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Dock Labs Live Event

Key Takeaways from EWC

12 November 2025

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Agenda

1	Short recap	EUDI Wallet, ecosystem, LSPs
2	Output from EWC	Use cases, interoperability, signing, trust infrastructure, ecosystem governance, business models, adoption
3	Where are we at?	1 year to go, timelines and issues

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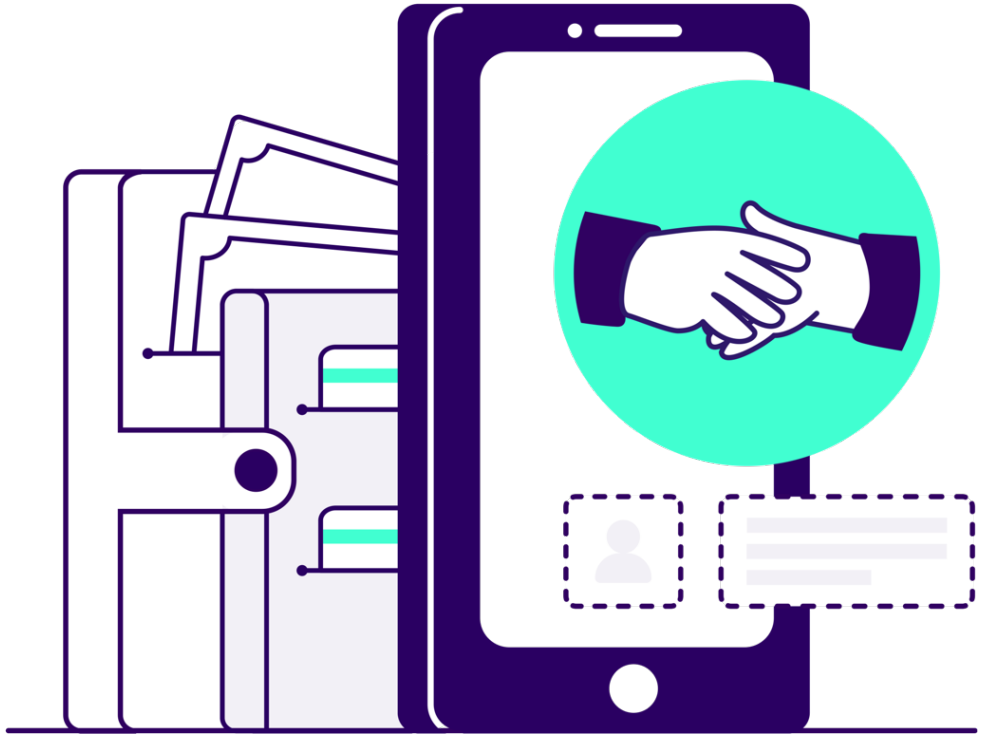
European Digital Identity Wallet



EUDI Wallet

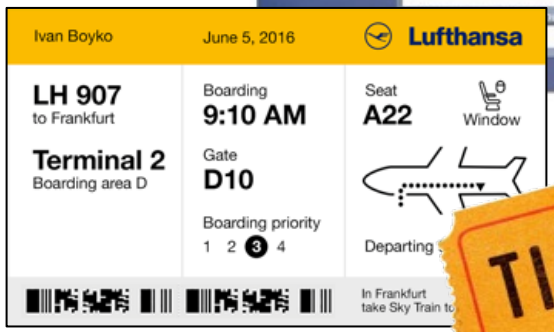
The Member States are **required** to issue a wallet and identity to all citizens

- All (E)EU residents will have (free) access to a mobile national eID
- With government-grade assurance
- Usable with public and private service providers
- Across borders
- Extensible with verified attributes from different (qualified) sources

This is part of **eIDAS**:

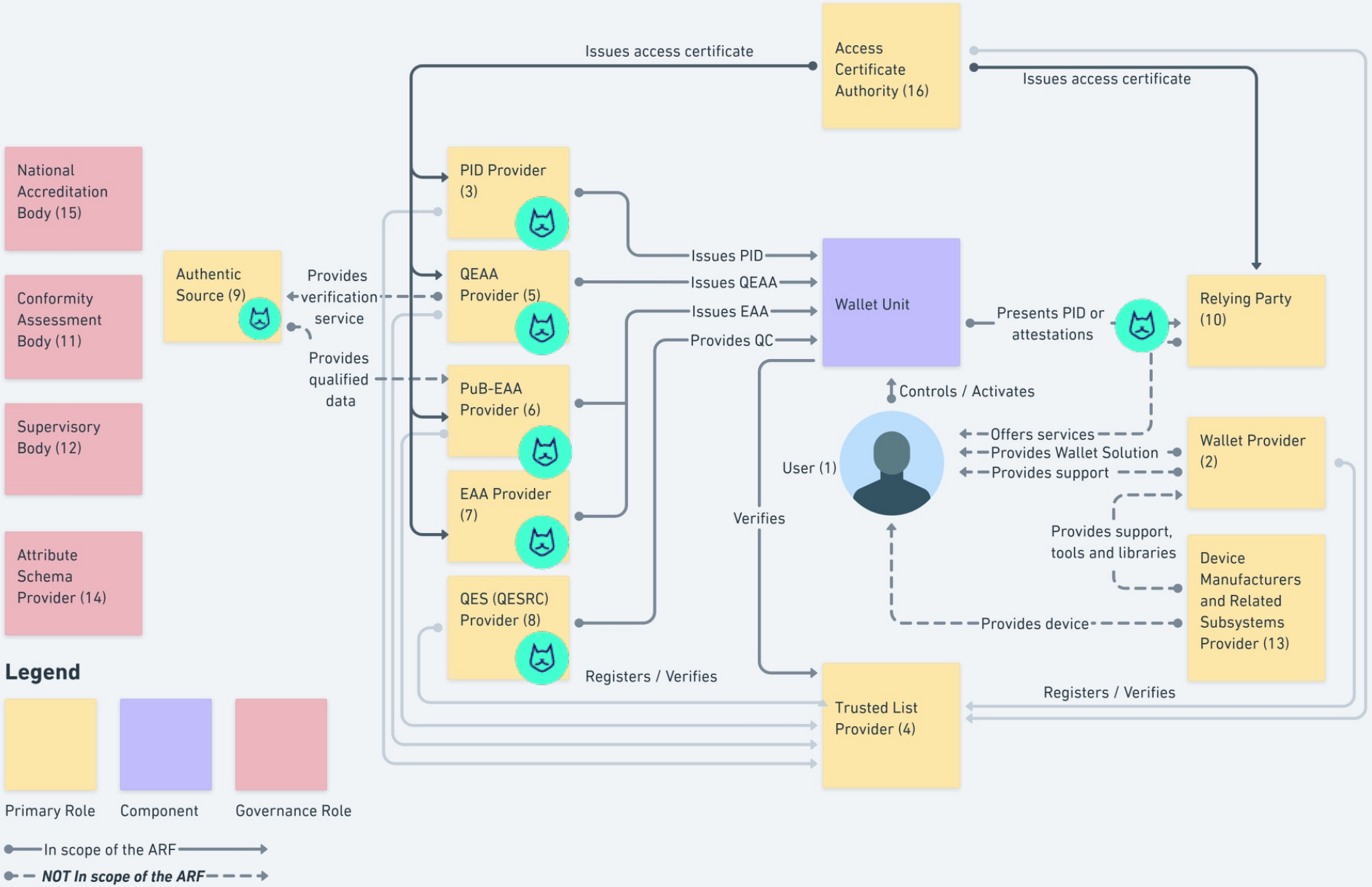
- A European regulation that covers eIDs and trust services
- Amended version of eIDAS covers the mandatory provisioning of the EUDI wallets (next to the usage of national eIDs across borders) and new and updated trust services

