Analysis of the European Union Digital Identity Wallet

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WHAT IS MAKING THE EIDAS 2.0 SO IMPORTANT?

What is the European Identity Wallet?

- It’s a container with boxes and a big padlock
- Every box holding an identity attribute, i.e. diploma’s, certifications. Name, given name(s), DOB, Etc
- After consent **anybody** can open a box in the container
- Its ISO 18013-5 compliant
- Mobile driving license (mDL) application

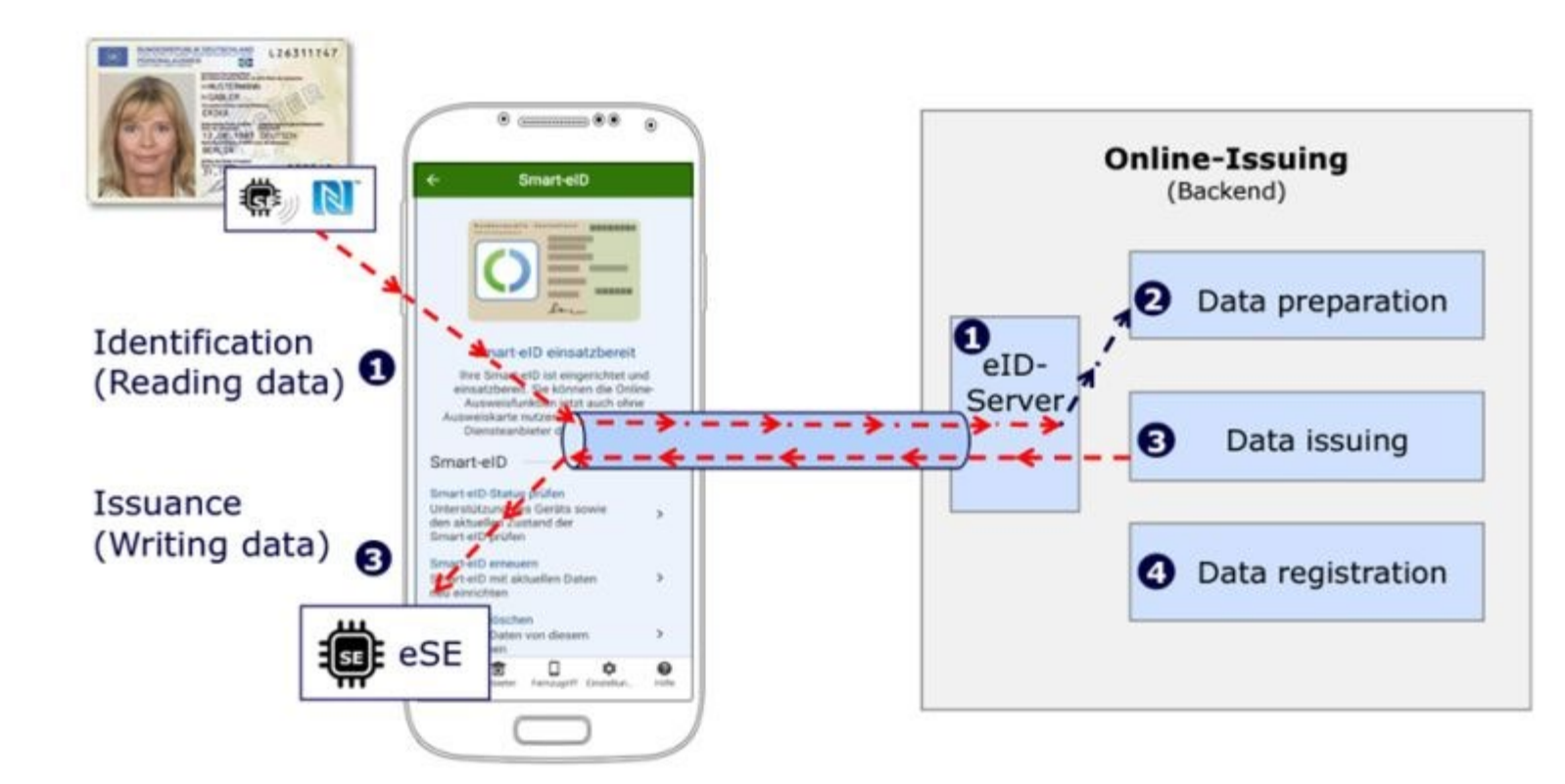
Comparison different wallets

Parameter	Google Wallet	Apple Wallet	European Identity Wallet	Mob.id
Primary Focus	Payments	Payments	Decentralized Digital Identity	Decentralized self-sovereign Digital Identity
Key Use Cases	Contactless payments, loyalty cards, tickets	Payments, tickets, passes	Identity verification, document signing, accessing services	Identity verification, identity provisioning, document signing, accessing services
Key Technologies	Host Card Emulation (HCE), NFC, tokenized payments	NFC, Secure Element, Apple Pay network	Self-sovereign identity, cryptographic credential verification, blockchain	Self-sovereign identity, cryptographic credential verification, PKD, PKI
Security Approach	Hardware secure element, tokenization	Hardware secure element, biometric authentication	Selective disclosure of identity data, user control	Selective disclosure of identity data, user control, secure endpoint
Adoption Status	Established user base on Android	Native iOS integration with established user base	Under development	Growing user base Android and Apple and API
Interoperability	Tied to Android platform only	Tied to Apple devices only	Standards-based interoperability across EU planned	Standards-based interoperability across the World
Identity/Credential Management	Centralized provisioning by Google	Centralized provisioning by Apple	Decentralized, user-controlled storage	Decentralized, user-controlled storage
Trust Framework	Leverages existing EMV payments framework	Proprietary tokenization framework by Apple Pay	Blockchain provides decentralized trust anchor	State provides decentralized trust anchor

