



European University Alliance for Global Health

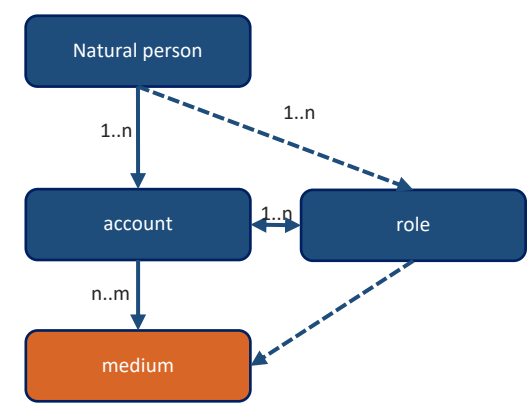
eduTAP

*Bridging **online identity** for reliable and trustworthy **on-site service access**
(in the educational sector)*



From eduGAIN & eduroam to eduTAP

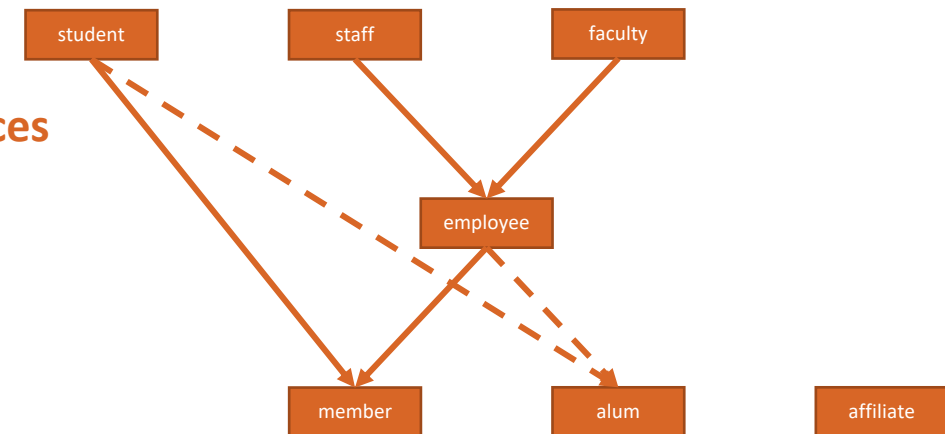
- eduGAIN is an **inter-federation of identity-federations** in Higher Education
 - Each Member of a Higher Education Institution (HEI) should have a **user-account** that allows him to **access online-services**
 - eduGAIN uses **Shibboleth** (federated SAML2 or OIDC) and is an “**Authentication and Authorization Infrastructure**” (AAI)
 - All HEIs Identity Management Systems uses the same common set of LDAP-Schema (eduPerson & SCHAC + SAML)
 - shared set of Attributes and understanding of those Attributes
- eduroam (educational roaming) gives all HEI members **access** to a **WLAN service** with SSID eduroam
 - WPA2/3-Enterprise with a Radius Authentication Service (based on the eduGAIN user-account - login)
 - A common WLAN at almost all HEIs world-wide and public spots



→ It is all about **accessing services**

→ eduTAP

- identification / authentication / authorization to **access services on-site**
- uses eduGAIN and legacy system attributes for service access



eduTAP – educational tapping

- ✓ tap to identify yourself,
- ✓ tap to claim a discount,
- ✓ tap to pay (open and close loop-payments),

TAP TO PAY



- ✓ tap to open a door,
- ✓ tap to lend a book,
- ✓ tap to take a campus shuttle.