National PID (core identity attributes)



The European Digital Identity Wallet Ecosystem

Areas where Signicat will have a role



Getting the ecosystem going

Amended eIDAS Regulation and Implementing Acts

(common law in all Member States)

Legislation

ARF (Architecture Reference Framework)

Reference Implementation Wallet

Specification

Large Scale Pilots:

- EWC
- Potential
- NOBID
- DC4EU
- WE BUILD
- Aptitude

Demonstration

Timelines

How agile is your roadmap?

- May 2024 – eIDAS2 coming into force
- 2024-2025 – 24 Implementing Acts (Regulations) published (and 19 draft IAs)
- 2025 – Current LSPs wrap up, new LSPs kick off
- 2026 – Standards “finalisation”, a few more IAs expected and 1st batch updated
- Dec 2026 – MS MUST provide at least one EUDI Wallet (EEA will get 1 year extra)
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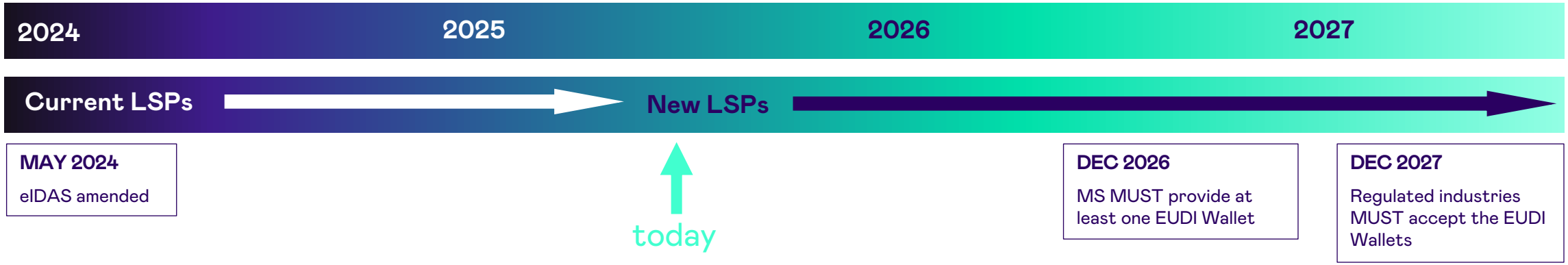
- Dec 2027 – Regulated industries MUST accept the EUDI Wallets



1st Round of Large Scale Pilots (LSPs)

European Identity Wallet Consortium (EWC)

- https://eudiwalletconsortium.org/
- Focus on travel, payments, organisational identity
- Large number of private sector participants

Potential Consortium

- https://www.digital-identity-wallet.eu/
- Many use cases including driving licence, egov
- Most EU governments participate

Wrapped up

NOBID Consortium

- https://www.nobidconsortium.com/
- Focus on payments
- Nordic/Baltic & Italian governments

DC4EU

- https://www.dc4eu.eu/
- Focus on education and social mobility
- Governments and educational sector

Last Time

Where we're at

What is being communicated

MVP ---------- Final Product

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Now

MIND THE GAP

Scalability issues remain yet unresolved

What is being communicated

Where the 1st LSPs ended

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EWC

Use cases in EWC

Payments

high frequency usage

Travel

high impact usage

Business Wallets & Organisational Identity

near-future usage

Payments

- Combining identity-verification with payments drops fraud impressively
- The technology cannot support seamless UX/UI yet
- Liability is not sufficiently addressed

Payments with the EUDI Wallet are possible

- In-store and online
- Compliant with PSD2
- By card or account-to-account (SEPA)
- Combining payments and attestations
- QR or deep-link, maybe NFC in the future
- Digital Euro t.b.d.

