

# A-SIT

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eIDAS, Toolbox, mGov4EU, and more ...



# About me ...

- › Director of A-SIT
- › Working on eSignature and eID
- › AT member of delegation to
  - › eIDAS Cooperation Network
  - › eIDAS Technical Subgroup
  - › eIDAS Expert Group (Toolbox process)



# Presentation Outline

- › The basis: eIDAS, SDGR
- › The future: eIDAS Revision (ongoing)
- › Current work: Toolbox process “EUDI Wallet”
- › Related research: mGOV4EU
- › Summary and questions

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# Some history of eID in Europe

- › 1999: EU Signature Directive
  - › Equivalence to handwritten signature, did not cover eID
- › 2000+: First national eID initiatives
  - › FI, EE, IT, AT, ...
- › 2005: Manchester Ministerial Declaration
  - › *"By 2010 [...] secure means of electronic identification [...] respecting data protection [...] be made available under the responsibility of the Member States but recognised across the EU"*
- › 2008+: STORK and STORK 2.0 Large Scale Pilots

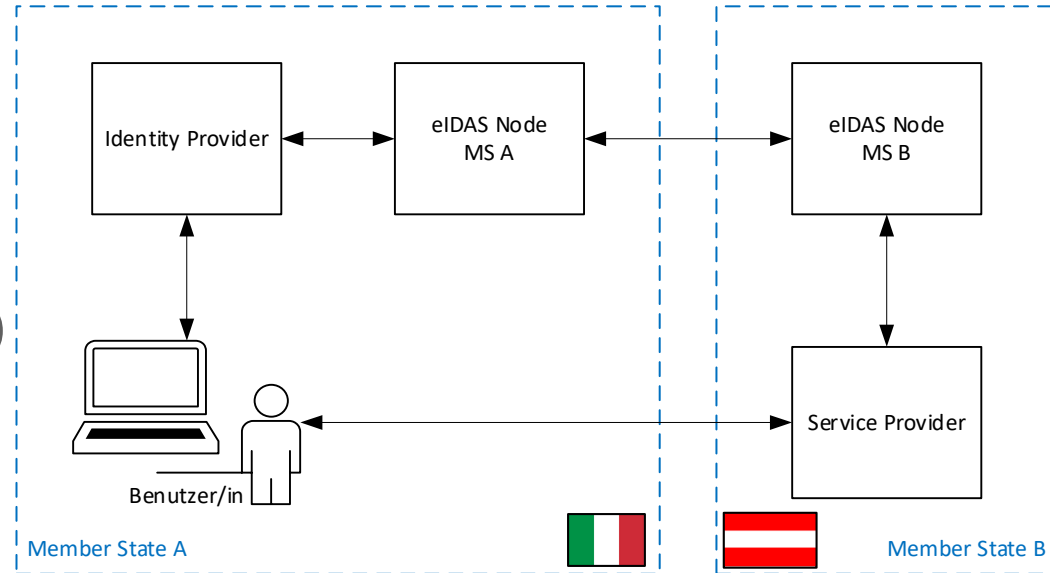
# eIDAS Regulation

- › Electronic Identity => *Limited harmonisation*
  - › Notification under national sovereignty
- › (Qualified) Trust Services => *Largely harmonised across the EU*
  - › Electronic signatures
  - › Electronic seals
  - › Validation services
  - › Preservation services
  - › Timestamp services
  - › Registered delivery services
  - › Website authentication



# eIDAS technical eID concept

- › Federation, shielding national specifics
  - › e.g. if MS have many IdPs (e.g. SPID)
  - › e.g. if national protocols are different (OIDC, SAML)
  - › 1 MS (DE) relies on middleware model
- › SAML v2 used cross-border



# Status of notified eIDs

## › Notified

- › AT: ID Austria (mobile)
- › BE: ID card, its.me
- › CZ: ID card, MojeID, MEG (mobile)
- › DE: ID card
- › DK: NemID
- › EE: ID card(s), MobiilID
- › ES: ID card
- › FR: LaPoste (FranceConnect+)
- › HR: ID card
- › IT: CIE, SPID
- › LT: ID card