Interoperability of Services

Identification

- Identification
- Status verification
- Proof of entitlement
- Single Sign On / 2FA / FIDO2
- Attendance check
 - Check-in for exams
 - attendance at courses
 - Time recording
- Electronic Signature (of legal documents)

Electronic payment / cashless campus

- Canteen & cafeterias
- Vending machines
- Printing / scanning (secure & follow me printing)
- Ticketing (secure & follow me printing)



Physical Access Control

- Areas (campus, parking lot)
- Buildings
- Rooms
 - Classrooms
 - Labs
 - Computer rooms
 - Learning spaces
 - Offices
 - Accommodation facilities (i.e., dorms)
- Sports facilities



Library services

- Access to / borrow
 - Physical media (book, audio and video media)
 - E-media (book, audio and video media)
- Learning spaces



Transport

- On campus services (university shuttle service)
- Public transport tickets & discounts



Discount and promotions

- Discounts on cultural activities
 - Museums
 - theaters
 - cinemas
- Shops
- Restaurants

on- & off-campus → on-site usage
online services

providing service → create benefits

- ✓ Vision of the European Commission: Towards a European Education Area
- ✓ The European Student Card Initiative (ESCI)
- ✓ European Charter for Higher Education (ECHE) of the Erasmus+ Program



A great vision!



European University Alliance for Global Health

9 Universities, 1 Goal: Building Europe's Campus for Global Health



EUGLOH 2.0 Consortium Partners



→ UNS & UiT are from **non-member states** of the **European Union**



15-20 % foreign students
40 % European citizens
60 % from other nations



Key Goals

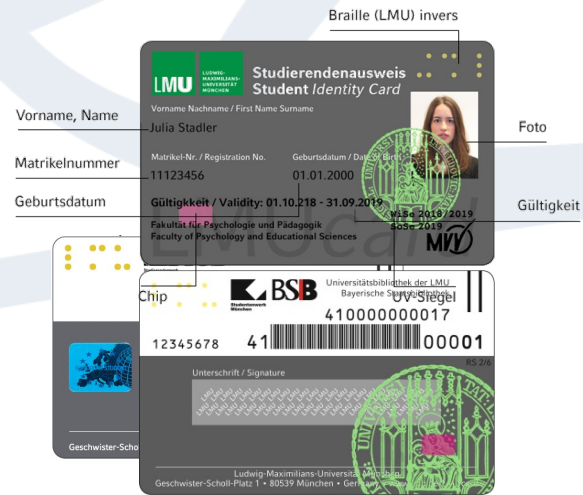
- Interdisciplinary Global Health programmes across universities – striving towards a joint European degree.
- **A vibrant, multicultural and inclusive inter-university campus.**
- **Seamless mobility** for students, staff and professionals – physical and virtual.
- Strong links between higher education, research and local socio-economic ecosystems to prepare young people for the jobs of tomorrow.
- Empowering future generations to find solutions for Global Health challenges.

} **Interoperable services and identification**

EUGLOH campus cards current state and connected services

→ Vision:

All university members should be able to use services of host university while on visit



Status of four core members (IT wise)

Ludwig-Maximilians-Universität München

- Legic CTC Cards (Legic Advant + Prime)
- Payment (Studierendenwerk München)
- Cloud-Printing and Scanning (Secure-Printing and Payment)
- Library
- Ticket for Public Transport System

Université Paris-Saclay

- NXP Mifare DESfire Cards
- Payment (izly – les Crous)
- Library
- Physical Access Control

Lunds universitet

- NXP Mifare Classic Cards
- Physical Access Control (online and offline)
- Login at copiers (for copy/print/scan)
- Library
- Several other services, but not any payment services