Scope: Card and account payments

Payment Authentication

EUDIW as an alternative SCA method for online payments

Satisfying regulatory obligations

- Linking a user's EUDI wallet with his payment account or card (registration)
- SCA for card-based transactions – EUDI wallet invoked by payer's bank (card issuer) or authentication data captured by the merchant
- SCA for account-based transactions – EUDI Wallet invoked by payer's bank (ASPSP) or authentication data captured by the merchant
- Add identity attributes to a payment transaction

Payment Initiation

EUDIW as a payment wallet, holding payment credentials

Beyond SCA, opportunities instore or online

- EUDI Wallet to provision card and account tokens to initiate online or instore payments
- Instore NFC card payment with no impact on merchant acceptance
- Push the card or account token payload to an online merchant for payment processing
- Add identity attributes to a payment transaction

Payment Pilots in production

Bank-led flow

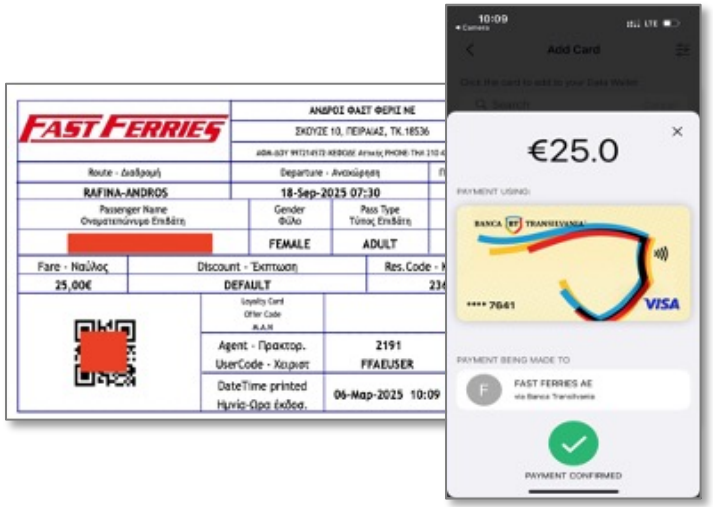
Baseline for compliance

- User pays by card as usual, but authenticates with EUDIW
- 49 payments in production

Merchant-captured flow

Combined presentation and advanced capabilities

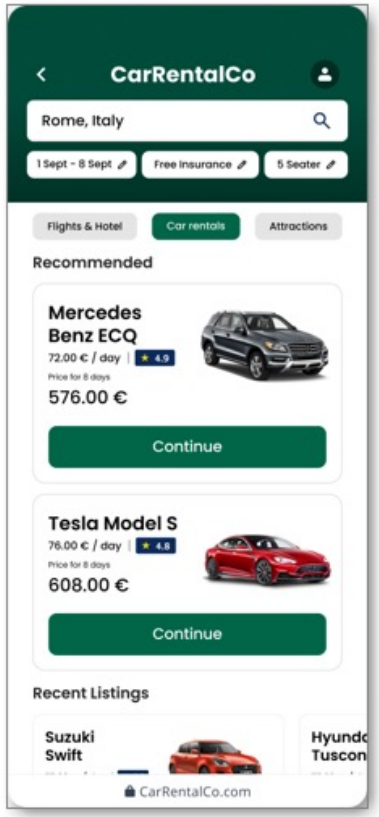
- Users can « Fast Checkout with the EUDIW »
  - authenticate the payment
  - consent to share PhotoID, student attestation and Fast Ferries loyalty card attestation
- After payment completed, Payment Receipt and Boarding Pass attestations are issued in the EUDIW
- 12 payments in production



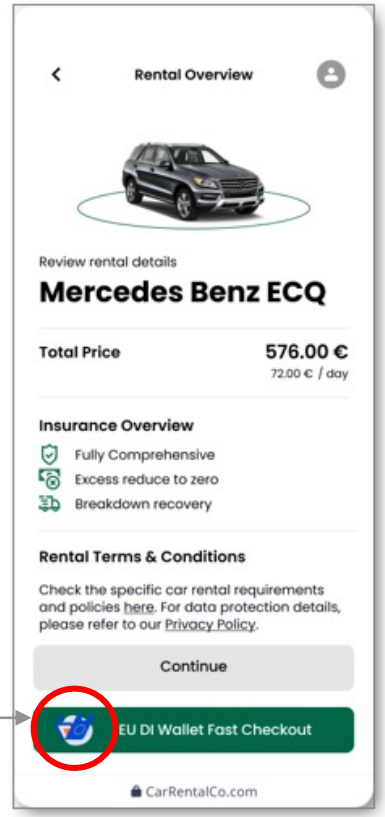
- **59% of users preferred the EUDI Wallet experience** over traditional authentication methods; 53% were very likely to adopt it if offered by their bank.
- **80% found the EUDI Wallet "Fast Checkout" was easier** than standard checkout, with a Net Promoter Score (NPS) of 75.
- Some users **requested clear benefits and more reassurance on data protection**.
- Further **improvements to checkout speed** and **mobile flow** were also requested.

Long term vision – payment experience

1) User selects good or service at merchant.

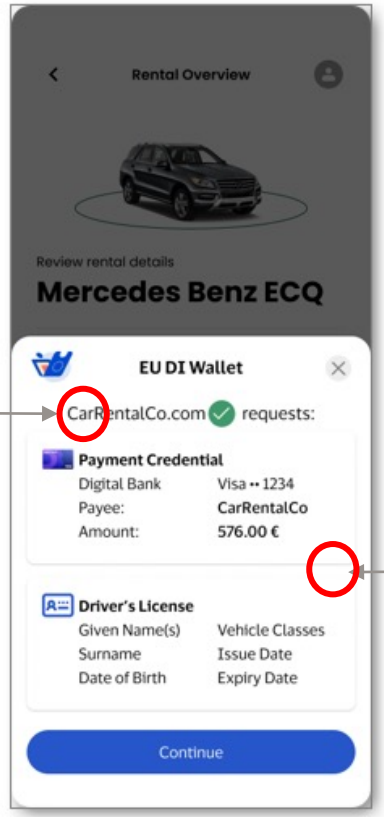


2) User chooses fast checkout with EU DI Wallet.



EU DI W trust mark and be accepted by merchants for user authentication; can extend to payment

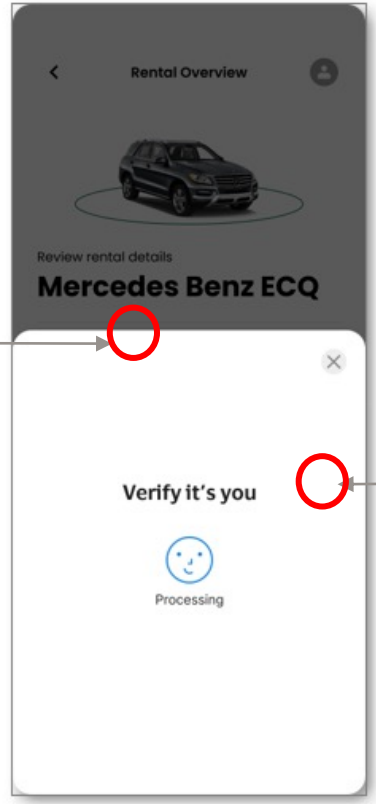
3) Wallet UI comes up. User confirms to release payment and driver's license credentials.



