

EUROPEUM

European Digital Infrastructure Consortium
Towards a new governance model for EBSI

DANIEL DU SEUIL

CONVENOR EPB/EBSI – Taskforce EDIC EUROPEUM – EBSI-VECTOR – CYBER3LAB HOWEST

BLOCKCHAIN & PUBLIC SERVICES

Mariya Gabriel, Commissioner for Digital Economy and Society, welcomed the signature of the declaration:

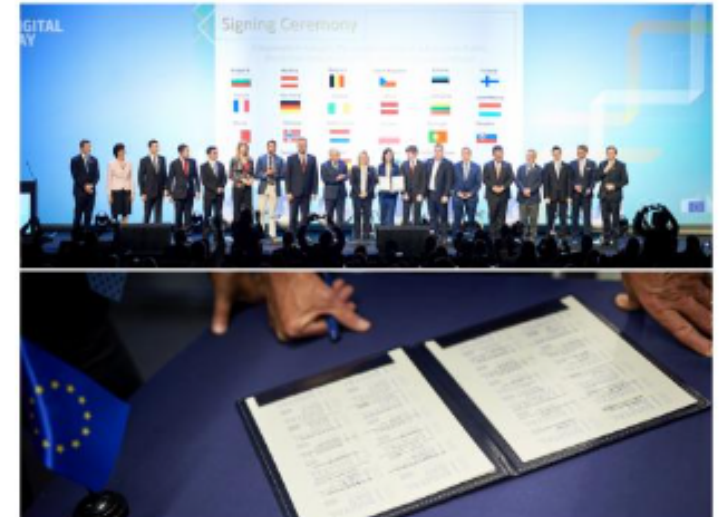


In the future, all public services will use blockchain technology. Blockchain is a great opportunity for Europe and Member States to rethink their information systems, to promote user trust and the protection of personal data, to help create new business opportunities and to establish new areas of leadership, benefiting citizens, public services and companies. The Partnership launched today enables Member States to work together with the European Commission to turn the enormous potential of blockchain technology into better services for citizens.

European countries join Blockchain Partnership

On 10th of April 2018, 21 Member States and Norway agreed to sign a Declaration creating the European Blockchain Partnership (EBP) and cooperate in the establishment of a European Blockchain Services Infrastructure (EBSI) that will support the delivery of cross-border digital public services, with the highest standards of security and privacy. Since then, eight more countries have joined the Partnership, bringing the total number of signatories to 30*.

[Blockchain](#) is a technology for promoting user trust. It makes it possible to share on-line information, agree on and record transactions in a verifiable, secure and permanent way. The technology is already being successfully tested, mostly in financial services, and will become more operational and integrated into increasing number of digital services, such as regulatory reporting, energy and logistics in the coming years.



Related topics

Introducing EBSI

The **European Blockchain Services Infrastructure (EBSI)** was born in 2018 when **29 countries** (all EU members states, Norway and Liechtenstein) and the **EU Commission** have joined forces to create the **European Blockchain Partnership (EBP)**.

EBP's vision is to leverage blockchain to create cross-border services for public administrations, businesses, citizens and their ecosystems to verify information and make services trustworthy.

Discover and understand EBSI by having a look at our website and visit the [FAQ's](#).

What is EBSI?



Co-funded by
the European Union

EBSI – the all-European Blockchain

A unique sovereign pan-European blockchain services infrastructure



01.

Provide decentralised services that Citizens can trust.

Privacy Preserving (self-sovereignty)

No personal data stored on chain

03.

Run European nodes in line with EU values and regulations.