## › Notified (cntd.)

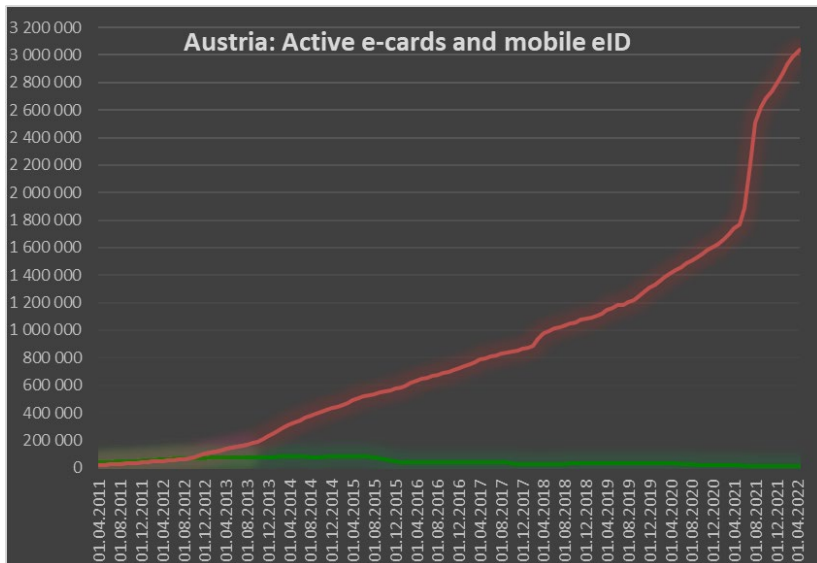
- › LU: ID card
- › LV: ID card, eParaksts
- › MT: ID card
- › NL: DigiD, eHerkenning
- › NO: Buypass ID, BankID
- › PT: ID card, CMD (mobile)

## › Pre-notified

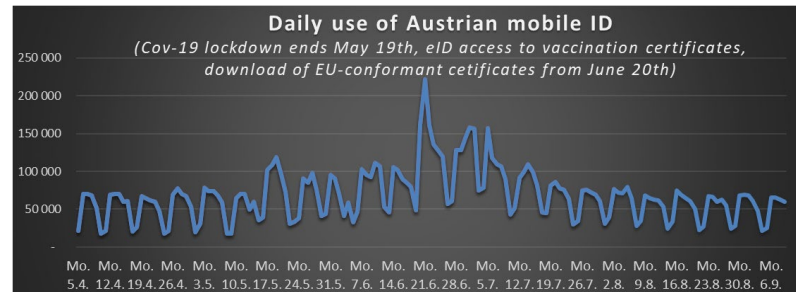
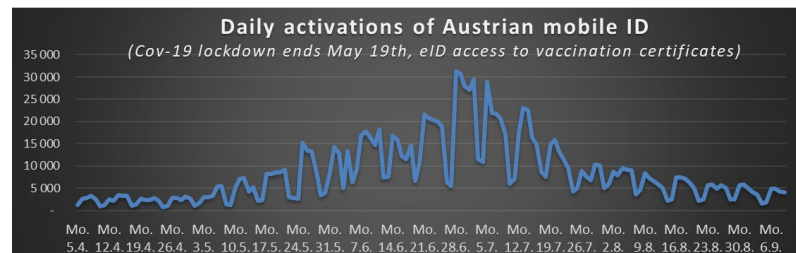
- › BG: Evrotrust
- › DK: MitID
- › LI: mobile ID

# A (sole) Austrian experience

› Smartcard vs. mobile eID use



› E.g. during Covid Pandemic  
(but compare also with SPID rise)



# Single Gateway Regulation (2018)

- › A right for fully online cross-border services in many areas
  - › Birth, residence, studying (applying for study financing, applying for admission, request recognition of diplomas), working, moving ...... from 12 December 2023.
- › Introduces “once-only” principle
  - › Administration shall request evidence from citizen/businesses only once
  - › Citizen/business has the right to request the authority to retrieve evidence needed directly from the competent authority (in particular cross-border)
    - requires eID, consent, OOTS (data service directory, evidence broker, semantic repository) ...... but compare to EUDI Wallet later (paradigms OO vs. citizen as “carrier”)

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# Some eIDAS short-comings

- › A personal view (some backed by EC thoughts)
  - › Little support for private sector services
  - › Notification / peer-review process can be improved
  - › eIDAS nodes not fit for mobile devices
  - › Support/process for attributes to be improved
  - › Identity matching remains an issue

# eIDAS Revision proposal

- › Revision of the Regulation
  - › Proposed in June 2021
  - › Current in 2<sup>nd</sup> reading in Telecom Council
  - › Public hearings in European Parliament
- › EC proposed a toolbox process in parallel
  - › Technical basis for European Digital Identity Wallet
- › Large scale pilots being prepared (Digital Europe Progr.)