Authenticated merchant

Combined presentation of payment credential and driving licence

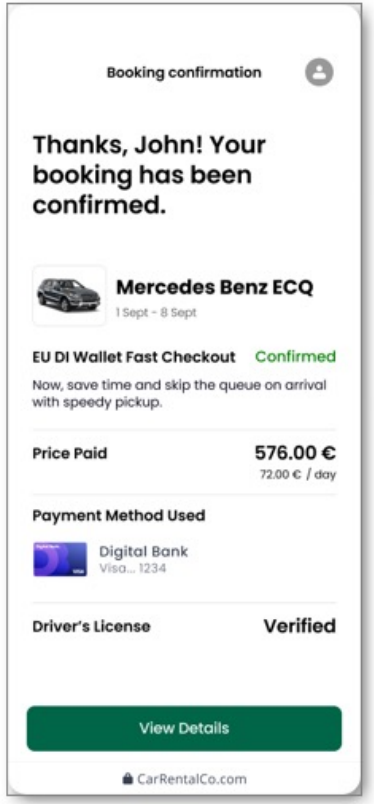
4) User authenticates.



Biometric authentication (and payment initiation)

Great UX; no app-switch with DC APIs

5) Merchant confirms successful wallet data retrieval and validation.



Travel

- Government border control is a closed ecosystem
- All regulated industry can benefit from a PhotoID attestation (which is part of DTC)
- Data sharing (partially self-asserted) provides promising gains (efficiency and data accuracy)

Travel per definition is global and encompasses a huge set of use cases

- Many different services (airlines, hotels, ferries, car rental, border control, luggage handling)
- Many different actors need to come together to provide a “seamless passenger experience”

Travel Pilots and research

DTC and PhotoID

- PID contains no unique identifiers and no ID picture, making it insufficient for regulated industries
- ICAO DTC covers passport data
  - DTC Type 1 does not support selective disclosure (not compliant with GDPR, unfit for regulated markets)
  - DTC Type 2 specifications not yet available
- PhotoID is standardised by ISO/IEC TS 23220-2:2024
  - Can be issued to the EUDIW by passport authorities or QTSPs

Travel Pilots

- Booking of travel: **self-service check-in**
- Automation of passenger information: **Biometric enrolment** off-airport
- Passenger flow facilitation (including biometrics): **Airline check-in** flow
- Ferries: **booking, payment and embarkation** with focus on booking time, customer experience and fraud
- Venue (Buda Castle): ZKP **age verification** allowing for discounted fees
- **Hotel check-in** (Visit Benidorm): guest registration seriously reduced

Organisational wallets and Identity

- B2B is a huge market, use cases involve data-access and data-sharing
- Adoption of business wallets could be much faster than individual wallets
- Organisational identity is a complicated matter

Business wallets have very different requirements than wallets for natural persons

Organisational Identity and Wallets

Business Wallets

Legal person wallet definition

- Not mobile (cloud, shared, on-premise)
- All roles (holder, issuer, verifier)
- (Semi-)automated exchange of attestations
- Integration with other systems (internal and external)
- EC is releasing separate legislation on business wallets (expected 19 Nov)

Legal PID

- An organisation is not a physical entity
- Registration of organisations differs per country (and is very locally legislated)
- Hard to find commonalities in registration data elements
- Lots of different identifiers (Tax registration, VAT, LEI, BRIS, EORI, and many others)

Organisational Identity and Wallets

Pilots

Public Procurement

- Attestations for evidence in the procurement process (ESPD)
- Automated verification of Economic Operator identity and mandate (ESPD)

Know Your Supplier

- Onboarding a new business partner
- Opening a corporate bank account

Business Document Exchange

- PEPPOL network
- Verifiable eReceipt
- Create a company branche in another country
- Company authorised business travel

Results

- Reduction of administrative burdens through the automation of data sharing and verification (such as done in procurement and processes for onboarding).
- Simplification of onboarding and identity verification for business partners and suppliers.
- Enhanced efficiency and reduction in time of cross-border interactions (public tenders, banking, company branch registration).
- Strengthening of fraud prevention and compliance (KYC/AML, public procurement,eInvoicing, eReporting).

