European Blockchain Services Infrastructure

The aim of the Blockchain Services Infrastructure (EBSI) is to consolidate the political and technological efforts carried out at EU level in the area of blockchain and distributed ledger technologies to further the delivery of a generic and reusable Blockchain Building Block in the existing ecosystem of CEF Building Blocks.

The General Data Protection Regulation (GDPR), which entered into force in all Member States in May 2018, strengthens and unifies data protection for citizens across the EU. The Blockchain Building Block provides the Member States with capabilities to arrive at GDPR-conformant solutions and to put the user in control over who is using its data.

Blockchain and distributed ledger technologies are recognized by the Commission to have significant potential for modernisation of public administrations, generating new business models and to address societal challenges.

The Core Service Platform builds on achievements of other EU projects piloting cross-border digital services based on blockchain. Part of the work under the Core Service Platform aims to encourage actors from all across Europe to tap into the potential of the EBSI infrastructure

EBSI also closely aligns with the Research and Innovation action, "DT-GOVERNANCE-05-2019: New forms of delivering public goods and inclusive public services" funded under the Horizon 2020 Work Programme 2019 for the societal challenge "Europe in a changing world - Inclusive, innovative and reflective societies".

EBSI is a technical set-up of a permissioned blockchain infrastructure, national nodes and the EU master node, a set of core elements such as mechanisms for identification and authorisation, protocols and other components underpinning the services. It also includes deployment support, training, service operation and contributions to standards that support interoperability and open interfaces, security, confidentiality and personal data protection compliance of the Core Service Platform.

[LEARN MORE]

Highlights

Generic Services Projects

€2.74 million in **19** Member States**. 19 projects** were awarded to the European Blockchain Service Infrastructure.

More info on the Generic Services:

[HaDEA]

European Blockchain Partnership

29 countries, including the **27** Member States, Norway and Liechtenstein, signed the EBP declaration.

Use cases successfully piloted

The CEF programme has played a valuable role in facilitating the effective implementation of verifiable credentials exchange, including diplomas, self-sovereign identity and social security

Indicators

As the CEF funding of the Core Service Platform came to an end in Q3 2022, this is the cut-off date for the last monitoring activities linked to this work strand. The monitoring of the Generic Services projects presents the state of play by Q4 2022. 14 Generic Services projects are still under implementation and are foreseen to be completed by 2023.

Uptake

29
countries participating in the European Blockchain Partnership (EBP)

25
countries having deployed at least one operational EBSI node

23
countries using the EBSI infrastructure for running EBSI applications or use cases

Service availability

99%
Average uptime of the EBSI nodes hosted by the European Commission

Financial Monitoring

€ 7,978,516
CEF Core Service Platform funding

€ 2,740,515
CEF funding through Generic Services Projects

ⓘ The CSP funding commitment includes 1 million EUR in horizontal enabling activities-related contracts that affected all CEF Building Blocks

Reuse of EBSI

EBSI is not being reused yet by any sector specific DSIs

Indicators

📑 **EBSI > Uptake > Countries participating in the European Blockchain Partnership**

