EUGLOH

European University Alliance for Global Health

# Feedback on European Student Card Project Digitized Card Pilot for European HEIs – A European Campus Card for Interoperable Services – (EUGLOH Work Package – Campus Life)

*Discussion with Directorate General For Education, Youth, Sport and Culture (EAC)*

*EAC Unit B1 – Higher Education*

*October 26th 2022*

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Co-funded by the Erasmus+ Programme of the European Union

# Agenda

- Welcome
- Round of Introduction
- Presentation
  - Common understanding
  - European Student Card Initiative vs. European Student Card Project
  - Success factors for an interoperable solution
  - EUGLOH Digitized Campus Card Pilot – A digitized European Campus Card for Interoperable Services
- Questions
- Discussions
- Next Steps

# Round of Introduction

- role
- background
- technical knowledge

→ understand audience

# European University Alliance for Global Health

## EUGLOH Consortium Partners

- Université Paris-Saclay (UPSaclay)
- Lund University (LU)
- Ludwig-Maximilians-Universität München (LMU)
- Universidade do Porto (UPorto)
- University of Szeged (USZ)

## EUGLOH New Consortium Partners

- University of Alcalá (UAH)
- University of Hamburg (UHH)
- University of Novi Sad (UNS)
- Tromsø University - The Arctic University of Norway (UiT)

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


https://www.eugloh.eu/

# EUGLOH Unites More Than...

210,000
Students

23,000
Academic Staff

73
Faculties & Schools

450
Research Groups

**15-20 % foreign students**

40 % European citizens

60 % from other nations

## Key Goals of EUGLOH

- Interdisciplinary Global Health programs 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

# EUGLOH Work Package – Campus Life

**EUGLOH focuses on:**

- Increasing the number of **short and long mobilities** at **all levels** within the network,
- Developing opportunities for **virtual mobility** and **online courses**,
- Developing the reception of exchange students in collaboration with the students' unions,

- **Implementation of the European Student Card Initiative → interoperable services**

- Activities with a focus on lifelong learning in cooperation with employers,
- Student employability,
- Increasing opportunities for students to gain research experience,
- Creating joint programs at master's and doctoral levels.

# Feedback on the European Student Card Project

EUROPEAN STUDENT



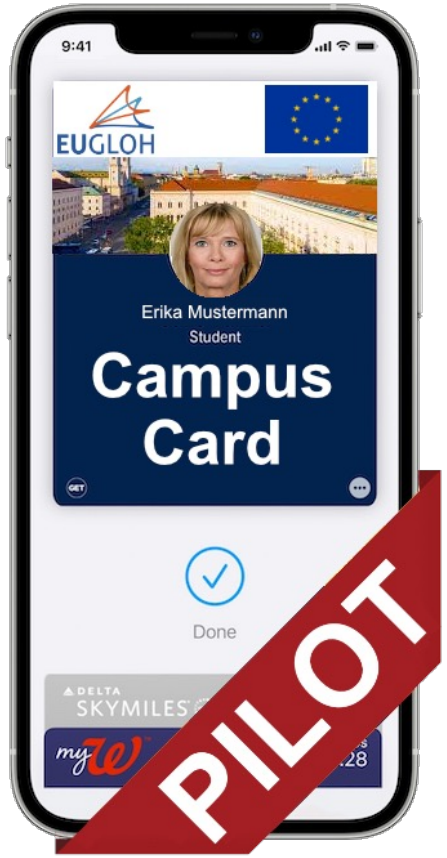
ESN
Erasmus Student Network



ISIC INTERNATIONAL STUDENT IDENTITY CARD


Considerations

## EUGLOH Digitized Campus Card Pilot



- ✓ 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!

# Common understanding

*Terms and Definitions*

*Explain certain technical points*

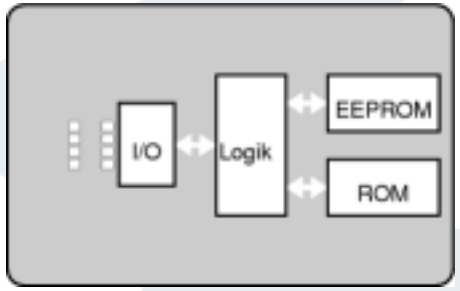
# Terms and Definitions

- Identity
  the fact of being, or feeling that you are, a particular type of person, organization
- Account
  an agreement allowing you to use a particular computer system, website, etc.
- Role
  the position or purpose that someone or something has in a situation, organization, society
- Credential
  documentary or electronic evidence that a person has certain status or privileges