Functional and operational elements

Interoperability
Signing
Trust Infrastructure

Interoperability

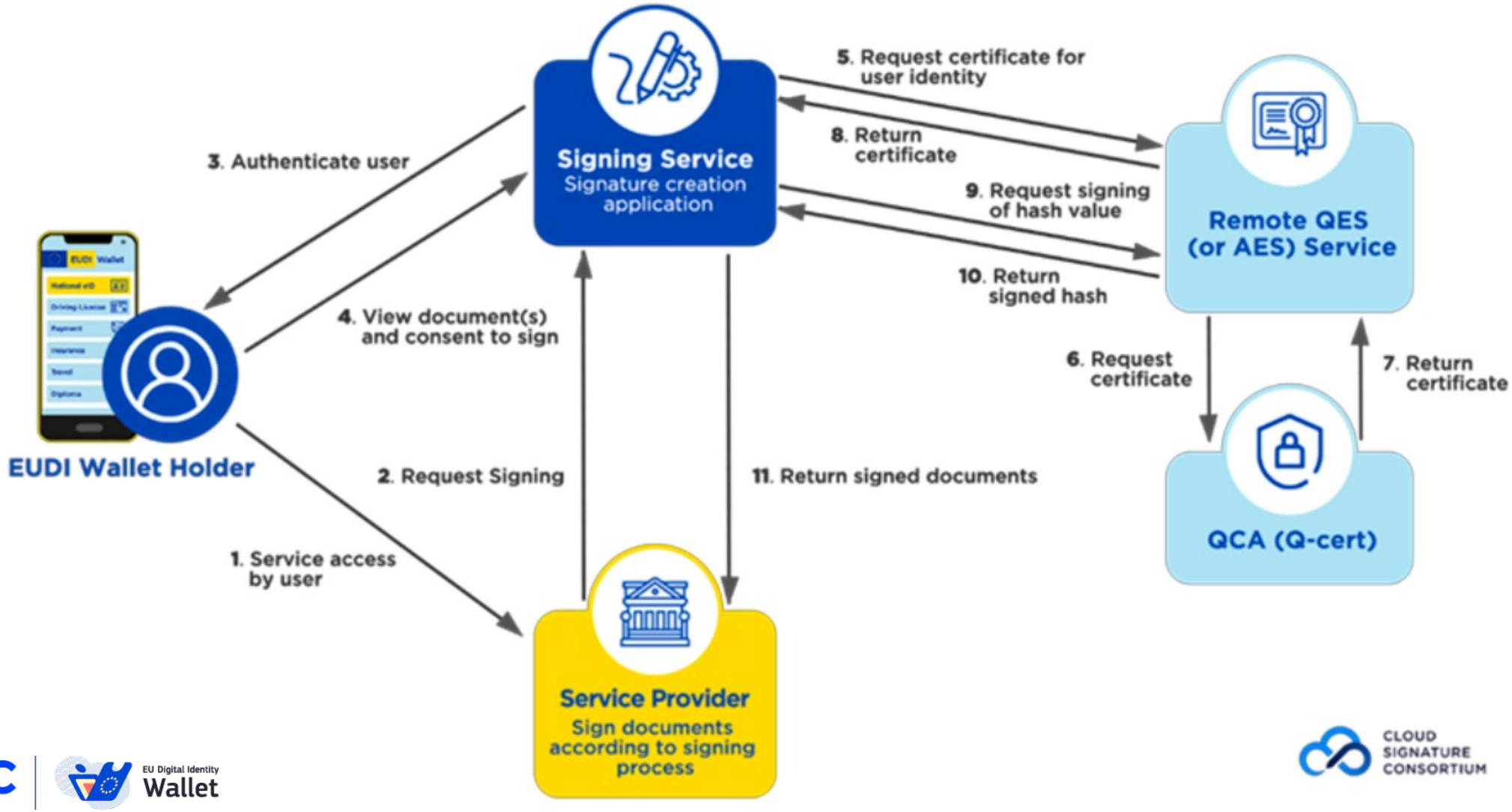
- Full core interoperability is achievable
- Requirements and specifications must stabilise
- A continuously available testing environment is needed
- Scalability of trust infrastructure is an open question

EWC | EU Digital Identity Wallet

Signing

- Signing solutions will differ per wallet solution and per member state (and perhaps even per wallet instance)
  - Depending on the wallet solution and device capabilities, EUDIW may or may not be a QCSD
  - Most will not and will invoke a local, remote or external QSCD and Signature Creation Application.
- Signing flows will differ for each situation, but always cover:
  - Uploading the document that will be signed
  - Identification of the signer(s)
  - Creating the signature and packaging to xADES format
  - Delivery of the signed documents to the involved parties – user and relying party

Signing flow demonstrated in the LSPs



Trust Infrastructure

eIDAS Trust infrastructure is based upon:

- National Trusted Lists and List of Trusted Lists
- National Registries for Relying Parties
- Various certificates and attestations
    - E.g. RP wallet access certificate, Wallet Unit Attestation

Challenges addressed by EWC in whitepaper:

- Scalability challenges: eIDAS trust infrastructure is not optimized for EUDI Wallets;
- Anchoring to 3rd party trust infrastructures is required for wider adoption of the EUDI Wallets;
- Business wallets have different trust infrastructural needs.

Ecosystem

Governance
Business models
Adoption

Ecosystem Governance

- The EUDIW ecosystem cannot cover all use cases
- Private sector use cases expand well beyond the scope of eIDAS
- Specific sub-system governance frameworks are needed
- Clarification of (overlapping) regulations is paramount

This could be addressed by developing (or driving the development of) specific ecosystem governance frameworks (EGFs)

Business Models

Getting paid (as an actor in the ecosystem) is hard:

- eIDAS focuses on legal and operational matters, business models are not considered
- Requirements on unlinkability and untraceability make payments hard
- No current mechanisms to support payments (such as metadata or embedding in protocols)

Facilitating options for getting paid are necessary:

- Incentivising of issuers is necessary
- Clear liability- and penalty regimes must be provided
- Short-term model: “minimal viable compliance”
- Long-term value proposition needs work starting today

Adoption

- Current expected adoption is 29%
- Barriers are UI/UX, privacy and security, trust
- EU-wide communication is needed on the benefits of eIDAS (targeted at different market sectors)