This indicator measures the number of **Member States and EFTA countries participating in the European Blockchain Partnership (EBP)** at the time of data collection. These participating countries are also deemed to support the technical development of the EBSI architecture.
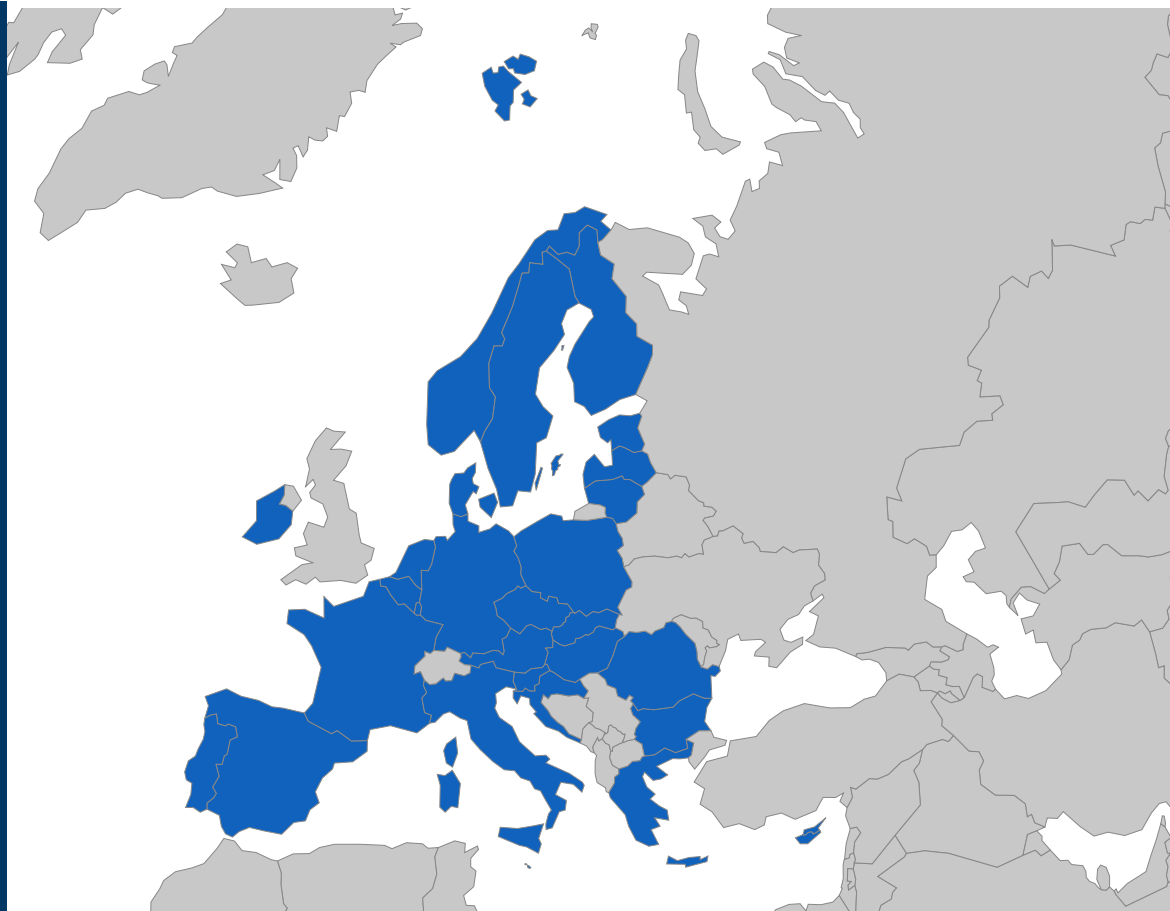
The EBP identified cross-border digital public sector services that could be deployed through a common European Blockchain Services Infrastructure, with a shared governance model.

ⓘ *Note that Liechtenstein is also taking part in the EBP but was too small to properly display on the map.*

Target
28 countries participating in the EBP, by the end of 2022.