EU governed, sovereign infrastructure

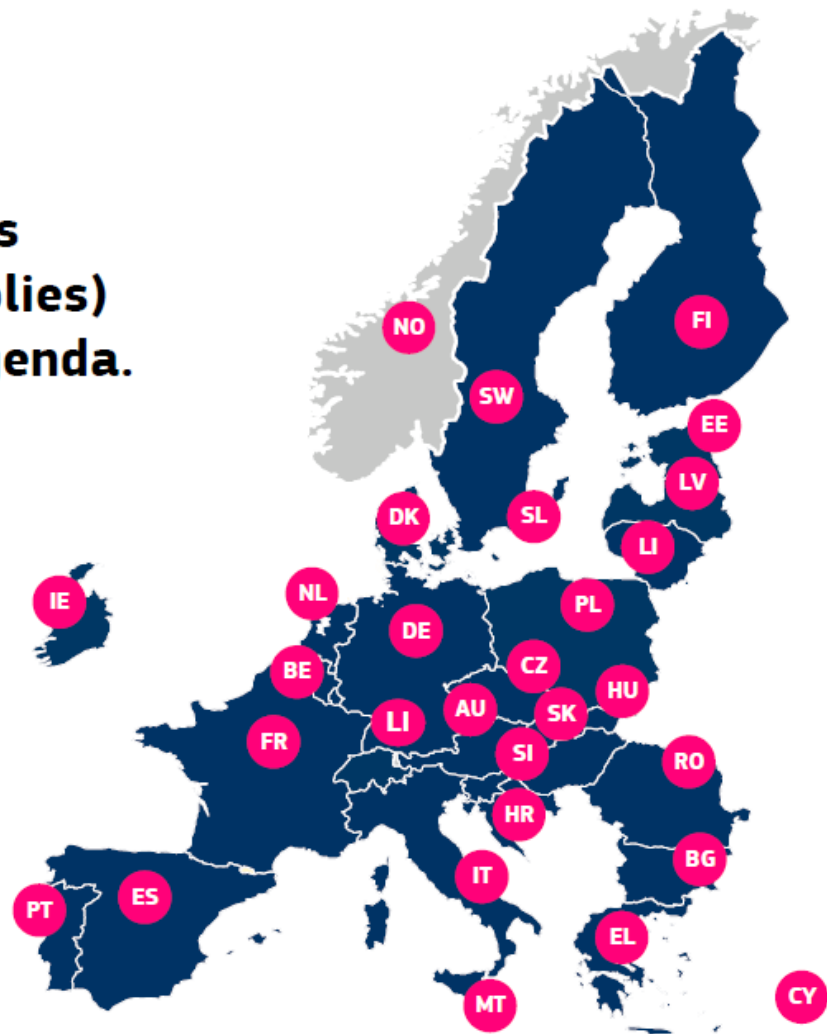
A permissioned blockchain -information can be *read* by all – however, only selected actors are allowed to *write*

02.

Contribute to data spaces (discourage data monopolies) and support the green agenda.

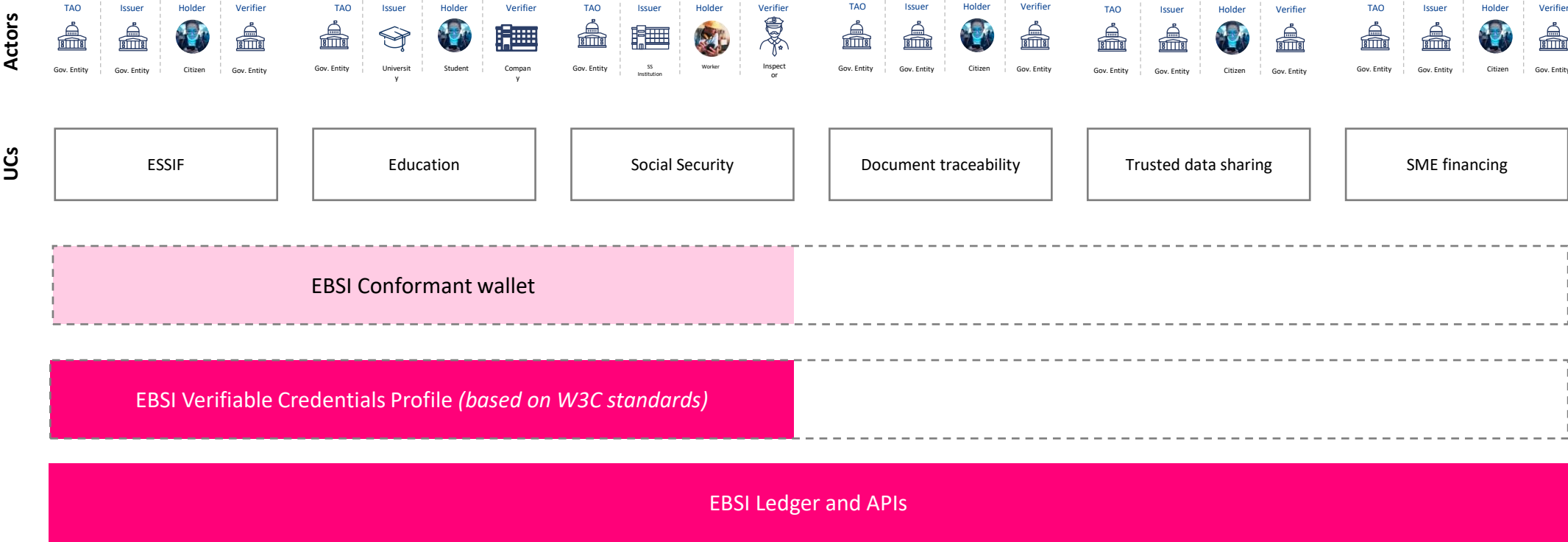
Eco-friendly

Proof of Authority requires almost no computing power, and therefore almost no electricity for its operation.



