European Blockchain Sandbox
Best practices report
1st Cohort, Part B –
Abstract and Executive Summary

Bird & Bird / OXYGY

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1. Abstract

Bird & Bird, its consultancy arm OXYGY and other consortium partners have been commissioned by the European Commission to set up and operate the European Blockchain Sandbox, providing a framework for regulators, supervising authorities and blockchain innovators to engage in a cross-border regulatory dialogue, identify obstacles from a legal & regulatory perspective in a safe and confidential environment, and thus increase legal certainty for innovative decentralized technology solutions, including blockchain. The initiative brings together regulators/authorities and innovators across industry sectors, allowing regulators and authorities to enhance their knowledge of cutting edge blockchain technologies and allowing innovators to enhance their understanding of relevant laws and regulations.

The initiative annually supports 20 projects and has started in 2023. The sandbox is open to use cases based on any blockchain infrastructure.

The dialogues for the 1st cohort took place from the end of 2023 until May 2024 and have resulted in lessons learned, best practices and recommendations which are relevant for the wider community. The results are presented in this best practices report (Best practices report, 1st cohort, Part B). The setting up of the European Blockchain Sandbox, the application & selection process and the matching with relevant regulators and supervising authorities for the first cohort of 20 uses cases is published as Best practices report, 1st cohort, Part A (link).

2. Executive summary

a. Objectives and policies

The *European Blockchain Sandbox* is a regulatory sandbox which aims to establish a pan-European framework for regulatory dialogue. This initiative of the European Commission brings together national and EU regulators and authorities with providers of innovative blockchain/DLT applications in both the private and public sector to identify possible issues and solutions from a legal & regulatory perspective in a safe and confidential environment. The cross-border regulatory dialogues will allow innovators to better understand relevant laws and regulations. The exchanges will allow regulators and authorities to enhance their knowledge of cutting-edge technologies involving blockchain and distributed ledger technologies, and to exchange views and experiences with other regulators and authorities.

The pan-European Blockchain Sandbox is set up and operated by a consortium of legal experts from the law firm Bird & Bird and its consulting arm OXYGY supported by blockchain experts of Warren Brandeis and website designers Spindox which has been procured through an open call for tenders in 2022. The selection and the award process is overseen by a panel of independent academics consisting of Professor Roman Beck (IT-University, Copenhagen), Professor Soulla Louca (University of Nicosia, Cyprus) and Professor Walter Blocher (University of Kassel).

The European Blockchain Sandbox initiative annually supports 20 projects and has started in 2023. The sandbox is open to use cases based on any blockchain infrastructure. Blockchain use cases are selected on the basis of published eligibility and award criteria and matched with relevant regulators and supervising authorities. The European Blockchain Sandbox does not imply legal endorsement or regulatory approval of the use cases, nor does it allow for derogations of applicable laws. Results are made available to the wider community through best practice reports.
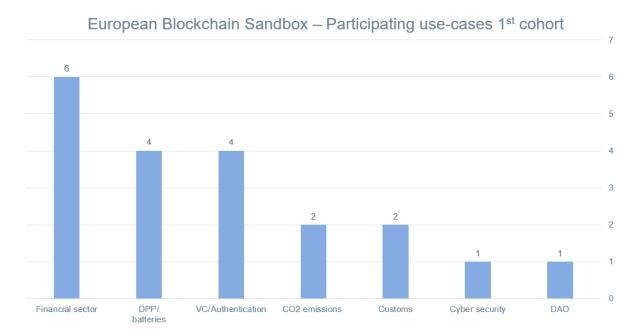
The dialogues for the 1st cohort of use cases have resulted in important lessons learned, best practices and recommendations which are relevant for the wider community. These results are presented in this best practices report (*1st cohort – Part B*).

