockchain characteristics, the top 3 answers were:

* Immutability of blockchain data, which remains unchanged, unaltered, and indelible;
* Blockchain traceability to identify, track, and trace transactions and data from the moment they are entered and their use over time; and
* Blockchain transparency where users can view recorded transactions depending on the system’s openness.

When it comes to technical knowledge, half of the participants were aware that use cases such as identity, notarization, tokenization, and time-stamping can be implemented on blockchain, as well as of how smart contracts are built, or they were familiar with the definition or implementation of smart contracts. The other half, however, were aware of the main aspects of the technology and how it works from a technical perspective, but had never used it before.

"We understand the importance of Standards for data interoperability, security and scalability." - Civic Ledger

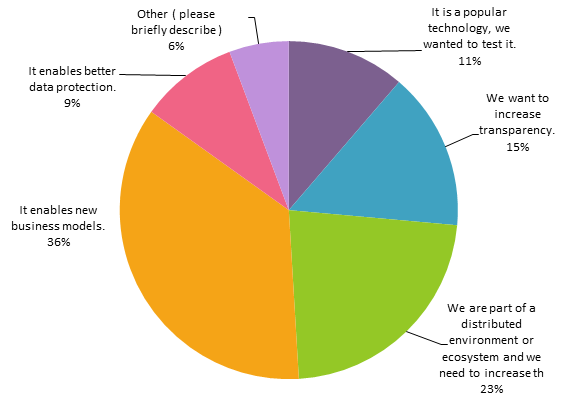
Regarding business expertise within the organization, most participants highlighted that they either already have a dedicated team for blockchain initiatives, or are considering forming one. However, 30 participants mentioned not having any plans in the foreseeable future to establish a dedicated blockchain group.

"We have a cross-functional working group that evaluates opportunities that impact our organization, stakeholders, and partners within our ecosystem. It promotes interoperability standards and relevant opportunities to stakeholders and partners within our ecosystem." – NBA Professional Sports League

"The entire company is based on the assumption that public blockchains are an effective way to protect and manage IP assets." - Bernstein Technologies GmbH

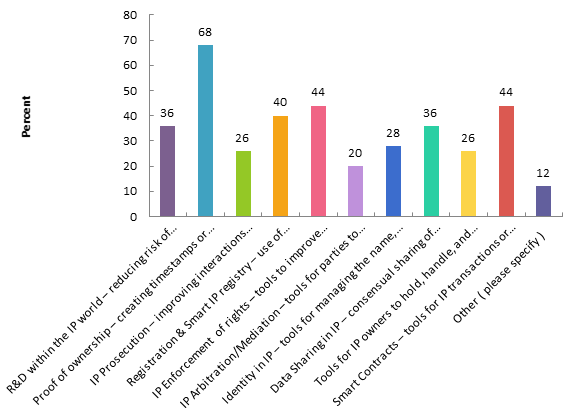
IMPLEMENTATION OF BLOCKCHAIN TECHNOLOGY

Participants currently implementing blockchain technology or those with the intention of doing so within the next 12 months chose to use blockchain for the following reasons:



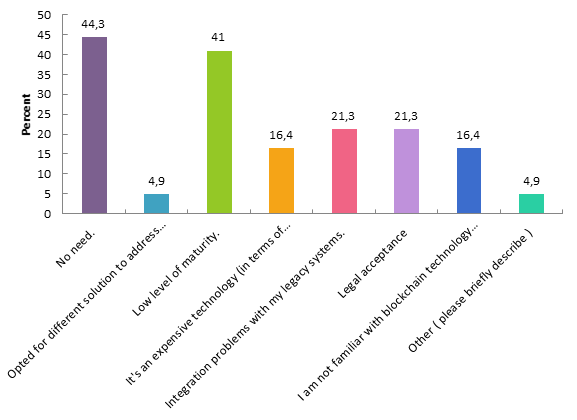
“In the context of intellectual property, blockchain and related distributed ledger technology offer obvious possibilities for IP protection and registration as evidence, either at the registry stage or in court. This also promises a cost-effective way to speed up such processes.” – Clarke Modet

While 27% of the companies implementing blockchain solutions are currently experimenting and validating the potential of blockchain, 18 companies are implementing wide end-user solutions in cooperation with partners.

 The areas where companies plan to use blockchain are shown in the following graph:

Regarding the data governance of the solutions, only 15% have a clear model while the majority have not defined any specific governance and are also not considering any scalability criteria to cover other IP rights.