# eIDAS Revision what's new

- › European Digital Identity Framework (aka “EUDI Wallet”)
  - › Shall complement existing notified eID
  - › MS obligation to issue a Wallet and to notify eID
  - › Obligations to accept for “gatekeepers” and certain private services
- › New Trust Services
  - › Issuer of qualified electronic attestations
  - › Providers of remote qual. signatures (existed before, but now specific)
  - › Electronic ledgers
  - › Electronic archiving services

# A few (new) terms on EUDIW

- › PID: '*person identification data*' means a set of data enabling the identity of a natural or legal person, or a natural person representing a legal person to be established;
- › EAA: '*electronic attestation of attributes*' means an attestation in electronic form that allows the authentication of attributes;
- › QEAA: '*qualified electronic attestation of attributes*' means an electronic attestation of attributes, which is issued by a qualified trust service provider and meets the requirements laid down in Annex V;
- › '*unique identification*' means a process where person identification data or person identification means are matched with or linked to an existing account belonging to the same person.

# A (personal) comparison

- › eIDAS shortcoming (*cf. slide #12*)
  - › support for private sector services
  - › Notification / peer-review process can be improved
  - › eIDAS nodes not fit for mobile devices
  - › Support/process for attributes to be improved
  - › Identity matching remains an issue
- › How addressed in the proposal
  - › MS obligations at least for the Wallet, obligations for some services
  - › Alternatives (conformity assessment or certification), Wallet certification
  - › **Toolbox process**, the EUDI Wallet has clear mobile focus (but not only)
  - › **Toolbox process**, support for Q(EAA) in the Wallet
  - › Addressed in the **toolbox process**

# Presentation Outline

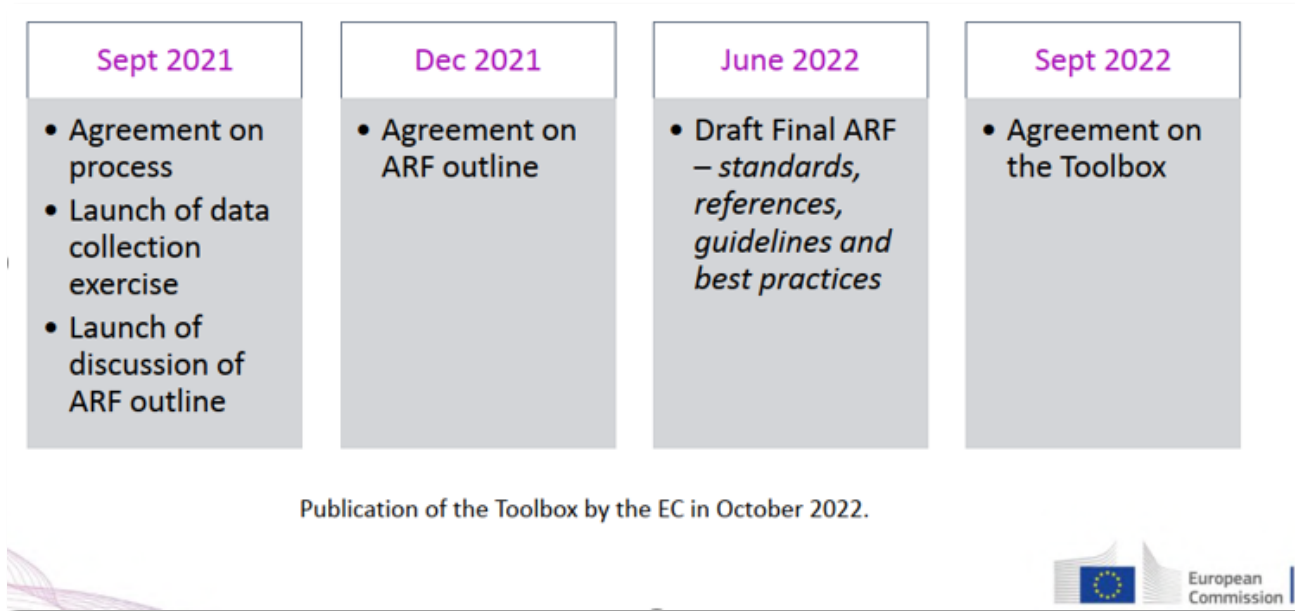
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# The Toolbox Process

- › Proposed by European Commission to speed up the process
  - › cf. Green Pass experience (but less complex)
  - › Runs in parallel to legislative process
    - but at the end of the day needs to implement the Regulation
- › Organised as
  - › MS collaboration with synchronisation-points (public consultation)
    - See (and sign up to) <https://futurium.ec.europa.eu/en/digital-identity>
  - › Use cases in key policy areas define requirements
  - › Working groups develop specifications (using standards)

