

# Impact of European Digital Identity Wallet on NRENs

*GÉANT Innovation Programme 2021*

*3 March 2022*



**inno  
valor**

# Agenda

- European Digital Identity Wallet
- eWallet use cases in research and education
- NREN roles and SWOTs
- Role of GÉANT related to eWallets
- Q & A



SURF

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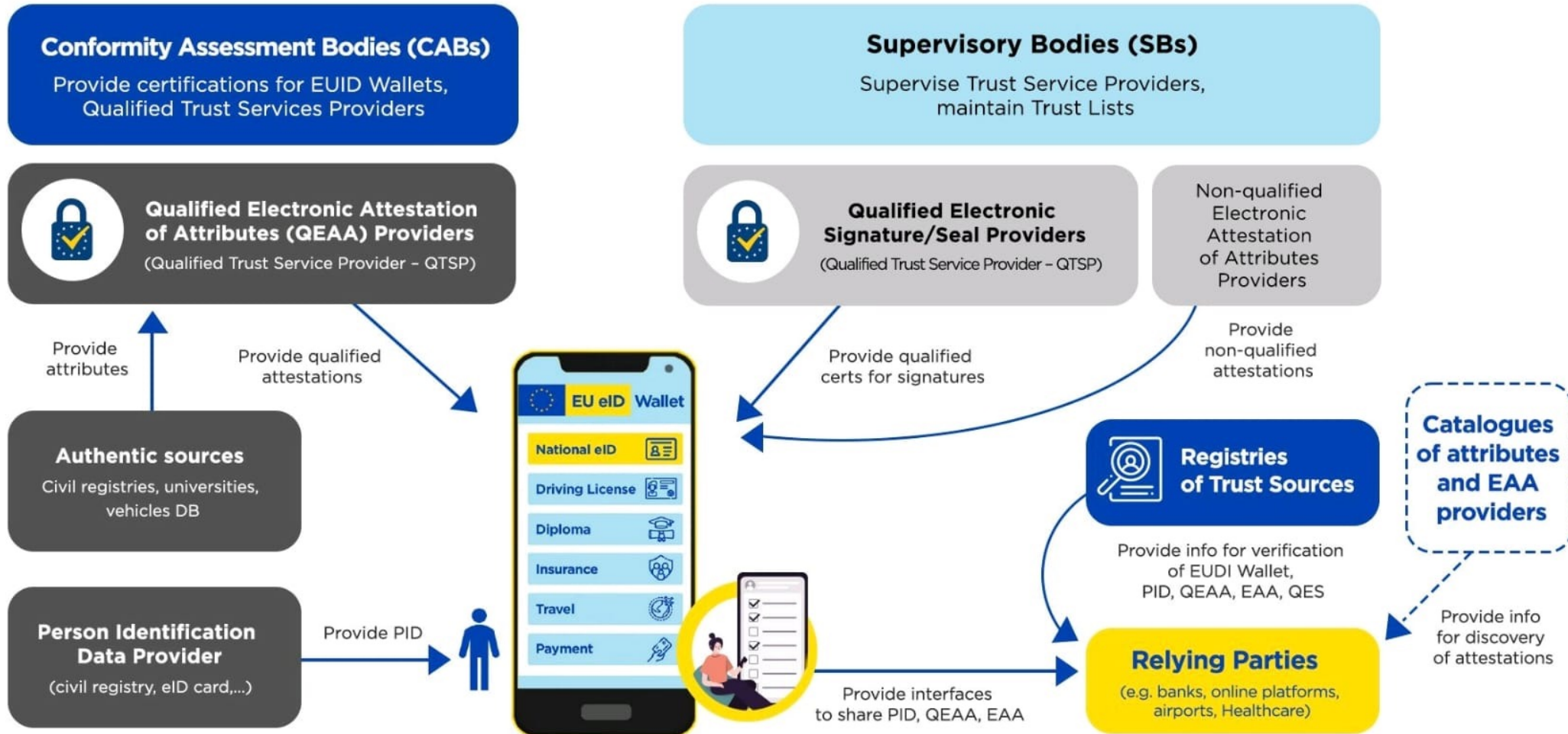
value through innovation



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# European Digital Identity Ecosystem





# Core eWallet functions

- Identification/authentication
  - Personal Identification Data (PID) including a unique and persistent identifier ('EU eID')
- Pseudonymous or anonymous authentication by providing a privacy preserving proof of possession
- Storing or retrieving identity data, credentials, attributes
- Providing attributes and attestations to relying parties
- Create qualified electronic signatures

# eWallets: what will change

- Shift from 'identity only' eID to a wide range of (identity related) attributes
- Every member state must make available at least one eWallet for its citizens
- eID not only for the public sector, but also for private sector use cases



# Some eWallet requirements

- eWallets must support authentication at the eIDAS Assurance level 'High'
- In some legally specified use cases eWallets must be accepted by private organisations - f.i. for student registration at educational institutes
- In other use cases, users may not be forced to use an eWallet
- eWallets must be available for free to the user
- eWallet and attestation providers are not allowed to use eWallet usage data – unless permissioned by the user