The setting up of the European Blockchain Sandbox, the application & selection process and the matching with relevant regulators and supervising authorities for the 1st cohort was published as Part A of this Best Practices Report (*1st cohort – Part A*).

b. Participants in the first round of dialogues

After the launch of the European Blockchain Sandbox on 14 February 2023, the project has gone through a successful first application round, which after a rigorous selection process resulted in an impressive 1st cohort of 20 innovative blockchain/DLT use cases, which between them represented all EU/EEA regions and a range of industry sectors (including one EBSI use case). The financial/crypto asset applications are well represented but not dominating, and a broad variety of other use cases is represented in the first cohort, covering areas such as verifiable credentials/authentication, CO2 emissions, digital product passports, cultural asset passports, customs, cyber security, data sharing and DAOs.[1]

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[1] The overview of selected 1st cohort use cases is added as Annex I to the best practices report.

European Blockchain Sandbox – Participating use-cases 1st cohort

The selected use cases in the 1st cohort have been successfully matched with well over 50 national and EU regulators/authorities from across the EU/EEA and covering a broad range of regulatory areas. An overview of the participating regulators/authorities is published on the project website (link).

> ➢ On average, more than 4 regulators/authorities have participated in the 1st cohort cross-border dialogues for each individual use case (exceeding the objective of on average 1.5 regulators per use case).

> ➢ Financial market authorities competent for Financial Sector regulation, MiCAR and AML were well represented in the dialogues for the 1st cohort which is important in view of the number of use cases in these areas and the broad range of relevant financial regulatory topics.

> ➢ For most of the 1st cohort use cases, the dialogues were cross-border with a range from 1 to 8 regulators /authorities per use case. A combination of national and EU regulators participated in the dialogue meetings for 9 of the 1st cohort use cases.

> ➢ Several regulators/authorities participated in more than 1 use case with a range from 1 to 4 use cases.

> ➢ The regulatory dialogues for 5 use cases focussed on more than 1 regulatory area such as the combination of the GDPR, Cyber Security, AML and the GDPR and DPPs/Battery Passports and the GDPR.

Each of the twenty 1st cohort use cases were matched with relevant regulators/authorities and the dialogues for nineteen of these use cases were completed and resulted in best practices/lessons learned. The combined results are presented in this report.[2]

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[2]   The dialogue for one of the twenty use cases is still ongoing and will be completed before the summer of 2024. This dialogue will be included in the results that will be presented in the next best practices report.

c. Format of the 1st round of regulatory dialogues

The dialogues for the 1st cohort were organized in accordance with the project's Protocol for Sandbox Participation.[3] The regulatory focus areas and regulatory topics for the dialogues were determined based on the selected use cases and in consultation with the selected use case owners while taking into account an appropriate balance of relevant regulatory areas for the 1st round of dialogues.

In preparation of the dialogue meetings, one-hour blockchain expert sessions were held per dialogue for the participating regulators/authorities. These sessions covered blockchain infrastructure and applications in general with a focus on the relevant industry sector or category of applications for the dialogues.

The actual dialogues consisted of two online dialogue meetings of each 1.5 hours which were moderated by Bird & Bird. Regulatory experts from Bird & Bird have taken the lead in preparing the agenda for the dialogue meetings with the regulatory topics, taking on board suggestions and information from the use case owners and the participating regulators/authorities. It is important to note that blockchain technology is not a one size fits all. The characteristics of the blockchain infrastructure and technical standards, the data flows and the use cases are important to understand the regulatory issues. Therefore, understanding the characteristics of the use case from a regulatory perspective was an important element during the dialogues.

To ensure an efficient use of time, information about the use case and the agenda for the dialogue meetings with relevant legal/regulatory context and further relevant information as appropriate were made available on the secure platform in advance of the dialogue meetings.

Summaries of the discussion during the dialogue meetings were shared in draft with the participants to the individual dialogues after each meeting. Based on the dialogue in the first meeting the agenda could be adjusted, additional participants could be invited and further information could be shared. For some dialogues an additional meeting or demo was held.

Following the dialogue meetings, a draft best practices document was prepared with draft lessons learned, best practices and recommendations for review by the participants to the dialogue. The draft documents were adjusted on the basis of the comments submitted by the participants and semi-final versions were shared for final comments. The resulting best practice documents are not specific for an individual use case and are the core of the best practices, lessons learned and recommendations that are presented in this best practices report.

