Blockchain and Web3 Strategy

Blockchain/web3 technology allows people and organisations who may not know or trust each other to collectively agree on and permanently record information without a third-party authority. By creating trust in data in ways that were not possible before, blockchain has the potential to revolutionise how we share information and carry out transactions online.

The Commission's strategy supports the use and the development of key areas of blockchain/web3 in adherence to European values and regulations:

- **Enhanced trust services**: Blockchain solutions provide a high level of trust and are being used in many pilot/deployment projects, policy actions, and R&D investments are being made in sectors like climate, energy, mobility, and agriculture.
- **Environmental sustainability**: Blockchain technology should be sustainable and energy efficient.
- **Data protection**: Blockchain technology should ensure compliance with the EU's strong data protection and privacy regulations.
- **Digital Identity**: Blockchain technology aims to enhance evolving digital identity frameworks for persons, organisations, and items. It can contribute to the implementation of the EUDI framework and support other relevant authentication purposes.
- **Cybersecurity**: Blockchain technology can provide high levels of cybersecurity.
- **Interoperability**: For blockchains and Web3 to succeed, they need to be interoperable with each other and with other existing systems.

What is the Commission doing?

The Commission supports policy, legal, regulatory, and funding initiatives in the fields of blockchain and Web3.

Support for infrastructure

The European public sector is building its own pan-European blockchain infrastructure, with the **European Blockchain Services Infrastructure (EBSI) (https://digital-strategy.ec.europa.eu/en/policies/european-blockchain-services-infrastructure)**. Over time, the initiative will expand its services and capabilities, including interoperability with other platforms. EBSI started with the European Blockchain Partnership (https://digital-strategy.ec.europa.eu/en/policies/blockchain-partnership), involving all 27 EU countries, Norway, Liechtenstein, and the Commission.

On 21 May 2024, the Commission adopted the decision creating the **EUROPEUM-EDIC (https://digital-strategy.ec.europa.eu/en/news/blockchain-creation-europeum-edic)**, a new legal entity established by a consortium of 10 Member States, which will further deploy and expand the exploitation of the European Blockchain Services Infrastructure. The EUROPEUM-EDIC should also support cross-border cooperation between public authorities on Web3 and decentralised technologies, promoting innovation and interoperability of such solutions with other technologies.

Legal and policy initiatives

The Commission recognises the importance of **legal certainty** and a **clear regulatory regime** in areas relating to blockchain-based applications. It has introduced and is now implementing a pro-innovation legal framework with the Market in Crypto Asset regulation (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32023R1114) and pilot regime (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R0858) for market infrastructures based on distributed ledger technology.

The Commission has introduced provisions for smart contracts (https://digital-strategy.ec.europa.eu/en/library/smart-contracts-and-digital-single-market-through-lens-law-plus-technology-approach) in the Data Act (https://digital-strategy.ec.europa.eu/en/policies/data-act) and electronic ledgers in the EU Digital Identity regulation (https://digital-strategy.ec.europa.eu/en/policies/eudi-regulation) to protect consumers and provide legal certainty for businesses. The **European Blockchain Sandbox (EBS) (https://ec.europa.eu/digital-building-blocks/sites/display/EBSI/Sandbox+Project)**, launched in February 2023, supports 20 innovative blockchain projects annually, fostering cross-border regulatory dialogue and aiming to prevent legal fragmentation. The EBS provides a framework for cross-border regulatory dialogue between regulators, supervisory authorities, and blockchain innovators. The 2024 Best practice report (https://op.europa.eu/en/publication-detail/-/publication/a945831c-2f87-11ef-a61b-01aa75ed71a1) published after the first

regulatory dialogues explores their outcomes.

The EU provides **funding for blockchain research and innovation** through grants and supporting investments. The Commission funded around 200 research and innovation projects, for innovating and piloting web3 in various application areas. Between 2016 to 2024, the Horizon 2020 and Horizon Europe EC R&I programmes provided approximately €700 million in grants to projects where blockchain or Distributed Ledger Technologies play a certain role.

The EU promotes the development and use of **sustainable blockchain solutions**. It also supports using blockchain technology to foster sustainable economic development, address climate change, and support the European Green New Deal.

The Commission also encourages the **standardisation for blockchain technology**, and the work done in International and European Standard bodies like ISO TC 307, ETSI ISG PDL, CEN-CENELEC JTC19, IEEE, and ITU-T.

Support for skills

As part of the Sector Skills Alliance funded by the Erasmus+ programme, CHAISE (https://chaise-blockchainskills.eu/) addresses the growing demand for blockchain skills across Europe. Its core mission is to develop a strategic approach to blockchain skills development and deliver future-proof training solutions to tackle skill shortages and meet the needs of the European blockchain workforce. The Digital Europe Programme (https://digital-strategy.ec.europa.eu/en/activities/digital-programme) also supports skills development in key digital technologies, including distributed ledger and web3 technologies.

Participation in Fora

The Commission engages with the private sector, academia, and the blockchain community via:

- **The International Association of Trusted Blockchain Applications (INATBA)**: This public/private partnership brings together EU countries, the private sector, and academia to advance the blockchain ecosystem in Europe. INATBA promotes blockchain interoperability and good governance, and serves as a liaison with governments and international bodies.
- **The European Blockchain Observatory and Forum**: This initiative aimed to pool expertise to identify and monitor global blockchain initiatives and trends. Although the project concluded in July 2024, thematic papers and other resources are still available (https://comm-ewcms-blockchain-observ-forum.acc.fpfis.tech.ec.europa.eu/index_en).

Future initiatives should focus on advancing innovation through Web3 technology and decentralised methods, particularly in the fields of AI, secure IoT integration, and data marketplaces.

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