European Self Sovereign Identity framework

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‘We cannot build services for the post-industrial age using the identity infrastructure of the industrial age. We need a new digital identity infrastructure.’

- David Birch

When we think of digital identity we therefore need to see it not as a single thing. It is rather the sum total of all the attributes that exist about us in the digital realm, a constantly growing and evolving collection of data points.

Definition digital identity

EU blockchain observatory report on digital identity and blockchain
https://www.eublockchainforum.eu/sites/default/files/report_identity_v0.9.4.pdf

Challenges (digital) identity?

Meet Lisa from Spain. She just earned her Bachelor's Degree in Law at University Carlos III of Madrid and wants to do her Master studies (Economics) in University of Antwerp in Belgium

Lisa needs subscribe in the university/city of Antwerp and present her paper diploma and her Spanish identity card.

The university and city check this information

Lisa gets a new Belgian identity card for foreigners with a unique Belgian national registry number.

Lisa graduates at University of Antwerp as a Master in Economics and her diploma is stored in the Learning and Diploma database of the Ministery of education and attached to her Belgian ID.

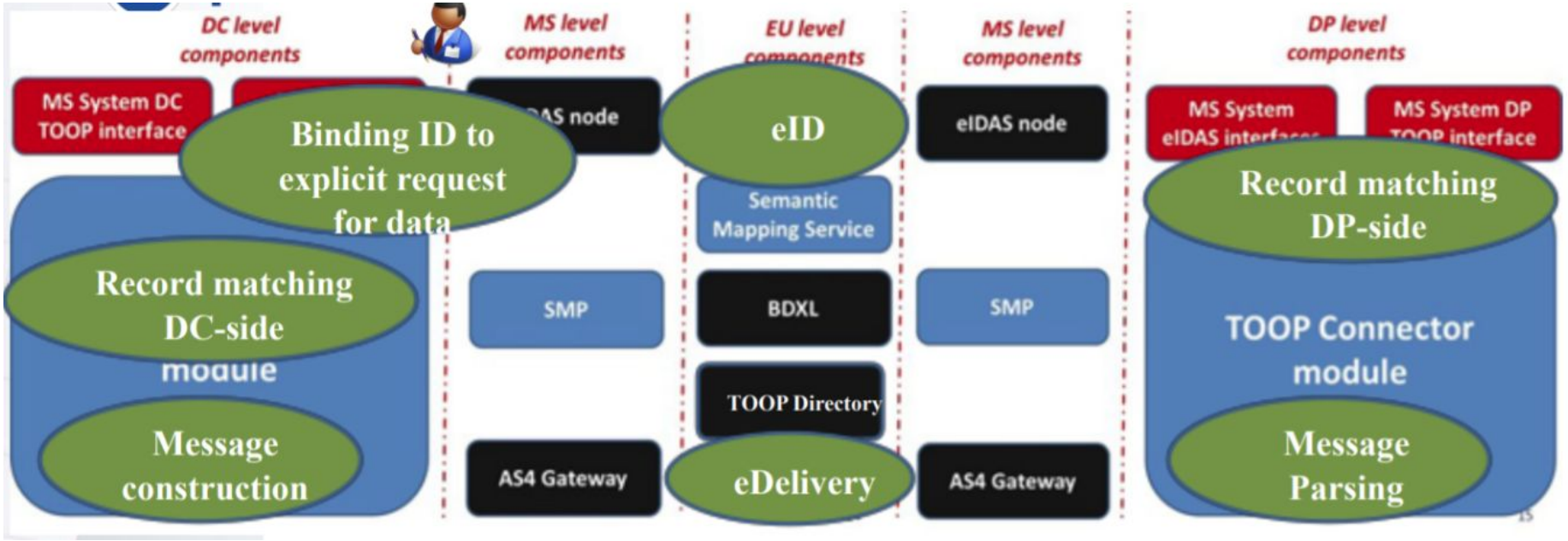
Lisa wants to work in France and needs to present and proof her paper/digital diploma to the employer and link these to her different identities.