The approach during the dialogues depended on the use case and the area(s) of regulation:

> ➢ Several dialogues focused on **regulatory compliance** by DLT/Blockchain use cases. Examples are the dialogues with a focus on the GDPR, Cyber Security, AML, MiCAR and Financial Sector regulation. During these dialogues, valuable guidance was provided by the participating regulators/authorities to the use cases which resulted in best practices and lessons learned which are presented in this best practices report. The best practices and lessons learned are presented on a generic level and are not specifically linked to individual use cases or dialogues.

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[3]   This Protocol (version 1.0) can be accessed through the following hyperlink: https://ec.europa.eu/digital-building-blocks/sites/display/EBSISANDCOLLAB/Key+documents.

➢ Other dialogues focused on how the use DLT/Blockchain applications can **support efficient and effective compliance and oversight**. Examples of the use of Blockchain/DLT as an extra tool, making compliance and oversight more efficient, were discussed in the customs area, Battery Passports/DPPs, Cultural Asset Passports and CO_2 reporting (EU ETS/MRV). The use of Blockchain/DLT for mandatory monitoring, reporting and oversight will likely become a relevant area for the dialogues in the next cohorts.

➢ Finally, the dialogues for some use cases focussed on **regulation as a facilitator** such as (i) the use of legal wrappers for DAOs to enhance compliance, (ii) the use of the EUDI Wallet and new categories of qualified trust services in scope of the eIDAS Regulation and (iii) the possibility to qualify as a recognized Data Altruism Organisation in the sense of the Data Governance Act, as a possibility to enhance credibility of a Blockchain/DLT use case.

d. Relevant legal & regulatory areas for the 1st round of dialogues

The report describes the relevant laws and regulations for blockchain/DLT applications. The 1ˢᵗ round of dialogues focussed on 13 of these relevant regulatory areas and have resulted in a wide range of lessons learned, best practices and recommendations. The results are presented in the *best practices report, 1ˢᵗ cohort, Part B* in different chapters for each of the 13 regulatory areas.

The main focus points for each regulatory area are set out below.

1. Data Protection (GDPR) - Regulatory compliance (Best practices report Section 3)

From a GDPR perspective one the first questions that needs to be addressed is if the data that is recorded on the ledger qualifies as personal data. In other words, does the data represent information that relates to an identifiable natural person or is it anonymous data?

If the data that are recorded on the ledger qualifies as personal data, certain measures will have to be taken to ensure GDPR compliance. Measures that can be taken were discussed during the dialogues and are presented in the report.

2. Cyber security (NIS2) – Regulatory compliance (Best practices report Section 4)

The dialogues in relation to cyber security legislation concentrated on the NIS2 directive.[4] Unlike the GDPR, the focus of NIS2 is not on personal data but on the infrastructure. and information systems used by the entities within the scope of the NIS2 Directive and the national implementation thereof.

The NIS2 legislation will be relevant for many Blockchain/DLT use cases either directly or indirectly because they qualify as suppliers for essential or important entities. This is analysed in more detail in the report.

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[4]   The NIS2 Directive (Directive (EU) 2022/2555) needs to be transposed into the national law of the Member States by 17 October 2024.

3. DAOs - Commercial Registers (Best practices report Section 5)

The term "Decentralised Autonomous Organisation" ("DAO") is not defined and is currently not used in EU legislation. There are different types of "DAOs": with/without a legal wrapper and for profit/non-profit.

DAOs lacking legal entity status and lacking a central authority figure (depending on their activities) may face compliance issues under certain existing legal frameworks which are designed to govern legal or natural persons and pose a complex challenge for regulators due to their inherent conflict with traditional legal frameworks. The report discusses these issues and explores possible solutions.

4. Customs – Blockchain/DLT solutions under the existing customs regulatory framework (Best practices report Section 6)

Existing and proposed EU legislation in the customs area is technology neutral and does not preclude the use of blockchain applications for declarations such as for import or export.