Comparison Security considerations

Security Consideration	ISO 18013-5	European Identity Wallet	ICAO 9303	ICAO DTC
Standardized protocols	General guidance, no mandated protocols	OpenID Connect, OAuth 2.0, DIDComm, more	BAC, EAC, LDS standards specified	BAC, EAC, LDS2 standards specified
Access control protocols	No specified protocols	OAuth 2.0, OpenID Connect, FIDO, PACE, DIDAuth	BAC, EAC	BAC, EAC, PACE
Digital signatures	Not mandated	Required	Required	Required
Data minimization	No guidance	Selective disclosure emphasized	Mandatory data elements	Same data elements as e-passports
Decentralized identifiers	Not mentioned	Supports DIDs for decentralized identity	Centralized PKI model	Based on centralized PKI model
Biometrics storage	No guidance	Off-chip storage preferred	Stored on chip	Stored on chip
Privacy-enhancing technologies	Not mentioned	Emphasizes technologies like zero-knowledge proofs	Not incorporated	Not a focus currently
Credential capabilities	No guidance	Extensible with verifiable credentials	Fixed passport data	Modelled on passport credentials
User control	No specific provisions	Users control identity data	Managed by issuer	Managed by passport issuer
Interoperability	Less standardized	Standards-based for interoperability	Global interoperability goal	Built on ICAO global standards

Architecture Bundesregierung Deutschland



Quelle: Antwort der Bundesregierung auf die Kleine Anfrage der Fraktion der CDU/CSU Stand der Umsetzung der eIDAS-2.0-Verordnung - Drucksache 20/8040 (PDF)

Questions?

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- **(N)PKD as a service**
- **Cooperation with ICAO**
- **Decentralised Identity**
  - European identity
  - Digital Traveler Credential
- **Company identity**
- **Identity Credential and Access Management**
  - Attribute Based Access (XACML)
  - Directory fully x.500
- **Credential Management**
  - Unlimited number of credentials
  - Unlimited number of attributes
- **Build to scale!**

DIFFERENT ROLES