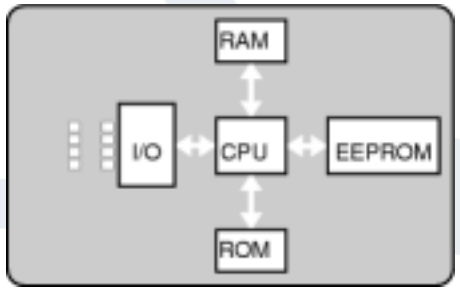
- Service provider
  a company or institution that provides services to customers
- Pass holder
  individual to whom an identification document / pass is issued
- Issuer
  authority who issues identification documents / passes / service cards

# Terms and Definitions

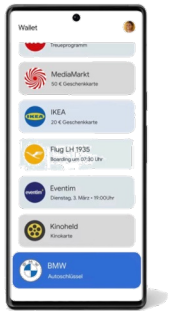
- Chip cards
  → memory cards ← stores data




- Smartcards
  → processor cards ← computing capabilities




- Wallet
  In Context of this Project is a digital Wallet a smartphone application that acts as a container for Passes. It is derived from the term wallet that describes a small case, often flat and made of leather, for keeping money, credit cards and identification documents




- Pass
  As Wallet Pass is an application that contains a visual representation of a card + a data structure + a contact less readable data structure or program