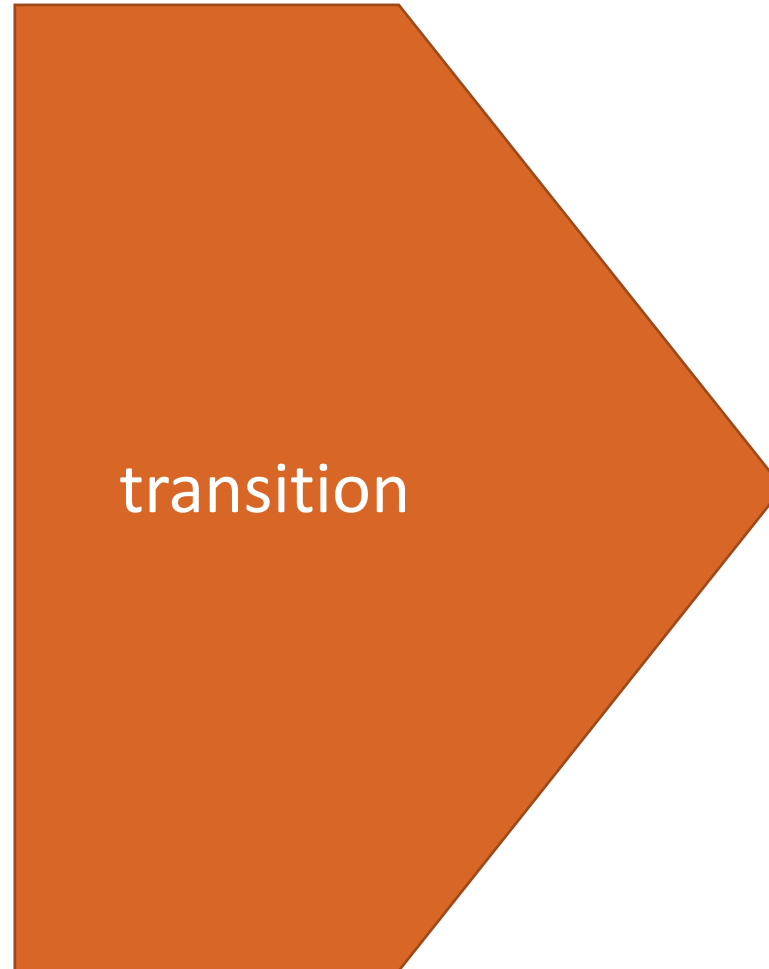
Universidade do Porto

- NXP Mifare Classic Cards / Java Cards with Mifare Classic emulation
- Library
- Physical Access Control
- Canteen & cafeterias
- Printing Service
- Attendance

Not compatible technologies

Path to an interoperable campus card

The image shows a collection of various student and campus cards. On the left, there is a blue 'EUROPEAN STUDENT' card with a globe and stars. In the center, there are four cards: a yellow 'Student ID' from UCC for John Doe, a blue 'KIT Studiensausweis' for Laura Musterfrau, a blue 'ESNcard' for Soledad Moreno Suárez, and a green 'INTERNATIONAL STUDENT IDENTITY CARD' for B. Smart. On the right side of the collection, there are logos for 'ESN Erasmus Student Network', 'e+' in a purple square, and 'ISIC INTERNATIONAL STUDENT IDENTITY CARD'.

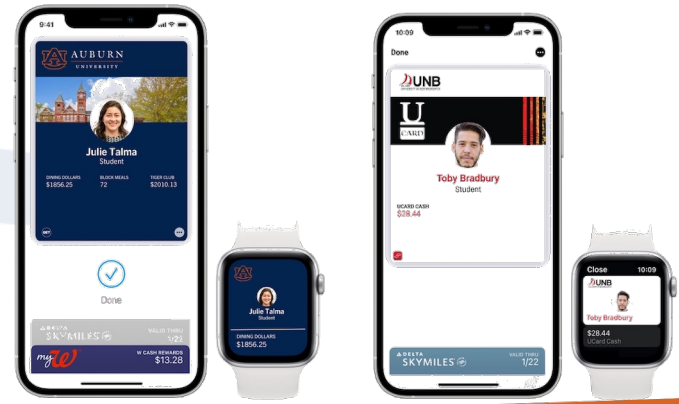
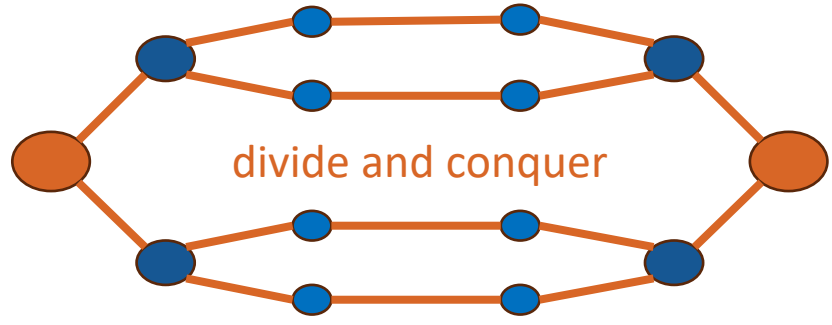


eduTAP

- ✓ state-of-art technology,
- ✓ secure and trustworthy,
- ✓ compliant to **GDPR**
- ✓ ensures interoperability