After getting hired she needs a new French identity ...

Challenges

- Proof of authentication of documents and information
- Validation of information
- Managing multiple identities
- Record/identity match in different systems/countries
- Interaction by the user independent of control by systems/organisations
- Very broad and heterogeneous ecosystem
- Cross sector sharing of validated information (public-private).
- Cross border sharing of information
- Identity theft and fraud
- ...

Control of your own identity data?



Our current EU ‘once only’ approach (Government-Government)

Linking authentic
public/private sources?

Explicit consent in the new General Data Protection Regulation

Control of your own identity data?

Control of your own identity data?

© AFP/Getty Images

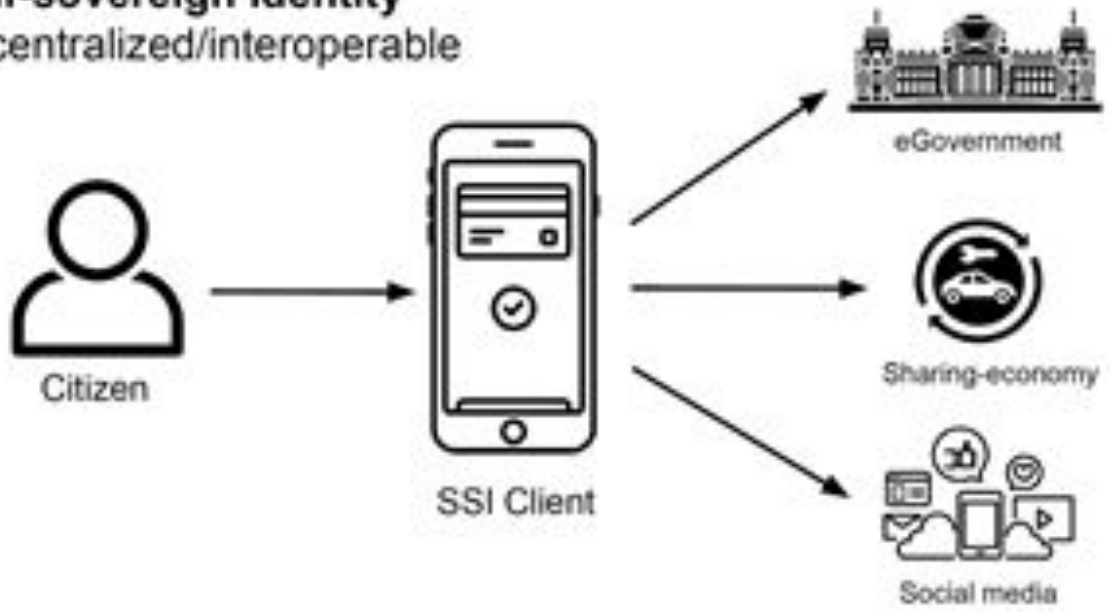
Self sovereign identity?

*‘**Self-Sovereign Identity** is the next step beyond user-centric identity and that means it begins at the same place: the user must be central to the administration of identity.’*

— Christopher Allen

https://www.youtube.com/watch?v=m2uj7fgb2JI

Self-sovereign Identity
decentralized/interoperable



Recognized ESSIF Issuer

Governmental agency
Financial Institution
Insurance company
University
Notary
...