# Planning



Today

**Agreement on process and working procedures**

**3 months**

2/6/2021 - 1/9/2021

**Agreement on technical architecture outline**

**3 months**

2/9/2021 - 1/12/2021

**Identification of specific technical architecture, standards and references, guidelines and best practice**

**3 months**

2/12/2021 - 1/3/2022

**Pilots**

**12 months**

1/4/2022 - 31/3/2023

**Rollout**

**15 months**

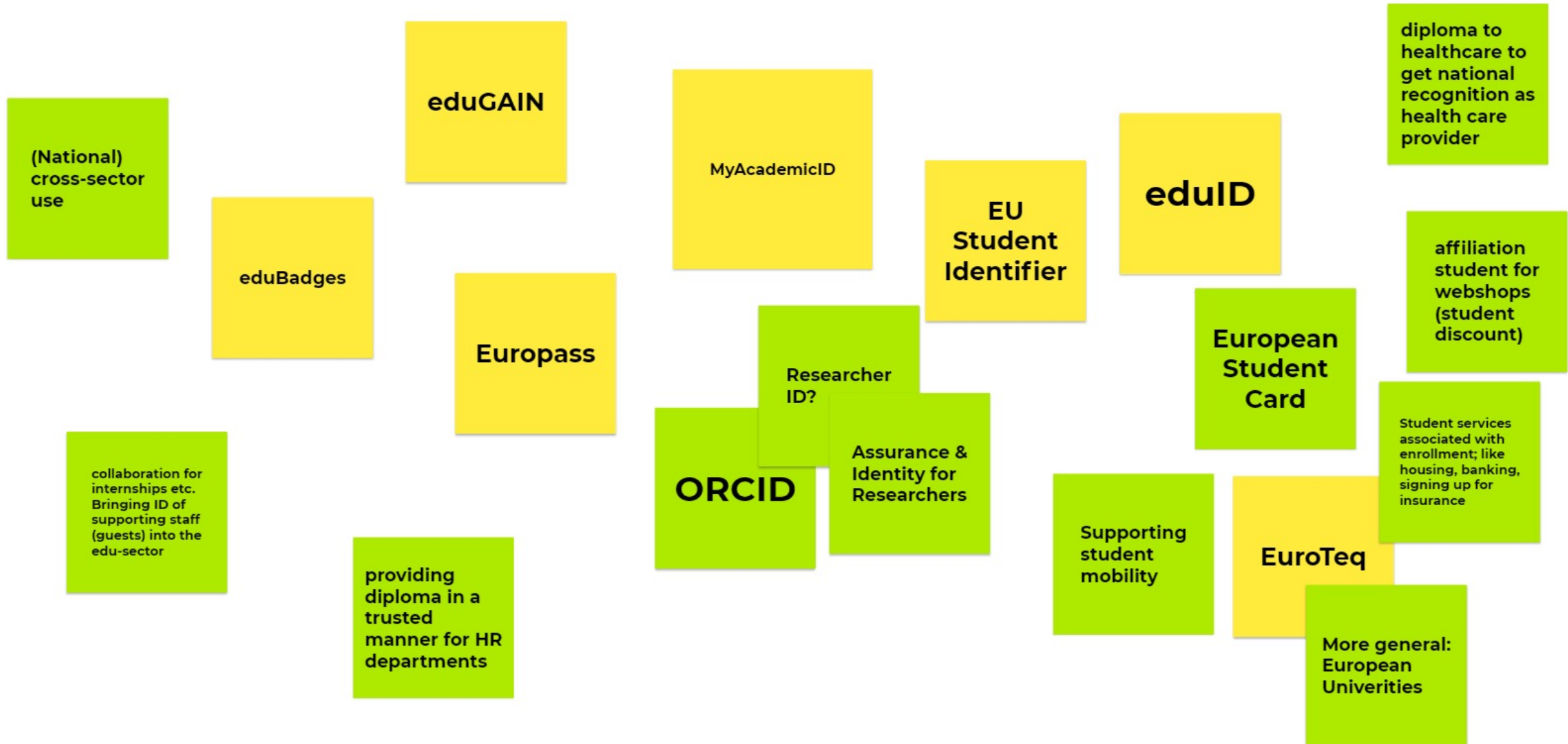
1/4/2023 - 30/6/2024



# Research questions

1. How does the EU Digital Identity Wallet ecosystem impact the role of NRENs and providers of credentials in the research and education domain?
2. How can existing NREN initiatives be leveraged to support the EU Digital Identity Wallets?
3. Is there a coordinating or supporting role to be played by GÉANT in this ecosystem?

# Which existing NREN initiatives could benefit from the EU digital identity wallets?





# eWallet use cases in research and education

- Student registration
- Supporting identity federations
- Providing educational attributes and attestations to relying parties
- (International) student and staff mobility
- Life Long Learning
- International research and development