Trust-Level: NO-TRUST

Path to an interoperable campus card



Medium → Services

Identification

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Electronic Payment / cashless campus

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Physical Access Control

- Areas (campus, parking lot)
- Buildings
- Rooms
- Classrooms

Library services

- Access to / borrow
 - Physical media (book, audio and video)
 - E-media (book, audio and video)

Transport

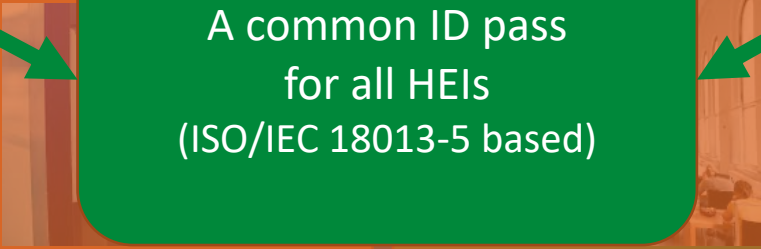
- On campus services (university shuttle service)
- Transport tickets
- "Proof of entitlement"
- "discount"

Discount and promotions

- Discounts on cultural activities
 - Museums
 - theaters
 - cinemas
- Shops
- Restaurants
- Special case of "Identification" / "Status verification" / "Proof of entitlement"

separate service passes
(can chose appropriate technology)
→ Working solutions by solutions providers

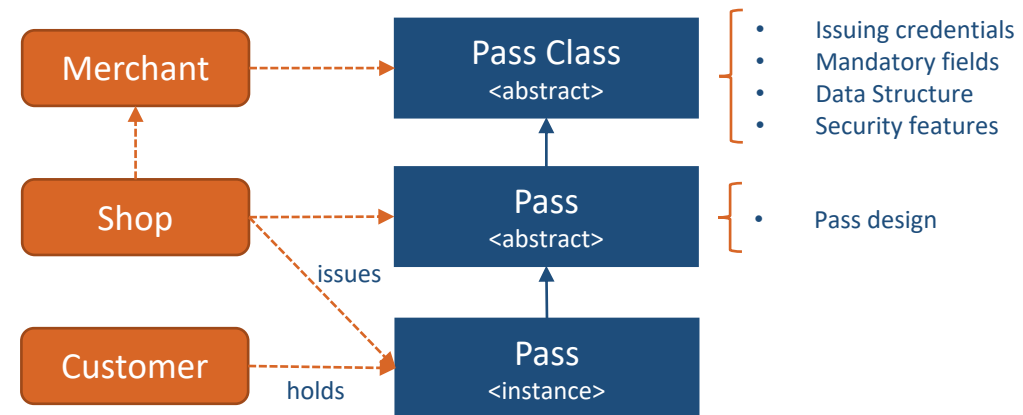
A common ID pass for all HEIs (ISO/IEC 18013-5 based)