Publish/Provide (verified) credentials / mandates / claims

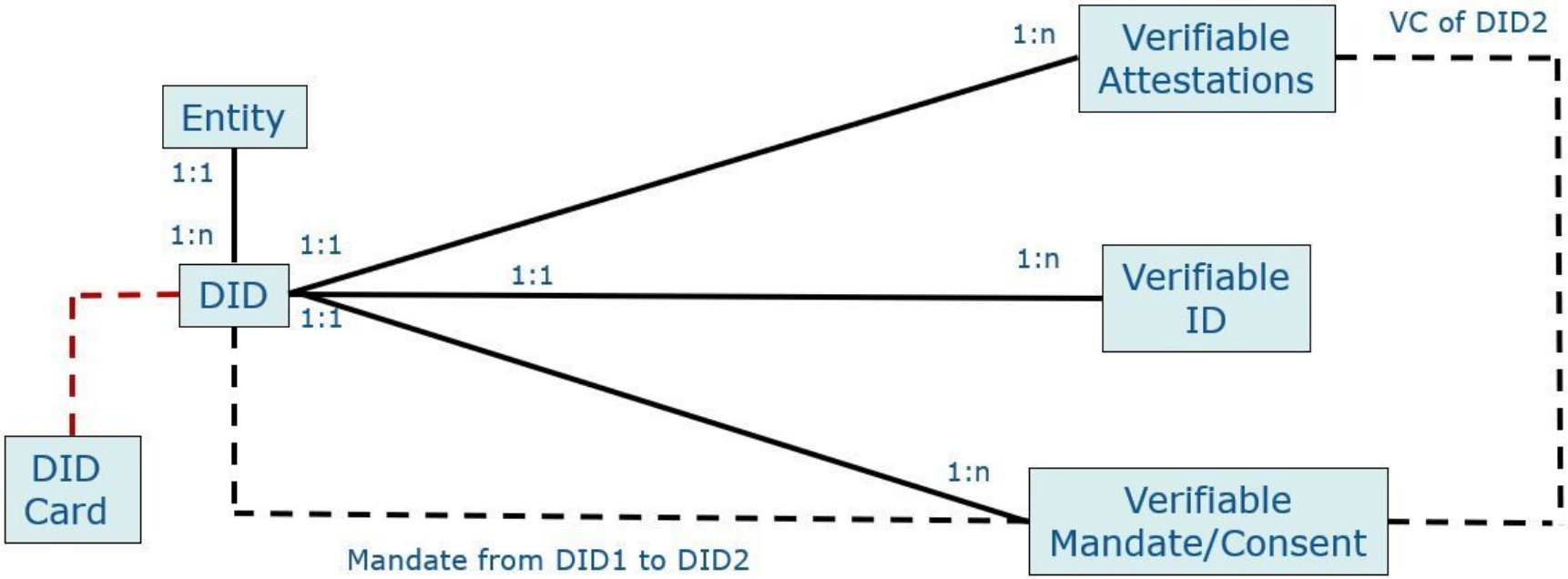
EU Citizen / Entity ESSIF Wallet

Obtain required info and verify (before providing service)

Relying party / Verifier

Financial Institution
Employer
Government Agency
....

High-Level Datamodel



SSI-use cases

Authenticity diploma?

Identity refugees?

Know your customer?

ENTER
Checking your age?
I'M OVER 18
GO BACK

Customer experience?

Local identity?

Moving to a new house?

ESSIF

European Blockchain Partnership (EBP)

Collaborate to let EU take the lead in blockchain

ESSIF (European Self Sovereign Identity Framework)

- How to collaborate in on the many cross border challenges of Self Sovereign identity in Europe?
- Initiative launched in EBP by **Germany**/ Nordrhein-Westfalen with help of **Netherlands** and **Belgium**.
- Use case and project in the European Blockchain Service Infrastructure (28 member states involved)
- Belgium and Spain project-convenors