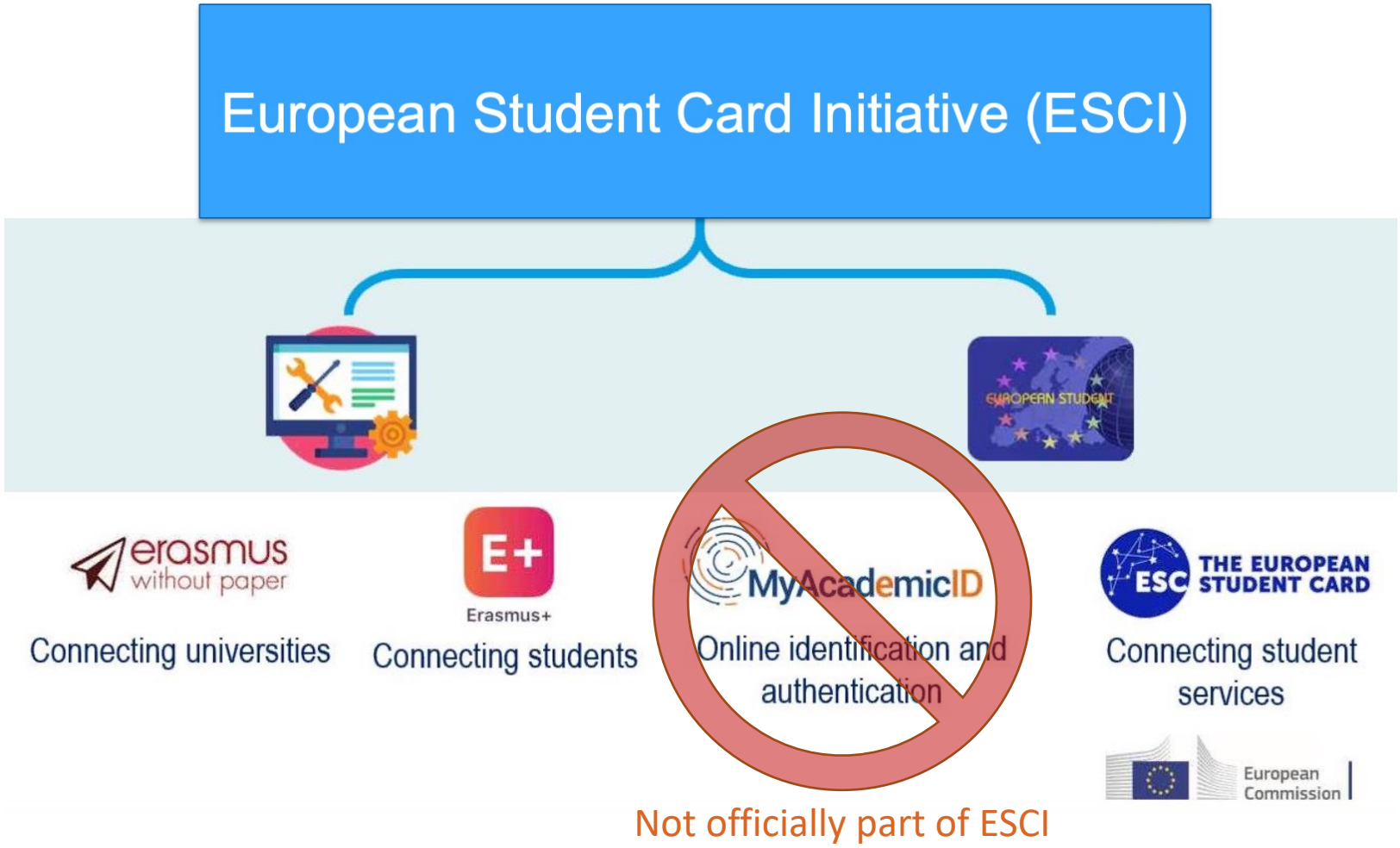
# Terms and Definitions

- Short-term vs long-term mobility

# European Student Card Initiative
# vs.
# European Student Card Project

- Goals
- Differences
- Problems

# The European Student Card Initiative (ESCI)



# The bigger Picture

# Digitalization & Interoperability *of Services*

# ECHE requirements for HEIs

„Implement the priorities of the Program:

- By undertaking the necessary steps to **implement digital mobility management** in line **with the technical standards of the European Student Card Initiative**.
- …“

Source: https://ec.europa.eu/info/funding-tenders/opportunities/docs/cap/eplus2020/eche-fp-2020/1877638-charter-annotated-guidelines-feb2020_en.pdf

## Timeline

- Erasmus Without Papers (EWP)
  - 2021 – Online Learning Agreements (OLA)
  - 2022 – Inter-Institutional Agreements (IIAs)
  - 2023 – Exchange Student Nominations, Acceptances, Transcripts of Records
- European Student Card Initiative (ESC)
  - **2025 – Implement European Student Card**

# Benefits of the European Student Card Initiative

- **For students:**
  - → Easy access to course materials prior to mobility, online course registration and automatic recognition of ECTS credits
  - → **Immediate access to services at the host university, such as libraries, transport and accommodation**
  - → **Discounts on cultural activities throughout the EU**
- **For Higher Education Institutions:**
  - → Easy, online management of the entire mobility process – from student selection to the recognition of ECTS credits
  - → Online identification of students, simplified and secure exchange of student data - including academic records - between Higher Education Institutions
  - → Reduced administrative burden associated with student mobility

Source: https://ec.europa.eu/education/education-in-the-eu/european-student-card-initiative_en

→ **European Student Card Project** as implementing instance

# History of the European Student Card

**2012 – 2013**
- Signing of a protocol of Intent
- Bilateral Franco-Italian agreement between:
  - Fondazione ENDISU
  - ANDISU,
  - Cnous

**November 2013**
- Exchange between the Cnous and the CPU on European Student Card

**2016**
- Institutional structuring at European level
  → Erasmus+ Strategic Partnership

**2016 – 2018 → European Student Card Project**

**2019 – 2020 → MyAcademicID Project**

**2025 - Goal**
- All European / Erasmus+ Higher Education Institutions offer their students a European Student card

1 2 3 4 5 6 7

**December 2015**
- Memorandum of Understanding
- Student Unions of 4 countries:
  - France
  - Germany
  - Irland,
  - Italy
- Exchange within ECStA

**2020 – 2022**
- European Digital Student Service Infrastructure Project
- ESC-Tension Project – European Student Card Extension and Adoption

→ sole focus: students

Comité National de la Carte Étudiant et de ses Usages

les Crous

FONDAZIONE ENDISU

1921–2021 100 JAHRE DEUTSCHES STUDENTENWERK DAMIT STUDIEREN GELINGT

# 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)

→ Special case of "Proof of entitlement"

- Learning spaces

→ Special case of "PAC"

**Transport**
- On campus services (*university shuttle service*)

→ Special case of "Proof of entitlement"

