

CONNEXUS

black sea tech forum

European Digital Identity Wallets - Opportunities and Risks for Citizens, State, and Business



Под патронажа на президента на
Република България г-жа Илияна Йотова

ЧЕРНОМОРСКИ ТЕХНОЛОГИЧЕН ФОРУМ
Hristian Daskalov, PhD



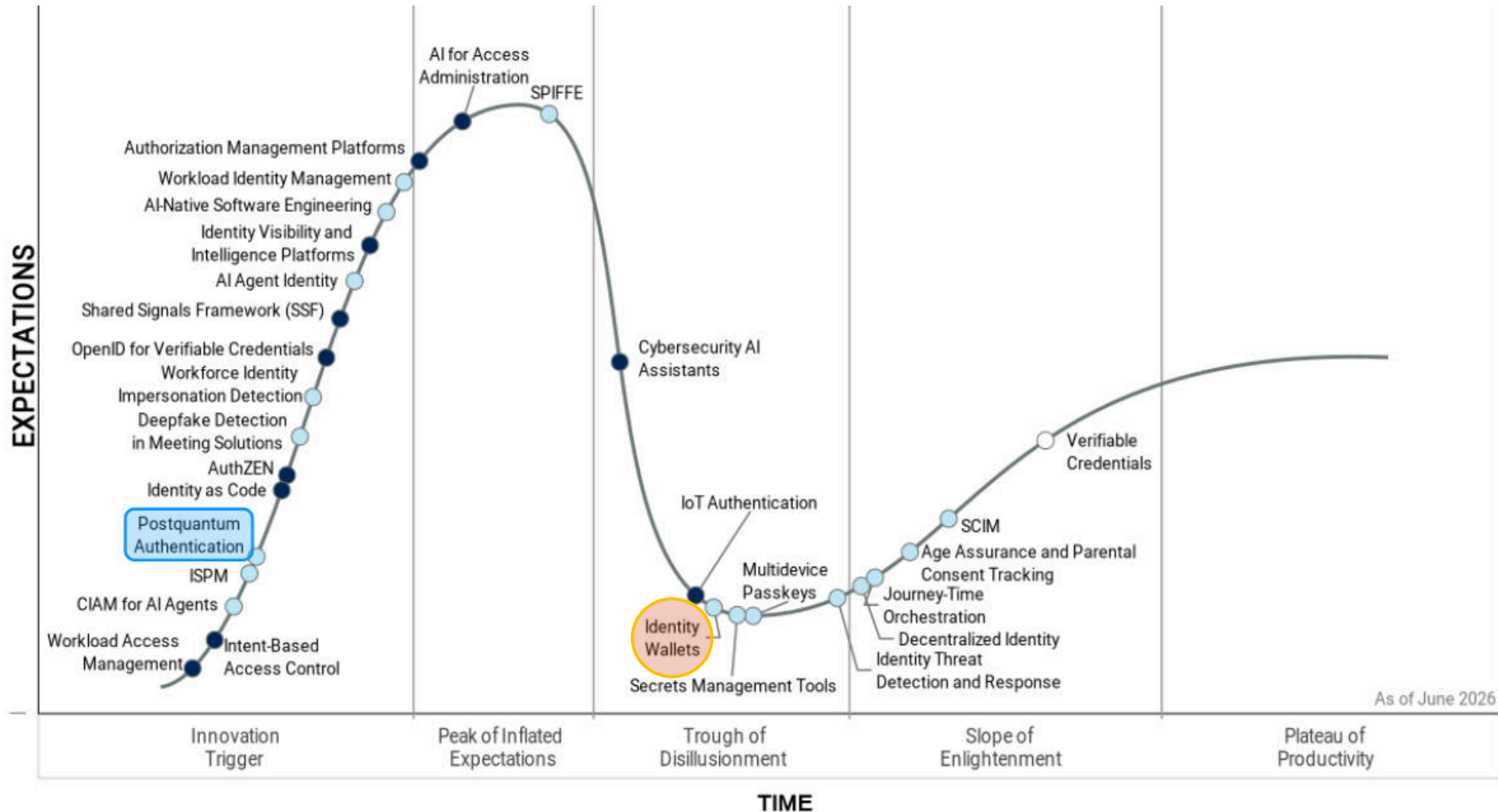
5 - 7 Октомври 2026

Варна



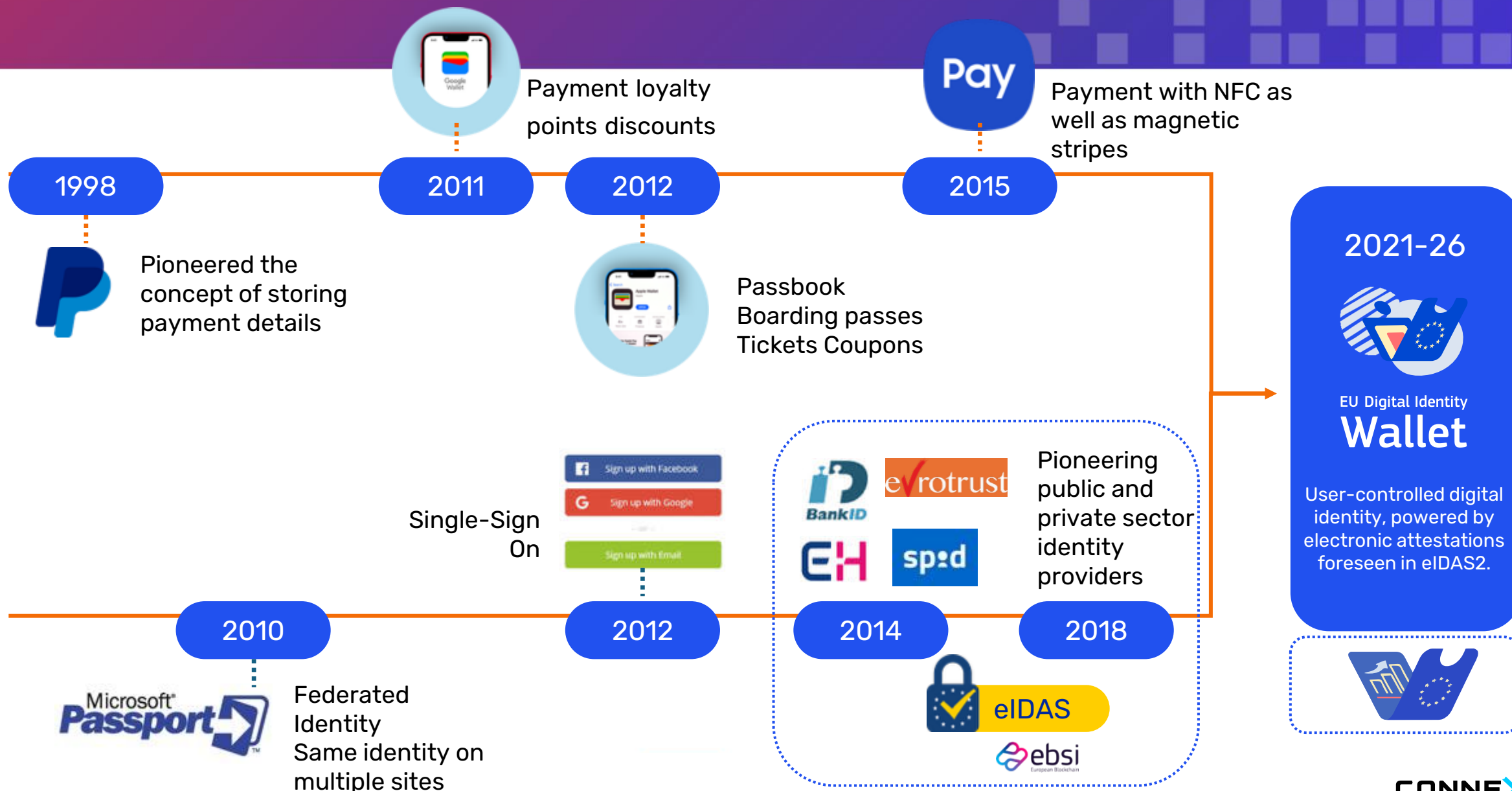
ARCFUND

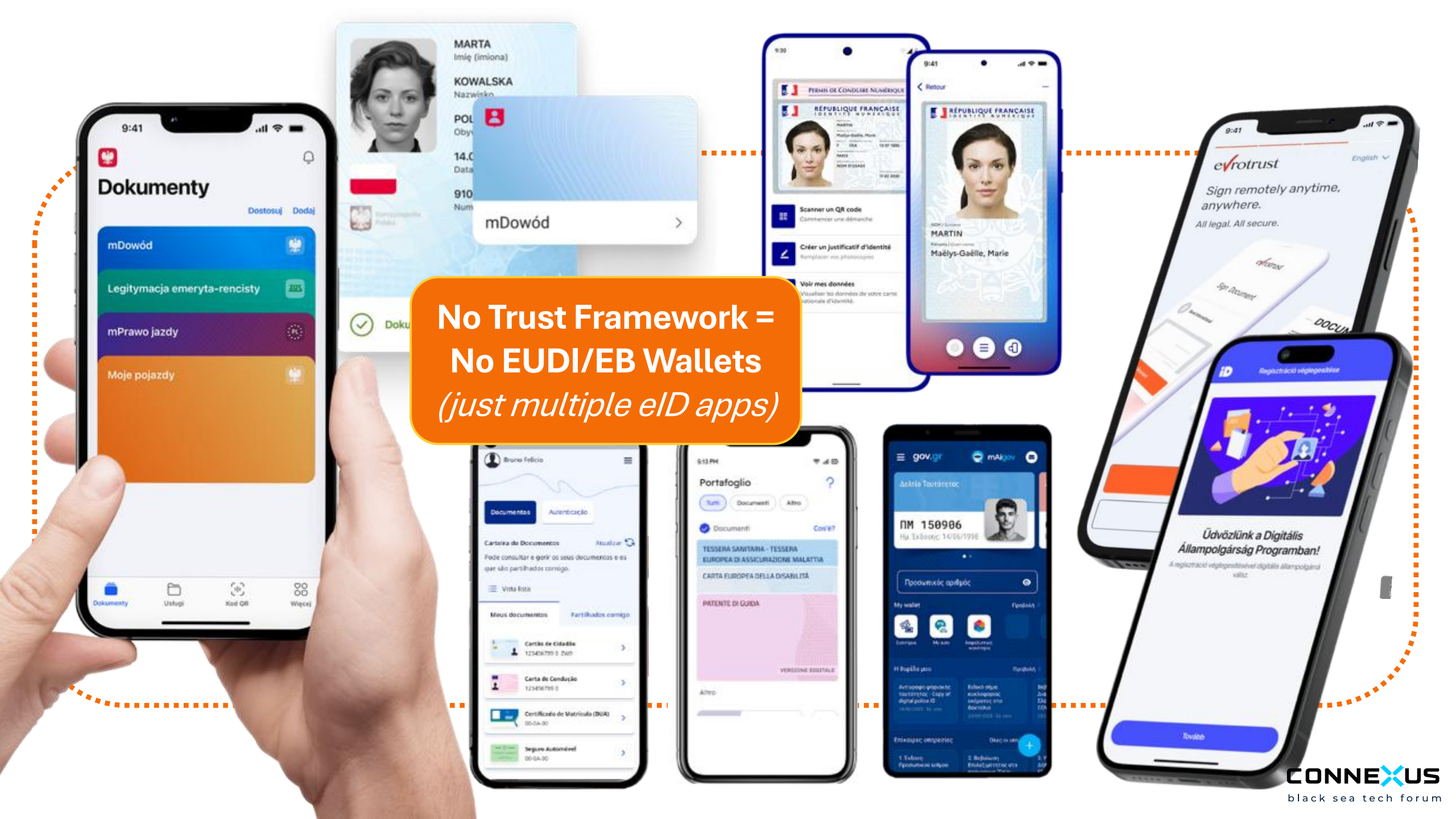
Hype cycle for digital identity, 2026



Plateau will be reached: ○ <2 yrs. ● 2-5 yrs. ● 5-10 yrs. ▲ >10 yrs. ✗ Obsolete before plateau

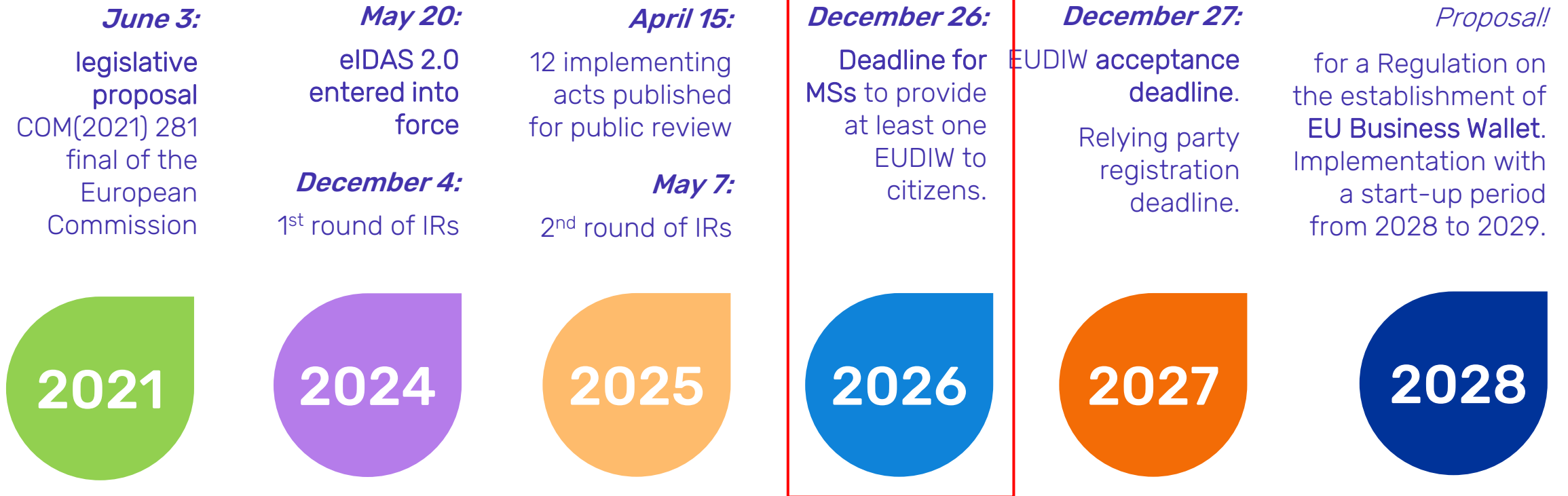
Digital wallets timeline





**No Trust Framework =
No EUDI/EB Wallets**
(just multiple eID apps)

EUDIW & EBW regulatory framework



European Parliament formally adopted the eIDAS 2.0 legislation on **Feb 29, 2024**.



Published in EU's Official Journal on **Apr 30, 2024** and entered into force on **May 20, 2024**.

Practical applications of the EUDIW/EBW



eGov Services:

- Mobile Driving License
- Passport application
- Filing a tax declaration
- Accessing social security services
- E-prescriptions



Banking:

- Opening a bank account
- Applying for a loan
- Accessing and providing statements, reports
- Multiple payment initiation / authorization use cases



Business:

- Signing contracts, Representation
- Exchanging organizational credentials across the value chain (e.g. due diligence)
- Controlling access to regulated services (e.g. age verification)



Education:

- Securely storing diplomas, transcripts, student IDs
- Validating professional credentials as part of the hiring process

63% of EU citizens would like to use a singular digital ID to access all their digital services.

55% of EU SMEs face administrative and regulatory obstacles as their biggest challenge.

Up to €3,500 (per micro) €37,250 (per other SME) €47,300 (per corporate) in net annual benefits.