providing service → create benefits

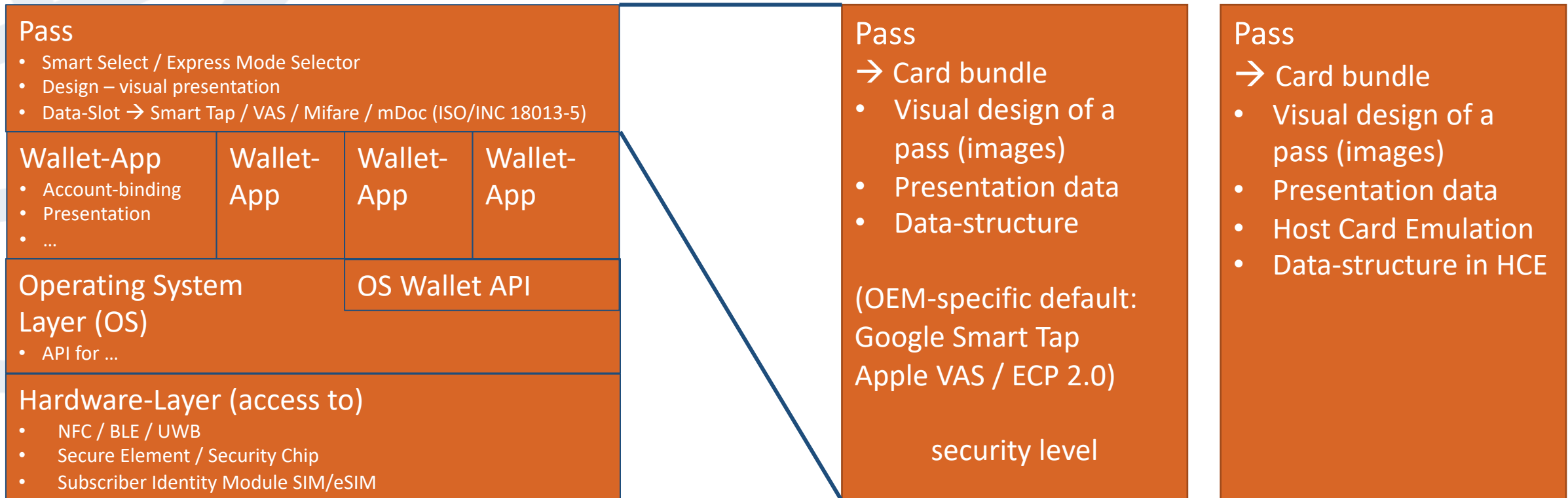
Technical details and features of Wallets / Passes

- **Smart / Quick Select option (Express-Mode)**
- **Battery reserve** (important for keys, transit tickets, payment)
- Authentication requirements ← **security features**
- Groupable
- Validity dates
- Remote updateable / revokable
- **Offline usable** (→ non traceable)
- Host Card Emulation possible



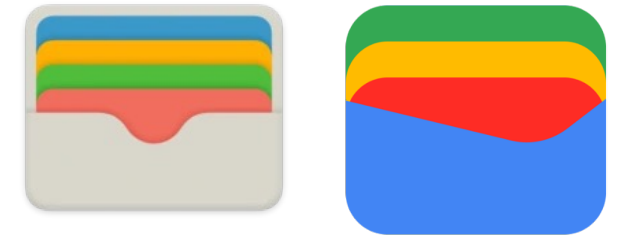
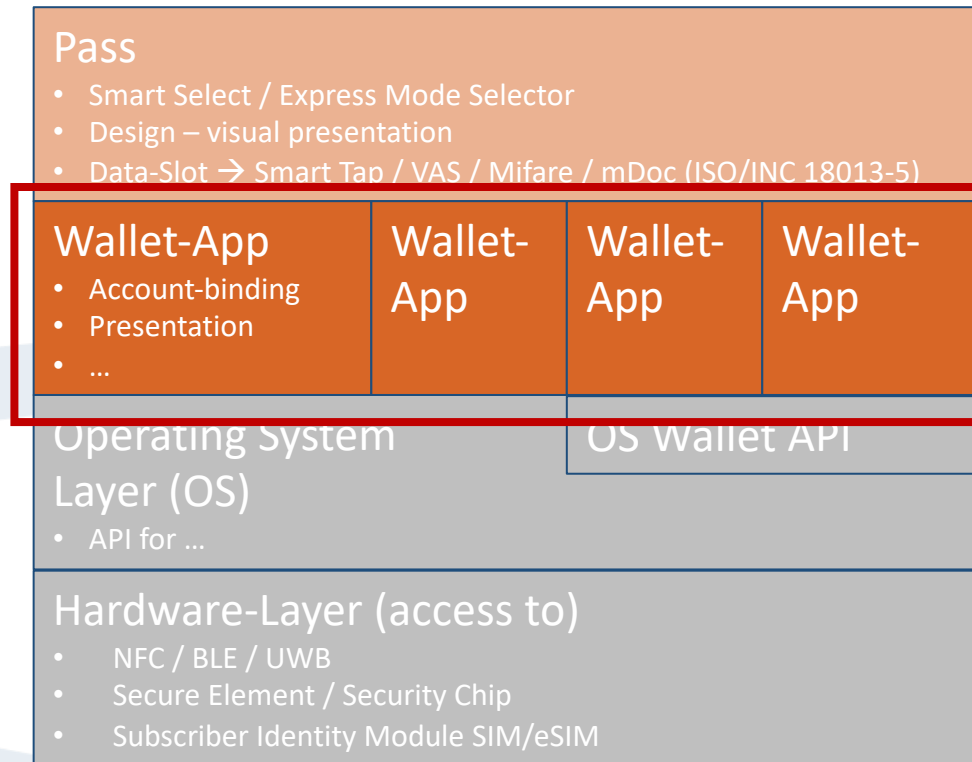
Technical details and features of Wallets / Passes