# Roles in EU wallet ecosystem (simplified view)

  
Person Identification Data  
Providers,  
Authentic Sources

Provides  
Wallet

  
Wallet provider

Provides attestations

  
Attribute provider

Registers info

Provides  
attestation

  
User

Relying party

Checks validity

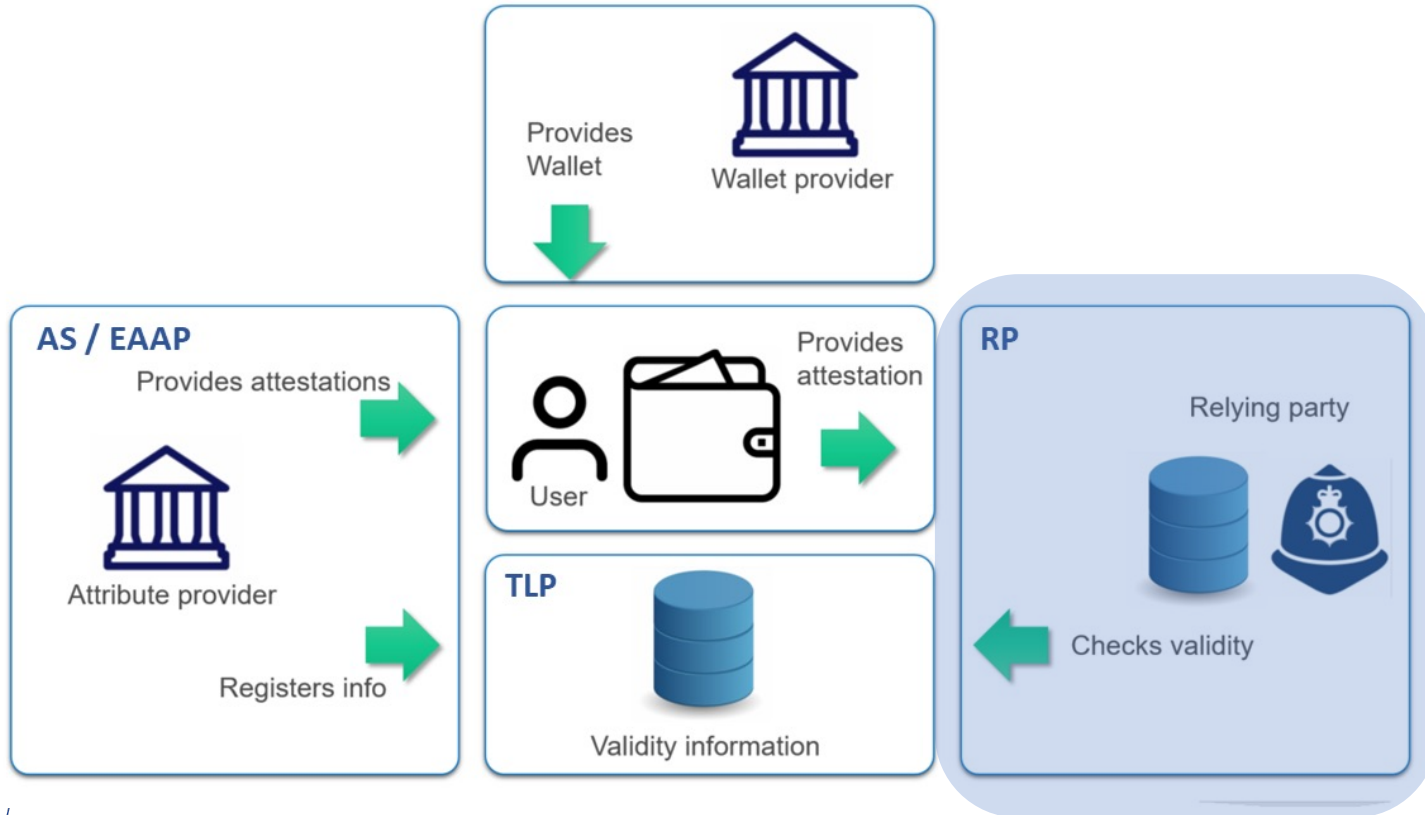
Trusted List Provider

## Main roles

- Wallet Provider
- Person Identification Data Provider
- Authentic Source
- Electronic Attestation of Attributes Provider
- Relying Party
- Trusted Lists Provider

# NREN as Relying Party

In this role, the NREN consumes and verifies EU eIDs, eduIDs and related attributes (educational qualifications, titles and licenses) provided by eWallets, on behalf of the receiving educational institutes.



