Meet

# **European Blockchain Services Infrastructure**

**ESSIF Stakeholders Meeting** 

Oscar Burgos

#EUBlockchain



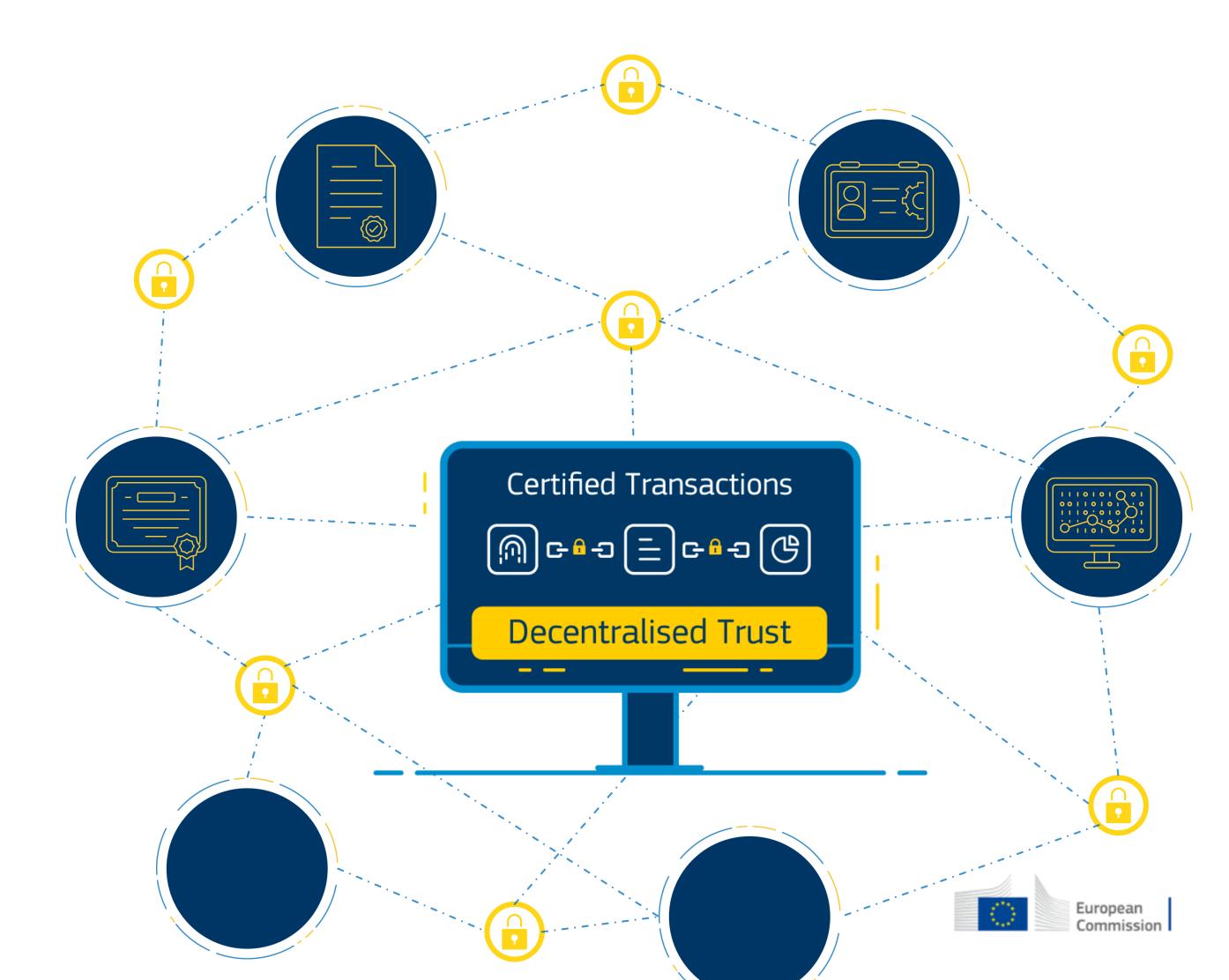


#### WHAT IS EBSI?

The European Blockchain Services Infrastructure (EBSI) aims to become a "gold standard" digital infrastructure to support the launch and operation of EU-wide cross-border public services leveraged by blockchain technology.