Detail view on the Pass



Technical details and features of Wallets / Passes

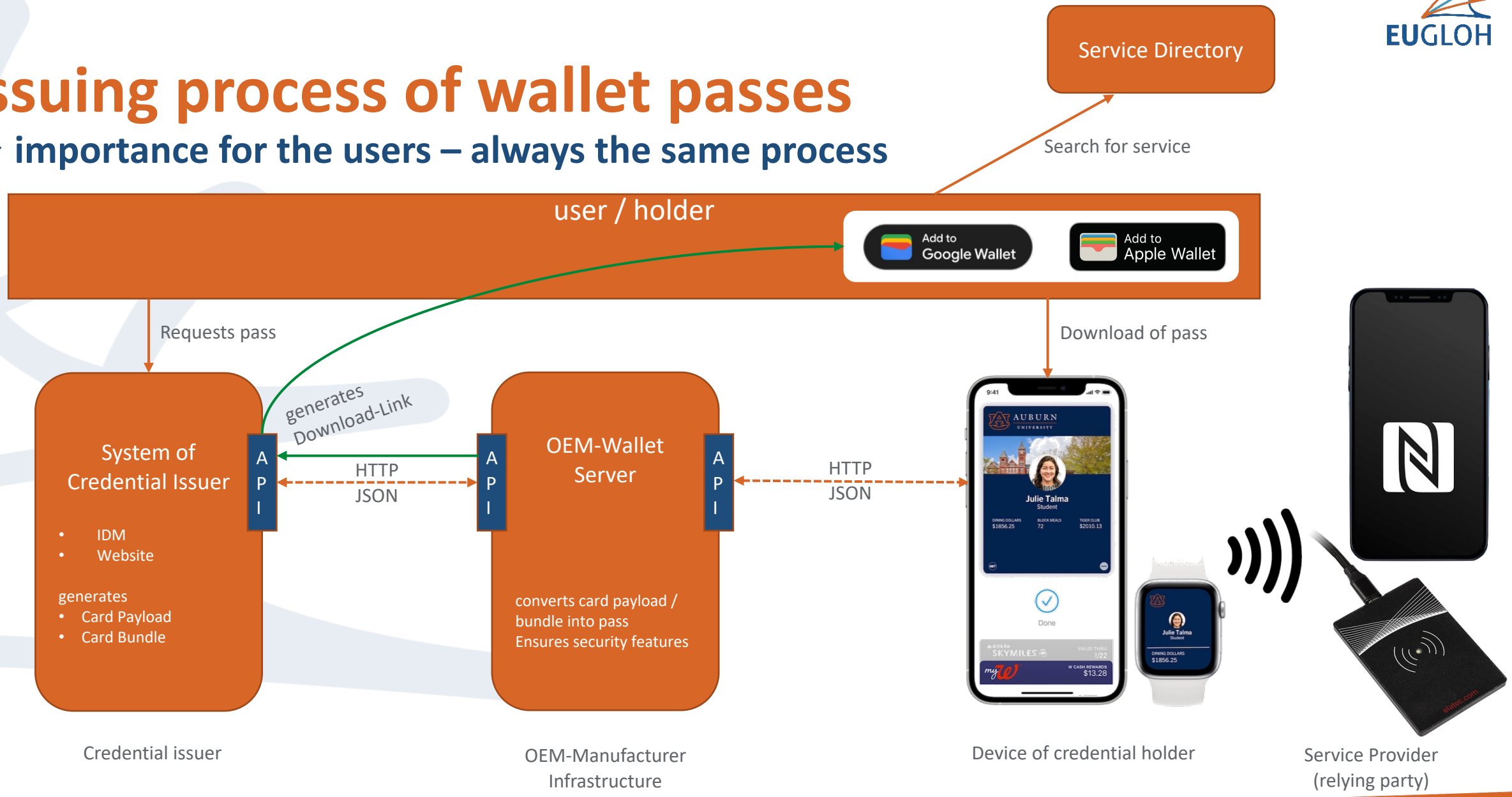
Detail view on the Wallet



→ The eduTAP solution is wallet **agnostic**, not bind to a specific Wallet provider or company