# NREN as Relying Party

## Strengths

NRENs experienced with ID federation

Trust and trust building are most valuable NREN assets

NRENs capable of connecting many different wallets

Strong eduID's and infrastructure already available

## Weaknesses

Central RP role not fully in line with SSI principles

Certain NRENs are understaffed

## Opportunities

Institutes must accept eWallets for student registration

Facilitate Life Long Learning

Improve (international) student mobility

Student IDs in eWallets reduce fraud by sharing ID chipcards

Provide RP services to institutes, for other use cases

## Risks

Competition from other (new) trustworthy (RP) service providers

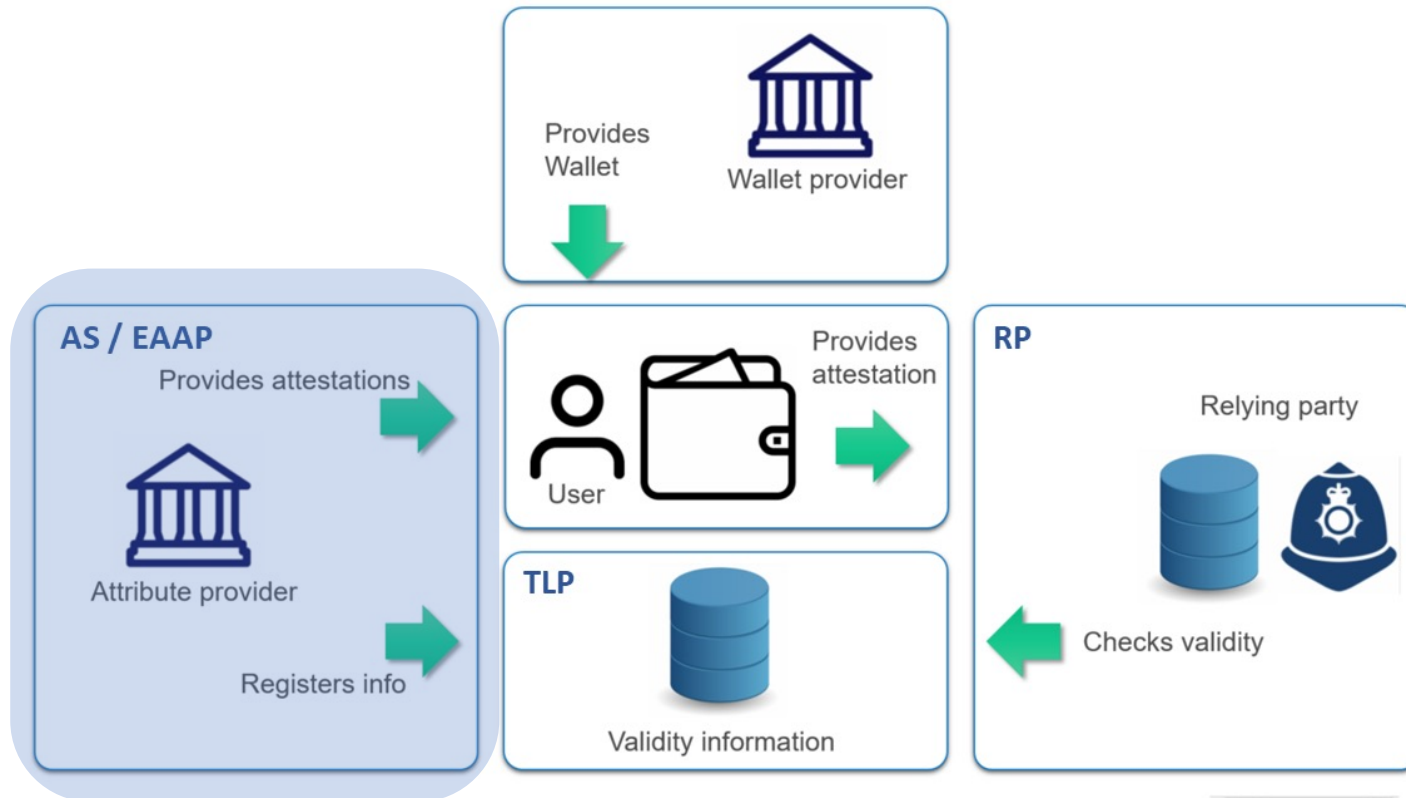
(Other wallet use-cases may drive) institutes to take-up this role themselves



## NREN as Authentic Source / Attestation Provider

In this role, the NREN issues eduIDs and related attributes (educational qualifications, titles and licenses) to eWallets, on behalf of the issuing educational institutes.

Also, the NREN provides attestations for such IDs and attributes to relying parties, for instance to other institutes or employers.



# NREN as Authentic Source / Attestation Provider

## Strengths

NRENs experienced with ID federation

Strong track record for innovating identity infrastructures

Trust and trust building are most valuable NREN assets

also acts as a "sectoral governance body" by defining exchange standards, e.g. how to present diploma data as VC

Strong eduID's and infrastructure already available

## Opportunities

Provide international standards for Research and Education wallet content

Facilitate Life Long Learning

Improve (international) student mobility

See [www.jisc.ac.uk/hedd](http://www.jisc.ac.uk/hedd) and [www.switch.ch/verify](http://www.switch.ch/verify)

Provide AS / AP services to institutes, for other use cases

EU eID replaces eduID's

## Weaknesses

Institutes may decide not to issue eduID's and attributes to wallets

For other identity use-cases, NRENs may lack experience

Some NRENs are not authorized to issue diploma's etc.

Lack of standards for wallet contents

## Risks

eWallets may be not fit for purpose

(Other wallet use-cases may drive) institutes to take-up this role themselves

Other wallet use-cases may drive institutes to use other (new) trustworthy service providers

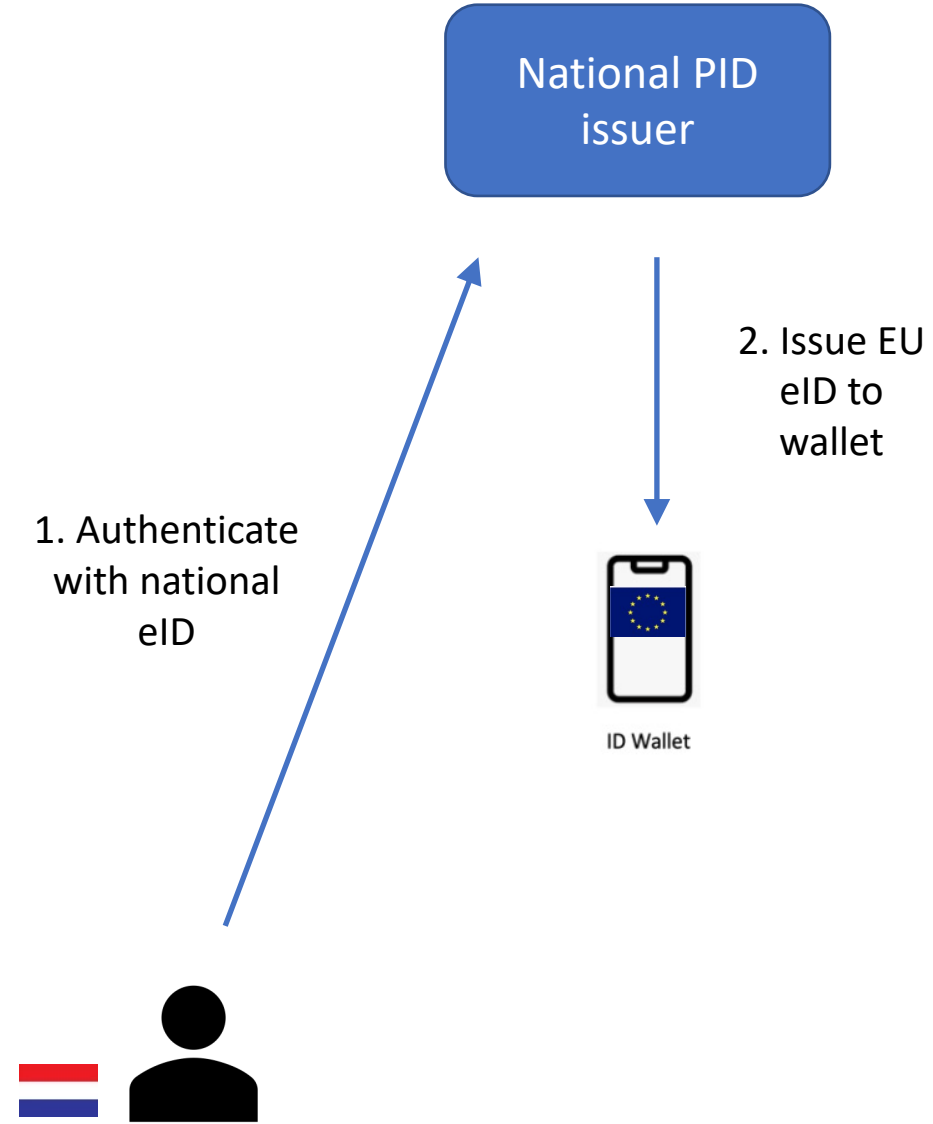
Research and Education may not be allowed into the EU wallet ecosystem