29
countries

Disclaimer: The boundaries and names shown and the designations used on the map do not imply official endorsement or acceptance by the European Union. The designations employed and the presentation of material on the map do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.
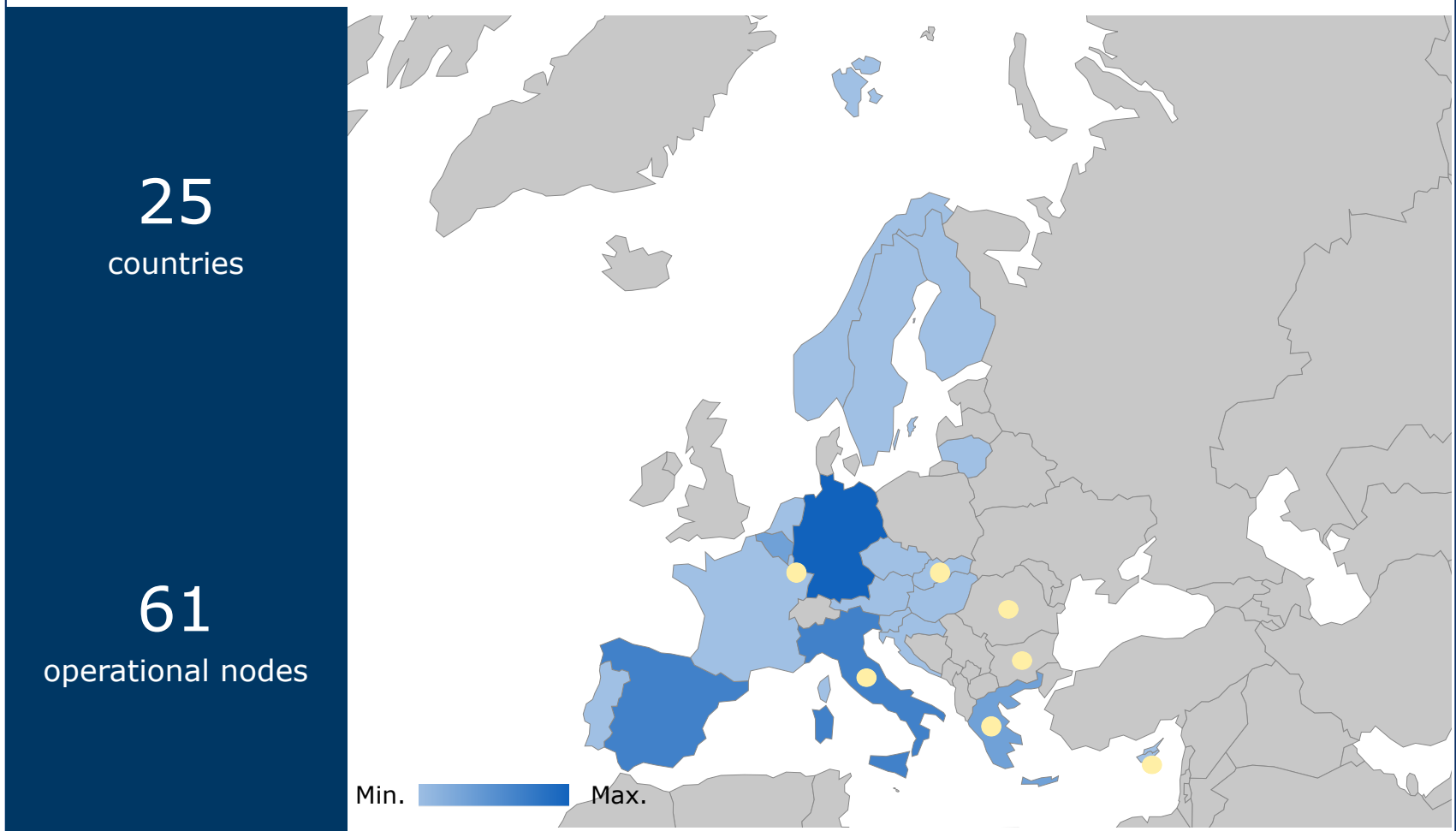
⬚ EBSI > Uptake > Countries having deployed blockchain nodes

This indicator measures the number of **EU and EEA countries** associated to the programme **deploying operational blockchain nodes** in the context of the European Blockchain Services Infrastructure (EBSI) at the time of yearly data collection. An operational blockchain node is specified as a node that is able to connect to the rest of the EBSI node network. The number of operational nodes per EU and EEA country associated to the programme is also reported.

Target

7 EU or EEA countries with operational nodes deployed, by the end of 2022.

🟡 Prevision of countries deploying operational blockchain nodes from CEF funding based on the expected results from ongoing Generic Services funded projects[1]

25
countries

61
operational nodes

Min. ▢▢▢▢ Max.