EWC | EU Digital Identity Wallet

EWC Co-funded by the European Union

Despite the focus on barriers, there remains strong overall support for EDIW

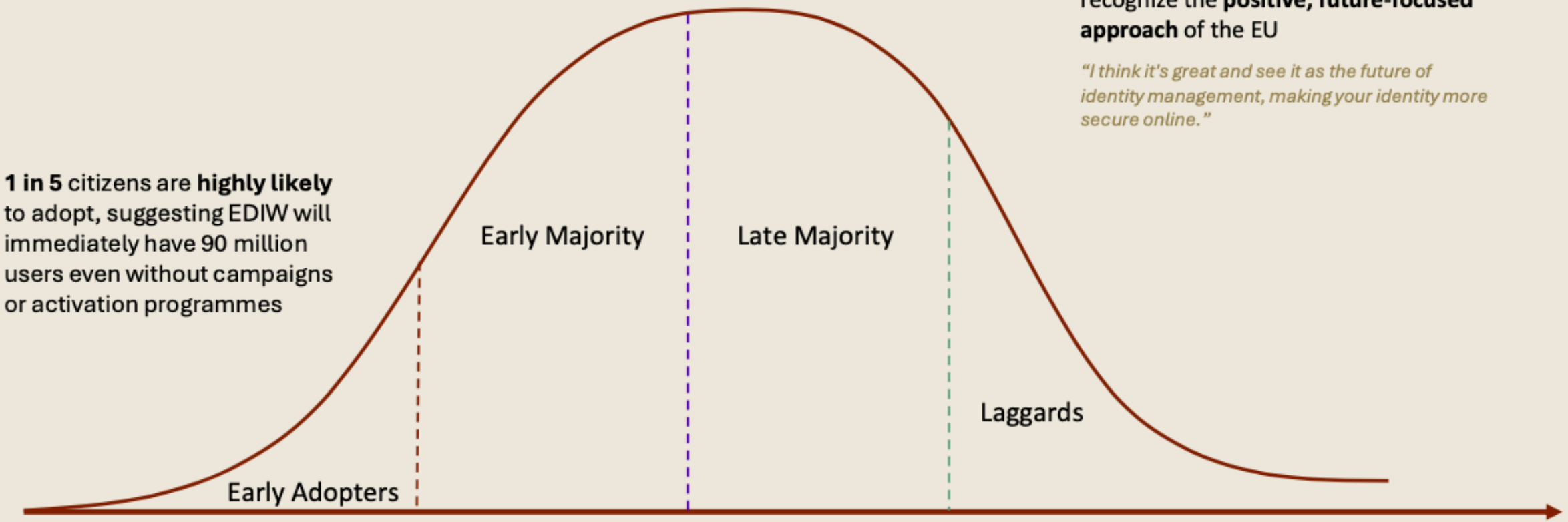
Many citizens will sit in this area of uncertain enthusiasm and **by addressing the barriers**, we can push them towards earlier adoption

"It certainly sounds to be a great idea, but like brand new ideas it will take time before the majority of us will accept it."

But fundamentally many citizens recognize the **positive, future-focused approach** of the EU

"I think it's great and see it as the future of identity management, making your identity more secure online."

1 in 5 citizens are **highly likely** to adopt, suggesting EDIW will immediately have 90 million users even without campaigns or activation programmes



EWC
Co-funded by the European Union

EU Markets vary in both digital and digital wallet maturity. This will impact their likelihood to adopt new EU-driven solutions

Sweden
"I expect that there will be an expansion of what already exists in Sweden so I don't have any big expectations for that."

Netherlands
"In reality, there will still be a lot of work to be done... not everyone is equally digital".

Greece
"This makes me a modern EU citizen."

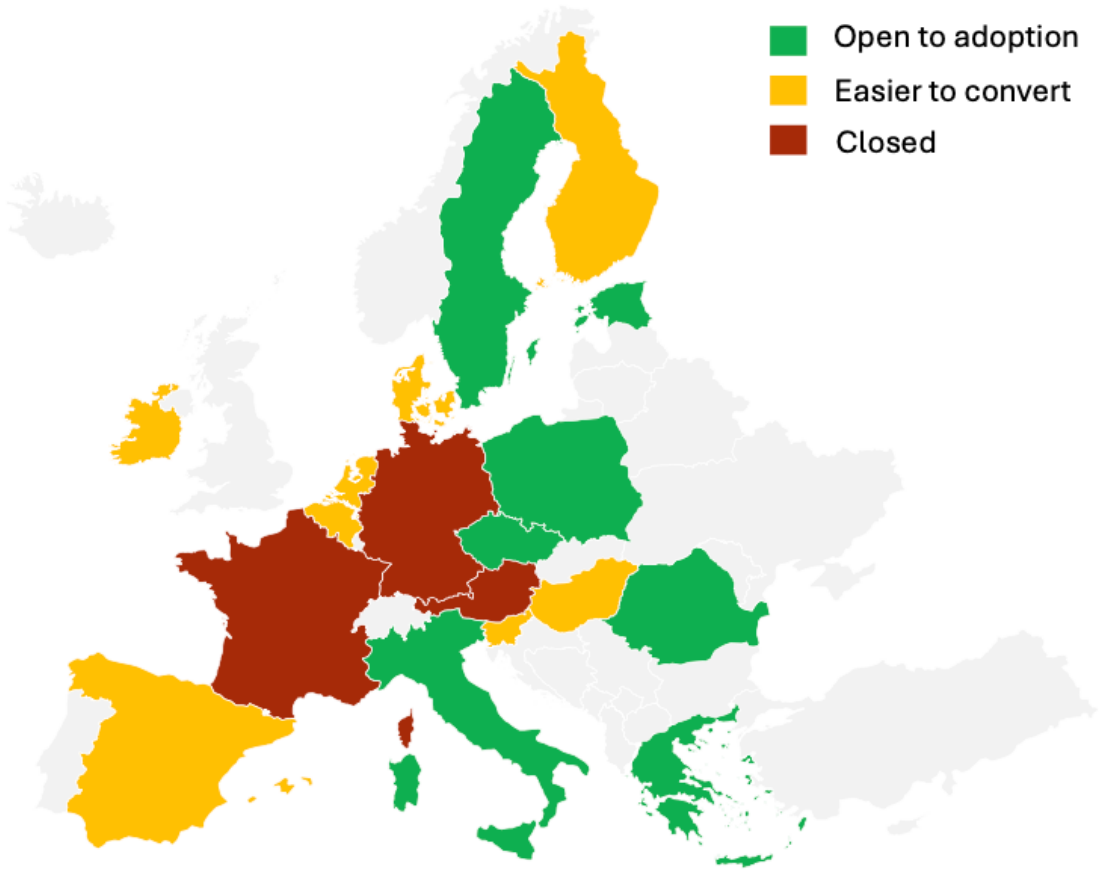
Finland
"How is this more convenient than suomi.fi?"

Ireland
"I'm a bit sceptical of the need for it as my digital wallets already do the job"

Denmark
"This will make the digital journey more equal between EU countries"

Romania
"It should be implemented as soon as possible in my country, it is much more efficient, it saves you a lot of worries."