Up to €13.2 billion in net annual benefits for all public bodies as per EU Commission's analysis.



Additional (re)sources

Deliverables from the first wave of 4 Large Scale Pilot projects

<https://ec.europa.eu/digital-building-blocks/sites/spaces/EUDIGITALIDENTITYWALLET/pages/694487808/What+are+the+Large+Scale+Pilot+Projects>

POTENTIAL – Pilots for European Digital Identity Wallet

1. Access to government services
2. **Opening of a bank account**
3. Registering a SIM card
4. Mobile driving licence
5. eSignatures
6. ePrescriptions



EWC – EU Digital Identity Wallet Consortium

1. The storage and display of digital travel credentials.
2. The organisation of digital wallets.
3. **The organisation of payments.**



NOBID – Nordic-Baltic eID Wallet Consortium

Single use-case: the use of the EUDI wallet for the **authorisation of payments for products and services** by the wallet user.



DC4EU – Digital Credentials for Europe Consortium

Test the use of the EUDI wallet in the educational sector and the social security domain.





WeBuild Large Scale Pilot Project | www.webuildconsortium.eu

Participating organisations

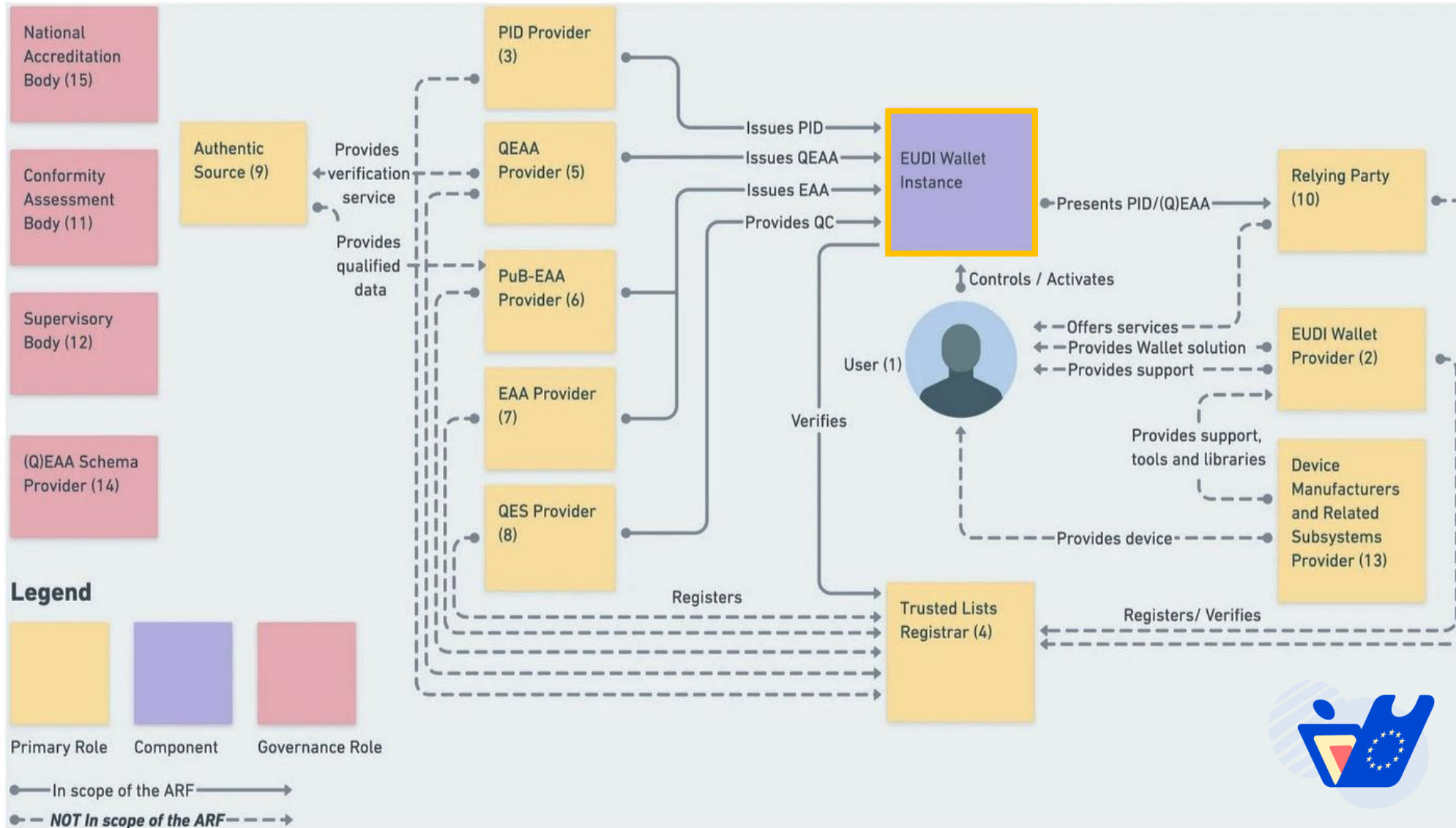
 = Business Registers

28 countries

Inside
EEA

The technical framework of the EUDI Wallet



The compliance framework of the EUDI Wallet

EUDIW decomposition:

CEN EUDIW provider decomposition
CEN EUDIW solution decomposition

Authentic sources interface:

ETSI TS 119 478

QTSP standards:

ETSI EN 319 401
ETSI EN 319 411
ETSI TS 119 471
ETSI TS 119 472-3
ISO 23220-3
OpenID OID4VCI

PID provider standard:

CEN TS 18098

Remote signing standards:

CEN EN 419 221
CEN EN 419 241
CSC API and Data Model
ETSI TS 119 431
ETSI TS 119 432

WSCA certification:

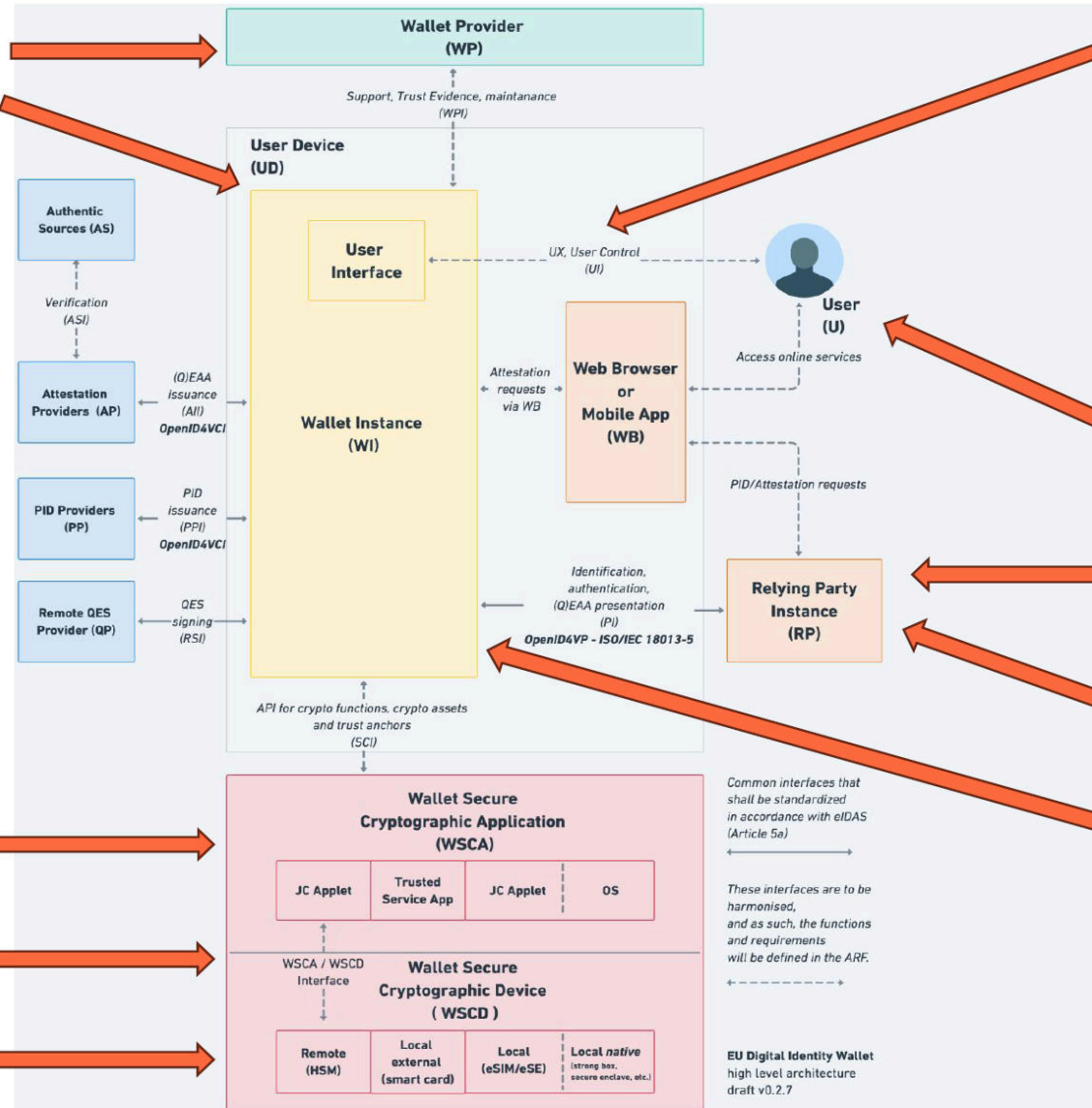
CEN WSCA CC PP

WSCA/WSCD interface:

BSI CSP CC PP
GlobalPlatform CC PP

WSCD certification:

ISO/IEC 15408 (CC)
CEN QSCD/RQCSD CC PPs



EUDIW presentation and authentication standards:

CEN WHA Access Control
ETSI TS 119 472-2
ETSI TS 119 476-2
ETSI TR 119 479-2
FIDO2/WebAuthn
IETF TLS
ISO 18013-5 (mDL)
ISO 23220-4
OpenID OID4VP

Identity proofing standards:

CEN TS 18099
ETSI TS 119 461
ISO 30107

Relying party standards:

ETSI TS 119 475
ETSI EN 119 486

Trust list standards:

ETSI TS 119 602
ETSI TS 119 612

EUDIW and formats standards:

ETSI TS 119 472-1
ETSI TS 119 482
ETSI EN 119 487
IETF SD-JWT VC
ISO 18013-5 (mDL)
W3C VCDM

30+ implementing regulations

(April 2026)