# An (ambitious) timeline

- › The original plan for the “Architecture Framework” (aka “Toolbox”)

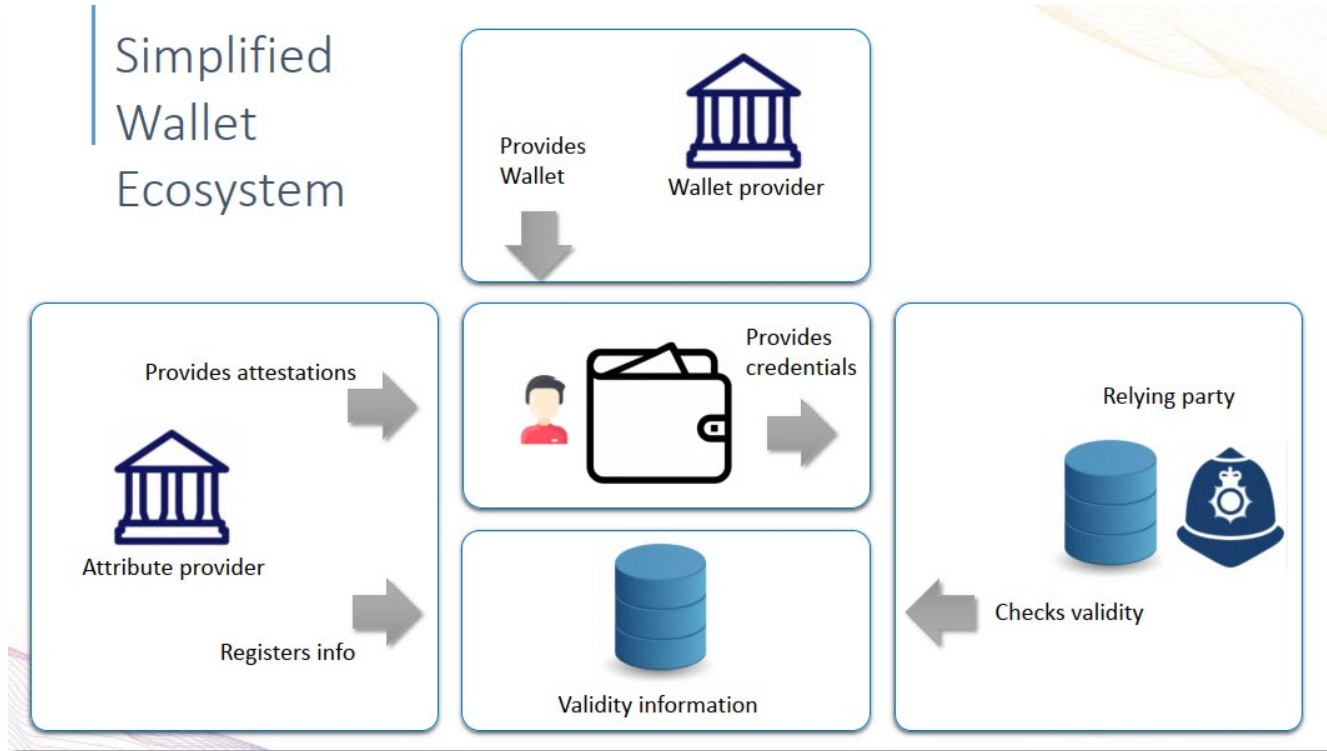


Slide by the European Commission

# What are we working on ...

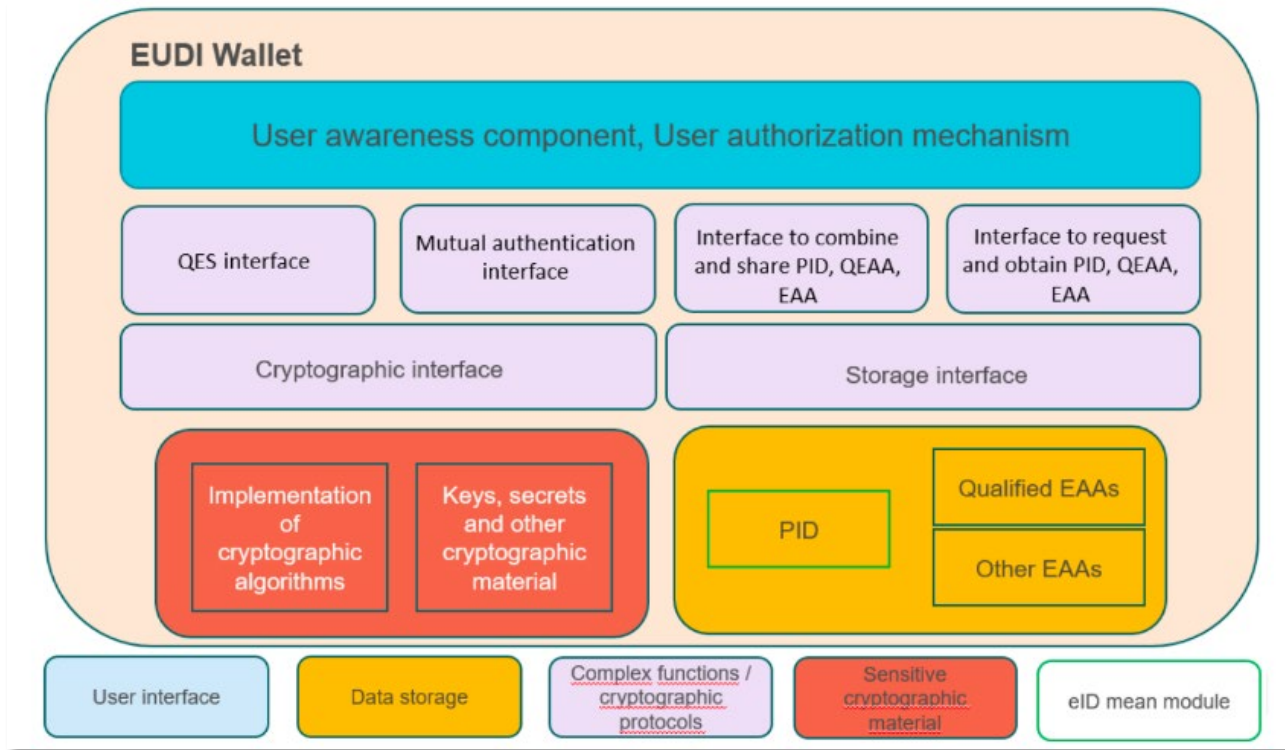
- › Use cases (*establish requirements*)
  - › Use Case 1 - Online identification
  - › Use Case 2 – Qualif. electronic signatures
  - › Use Case 3 - Mobile driving license
  - › Use Case 4 - eHealth patient summary and ePrescription
  - › Use Case 5 - Digital travel credential
  - › Use Case 6 - Payments
  - › Use Case 7 - Sharing diploma
- › Working groups (*define the Wallet*)
  - › WG1 - Provision and exchange of identity attributes
  - › WG2 - Functionality and security of the Wallet
  - › WG3 - Reliance on the Wallet
  - › WG4 - Governance

# Wallet high-level overview



*Slide by the European Commission*

# Wallet components

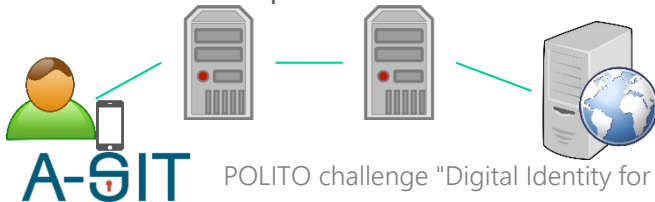


From: ARF, version 02/2022

# And what's the difference?

## › eIDAS so far (and onwards)

- › Online services, PC focus
- › MS notify eIDs, but have high degree of freedom
- › Citizens (usually) use their MS eID (but consider e.g. commuters, Erasmus, ....)
- › Focus on public sector and eID
- › MS use central components (nodes) to de-couple



## › Wallet proposal

- › Online and offline use, mobile focus
- › MS have to offer an EUDI Wallet that is largely harmonised
- › Citizens might be free to use any Wallet (enrol/onboard nationally?) (*remark: which may turn out complex*)
- › Public and private sector, attributes
- › Direct communication with Relying Parties (also cross-border)



# Where do we stand

- › High-level view on what the Wallet is, with ...
  - › agreement on many aspects,
  - › but several aspects not yet touched or agreed
    - Pending also political agreement
  - › First version of ARF was under public consultation
    - See (and sign up to) <https://futurium.ec.europa.eu/en/digital-identity>
- › ... but
  - › no technical standards thoroughly discussed / selected yet
  - › ... which may take time given different MS situation or paradigms