On the other hand, the main reasons for not implementing blockchain solutions are:



BENEFITS AND CHALLENGES

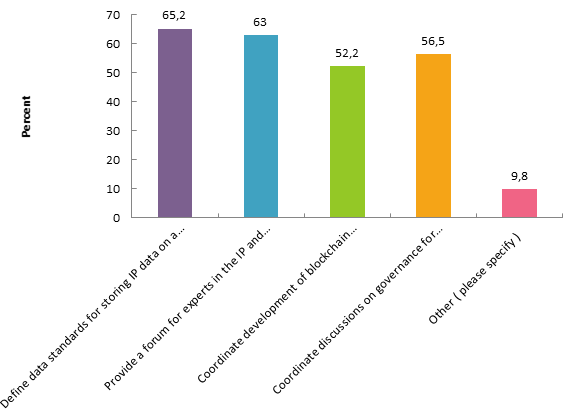
The next set of questions targets the benefits and challenges of adopting blockchain within the IP community. In this line, the most relevant statement about the benefits of using this technology is the ability to increase transparency and traceability by enabling all participants to record their transactions and share this information within the network.

Among the expected challenges for blockchain adoption, the most common is in terms of governance and regulatory interoperability challenges (e.g. different legal frameworks, lack of standards, data protection, digital identity, and so on), followed by lack of awareness of blockchain's potential, and immaturity of blockchain products. For these reasons, cloud storage and centralized databases are preferred to blockchain solutions.

"The biggest challenge is that in an increasingly global world where IP rights of parties routinely transcend borders, the lack of a unifying framework or platform (both at tech and policy / treaty level) will make it difficult, if not impossible, to implement solutions effectively and to their full potential." - Ajay Sahni Associates

An effective solution would be for WIPO to take the following actions in order to facilitate a blockchain-enabled IP ecosystem:

* "Advocate for change at the different IP offices to allow blockchain-based transactions." - Koch Industries, Inc.
* "Develop reference models for using blockchain technology in the IP field, including guiding principles, common practice, and use of terminology." - Clarke, Modet & Cia



IP OFFICES AND OTHER GOVERNMENTAL AUTHORITIES’ SPECIFIC QUESTIONS

The questions targeting the perception of IP Offices determined by 40% that blockchain implementation would be useful to provide secured services to the IP Industry as well as to create a worldwide trust platform. It would also be an opportunity to create a shared registry and redefine the relationship between IP Offices. Moreover, the use of blockchain for anti-counterfeiting and IP Rights enforcement is seen as the most relevant use case for the IP ecosystem.

IP INDUSTRY SPECIFIC QUESTIONS

With regard to the participants working in the IP industry, 54% believe that with the adoption of blockchain they will implement a new way of managing and monetizing IP under new governance forms, and new ways of protecting intellectual property.

### Creation phase

The biggest challenge in the creation phase is represented by non-registered IP rights, such as copyright and design rights, which should be more formally regulated to allow for greater protection against unauthorized copying.

The most effective use cases for this technology (1) are the implementation of legal smart contracts for confidentiality agreements with partners and testers and (2) keeping an immutable record of inventions in order to help prove the date and ownership of the invention.

### Protection phase

In the protection phase, the idea of IP Offices taking steps towards a unique and global blockchain-based IP registry is perceived as follows:

* 36% of respondents think it would be a great improvement for all IP stakeholders, as it would save time, money, and reduce complexity.
* 24% would be in favour, but don't think it is possible since it is a governance, not technical issue.
* 19% think that it is maybe not possible for the time being, but the first step could be to create a network to enable information exchange in a more efficient, transparent, and secure way across the IP ecosystem.
* 17% think that we would first need a unique digital identity model for the IP ecosystem and a trust framework, then we could build global applications.
* 4% Other

Management phase

The main benefits of using blockchain during this phase are expected to be, firstly, a single IP registry blockchain that can simplify IP audits and due diligence, and, secondly, the creation of trust network hubs that can improve outcomes by facilitating interactions between firms and institutions (30%).

Commercialization phase

In the final phase, 22 out of 39 participants from the IP ecosystem believe that blockchain could change the way IP rights are transferred by creating an automatic process from the launch of the offer to the execution of a smart contract, once payment is completed. Moreover, 27 participants think that the adoption of blockchain technologies in the supply chain could increase the efficiency, speed, and volume of global trade by limiting the costs associated with international transactions. Finally, 23 participants believe that the adoption of blockchain technologies could lead to increased consumer protection and confidence in digital trade. In line with the above, an automatic system for IP rights transfers, payments, and rights of use, is the use case participants are most interested in.

[Annex III follows]

1. Data cleansing: process to identify incomplete, incorrect, inaccurate or irrelevant parts of the data and then replace, modify, or delete dirty or coarse data. [↑](#footnote-ref-1)
2. Partial answers: the participant did not go through the complete survey. [↑](#footnote-ref-2)