Although it can be challenging to meet the current mandatory regulatory customs requirements through blockchain solutions as a result of e.g. formal requirements regarding data submission in the national customs legislations, blockchain solutions can already be used in the customs area as an extra tool in particular in those areas where there could be trust issues and/or for efficiency reasons. Several examples were discussed during the dialogue meetings and are described in more detail in the report.

5. Blockchain/DLT solutions for Battery Passports and DPPs (Best practices report Section 7)

Existing and proposed EU legislation for Battery Passports and Digital Product Passports is technology neutral and does not preclude the use of Blockchain/DLT applications.

Several Blockchain/DLT solutions for Battery Passports/DPPs were presented/discussed during the 1st cohort dialogues and possible issues and solutions/recommendations were identified. Reference is made to the report for further details.

6. Blockchain/DLT solutions to help preventing trafficking in cultural goods (Best practices report Section 8)

In accordance with the UNESCO Conventions State Parties have adopted national legislation and have established national registries to prevent trafficking in cultural goods. However, the measures that are taken on a national level are currently not harmonized.

The possibility to introduce blockchain/DLT based digital cultural asset passports as a supportive measure against trafficking in cultural goods also from a global perspective was discussed as part of the sandbox.[5]

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[5] DG HOME has commissioned a Study on measures to increase traceability of cultural goods in the fight against cultural goods trafficking at EU Member State level and at EU level. The current use of DLT/Blockchain solutions is explored as part of this study.

7. <u>Blockchain/DLT solutions for EU ETS / MRV reporting (in the maritime sector) (Best practices report Section 9)</u>

Existing EU legislation in the area of the monitoring, reporting and verification of CO2 emissions from maritime transport is technology-neutral and does not preclude the use of blockchain applications for statutory reporting purposes.[6]

The use of blockchain solutions as an extra tool for verifiers and competent authorities against fraud and to detect mistakes at an early stage were discussed during the dialogues and are described in more detail in the report.

8. <u>Blockchain/DLT solutions – Data collection & sharing under the Data Governance Act (Best practices report Section 10)</u>

The Data Governance Act (**"DGA"**) is in particular relevant for use cases that qualify as Data Altruism Organisation (voluntary regime) or as Data Intermediation Services (mandatory regulatory obligations) in the sense of the DGA.

The characteristics of Data Altruism Organisations and DISPs that were discussed during the dialogues in the context of the DGA and the relevant regulatory compliance requirements are set out in more detail in the full report.

9. <u>Relevance of the eIDAS 2 regulation for Blockchain/DLT solutions (Best practices report Section 11)</u>

Pursuant to the amended eIDAS regulation (**"eIDAS 2"**)[7] the list of "trust services" is extended and the EUDI Wallet is introduced. Under eIDAS 2 Blockchain/DLT solutions will normally qualify as trust services and/or will use trust services which are governed by the eIDAS regulation.

During the dialogues the new categories of trust services which can be particularly relevant for Blockchain/DLT applications were discussed, such as "electronic attestation of attributes", "electronic archiving services" and "electronic ledgers".

10. <u>Blockchain/DLT solutions for AML compliance (Best practices report Section 12)</u>

DLT/Blockchain providers that are active in e.g. the financial/crypto-asset sectors and qualify as service providers under financial sector regulation or (in the future) CASPs under MiCAR will have to comply with AML requirements. These requirements are currently not harmonized across the EU/EEA.

Questions how blockchain solutions can help to ensure AML compliance in a more efficient/effective way were discussed during the dialogues.

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[6]   A Study on the potential of blockchain technology in facilitating EU climate policy implementation was conducted on behalf of the European Commission's Directorate General for Climate Action setting out how certain key climate EU policy challenges could potentially be addressed by blockchain solutions and the pros and cons of the introduction of blockchain to EU climate policies including the EU ETS and the MRV regulatory areas (Study on the potential of blockchain technology and other digital tools in facilitating EU climate policy implementation - Publications Office of the EU (europa.eu)).

[7]   Regulation (EU) 2024/1183 of 11 April 2024 amending Regulation (EU) No 910/2014 as regards establishing the European Digital Identity Framework entered into force on 20 May 2024.