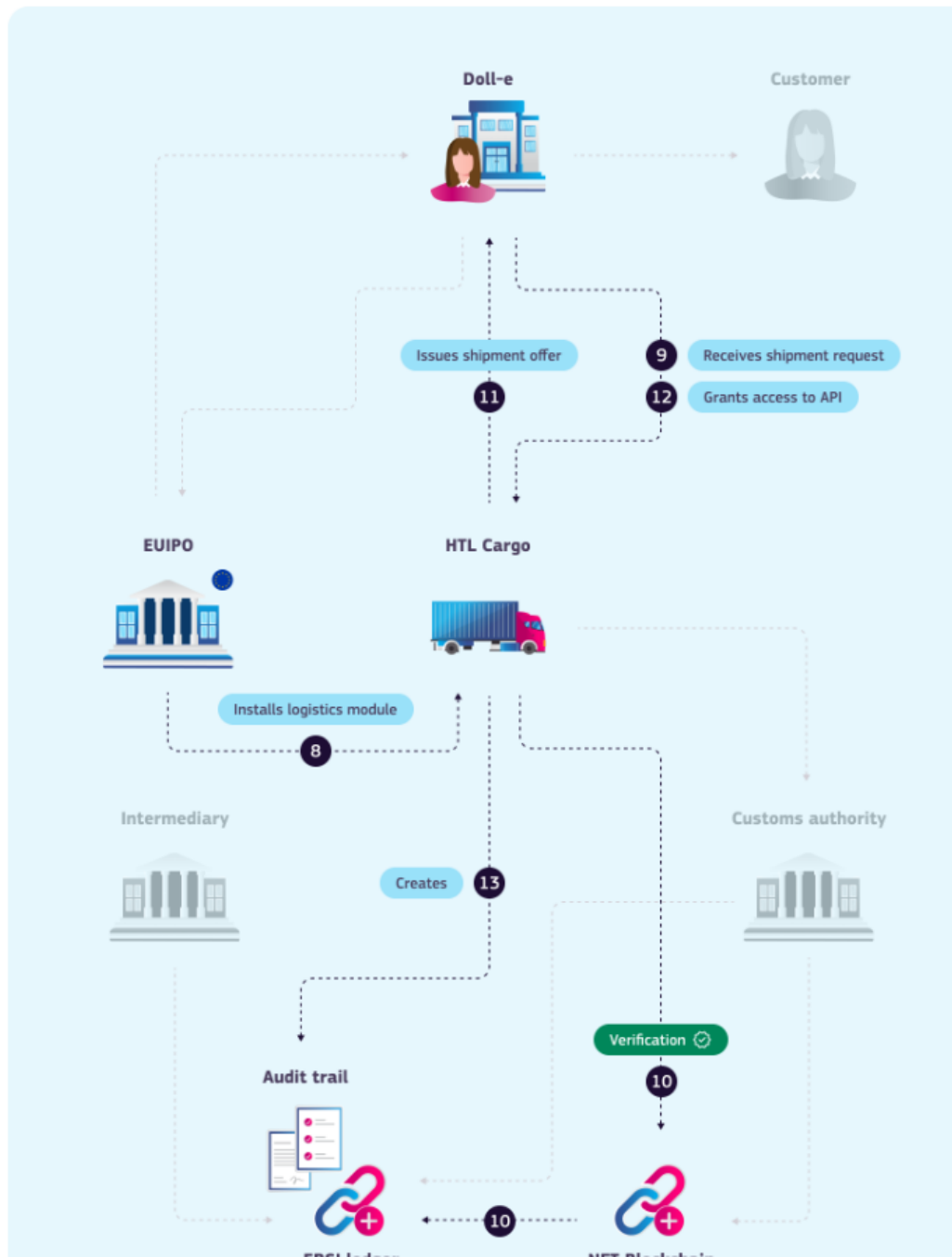
What is EUROPEUM today?

EUROPEUM is user centric, decentralised and reusable in multiple contexts and use cases. It is based on open standards to stimulate interoperability and the creation of cross-border public services





2. Verification by logistics operator



Jimmy is an operation process owner at HTL Cargo, a well known freight forwarder for import/export in the European Union. HTL Cargo wishes to further increase security and efficiency of operations by enabling transparency in the logistic chain between its clients, major brands, and law enforcement authorities.