# Core challenges

- › Broad footprint of services
  - › E-Government (usually) needs persistent unique identification
  - › For most private services not desirable, traceability to be avoided
- › Co-existence of existing eIDAS with the Wallet
  - › Different concepts, but citizens shall have a seamless experience
- › Role of QEEA vs. direct access to authentic source
- › EUDIW and SDGR aim at the same goals, but apply different paradigms
  - › EUDI Wallet assumes citizen *attribute-carrier* (to anticipate what is needed)
  - › SDG OOTS lets citizen delegate to the evidence requester

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# mGov4EU

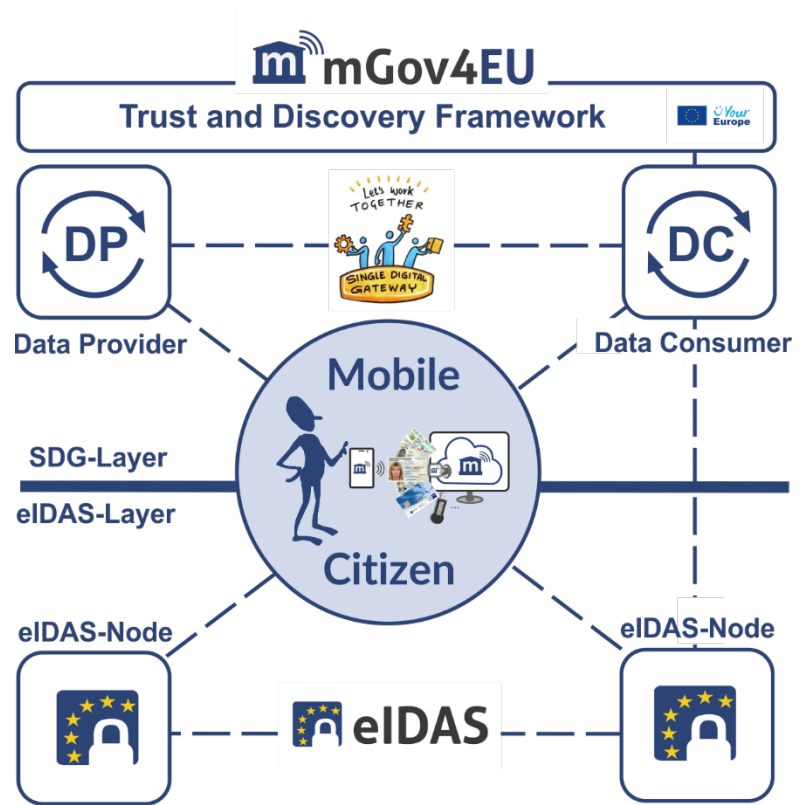
- › Research project funded under Horizon 2020
  - › Mobile Cross-Border Government Services for Europe
- › Aims at bridging
  - › eIDAS and
  - › SDGRusing mobile devices.
- › ... proposed before eIDAS Revision got known



The mGov4EU project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 959072.

# Overall Idea

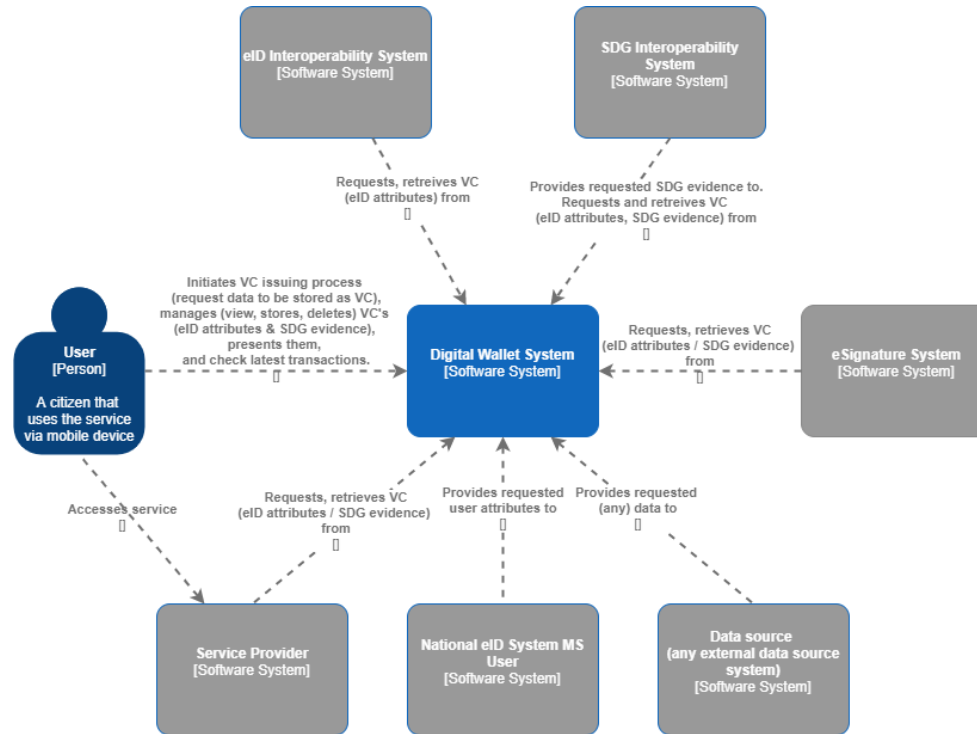
- › Development of cross-border solutions
- › Implementation of the once-only principle
- › Usage of eIDAS-Layer
- › Wallet solution
- › Beyond SDG