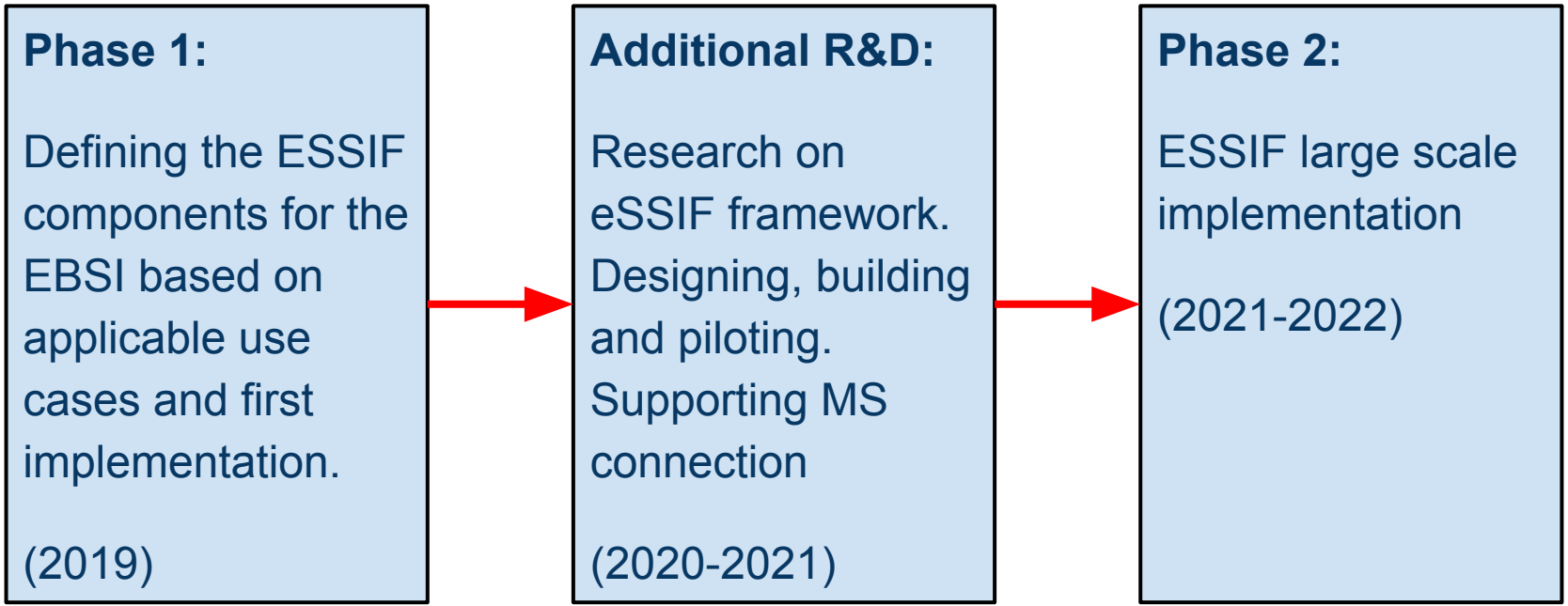
Scope ESSIF

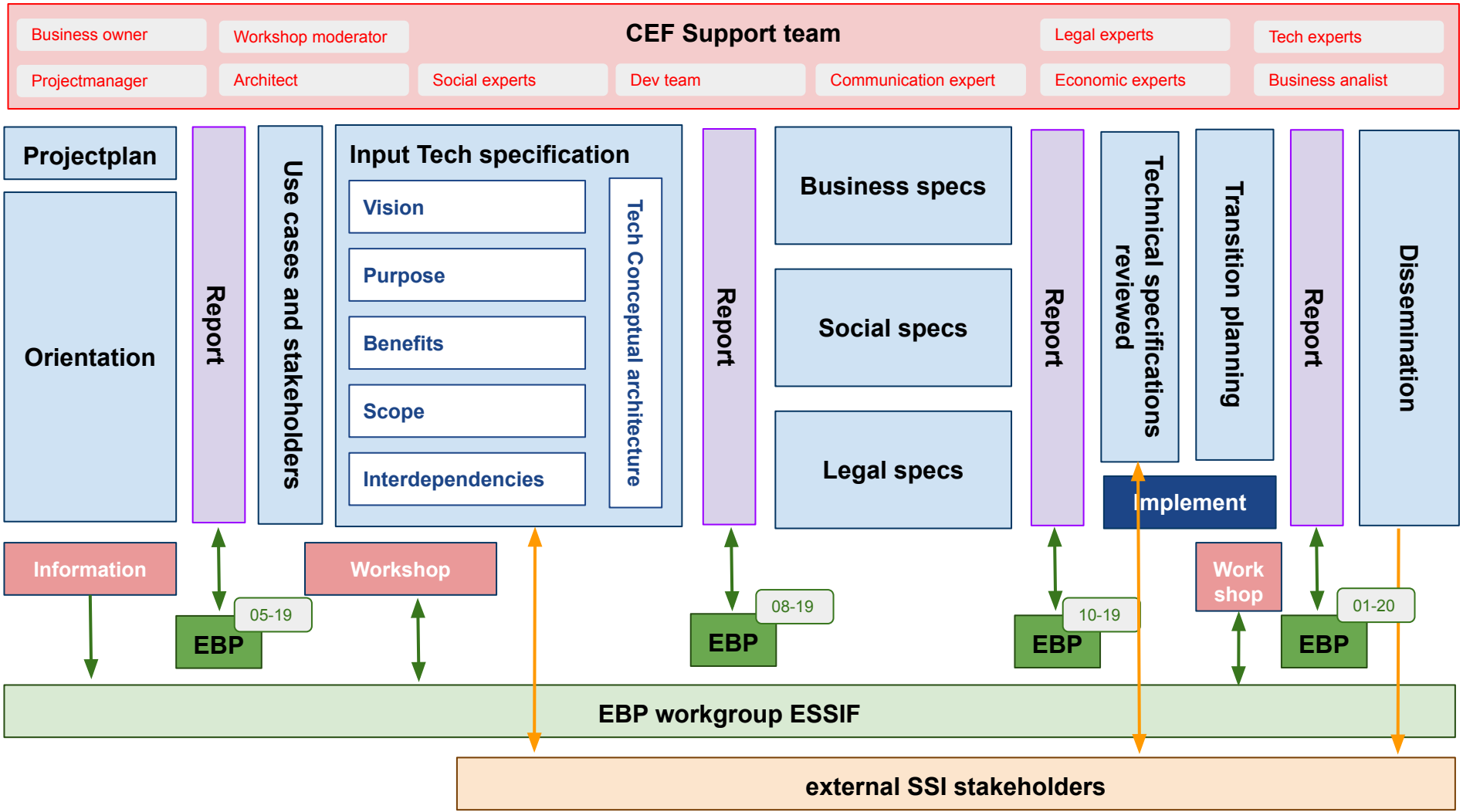
- How to facilitate cross-border interaction with SSI.
- How to make/keep national SSI projects interoperable.
- How to integrate/align existing building blocks such as eIDAS, e-delivery, once-only with SSI.
- Stimulate the SSI-transformation of public services
- How to conceptualize and build an identity layer in the new European Blockchain Services Infrastructure.
- How to preserve European/democratic values in the implementation of Self Sovereign identity.
- Stimulate SSI development and standardisation on global level.

Out of scope of ESSIF

- The interpretations of the data (semantics) and the necessary standardizations and business logic is however outside the scope of ESSIF.
- ESSIF will provide in its first instance support for other EBSI use cases (like diploma and notarization)
- ESSIF will not build and maintain an SSI wallet for all European citizens and interfere in this way with the emerging market of SSI solutions and personal data storage.
- Academic research on SSI is out of scope of the EBSI use case ESSIF.

The roadmap and project landscape ESSIF




Business owner
Workshop moderator
CEF Support team
Legal experts
Tech experts
Projectmanager
Architect
Social experts
Dev team
Communication expert
Economic experts
Business analist
Projectplan
Orientation
Report
Use cases and stakeholders
Input Tech specification
Vision
Purpose
Benefits
Scope
Interdependencies
Tech Conceptual architecture
Report
Business specs
Social specs
Legal specs
Report
Technical specifications reviewed
Transition planning
Report
Dissemination
Implement
Information
Workshop
Work shop
05-19
EBP
08-19
EBP
10-19
EBP
01-20
EBP
EBP workgroup ESSIF
external SSI stakeholders

Freedom is control
in your own life.
- Willie Nelson -

Thank you for your attention
(and thanks to Rene Margritte)