EBSI aims to establish itself in 'virtually' every public sector domain that can benefit from blockchain technology. It will be materialized as a network o distributed nodes across Europe, leveraging an increasing number of applications focused on specific use cases.

These use cases are identified and selected each year by the Member States (European Blockchain Partnership) and the European Commission.

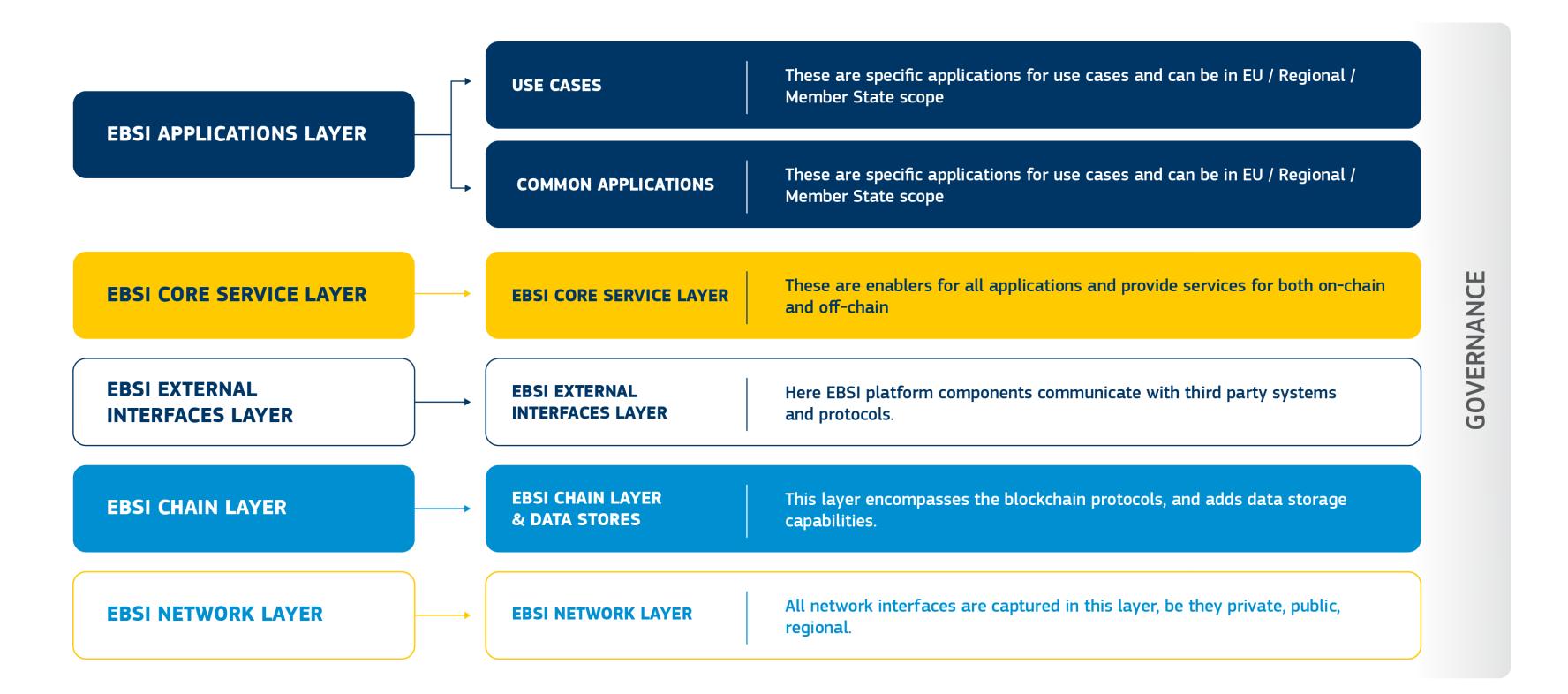


#### EBSI AT A GLANCE

The Member States will operate EBSI nodes at national level. These nodes will be able to create and broadcast transactions that will update the ledger. The architecture of each node will be composed of two main layers.