11. <u>MiCAR & Financial sector regulation – Scope and delineation (Best practices report Section 13)</u>

The 1st round of dialogues focussed on different areas for delineation and additional clarification such as: i) the delineation between MiCAR and MiFID/Prospectus Regulation, ii) the delineation between crypto asset services and payment services and, iii) a compendium of topics where clarification/guidance would be helpful.

The combined results of the dialogue meetings are discussed in more detail in the report.

12. <u>Tokenization of shares and dividend payments (Best practices report Section 14)</u>

Irrespective of MiFID harmonizing national legislations, there are still different interpretations whether a token may qualify as security in each member state. Different approaches to transferability of shares or interest under national corporate or partnership law can be a reason for the national differences in interpretation if a token qualifies as a security. In addition, corporate law amendments in national law to facilitate the EU DLT Pilot Regime were discussed.

13. <u>Application of Financial Sector regulation to Smart Contracts (Best practices report Section 15)</u>

The wide range of potential functionalities of smart contracts in the financial sector requires a case-by-case analysis and lessons learned are discussed in the report.

The regulation of smart contracts will be a relevant area for the next rounds of dialogues.

e. Conclusions and next steps

The 1st round of regulatory dialogues resulted in a broad range of best practices, lessons learned and recommendations which are presented in the *Best practices report, 1st cohort, Part B*.

The European Blockchain Sandbox project team would like to thank the participants to the 1st round of dialogues for sharing their expertise and experiences and for contributing to the best practices, the lessons learned and the recommendations that were identified during the dialogue meetings.

Feedback from the 1st cohort of selected use cases and participating regulators/authorities is very positive. The use cases appreciate the legal/regulatory guidance and the possibility to have an open dialogue with regulators/authorities. The regulators/authorities appreciate to learn more about DLT use cases and to have a cross-border dialogue with other national and EU regulators/authorities. Almost all regulators/authorities are interested to participate again in the next round of dialogues (depending on use cases and regulatory areas/topics) and many regulators/authorities have shared helpful feedback and recommendations for possible improvements for the next rounds of dialogues.

Although this is only the 1st round of dialogues, it appears safe to say that the European Blockchain Sandbox is delivering a clear and positive impact for the whole Blockchain ecosystem. With "impact" we refer to the pivotal role that the Sandbox is playing to reinforce the perceived maturity and potential of blockchain technology. This important outcome has been achieved thanks to the following results:

- increased legal certainty through enhancing a better understanding of relevant laws and regulations by innovators and greater confidence of compliance;

- enhancing confidence among stakeholders and regulators/authorities by showing the potential of Blockchain/DLT solutions to support effective and efficient compliance and supervision across different industry sectors;

- the possibility to improve the regulatory framework as a result of the identification of regulatory issues and solutions and of areas for clarification, leading to more effective regulations;

- cross border collaboration facilitated by the project among European and national regulators/authorities and innovators, promoting a more unified regulatory approach of Blockchain/DLT solutions which will enhance more harmonized regulatory practices and will help to create a more cohesive regulatory framework;

- facilitate the sharing of knowledge and experience between regulators/authorities and with innovators on the basis of concrete use cases resulting in a better understanding of compliance requirements among Blockchain/DLT innovators and regulators/authorities;

- acceleration of innovation by providing a safe environment for refining blockchain applications to support compliance by design;

It is obviously a journey that will continue for the next cohorts. The regulatory areas for the first cohort will continue to be relevant and the next rounds of dialogues will allow for deeper dives into the various topics and to take account of new developments on the basis of secondary legislation, administrative decisions and case law. In addition, other (new) regulatory areas will become relevant for the next cohorts such as the Data Act, the Digital Services Act, DORA, the AI Act, ESG regulation (including CSRD compliance), standardization and the regulation of smart contracts.

The expectation is that the impact of the sandbox with the lessons learned from the 1st cohort will be even more appreciated and will serve as a best practice for similar future initiatives.

Finally, the EBS project team would like to thank the project team at DG CONNECT for the seamless cooperation and the excellent input and guidance that is provided at all stages of the project.

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