- To do this, Jimmy **8** installs the logistic module from EUIPO into HTL Cargo IT system and accepts the connection to Doll-e's logistic module.
- Jimmy then **9** receives the shipment request from Doll-e and verifies the brand's identity against the EBSI ledger. Jimmy can **10** verify the Trademark Verifiable Credentials of the products digital twins (NFTs), by looking at the NFT properties containing the unique file and matching it against the EBSI ledger by using the NFT Viewer.
- HTL Cargo then **11** issues a shipment offer to Doll-e that may include segment offers from carriers.
- Virginia accepts the offer, appends the shipment request contract on behalf of Doll-e, and **12** grants access to EBSI's timestamping API to HTL Cargo and related shipment Carriers.
- HTL Cargo and potentially involved carriers use their logistic module and the timestamping API to **13** create an audit trail of every event for the shipment during its logistic journey, using the EBSI ledger as its source of truth.

VC Framework

EBSI W3C VCs and VPs

Data Models ▾

[What are data models?](#)

[Data models inventory](#)

[Verifiable Credentials Data Model 2.0](#)

DID Methods ▸

E-signing and e-sealing ▸

Trust Model ▸

Credential Status ▸

Framework ▸

Guidelines ▸

02 Navigate the EBSI Data Model Inventory

41 Items available

Data model	Verification focus	VCDM version
<u>EBSI Verifiable Accreditation Record</u> Schema of an EBSI Verifiable Accreditation Latest version: 1.4.0 Schema ID: zDCGvPRUnnSTkVgnX6xRwQMz8hh4VYuJ4r7nxCNGgSTB1	Documents	1.1
<u>Verifiable AllianceID</u> Schema of an EBSI Verifiable University Alliance ID for a natural person participating in the Alliance Latest version: 1.0.1 Schema ID: zCHc3ZfYg2871W2WftjLu4QNMQRDzG57oG5pvGoyHcagB	Documents	1.1
<u>EBSI Verifiable Attestation</u> The schema defines a generic structure for any EBSI-related Verifiable Credentials according to the VCDM v1.1 Latest version: 1.3.0 Schema ID: zDpWGUBenmqXzurskry9Nsk6vq2R8thh9VSeoRqguoyMD	Documents	1.1
<u>EBSI Conformance Testing Qualification Credential</u> The Credential defines that the Conformance Testing was passed and qualified Latest version: 1.3.0 Schema ID: z9CKy91QMGggAdwtB6T3CJBNRXWfvpzYbiPBsLDFvt1UP	Documents & Products	1.1

6 successful cross-border pilots

Help citizens study, work and grow from all over Europe.

Study

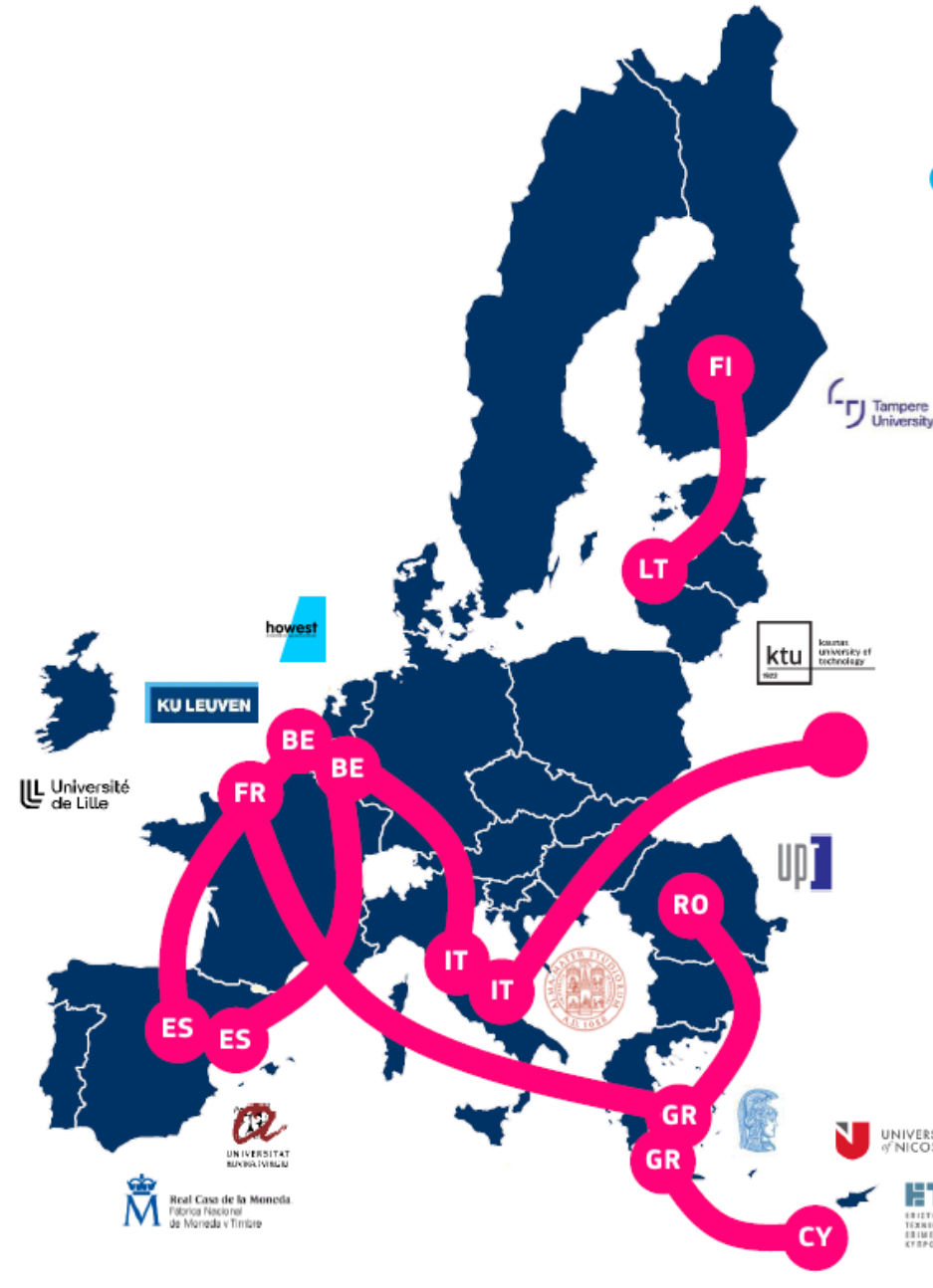
- 01** A student gets a diploma with a list of course units validated from Erasmus (Transcript of Records Credential) [\(ES/BE/IT\)](#)
- 02** A student applies for a PhD with a Bachelor / Master degree from a foreign country (Bachelor/Master Diploma Credential) [\(RO/GR/FR\)](#)
- 03** A student gets access to local discounts using student credential (European Student IDentity) [\(BE/ES\)](#)
- 04** A refugee presents an EQPR to a European Italian University to apply for a Master (EQPR - CoE Refugee Passport) [\(IT/DE\)](#)