A use case-specific APIs layer developed to enable business applications to interface with the node.

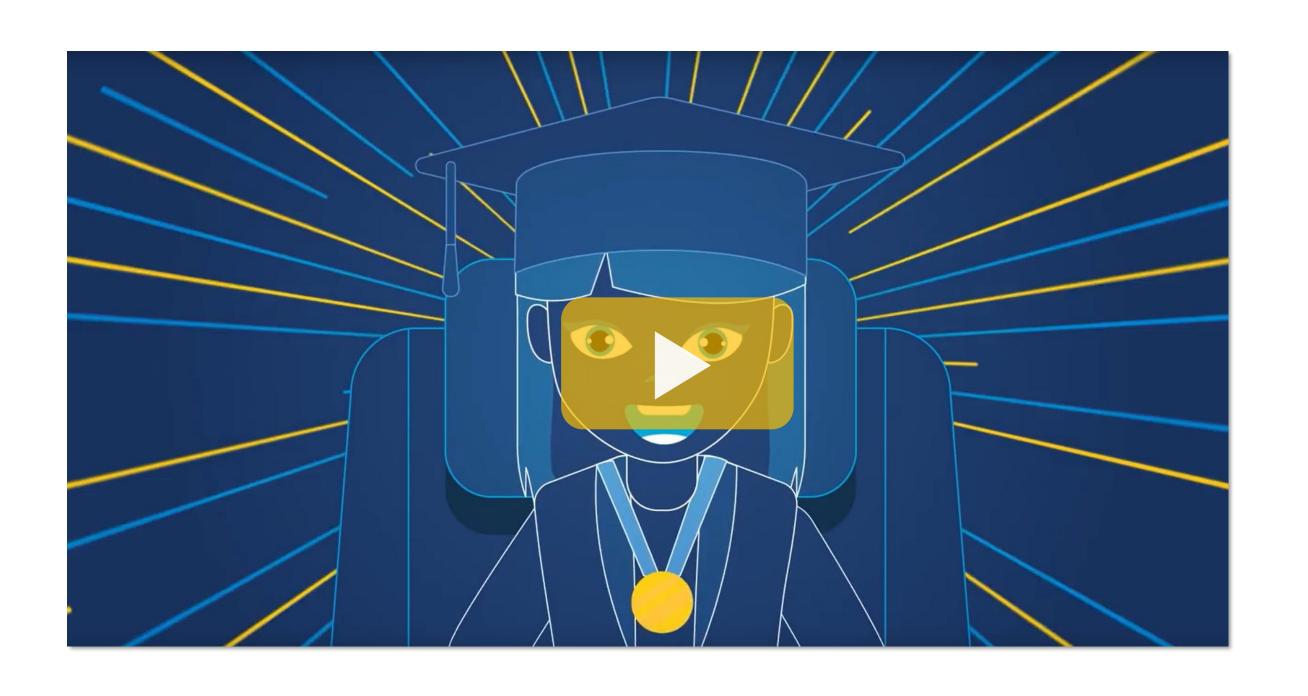
An infrastructure layer with capabilities common to all use cases. A thorough analysis will determine the EBSI native network based on specific use case requirements.





#### SELECTED USE CASES FOR 2019

A Member State led and composed user group has been established per selected use case. These user groups aim to deliver a working prototype connected to the infrastructure layer of EBSI by the beginning of 2020. A new set of use cases will be selected by the European Blockchain Partnership Policy Group for 2020 (and onwards).