## **NREN as Wallet Proxy**

In this role, the NREN handles eWallets for the educational and research institutes, in order to allow them to continue using their existing identity frameworks whilst supporting eWallets.

In fact, this role combines the roles of Relying Party and Authentic Source.

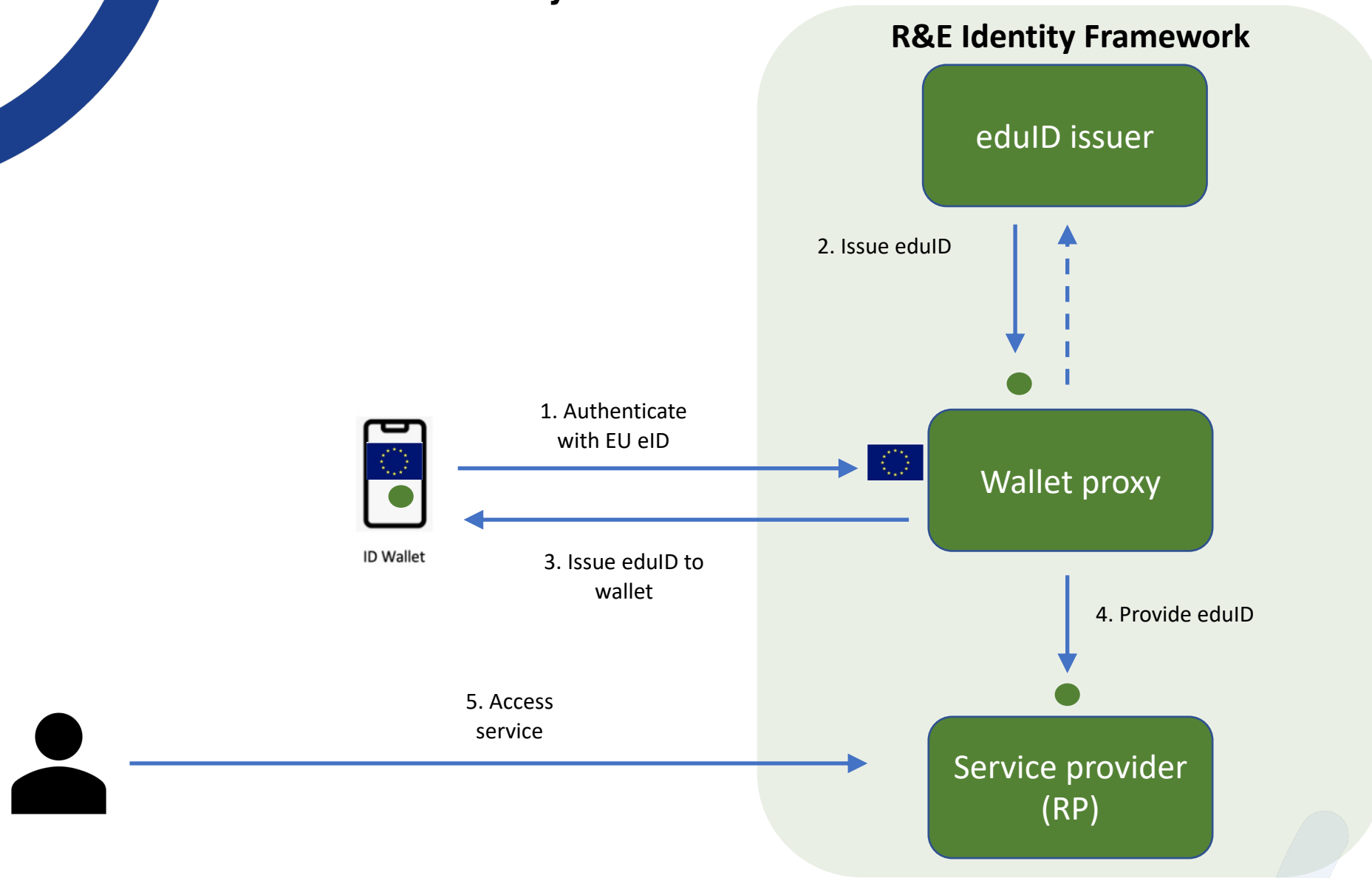
# NREN as Wallet Proxy



*Onboarding in eIDAS Identity Framework*

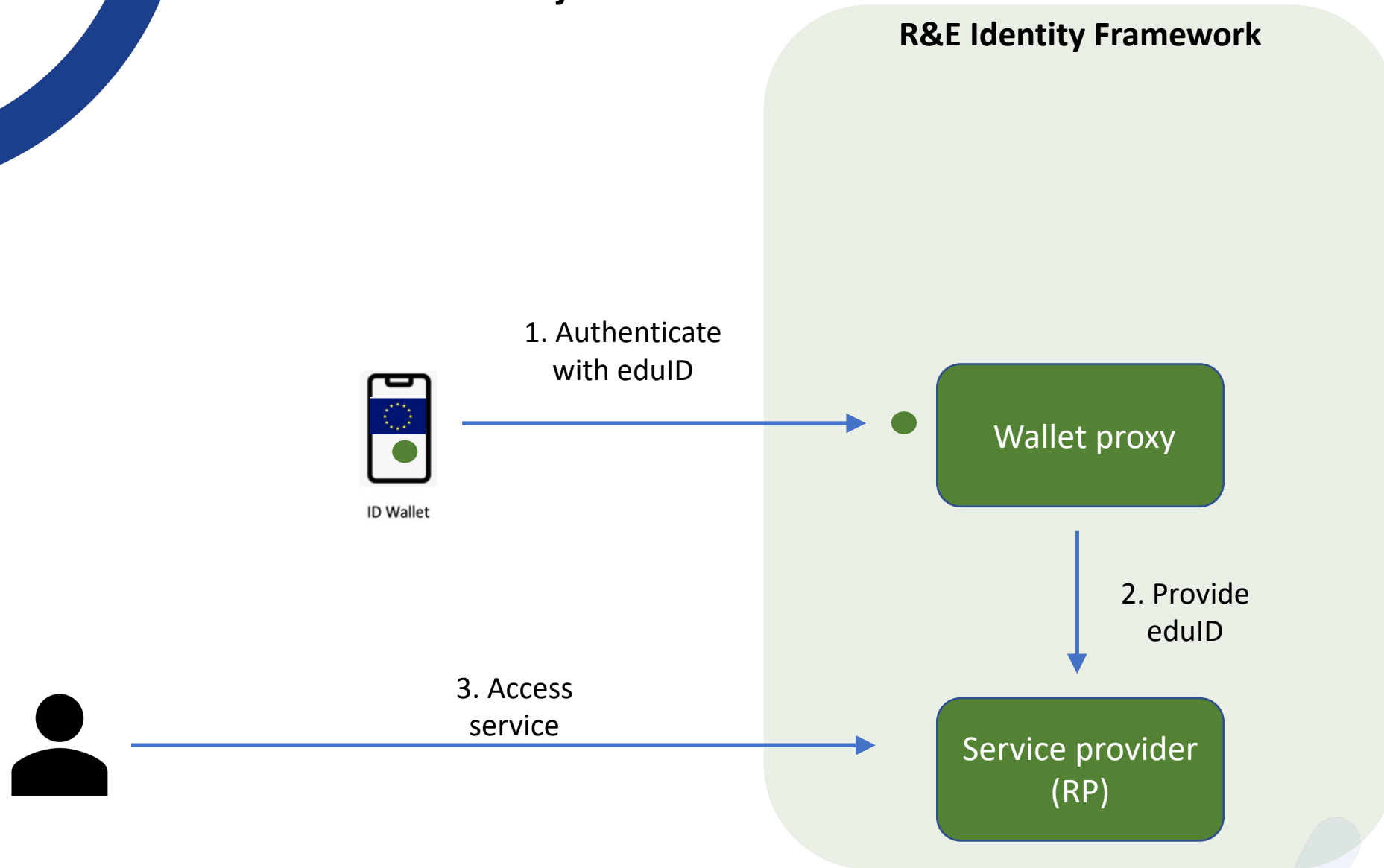


# NREN as Wallet Proxy



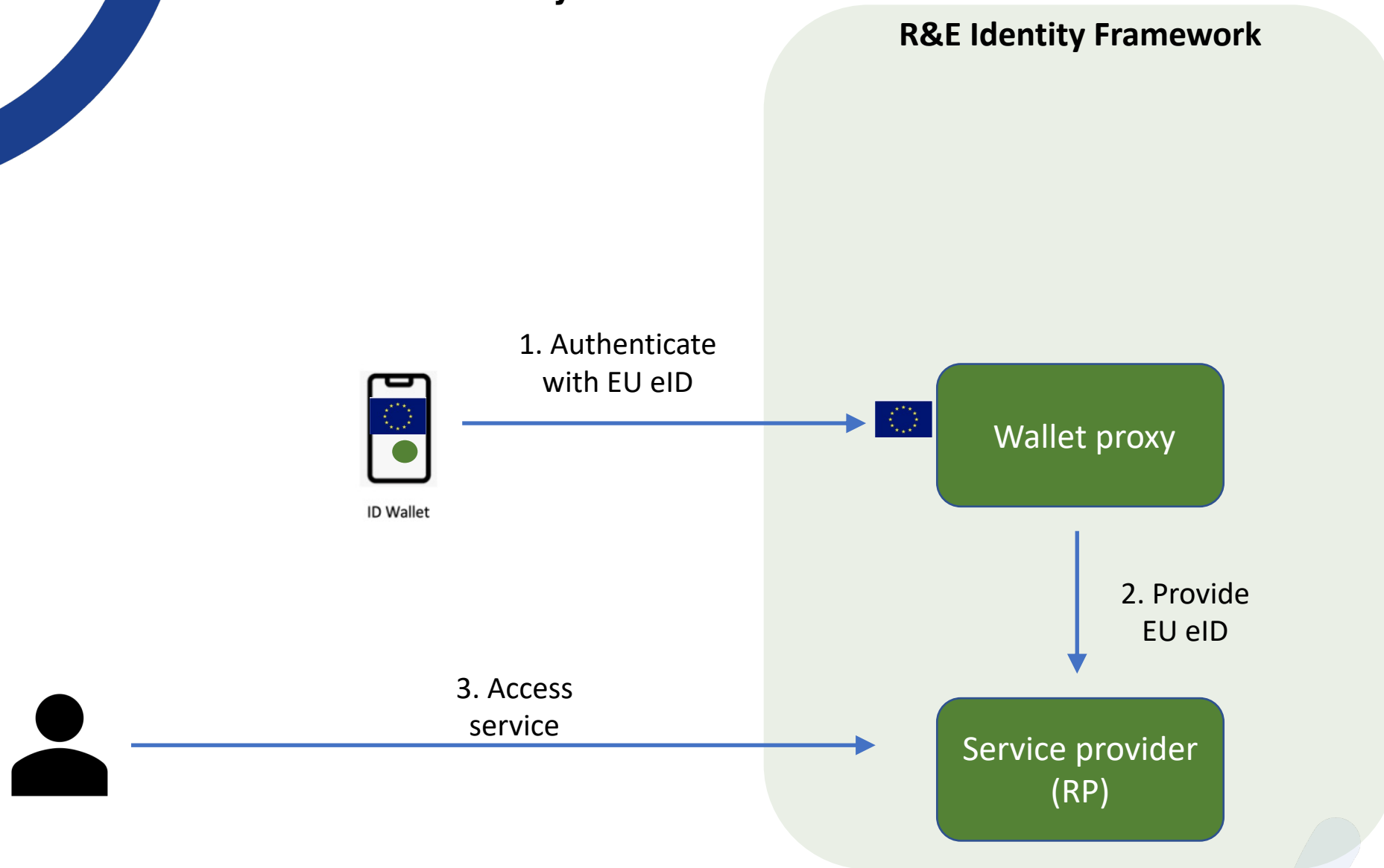
*Onboarding in R&E Identity Framework*