Work

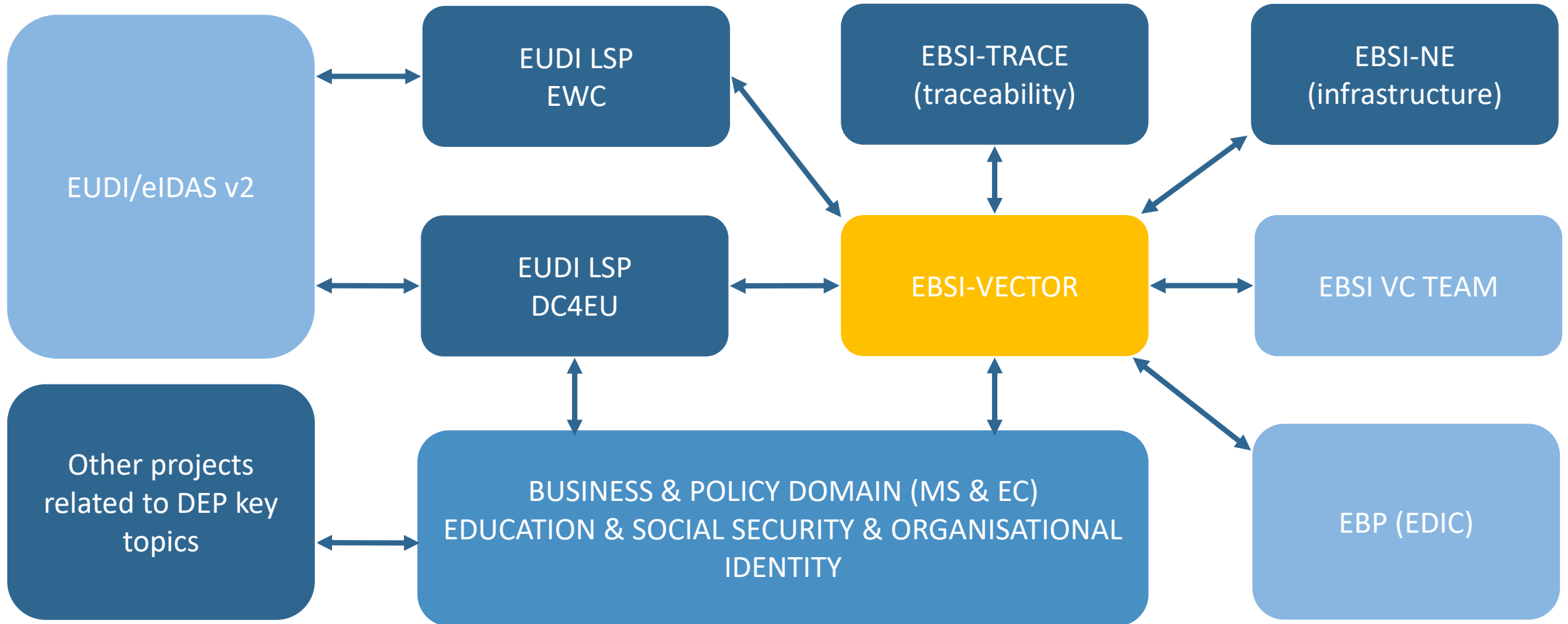
- 05** A graduated citizen applies for a job with a Degree from a foreign country (License to Practice Credential) [\(GR/CY\)](#)