Notarisation of Documents for Auditing Purposes



EU Self-Sovereign Identity Framework



Certification of Diplomas



Trusted Data Sharing





Uses her Belgian ID to register to university



Requests her diploma from Spanish university



Creates company in Northern Italy



Applies for funding at EU funding entity



Receives EU funding



Online KYC procedure allowing the creation of a verifiable credential, which is authenticated with her Belgian electronic ID



The university creates a digital asset representing Eva's diplomas and assigns it to her known verifiable credential



Eva notarizes her documents using her private keys and stores the notarized documents (e.g. diplomas)



EU Startup Funding entity verifies Eva's diploma



Eva notarises the documents justifying the spending of the grant, which the EU auditors can verify



#### **PERSONA**

Eva is a 23 years old Belgian Bachelor's degree graduate in computing security and AI.

She has a passion for learning languages, travelling, computing services and AI

#### CONTEXT

Eva wants to further deepen her knowledge in computing security and AI and applies for a master degree at the Barcelona University.

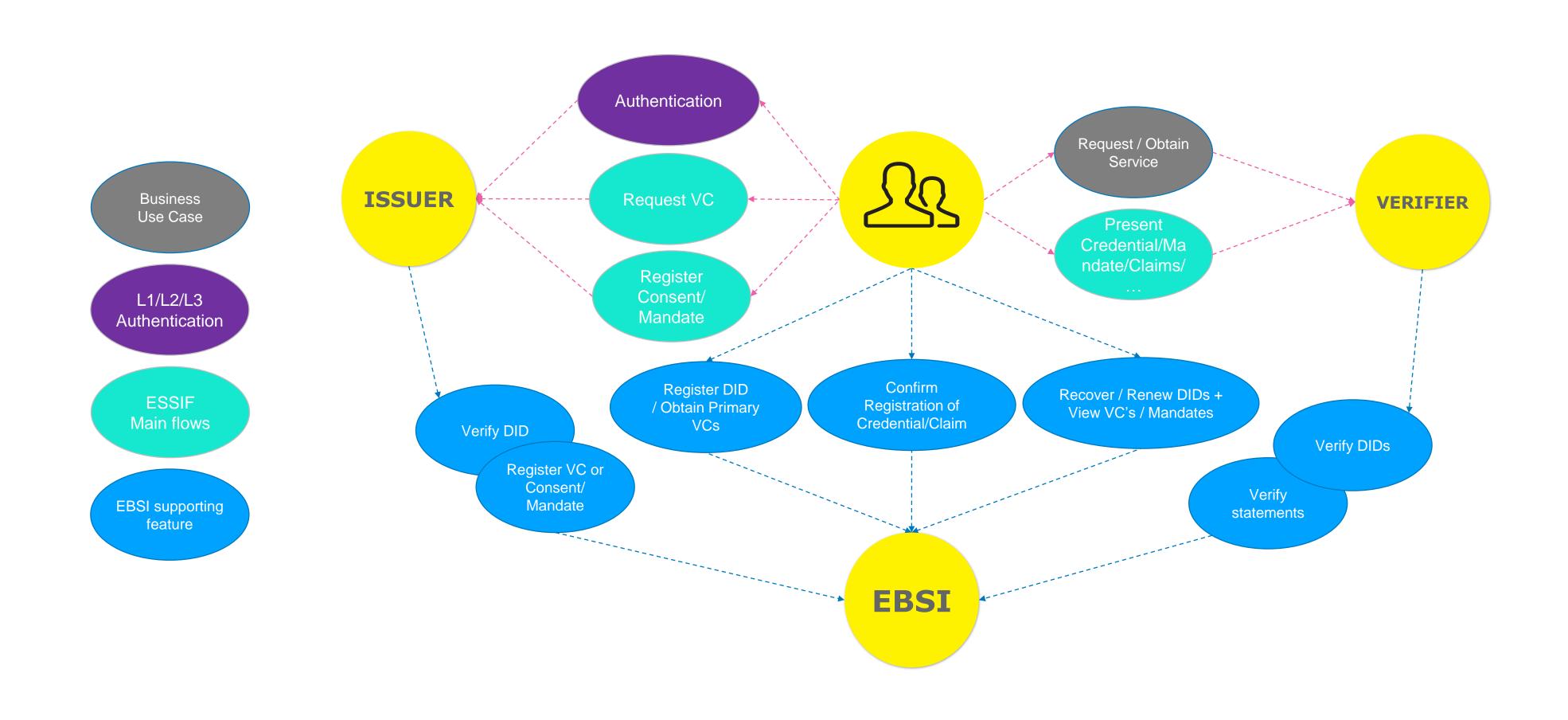
Eva hears about EU incentives to start companies in Northern Italy. She decides to pursue her dream and to start a business there to sell specialized security chipsets with AI enhanced capabilities.