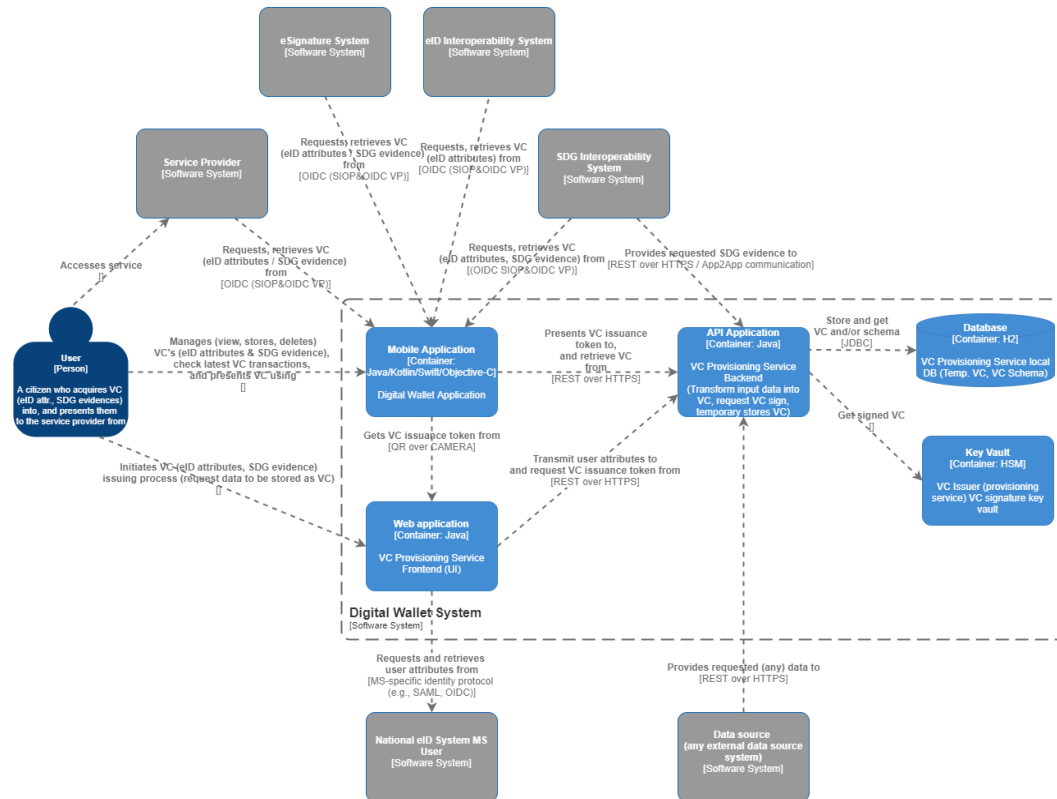
# Wallet concepts

- › Usage of Verifiable Credentials (VC)
- › Focused on two domains (and types of data):
  - › eIDAS = eID attributes (with focus on existing eIDAS Interoperability Architecture)
  - › SDGR = SDG evidence (enable user-centric approach)
- › Generic Digital Wallet System technical architecture to enable processing (provisioning, storing, managing, presenting) of any verifiable data
- › Technical architecture of Wallet System consists of 2 main sub-systems:
  - › VC Provisioning Service (i.e., provisioning of data to Digital Wallet)
  - › Mobile Digital Wallet (storage, managing, presentation) of VCs