60+ standards per EU strategy on EUDIW standardization

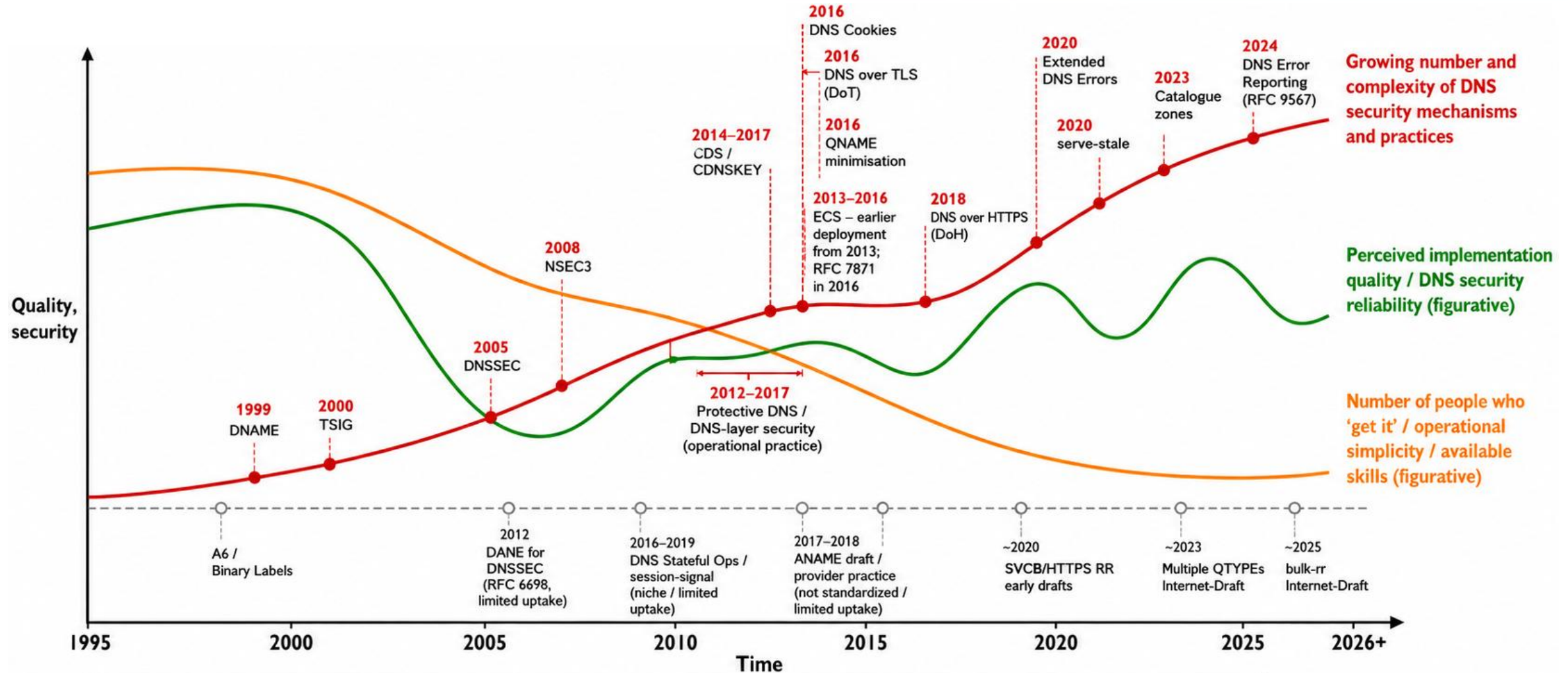
(Sept. 2024)

190 standards & technical specifications per recent research

(Nov. 2025)

Risks and lessons learned from the practice:

1. Avoiding the 'DNS Camel' effect



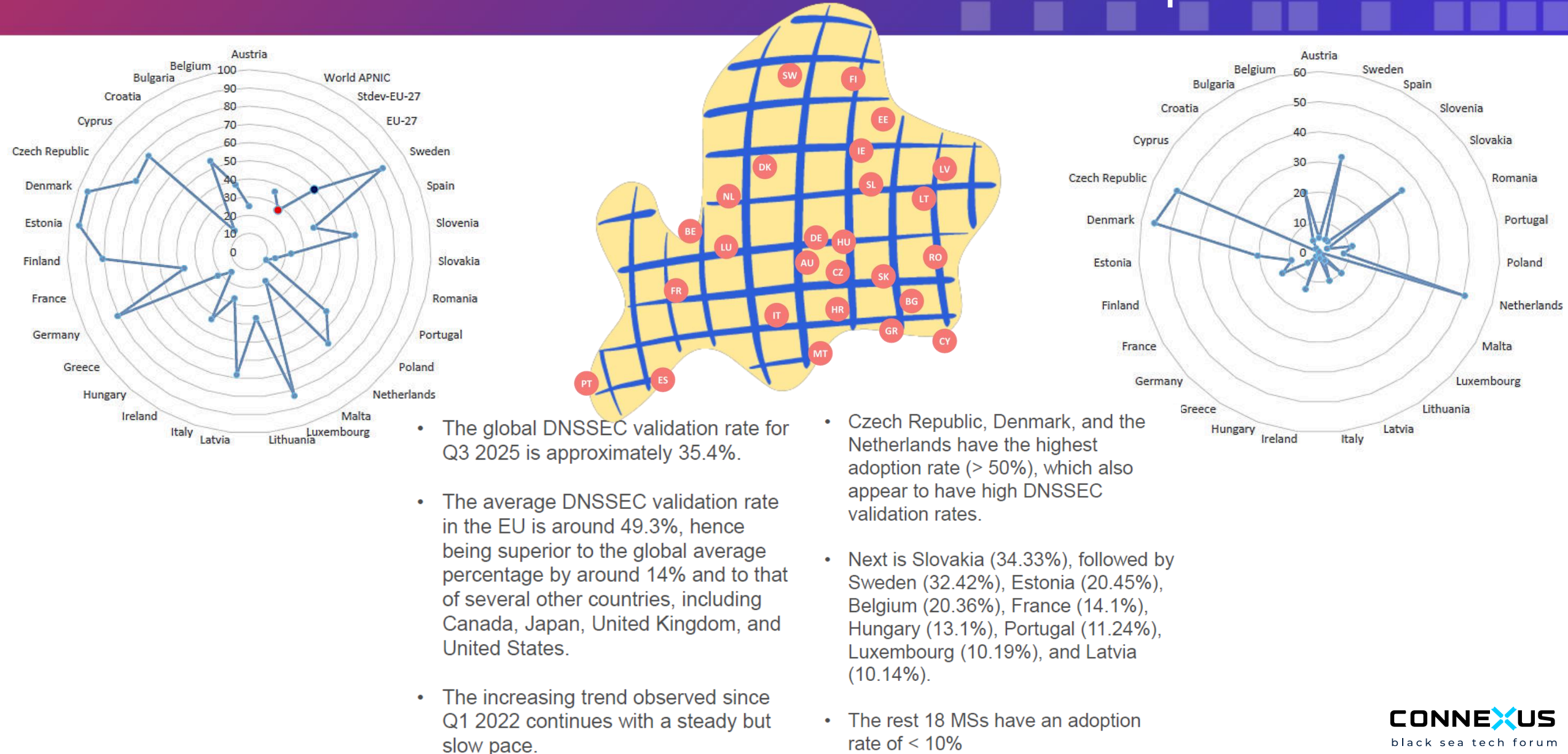
Notes:

- Red markers = adopted standards and operational practices with significant uptake.
- Grey markers = proposals, drafts, or items with limited uptake / not standardized.
- Green and orange curves are figurative only.

Originally of 2018:
blog.apnic.net/2018/03/29/the-dns-camel

Risks and lessons learned from the practice:

2. The case of DNSSEC's low validation & adoption levels



A certified EUDIW does not guarantee the ultimate online payment flow (if any)

Practical payment-SCA capability depends on implementation and certification / conformance against the relevant SUA/TS12 payment profile

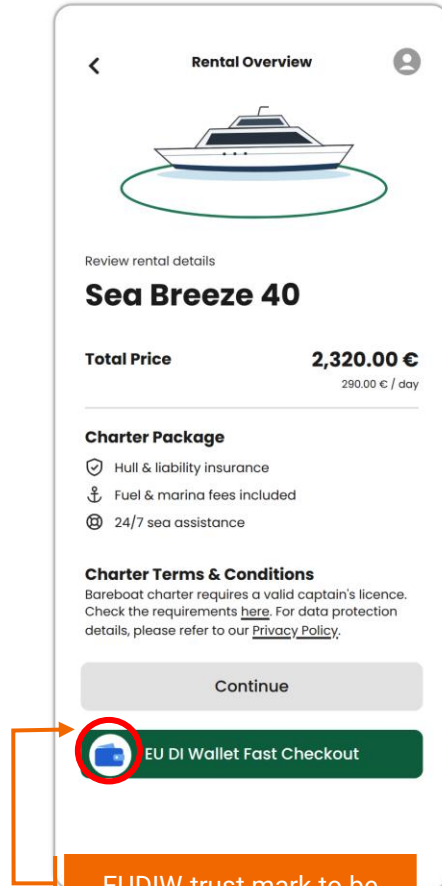
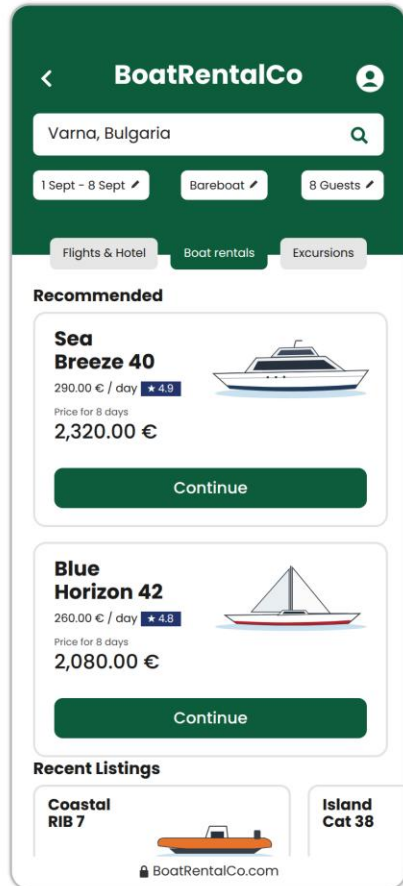
1) User selects good or service at merchant.

2) User chooses fast checkout with EU DI Wallet.