#### GOALS

- · Provide seamless cross border services for citizens;
- Help make institutions more efficient;
- Make economic activity flow cross border.



#### Business case → ESSIF → EBSI



#### ESSIF v1 phased evolution



ESSIF features

- DID-creation
- DID-resolving
- Verifiable IDs
- Verifiable Attestation

- Renew & revoke DIDs / VCs
- Notarise issuance time

- Support for "Public" Attestations / Permits / etc

- Issuance & Registration of Consents

- Proofs using "on ledger registration" of evidences
- ...

features

- DID-anchoring
- •Trusted Issuer List
- ...

- Registration of revoked DID's / VC's
- •Timestamp of VCs •...

- Publication of public VCs (e.g. permits, grants, etc)

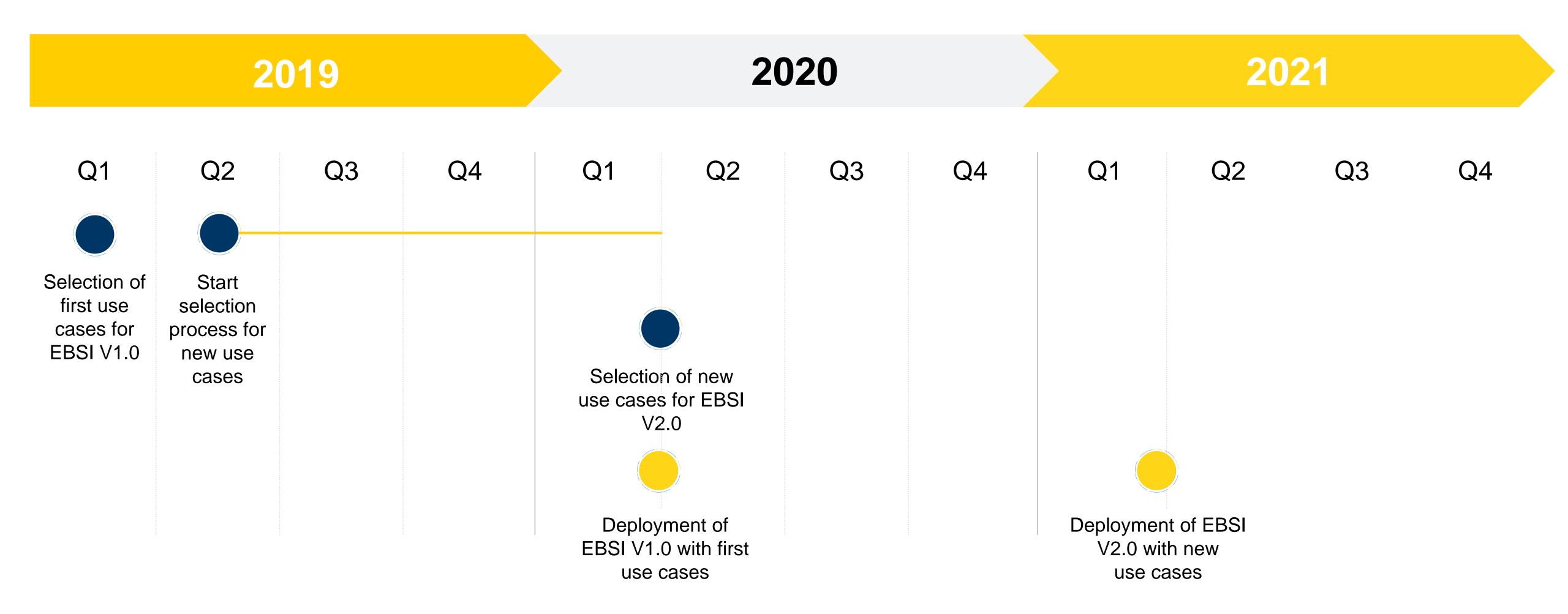
- Smart contracts implementing consent management
- Smart contracts to automate verifications, e.g. "this DID belongs to an SME?"
- ...