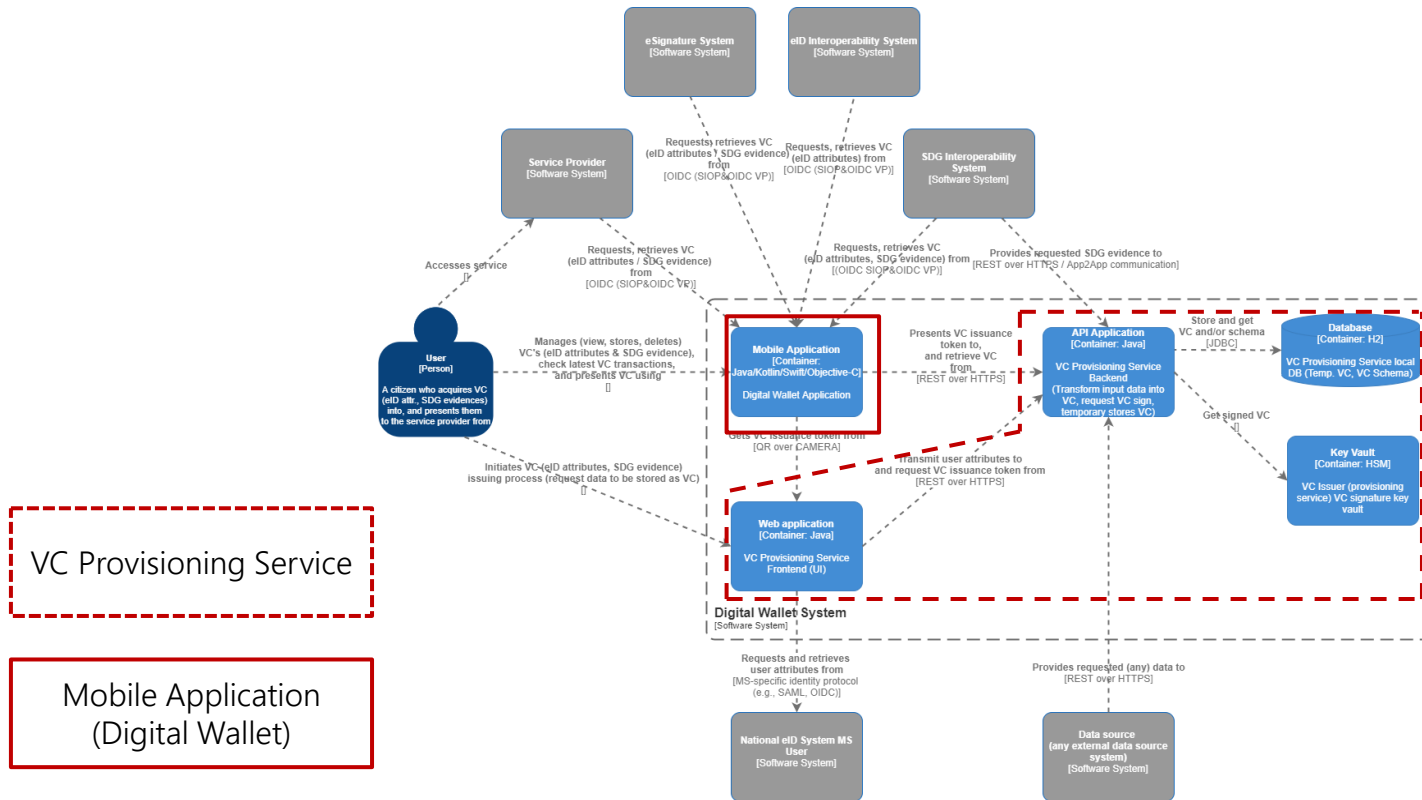
# Digital Wallet System (C4 lvl.-1)



# Digital Wallet System (C4 lvl.-2)



# Digital Wallet System (C4 lvl.-2)



# mGov4EU will validate in three pilots

- › Online Voting Pilot
  - › mGov4EU Platform interconnected with the online voting solution to provide a robust eIDAS authentication
- › Smart Mobility Pilot
  - › Mobility services, which require a trustworthy identification and further evidences
- › Mobile Signature Pilot
  - › User-friendly creation of advanced and qualified electronic mobile signature according to eIDAS

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# Summary

- › The eDIAS Regulation gave a sound basis on
  - › But shortcomings on
    - MS uptake (no. of notified eID)
    - Private sector support
    - Mobile device support
    - Attributes or identity matching
- › eIDAS Revision proposal sets ambitious goals
  - › Watch out (or engage) on the developments

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