Grow

- 06** A PhD student applies for specific courses in a foreign country (Cross-border Micro-credentials) [\(FI/LT\)](#)



EBSI-ecosystem





European blockchain regulatory sandbox for Distributed Ledger Technologies

Get started ↓

Introduction

The European Blockchain Regulatory Sandbox for innovative use cases involving Distributed Ledger Technologies (DLT) is an initiative of the European Commission. The sandbox establishes a pan-European framework for regulatory dialogues to increase legal certainty for innovative blockchain technology solutions.

Blockchain and other Distributed Ledger Technologies are innovative developments and are deployed across industry sectors such as energy & utilities, education, healthcare, mobility, finance & insurance, and logistics & supply chains.

The European Blockchain Sandbox has been set up and is being operated to facilitate the



The Expert Group on
Blockchain Ethics (EGBE)

Ethical Guidelines for Blockchain Systems

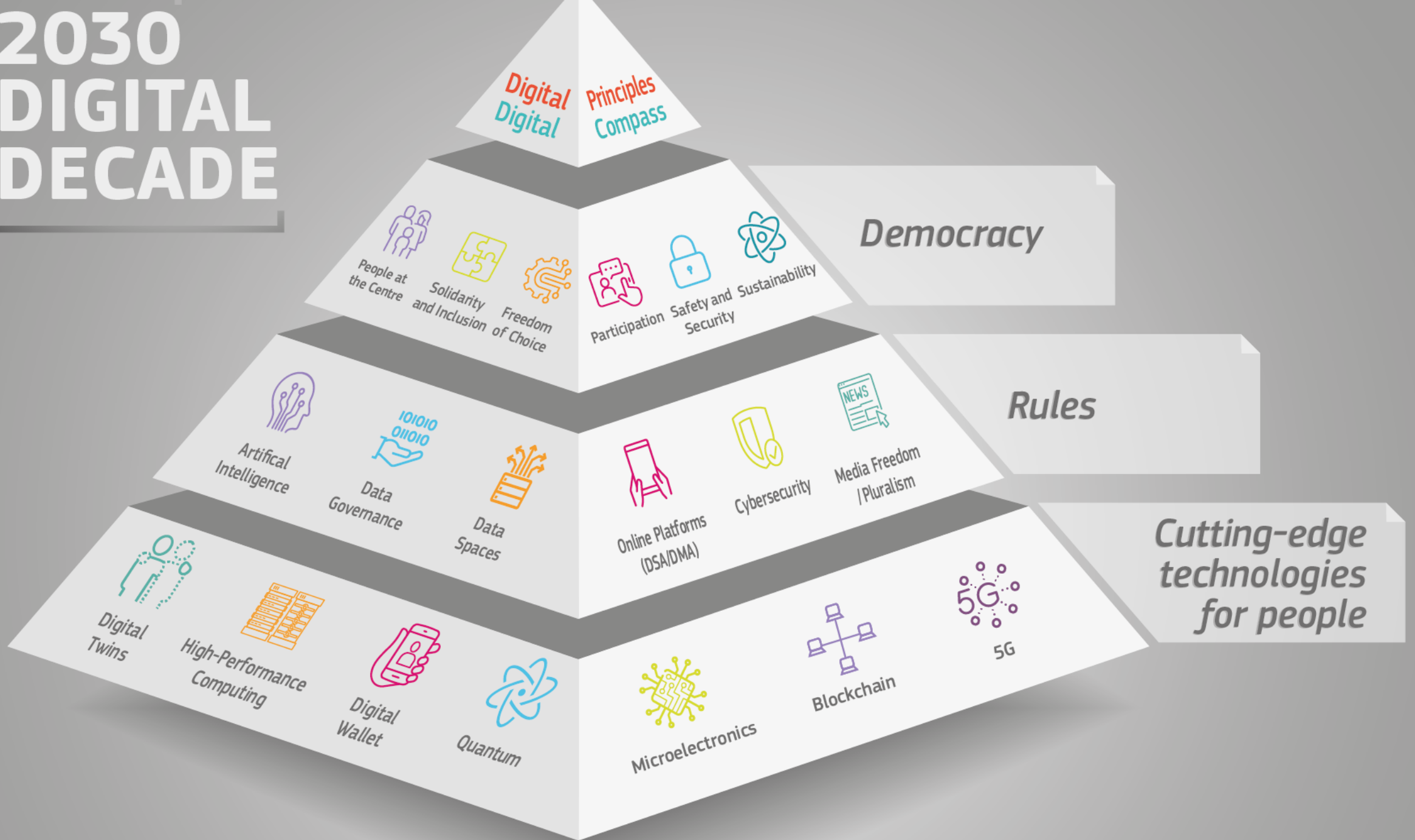
 European Blockchain Center



EBSI
European Blockchain Infrastructure



2030 DIGITAL DECADE





EDIC – European Digital Infrastructure Consortium

An EDIC represents the institutional response of the **Digital Decade Programme** (EU Decision 2022/2481), which aims to accelerate the digital transformation of the Union and its member countries.

EDIC allows **multi-country projects** to gain a legal capacity to operate in and across MS, allowing them to acquire, own, and dispose movable, immovable and intellectual property within the area of operation.



EDIC – European Digital Infrastructure Consortium

An EDIC may deploy joint infrastructure, deliver related services, and act as a networking platform to bring together public and private stakeholders.

- EDIC shares legal characteristics with other European multicountry organizational forms, such as the European Cooperative Society (ECS) or European Economic Interest Grouping (EEIG).
- EDICs aim to bring together MS rather than the corporations to deploy joint infrastructure for service delivery under cross-border conditions.
- As an organizational form, the EDIC most closely resembles the European Research Infrastructure Consortium (ERIC), However, unlike ERICs, EDICs are governed by Member State representatives,

First EDICs being set up

Alliance for Language Technologies European Digital Infrastructure Consortium (ALT-EDIC)

The Alliance for Language Technologies European Digital Infrastructure Consortium (ALT-EDIC) seeks to address the scarcity of European language data available for training artificial intelligence (AI) solutions. This collaborative initiative aims to develop a common European infrastructure in Language Technologies. This will result in the creation of 'Large Language Models' of European regional and official languages. The goal is to use those models to boost the development of advanced AI models capable of understanding and generating human-like language. The ALT-EDIC will promote digital competitiveness, preserve linguistic diversity, and promoting cultural richness in Europe.