- Alternative technical implementation for eSeals / eSignatures
- ...

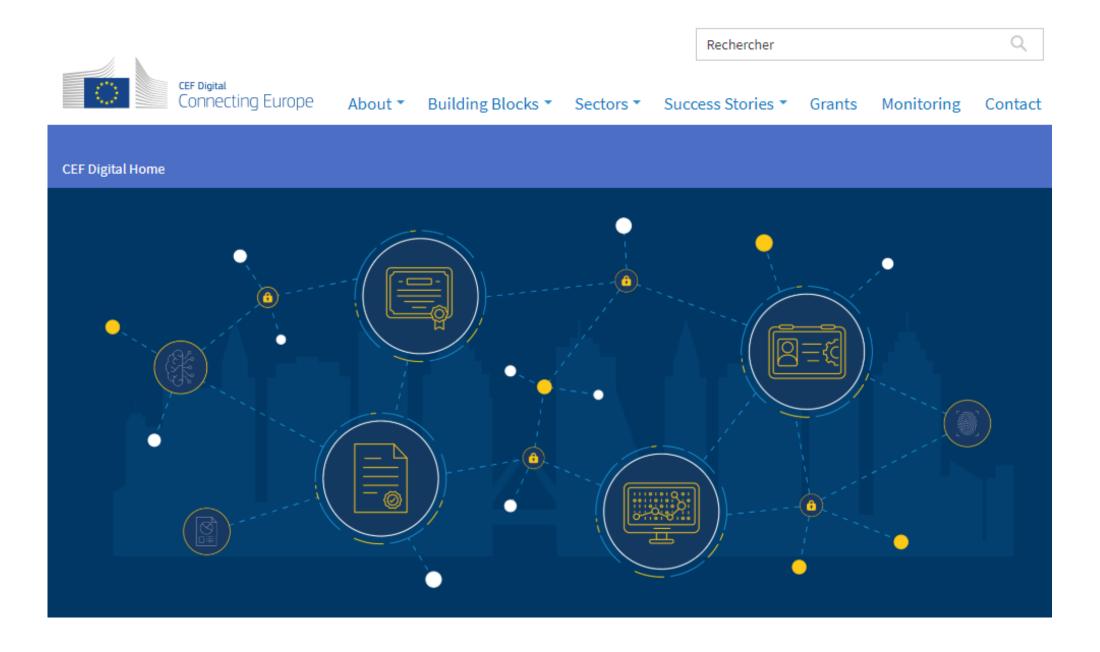
## ESSIF in EBSI vs ESSIF Ecosystem

EBSI	Wider Eco-system
Reference setup for Trusted Gov Issuers	Compliant market wallets
Ledgers for public / official Permits	Compliant (sector) ledgers
Revocation Lists for notarized eID-schemes	Compliant market Identity Hubs
Ledgers for cross-border sector Trusted Lists	New (Q)TSPs

### **EBSI Roadmap**



#### Want to know more?



# Introducing the European Blockchain Service Infrastructure (EBSI)

Blockchain technology has enormous potential to enhance the way that citizens, governments and businesses interact, by enhancing trust between entities and improving the efficiency of operations.

The European Blockchain Services Infrastructure (EBSI) is a joint initiative from the European Commission and the European Blockchain Partnership (EBP) to deliver EU-wide

increasing number of applications focused on specific use cases. In 2020, EBSI will become a CEF Building Block, providing reusable software, specifications and services to

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