Blockchain and its relevance in Europe

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Blockchain works like a “magic notebook” that is kept in sync across organisations – enabling multiple parties to agree on a historic log of transactions.

To be used e.g.:
- By the Financial Sector for payment solutions, securities and insurance products.
- By the Transport Sector for connecting mobility services and autonomous vehicles.
- By the Energy Sector to integrate renewable electricity generation in Europe’s grids.
- By the Health & Pharma Sectors to trace the origins of goods in a reliable manner.
- By the Public Sector to protect democracy, improve e-voting and use of e-identities.
Transformative Potential of Blockchain

Reinforcing trust in multi-party co-operations between actors (that may not trust one another)

EFFICIENCY

Blockchain are used by companies to increase efficiency (e.g.: finance)

CONVERGENCE

Blockchain converges with Big Data & IoT. Blockchain role for data spaces, e.g. record data from IoT sensors to ensure integrity prior to training AI algorithms

SUSTAINABILITY

Blockchain supports product tracing and data sharing across supply chains

E-ID & CREDENTIALS

Many industries develop eID solutions with Blockchain. Self-Sovereign Identity can empower citizens

TOKENISATION

Physical and immaterial assets (e.g.: IP Rights) tokenised to share rents, facilitate multi-party cooperation, and/or create liquidity
Blockchain & Future Internet & Industry 4.0

Blockchain - a trust layer

- Linking different components in digitalised global systems
- Authenticity/integrity of Data, from IoT for AI
- Tokenisation of assets
Crypto Assets Matter for Several Reasons

“Programmable” Money
- Smart contracts
- M2M Payments

Risk Capital for SMEs
- Initial Coin Offering
- SMEs mini-bonds

Financial inclusion
- Digital wallets instead of bank accounts

A New Global Currency?
- Diem or CBDCs?
Comparison of Blockchain Engagements by Vertical, 2017-2020

- Banking and Securities: 75% (2017), 37% (2018), 30% (2020)
- Communications, Media and Services: 37% (2017), 16% (2018), 7% (2020)
- Manufacturing and Natural Resources: 14% (2017), 12% (2018), 7% (2020)
- Government: 10% (2017), 9% (2018), 7% (2020)
- Insurance: 10% (2017), 8% (2018), 8% (2020)
- Retail: 8% (2017), 6% (2018), 5% (2020)
- Transportation: 6% (2017), 5% (2018), 4% (2020)
- Utilities: 5% (2017), 4% (2018), 5% (2020)
- Healthcare Providers: 5% (2017), 5% (2018), 3% (2020)
- Wholesale Trade: 7% (2017), 3% (2018), 1% (2020)
- Education: 0% (2017), 0% (2018), 0% (2020)

Source: Gartner
The global impact of blockchain GDP boost and jobs enhanced by 2030

Global in 2030
$1756.5 billion

PWC, Time for trust: The trillion-dollar reasons to rethink blockchain – October 2020
EC ambition is to establish global leadership in blockchain and distributed ledger technologies

<table>
<thead>
<tr>
<th>Joined-up political vision (EU-MS)</th>
<th>Public-private partnership</th>
<th>Connecting Global Expertise</th>
<th>Investing in EU Innovation and start-ups</th>
<th>Promoting an enabling regulatory framework and others</th>
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<td>Joint declaration on the establishment of the European Blockchain Partnership [EBP] and the development of the European Blockchain Services Infrastructure [EBSI] for cross-border digital services of public interest</td>
<td>Support to the creation of the International Association of Trusted Blockchain Applications [INATBA], a multistakeholder organisation to promote trust and interoperability at Global level</td>
<td>The EU blockchain observatory and forum brings together the leading global experts to identify obstacles, incentives and practical solutions to promote blockchain uptake.</td>
<td>Through Horizon Europe (and Horizon 2020 Programmes), and the DIGITAL EUROPE PROGRAMME (and CEF), the EU is co-investing in the most advanced digital infrastructure and the most innovative EU start-ups</td>
<td>Promoting and enabling legal framework interoperable</td>
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<td>Reflections on digital euro (with ECB)</td>
<td>Standards</td>
<td>EU investment scheme for AI and blockchain + support programme</td>
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<td>Skills development (cooperation with Erasmus+)</td>
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The **EUROPEAN BLOCKCHAIN PARTNERSHIP (EBP)**

Our Ambition: Building a Pan-European Blockchain Services Infrastructure (EBSI)

- Working with 27 MS (+LI & NO) in EBP
- Supporting public services (at first)
- Cooperation with private sector or applications
- Strengthening EU leadership and autonomy in Blockchain

A Cross-border Public Services Infrastructure

- **Public sector as trailblazer**
- Avoids fragmentation
- Secure, interoperable, GDPR compliant, sustainable, based on (new) EIDAS and SSI
EC was instrumental in founding INATBA under EU law in April 2019 in Brussels. Today 160 companies (users & suppliers of DLT) EU Commission & Canada co-chair the Governmental Advisory Board:

- Standards
- Governance
- Regulation
- SDGs

more than 50 members and growing (All EU Member States, CAN, JPN, US (Federal Reserve), South Africa, Taiwan, EIB, EBRD, UNFCCC, UN World Food Program, UNICEF, World Bank and WTO)
Challenges for skills in blockchain (DLT)

- Technology: Blockchain are fast evolving and aims for integration with other technologies (AI/IoT/data/cloud)
- Technical and non-technical aspect (legal/economic/social/ethical…)
- Multiple sectors and applications (specific contexts)
- Blockchain/DLT can help for education and skills development
Thank you!