# NREN as Wallet Proxy



*Authenticating in R&E Identity Framework*

# NREN as Wallet Proxy



*Authenticating in R&E Identity Framework*

# NREN as Wallet Proxy

## Strengths

NRENs experienced with ID federation

Infrastructure services are NREN core business

Strong track record for innovating identity infrastructures

Trust and trust building are most valuable NREN assets

Strong eduID's and infrastructure already available

## Opportunities

Enable institutes to take up eIDAS wallet roles themselves, in their own tempo

Facilitate Life Long Learning

Provide wallet proxy services to other identity frameworks

Improve (international) student mobility

Over time, institutes may abandon eduID and only use EU ID

## Weaknesses

Lack of staff and resources in certain NRENs

I'd guess that most students don't know of their NREN's existence. The idea that your EU identity is going to be proxied by something you've never heard of is going to take a lot of careful messaging...

In general: very EU focussed. It will not solve problems/challenges with worldwide scope

## Risks

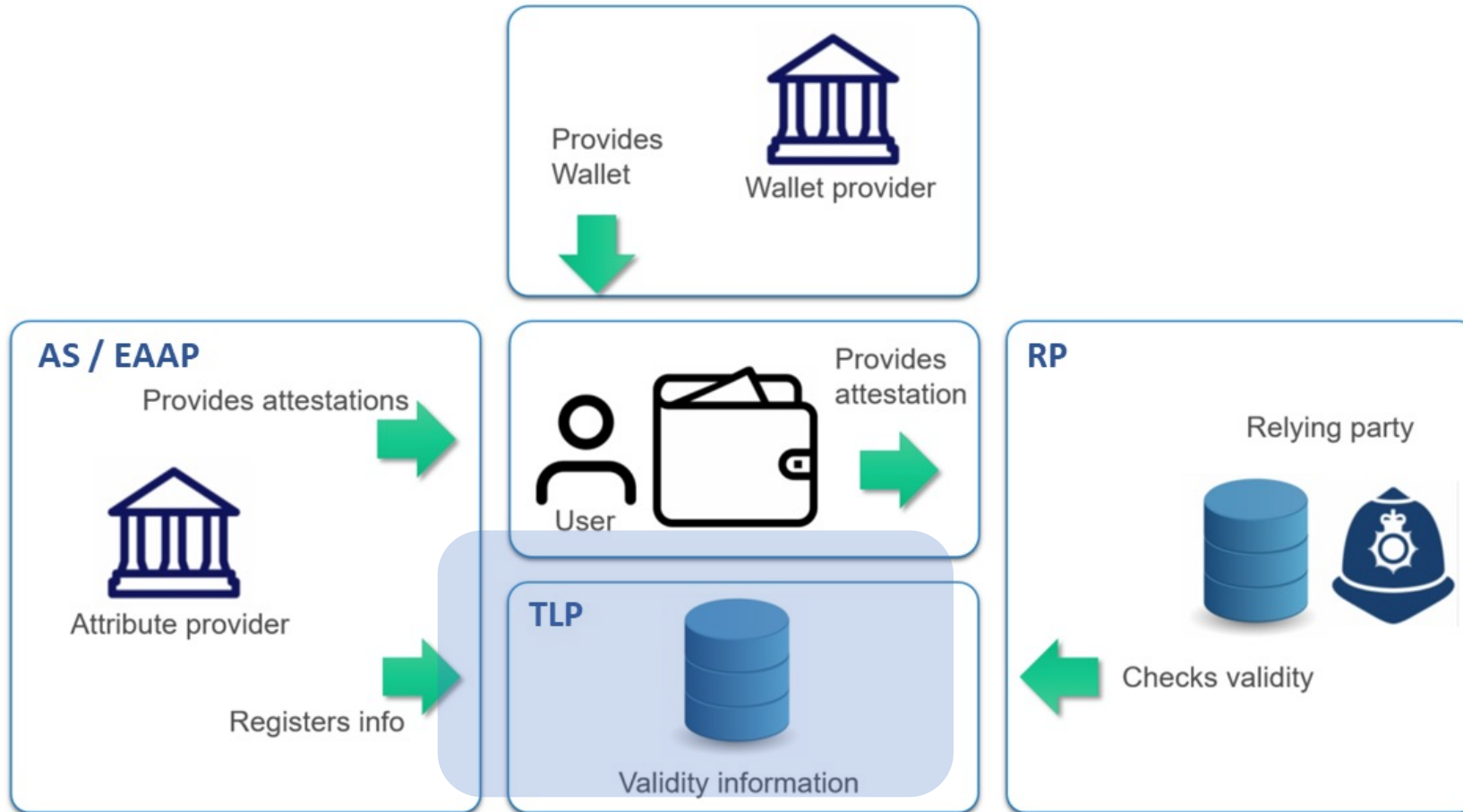
fully dependent on students having a wallet, problems with foreign students etc.