Digital and eID Readiness



60% and above likely adoption = green
Less than 60% adopt but more than 75% adopt or undecided = yellow
Less than 50% adopt and more than 15% highly unlikely = red

Gen .YONDER

Read all the details

Deliverables on the EWC website (available until Q2 2026)
https://eudiwalletconsortium.org/insights-and-deliverables/

Deliverables on the EC website
https://ec.europa.eu/digital-building-blocks/sites/spaces/EUDIGITALIDENTITYWALLET/pages/920064565/LSP-EWC

2nd Round of Large Scale Pilots (LSPs)

WE Build Consortium (WBC)

Kicking off

- https://www.webuildconsortium.eu/
- Led by KVK NL (Dutch Chamber of Commerce), supported by the Dutch Ministry of Economic Affairs.
  - Co-Lead: Bolagsverket (SE)
- Focus on organisational identity through 3 groups of use cases (business, supply chain, payments). It will also cover natural persons and their interactions.

Aptitude

- Led by French governmental organisations
- Focus on travel, payments and vehicle registration

Start August 2025
(end Sept 2027)

WE BUILD Kick-Off

WE BUILD CONSORTIUM | EU Digital Identity Wallet

EUDI Wallets

with 1 year to go

where are we at?

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Timelines

- May 2024 – eIDAS2 coming into force
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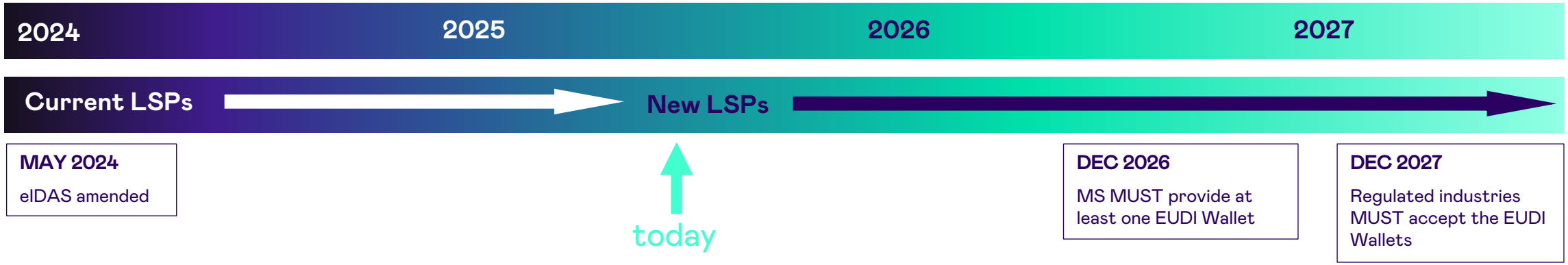
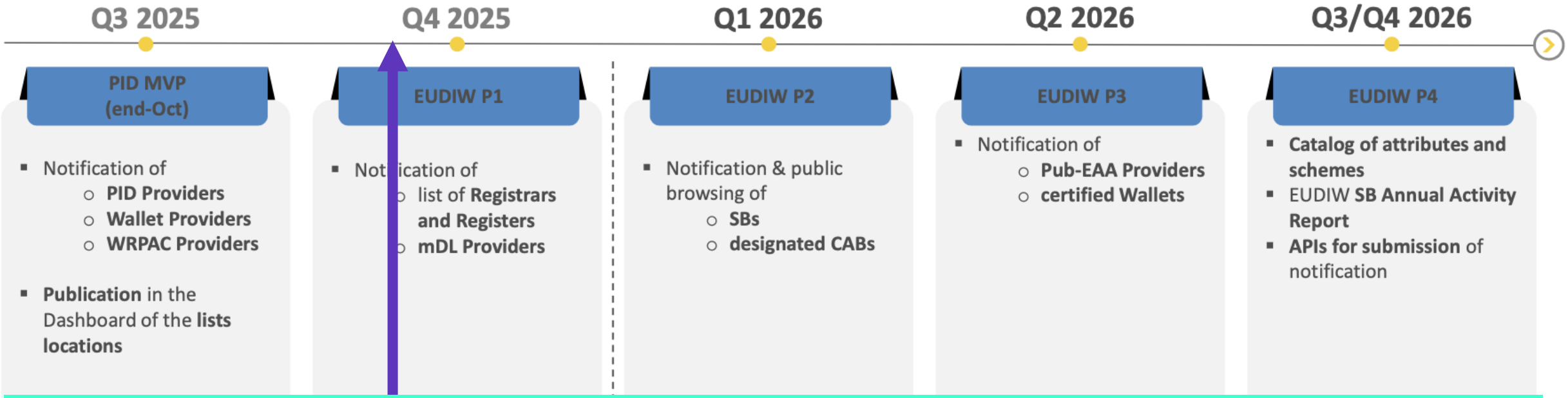


Roadmap to achieve the technical and operational interoperability

Actions the build the European Trust Services Infrastructure in order to support the Wallet ecosystem



- Apparently we're already running over time
- This doesn't show the actions that come before 'notification'

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Source: DIGIT presentation at ENISA TS and CA Forum 24 September 2025

Less

but still more than enough

Confusion

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How many wallets will there be?

- At least 1 in each Member State
- 6 of them announced “open certification”
- Dozens of “wild wallets” aligning to the ARF
- Commercial apps announcing “integration” of “EUDI wallet capabilities”
- Some eager 3rd countries wanting to play

