

About IOTA

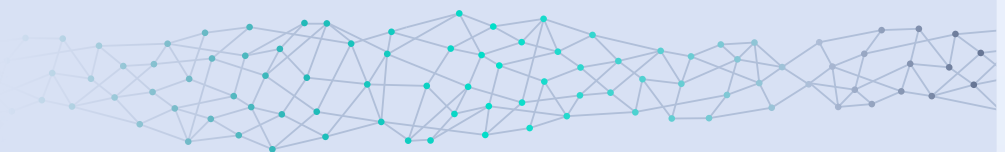
The [IOTA Foundation](#) is a global not-for-profit foundation incorporated and headquartered in Germany. Its mission is to support the research, development and standardization of new distributed ledger technologies (DLT), including the IOTA Tangle.

The [IOTA Tangle](#) moves beyond more traditional blockchains by providing the world's first scalable, feeless and fully decentralized distributed ledger technology. The Tangle uses its unique technology to solve three fundamental problems with blockchain technology: high fees, low throughput and centralization. It is an open-source protocol connecting the human economy with the machine economy by facilitating novel interactions, including secure data transfer, feeless micropayments and secure access control.

Contribution to EBSI

IOTA is ideally suited to the infrastructure requirements proposed by the European Blockchain Services Infrastructure (EBSI), to support the vision of ledger-based secure transactions for an EU single digital market. In particular, IOTA technology answers EBSI's stated goals of being scalable, open, decentralized and interoperable. It is permissionless by nature, but can support permissioned environments (using the IOTA Smart Contract Platform), and can grant permission to resources and control data distribution to comply with EU regulations for data sharing. The network needs to support high throughput and a large number of nodes, and each Member State should be able to run its own set of nodes. As an open, feeless and scalable distributed ledger, designed to support frictionless data and value transfer, IOTA meets these requirements. The EBSI Pre-Commercial Procurement (PCP) now presents a unique opportunity to converge cutting-edge technology with the highest standards of public digital infrastructure.

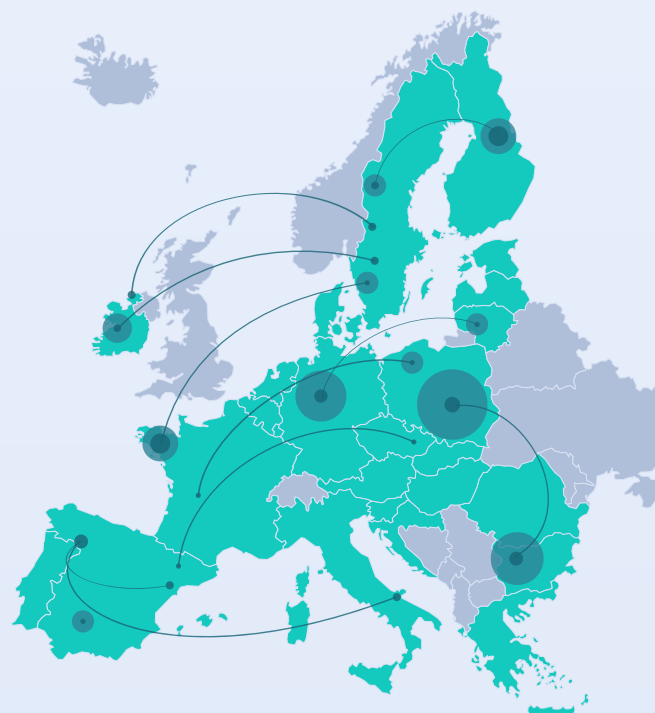
IOTA Tangle



The work of the IOTA Foundation

Within the EBSI PCP, the IOTA Foundation will be adapting the specific characteristics of the IOTA Tangle to fit with the EBSI platform. The Tangle – [IOTA's answer to the blockchain](#) – is inherently scalable, decentralized and built on open-source software. This will allow organizations to develop services and run applications on a public network that has no miners or stakers. Instead, to reach a consensus in the IOTA protocol, all nodes validate messages and the placement of new messages is used to confirm old messages. IOTA's feeless nature is suited to high volume and velocity use cases, opening up the network to a broader potential audience. Anyone can afford to use it, whereas the cost of transactions on other blockchains makes transferring small values (for example, the cost of stamping a single document) prohibitive.

IOTA's green credentials – no miners working on Proof of Work means much less energy spent in comparison to other blockchains – is another driver of scalability and complements the European Green Deal, the EU's overarching aim of making Europe climate-neutral by 2050. IOTA also aims to support data sharding, splitting the network up into smaller partitions (for example into application-based, regional or logical clusters), thereby allowing it to scale while retaining its overall security and integrity.



The technical approach

The IOTA Foundation is offering its advanced core technology, packaging it with additional solutions required for integration into the EBSI infrastructure and supporting a wide range of cross-border use cases foreseen for EBSI. The proposed modular approach combines existing and new components from the core IOTA protocol and runs IOTA frameworks such as IOTA Identity or IOTA Streams on top of it. This way, the broad set of functionalities of the IOTA protocol are made available for institutions and actors across Europe, enabling them to develop novel use cases.

Data sharding will allow deployed solutions to be partitioned based on the application type, and localization of participating institutions, therefore allowing it to scale in line with EBSI requirements. To accelerate development and uptake of the solution, the IOTA Foundation has joined forces with enterprise software company Software AG, which will oversee system integration during the procurement phases, future provisioning, and potential exploitation of the associated services.

Use cases

The IOTA protocol can function as an infrastructure that supports all potential use cases foreseen by the European Commission. Within the context of the PCP, the IOTA Foundation will test the platform with two specific use cases that are a priority for the European Commission.



IOTA
IDENTITY

Digital product
passport

The creation of a digital product passport for the circular economy, applied to consumer electronics and electric vehicle batteries. The use case addresses policies for the circular economy, such as the Sustainable Products Initiative and the “battery passport” that has already been proposed in the new [Batteries Regulation](#).



IOTA
STREAMS

Intellectual property
rights management

Intellectual property rights management in the creative industry. This use case helps creatives to track the use of their work, transfer intellectual property rights and receive compensation in an automated and trusted way. Further tests within the Foundation's ecosystem of partnerships is also within scope.

These use cases will build on frameworks such as IOTA Streams for protecting data confidentiality and IOTA Identity for guaranteeing data integrity and control access to it. In addition, IOTA's new Digital Assets framework will be leveraged to create Non-Fungible Tokens (NFTs) to track ownership of original intellectual work.