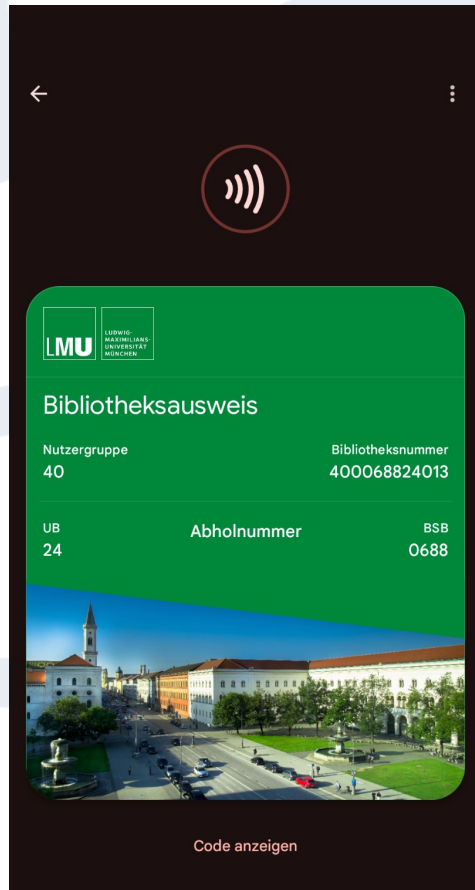
Issuing process of wallet passes

→ importance for the users – always the same process

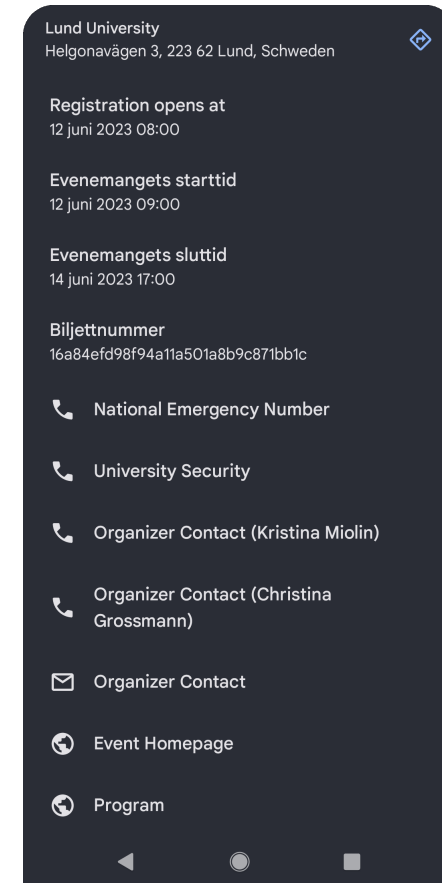


Examples:

potential Library ID for LMU Munich

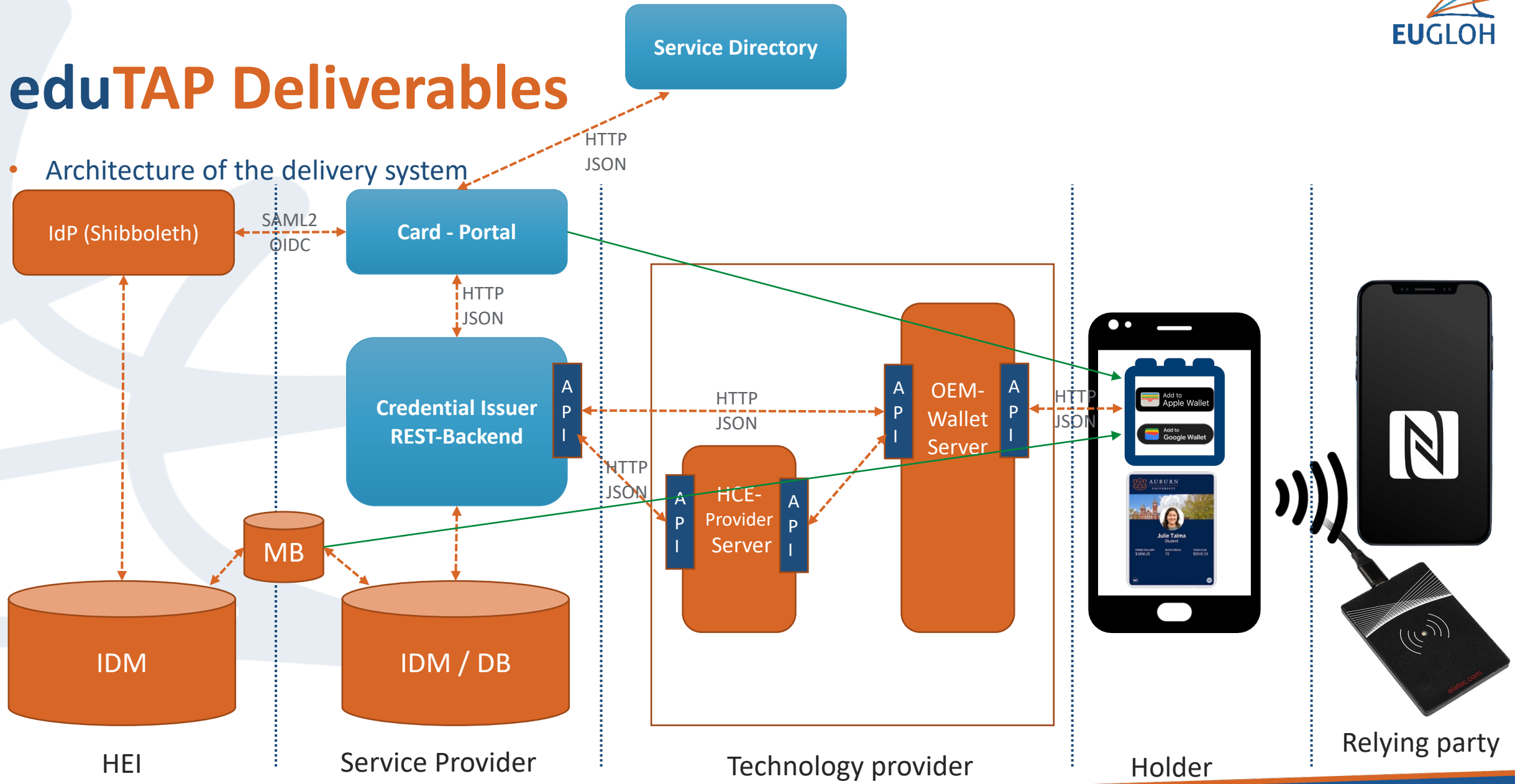


Event-ticket for EUGLOH Annual Summit 2023 in Lund



eduTAP Deliverables

- Architecture of the delivery system



eduTAP Deliverables

- eduTAP core → generic libraries and tools; everything to create and issue passes in the wallets
- eduTAP libs → generic libraries and tools; everything to read and process data from a wallet pass
- eduTAP docs → Information about eduTAP and Wallets
- Central Service Directory → find service and obtain a service pass if necessary
- Infrastructure and Deployment helpers
- Mandant Specific Applications (MasA) → eduTAP@institution implementation

eduTAP is community open source

More Information's → <https://eduTAP.eu> • <https://docs.eduTAP.eu> & <https://github.com/edutap-eu>