- PID will only be issued in a certified wallet of the issuing country

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Rules and Regulations

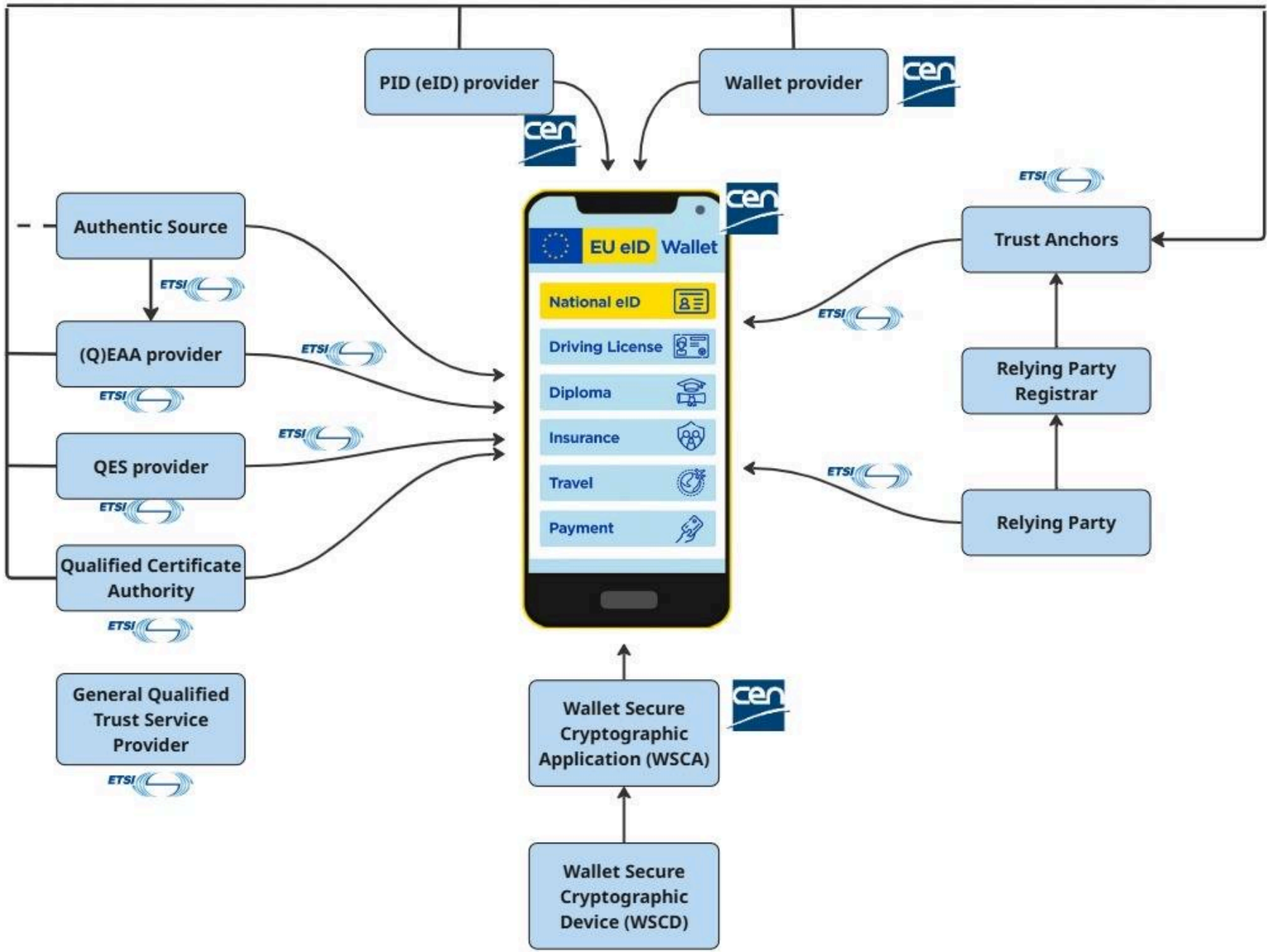
ARF planned to be frozen end of this year

- 6 discussion topics to be integrated by then
- 3 left open for ‘iteration 3’
  - Pseudonyms, including user authentication mechanism
  - DC API
  - Zero knowledge proof

ETSI and CEN working on finalising standards to be used in the ecosystem

Specifications

Stabilising


PID (eID) provider
Wallet provider
Authentic Source
(Q)EAA provider
QES provider
Qualified Certificate Authority
General Qualified Trust Service Provider
EU eID Wallet
National eID
Driving License
Diploma
Insurance
Travel
Payment
Trust Anchors
Relying Party Registrar
Relying Party
Wallet Secure Cryptographic Application (WSCA)
Wallet Secure Cryptographic Device (WSCD)

Rules and Regulations

Next to its core legislation, eIDAS currently covers:

- 26 Implementing Regulations
- 19 Draft Implementing Regulations
- 5 Implementing Decisions
- To be updated end 2026 to cover new standards (?)

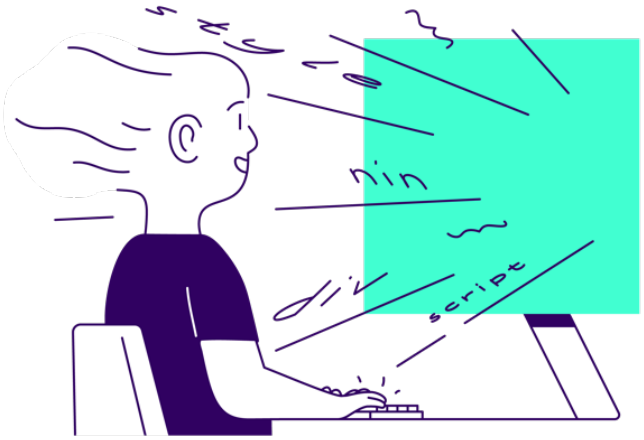
National policies on:

- Certification schemes (including wallets and PID)
- Relying Party Registration

Non-harmonised requirements from overlaps with:

- NIS2, DORA, DSA, DMA, AMLR, CRA

Legislation



Exploding

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Do we really want private sector in?

- Hard business case for all ecosystem participants
  - But commercial ones really need one
  - Especially (Q)EAA issuers and QTSPs
- Barriers to engagement with EUDIW
  - Mandatory Relying Party registration
  - Registration as issuer (including navigating attestation schemes, rulebooks and catalogues)
- Impressive requirements for issuers all around
  - Steep and costly for QTSPs, but little less for non-qualified
- Liability is insufficiently addressed
  - Especially on governmental services and data
- Private sector issuers might not be supported everywhere from the start

High-frequency (everyday) usage will be a hard sell

Adoption requires communication

To service providers

- On saving costs, increasing revenue and adding value
- Distinctive to different geographies and industries
- Unless you want to stick with ‘minimal viable compliance’ adoption

To end users

- On security and privacy benefits - and trust
- Focus on high-impact use cases
- Tailored to regional profiles (digital maturity, openness to technology, views towards EU)

A trusted digital world

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