[Commission Implementing Decision setting up the European Digital Infrastructure Consortium for the Alliance for Language Technologies \(ALT-EDIC\)](#) ↗

CitiVERSE

The Networked Local Digital Twins towards the CitiVERSE (LDT CitiVERSE EDIC) initiative aims to connect existing local digital twins across Europe, forming the basis for the EU CitiVERSE. Local digital twins are virtual representations of a city's physical assets, processes, and systems. Digital twins use data, analytics, and AI to create real-time simulation models that mirror the cities they represent. The CitiVERSE focuses on advancing generative AI applications in smart cities, including simulations addressing (among other things) the impact of changing traffic conditions on air quality, decarbonization, and congestion. Additionally, it explores generative AI-based virtual reality applications to improve citizen interaction (for instance, simplifying the consultation and understanding of planned urban changes).

[Commission Implementing Decision setting up the European Digital Infrastructure Consortium for Networked Local Digital Twins towards the CitiVERSE](#) ↗

EDIC for European Blockchain Partnership and European Blockchain Service Infrastructure (EUROPEUM-EDIC)

This EDIC will develop the existing ecosystem of the European Blockchain Services Infrastructure (EBSI). It will further deploy and expand the exploitation of the EBSI to deliver EU-wide cross-border services, in particular public services. The aim of the EDIC is to reinforce trust and cyber resilience in compliance with EU regulation, including the newly adopted European Digital Identity framework. It will also support cross-border cooperation between public authorities on Web3 and decentralised technologies, promoting innovation and interoperability of such solutions with other technologies.

[Commission Implementing Decision \(EU\) 2024/1432 of 21 May 2024 setting up the European Digital Infrastructure Consortium for European Blockchain Partnership and European Blockchain Service](#)

EUROPEUM

European Digital Infrastructure Consortium

In June 2023 it was agreed to establish Europeum as an EDIC to replace EBP, with Belgium becoming the hosting country.

Europeum is set to operate under Belgian law, having the legal seat in Brussels, and supporting the development, deployment, and operation of EBSI.



EUROPEUM

European Digital Infrastructure Consortium

According to the draft statute, the Europeum members will be responsible for:

- Maintaining blockchain nodes
- Supporting EBSI application service providers
- Establishing partnerships for new use cases.

It will seek regulatory compliance across MS and engage with relevant networks and organizations in technology interoperability, research, innovation support, skills development, and collaboration with technological initiatives.