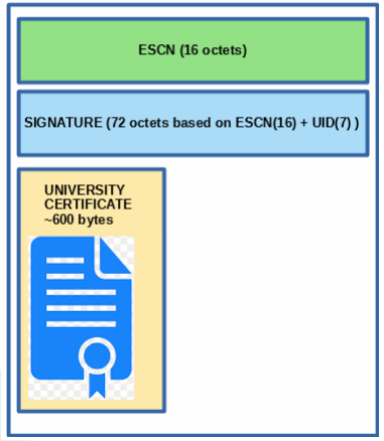
- Public transport tickets & discounts

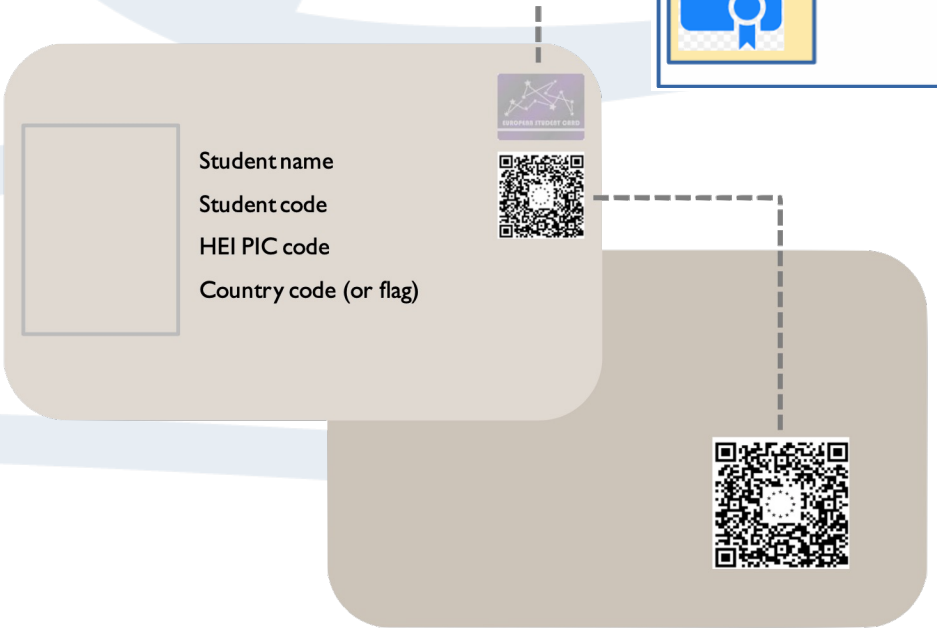
→ Special case of "Payment" / "discount"