As a proxy model by definition enables snooping on users data, it might not be permissible under the eIDAS regulation



## NREN as Trusted Lists Provider

In this role, the NREN provides trusted lists containing all institutes that are verified data sources, trust providers and/or relying parties in the research and education domain.



# NREN as Trusted Lists Provider

## Strengths

NRENs experienced with ID federation

Strong infrastructure already available

Trust and trust building are most valuable NREN assets

Strong track record for innovating identity infrastructures

## Weaknesses

NRENs not positioned as service provider for all research and education organisations

not all educational organisations are affiliated with the NREN

NREN costs may be too high for (very) small organisations

Business case?

## Opportunities

Become the national TLP for all research and education organisations in the country

## Risks

Member states may assign this role to other parties

There are collaborations which are 'stateless' or state membership is not obvious. Risk if this must be vetted through a member state

## **NREN as infrastructure provider**

In this role, the NREN provides eIDAS infrastructure services to educational and research institutes.

An example would be to provide ledger services.

The NREN has no eIDAS process role at all; these are taken up by the institutes and third parties.

# NREN as infrastructure provider

## Strengths

Infrastructure services are NREN core business

Strong track record for innovating identity infrastructures

## Weaknesses

Requires member institutes to implement wallet roles and processes themselves - or turn to other service providers

Users might prefer different 'general' wallets for different sectors. So not only focussing on the EU wallet, but there might be a need for a Education Wallet next to it.

many NRENs are by their (by)laws not allowed to offer services to other wallet providers

## Opportunities

Provide infrastructure services to other wallet service providers

## Risks

Other wallet use-cases may drive institutes to use other (new) trustworthy service providers - with own infrastructures



# Is there a coordinating or supporting role to be played by GÉANT in this ecosystem?

## General information

Topic description

Conditions and documents

Partner search announcements

Submission service

Topic related FAQ

Get support

Call information

Call updates

## General information

Programme

[Digital Europe Programme \(DIGITAL\)](#)

Work programme part

[Digital Europe Work Programme 2021-2022](#)

Call

[Accelerating best use of technologies \(DIGITAL-2022-DEPLOY-02\)](#)

Work programme year

DIGITAL-2021-2022

 See budget overview

Type of action

DIGITAL-SIMPLE DIGITAL Simple Grants

Type of MGA

DIGITAL Action Grant Budget-Based [DIGITAL-AG]

Open for submission

Deadline model

single-stage

Opening date

22 February 2022

Deadline date

17 May 2022 17:00:00 Brussels time

## Topic description

ExpectedOutcome:

### Outcomes and Deliverables

- At least 4 large scale pilots to test the deployment of the European Digital Identity Wallet in priority use cases and regarding the once-only principle under the Single Digital Gateway regulation. These pilots will deploy the European Digital Identity Wallet in national eID ecosystems by Member States.
- Successful implementation of the revised eIDAS regulatory framework by public and private sector service providers (i.e. SMEs) to exchange digital identity credentials in several Member States.

Objective:

### Objective

The objective of the topic is to develop, implement and scale up the European Digital Identity framework, based on the revised eIDAS regulatory framework as well as the exchange of evidence as set out in article 14 the Single Digital Gateway Regulation. The broader objective of European Digital Identity is to improve citizen's access to highly trusted and secure electronic identity means and trust services such as digital signatures, improve citizens' possibilities to use them and improve their ability to control over sharing their personal identity data. Reaching these aims requires technical implementation work procured by the Commission in particular in the development phase as well as by organisations providing public and private online services in Member States. The topic aims to develop and pilot tools supporting the implementation of the new European electronic identity for all relevant stakeholders. It also intends to develop and deploy use-cases, including innovative solutions, for the new EU-eID ecosystem leveraging and using synergies with decentralised technologies and the work for a self-sovereign identity framework undertaken at EBSI and developed in the context of the new trust service for electronic ledgers (see topic 5.2.1). It will support the implementation of the once-only principle and the sharing of data between

 Go back

# Questions and answers

	DIGITAL CAPABILITY	RELEVANT GROUP
SCORE	1 2 3 4 5	1 2 3 4 5
DIGITAL CAPABILITY	Owl	Digital marketing
	Technologic	Innovation
	Partnership	

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Value through innovation