EUROPEUM

European Digital Infrastructure Consortium

The draft statute of the Europeum sets the main responsibilities of Europeum as follows:

- Establishing EBSI for cross-border services:
- **Fostering European digital identity integration:**
- Supporting cross-border cooperation and innovation





Public Good

[pə-blik 'gud]

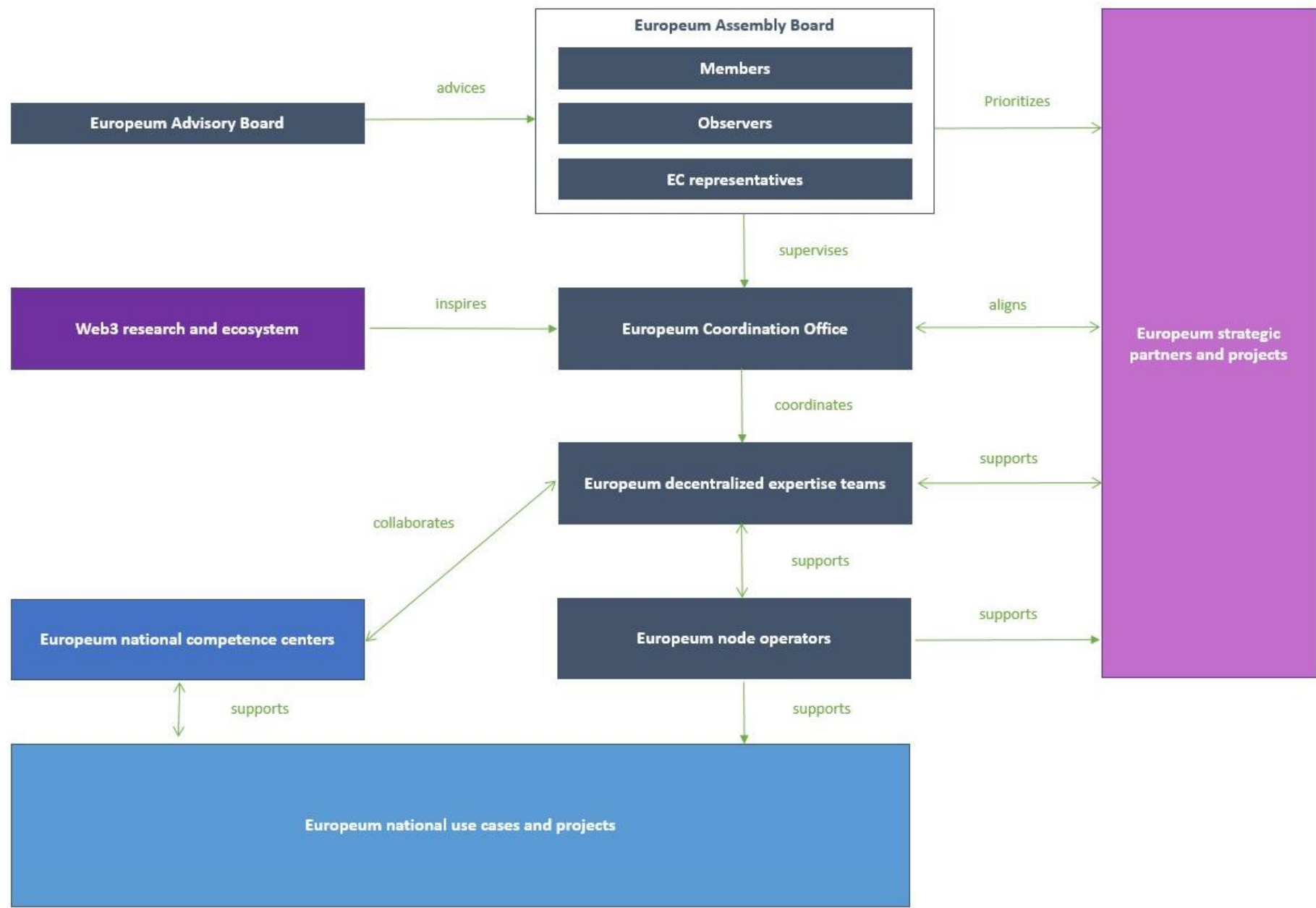
A commodity or service that is made available to all members of a society, typically administered by governments and paid for collectively through taxation.



Financial Plan

[fə-'nan(t)-shal 'plan]

A document detailing a person's financial circumstances, monetary goals, and strategies to achieve them.



EU digital identity



#DigitalEU



THANK YOU

DANIEL DU SEUIL

CONVENOR EPB/EBSI – Taskforce EDIC EUROPEUM – EBSI-VECTOR –
HOWEST

daniel.du.seuil@howest.be

<https://www.linkedin.com/in/danielduseuil/>