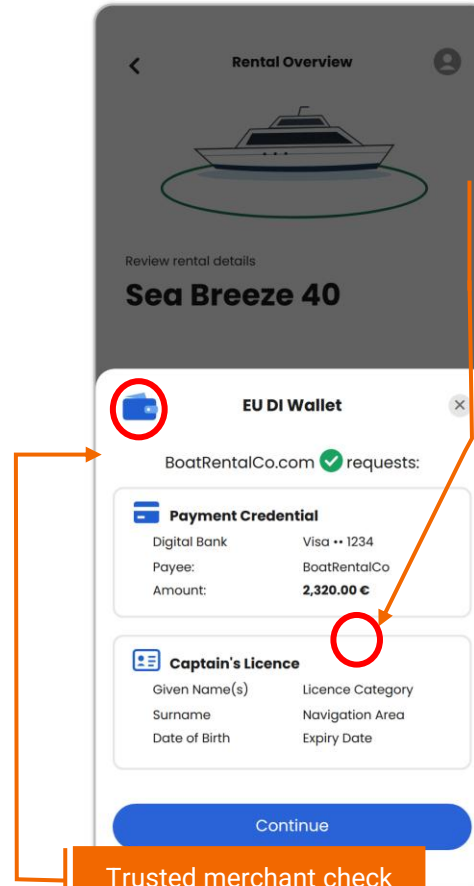
3) Wallet UI comes up. User confirms to release payment and captain's licence credentials.

4) User authenticates.

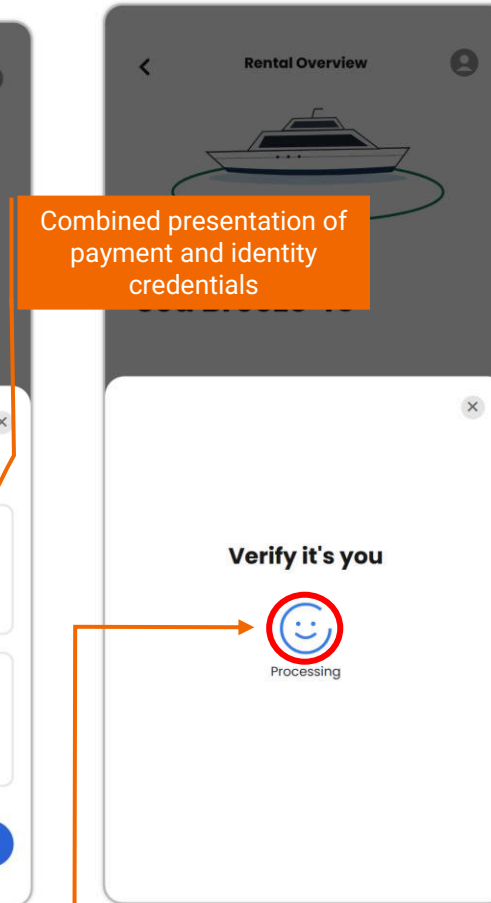
5) Merchant confirms successful wallet data retrieval and validation.



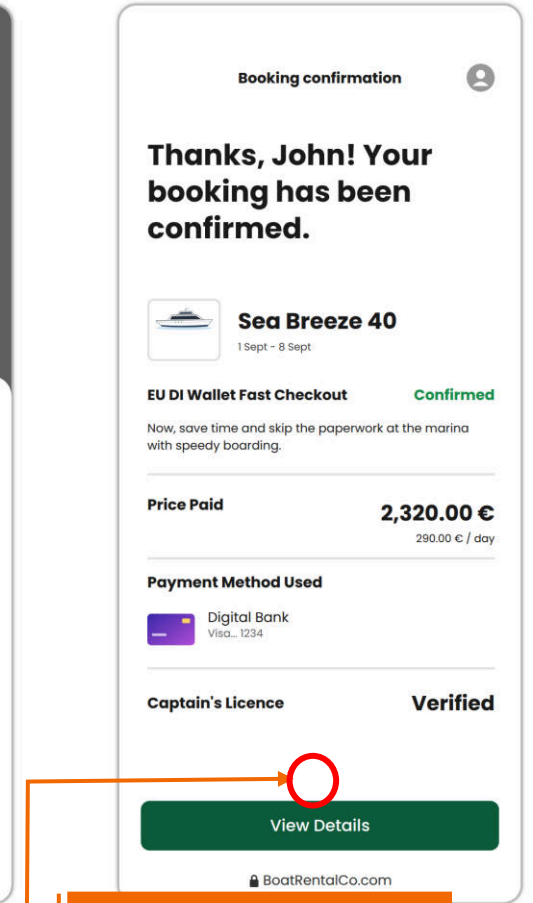
EUDIW trust mark to be accepted by merchants for login; can be extended to payment



Trusted merchant check provides reassurance and helps fighting against authorized fraud



Great UX incl. biometric authentication & no app-switch with DC APIs



Option for merchants to issue in background their own credentials eg ticket, boarding pass, eReceipt, invoice, ...

CONNEXUS

black sea tech forum

Thanks for the attention!

[linkedin.com/in/Hristian](https://www.linkedin.com/in/Hristian)



Под патронажа на президента на
Република България г-жа Илияна Йотова

ЧЕРНОМОРСКИ ТЕХНОЛОГИЧЕН ФОРУМ

Hristian Daskalov, PhD

5 - 7 Октомври 2026

Варна



ARCFUND