

Distributed ledger technologies and blockchains: building trust with disintermediation

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The European Parliament adopted a resolution tabled by the Committee on Industry, Research and Energy on distributed ledger technologies (DLT) and blockchains: building trust with disintermediation.

The resolution pointed out that DLT reduces intermediation costs in a trusted environment between the transacting parties and allows peer-to-peer exchange of value that can empower citizens, disrupt legacy models, improve services and reduce costs, in a wide range of key sectors. It asked the Commission to undertake policy initiatives that promote the **competitive position of the EU** in the field of DLT.

Energy- and environment-friendly applications: Members underscored that DLT can transform and democratise the energy markets by allowing households to produce environment-friendly energy and exchange it on a peer-to-peer basis. They called on the Commission to add an **energy efficiency dimension** in its activities related to DLT and to explore the energy impact and energy efficiency of the various consensus mechanisms, such as ‘proof-of-work’, ‘proof-of-stake’, ‘proof-of-authority’ and ‘proof-of-elapsed-time’. They also called for an **assessment of governance models** within the diverse consensus mechanisms under development.

Transport, supply chains, healthcare and education: Parliament stressed the potential of DLT for mobility and logistics, the significance of DLT in improving supply chains, the potential for improvement of the efficiency of the healthcare sector, the education sector, and for the creative industries with regard to the management of intellectual property.

Financial sector: Parliament called on the Commission and the financial authorities to **monitor developing trends and use-cases in the financial sector**. It emphasised the volatility and uncertainty surrounding cryptocurrencies, calling for feedback on the sources of such volatility, as well as the identification of dangers for the public.

Identity: the resolution noted that DLT enables users to identify themselves while being able to control what personal data they want to share. Members were concerned about the dangers of misusing one’s own data and vulnerability to fraudulent schemes due to lack of knowledge. Since digital identities are imperative for the future of this technology, Member States should **exchange best practices** on how to ensure the security of such data. DLT uses must be compliant with the EU legislation on data protection, and the Commission and the European Data Protection Supervisor (EDPS) were asked to provide further guidance on this point.

Smart contracts: Parliament called on the Commission to promote the development of **technical standards** with relevant international organisations, and to conduct an in-depth analysis of the **existing legal framework** in individual Member States in relation to the enforceability of smart contracts. Appropriate measures should be taken should potential barriers arise to the use of smart contracts within the Digital Single Market, and legal certainty enhanced by means of coordination or mutual recognition between Member States.

Infrastructure security: Parliament called on the Commission to closely monitor technological developments (such as quantum computing), assess technological risks, support resilience to a cyberattack, and promote data protection projects that ensure the sustainability of DLT platforms as part of the agenda of the **EU Blockchain Observatory**.

Strategic importance of DLT for public infrastructure: Members stressed the efficiency potential of DLT for public sector services and management as regards reducing bureaucracy, especially with a view to enforcement of the eGovernment Action Plan.

It called on the Commission to:

- monitor the potential of DLT for improving the social good, and to assess the social impact of the technology;
- evaluate the safety and efficiency of electronic voting systems, including those that employ DLTs, for both private and public sectors.

SMEs, technology transfer and financing: noting that innovative SMEs need access to funding in order to develop DLT-based projects, Members called on the EIB and the EIF to create funding opportunities that support DLT-based entrepreneurial endeavours to accelerate technology transfer. They also stressed the potential of **Initial Coin Offerings (ICOs)** as an alternative investment instrument in funding SMEs and innovative start-ups but remarked that lack of clarity with regard to the legal framework applicable to ICOs can negatively affect their potential and called on the Commission to **identify criteria that enhance investor protection** and articulate disclosure requirements for the initiators of ICOs. Parliament asked the Commission to create an **Observatory for the Monitoring of ICOs**, as well as a database of their characteristics and taxonomy, distinguishing security and utility tokens.

Policies for boosting DLTs in Europe: the resolution emphasised that the Union has an excellent opportunity to become the global leader in the field of DLT. Any regulatory approach toward DLT should be innovation-friendly, should enable passporting, and should be guided by the principles of technology neutrality and business-model neutrality. Parliament stressed that the Union should not regulate DLT per se, but should try to **remove existing barriers to implementing blockchains**, and it welcomed the Commission's approach of following a use-case method in exploring the regulatory environment around the use of DLT. Members called for awareness-raising concerning DLTs, as well as initiatives for the education of citizens regarding the technology.