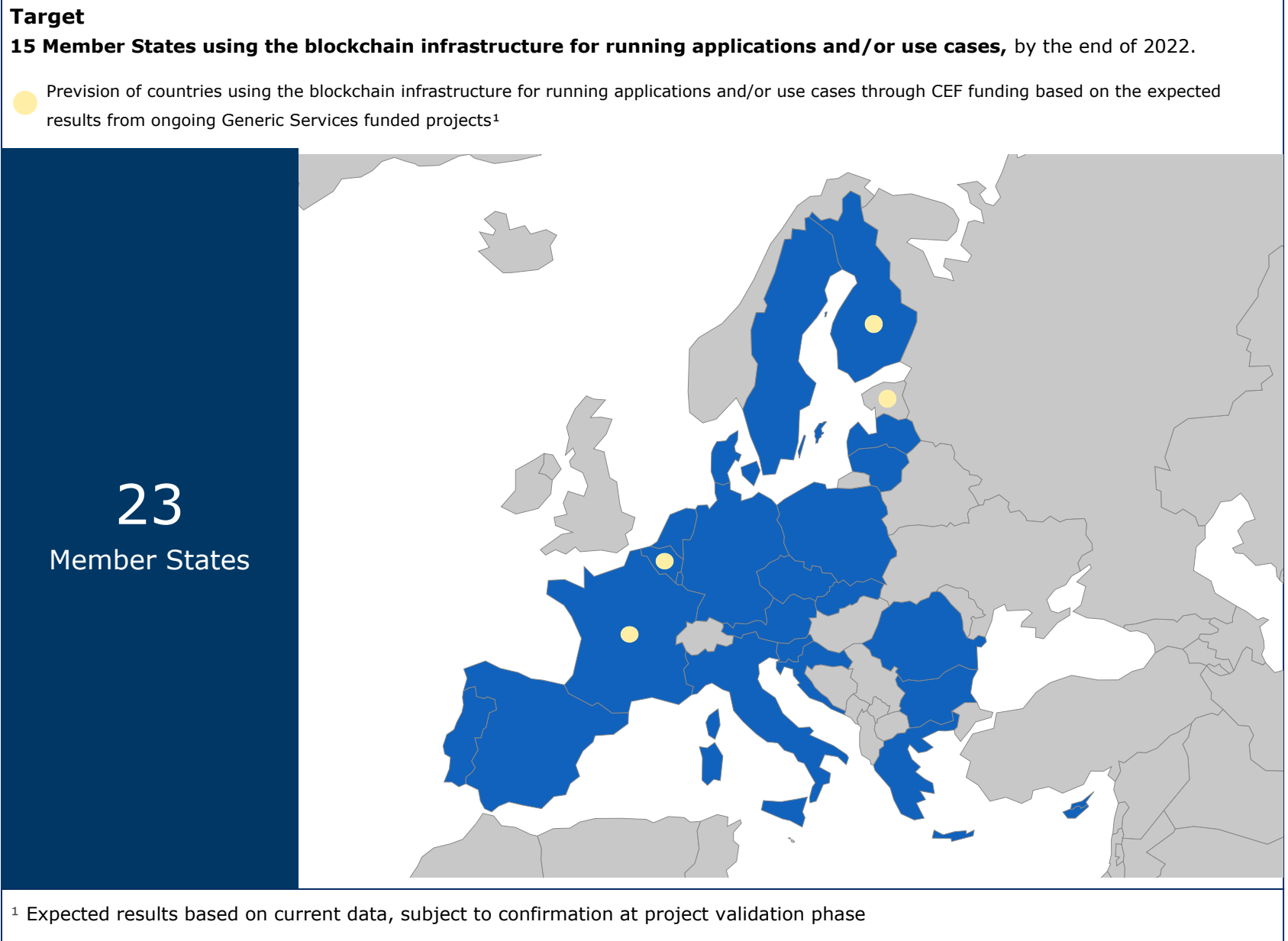[1] Expected results based on current data, subject to confirmation at project validation phase

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ⓘ 7 additional countries are expected to have operational nodes deployed through Generic Services Projects by 2023 (5 of them having at least already one operational node deployed).
13 additional operational nodes are expected to be deployed through Generic Services Projects by 2023.

EBSI > Uptake > Countries using the Blockchain (EBSI) infrastructure

This indicator measures the number of **EU and EEA countries** associated to the programme **using the Blockchain (EBSI) infrastructure** for running applications and/or use cases.

Target

15 Member States using the blockchain infrastructure for running applications and/or use cases, by the end of 2022.

● Prevision of countries using the blockchain infrastructure for running applications and/or use cases through CEF funding based on the expected results from ongoing Generic Services funded projects[1]

23
Member States

[1] Expected results based on current data, subject to confirmation at project validation phase

ⓘ 4 additional countries are expected to be using the blockchain infrastructure for running applications and/or use cases through Generic Services Projects by 2023 (3 of them being already using the blockchain infrastructure for running applications and/or use cases).

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EBSI Milestones

All the **EBSI** milestones defined within the CEF Monitoring framework were successfully achieved.
A detailed overview of the milestones can be found in the table below.

Milestone title	Start date	End date	% complete	Status
1. Selection of first set of use cases for EBSI V1.0	01 January 2019	31 March 2019	100	Completed
2. Deployment of EBSI V1.0	01 January 2020	31 March 2020	100	Completed
3. Selection of second set of use cases for EBSI V2.0	01 April 2019	30 April 2020	100	Completed
4. Deployment of EBSI V2.0	01 December 2020	31 March 2021	100	Completed