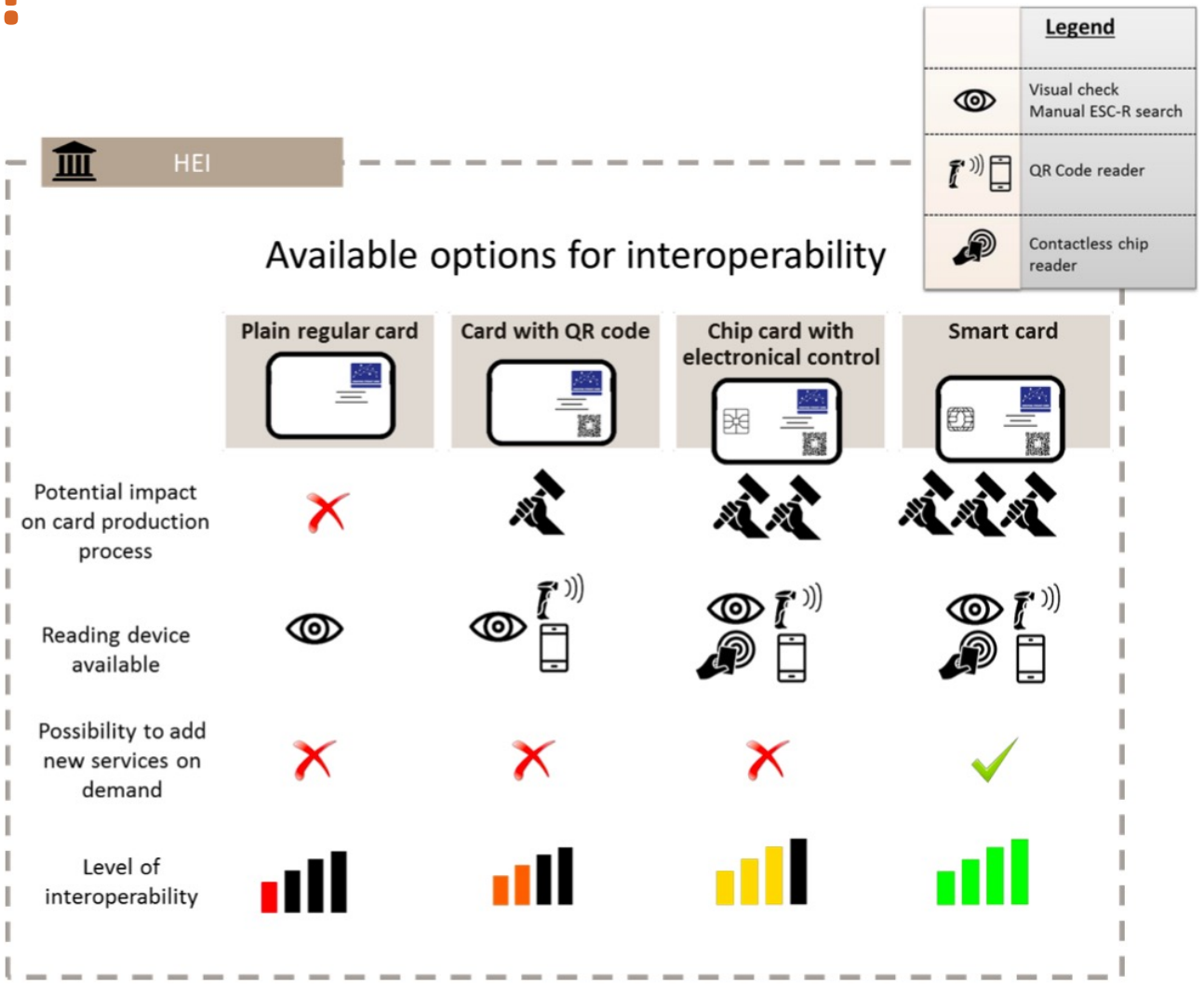

**Discount and promotions**
- Discounts on cultural activities
  - Museums
  - theaters
  - cinemas
- Shops
- Restaurants

providing service → create benefits

# How does the ESC work?

- ✓ 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!

# BUT

# BUT (legal aspects & IT-Security aspects)

- The European Student Card Project specification is not transparent,
- Conflicts with GDPR requirements
  - → **Student IDs are not optional**; therefore, they could not be issued on consent (Article 7 - Conditions for consent, define when GDPR Art. 6 par. 1 lit. (a) did not apply)
  - Centralized Infrastructure conflicts with GDPR Article 24 & 25
- Conflicts with competition law and procurement law
  - Not vendor neutral
  - Holograms for example exclusive by one provider
- IT-Security
  - QR-codes are not considered secure
  - **NEVER EVER** code an URL into QR-Codes → communicate Trusted verification Apps or Websites → corona vaccination pass verification as best practice
- Sole focus on **students**

→ not a specification that could be implemented by all HEIs

# GDPR Article 6 – Lawfulness of processing

## Article 6 – Lawfulness of processing

1. Processing shall be lawful only if and to the extent that at least one of the following applies:

   (a) the data subject has given consent to the processing of his or her personal data for one or more specific purposes;

   (b) processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract;

   (c) processing is necessary for compliance with a legal obligation to which the controller is subject;

   (d) processing is necessary in order to protect the vital interests of the data subject or of another natural person;

   (e) processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller;

   (f) processing is necessary for the purposes of the legitimate interests pursued by the controller or by a third party, except where such interests are overridden by the interests or fundamental rights and freedoms of the data subject which require protection of personal data, in particular where the data subject is a child.

   Point (f) of the first subparagraph shall not apply to processing carried out by public authorities in the performance of their tasks.

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679#d1e1888-1-1

→ Art. 6 par. 1 lit. a is the strongest?

If someone consent to the processing of their data, everything is allowed?

→ Art. 6 par 1 lit. b-e are the conditions public institutions work based on

# The Problem of GDPR Article 6 par. 1 lit. a

GDPR Art. 6 par. 1 lit. (a) has a few Problems:

- It might be the strongest if consent is given
- But consent is limited by Article 7 – Conditions for consent
- Also Recital 42 sentence 5 GDPR – Burden of Proof and Requirements for Consent

"Consent should not be regarded as freely given if the data subject has no genuine or free choice or is unable to refuse or withdraw consent without detriment."

## Article 7 - Conditions for consent

1. Where processing is based on consent, the controller shall be able to demonstrate that the data subject has consented to processing of his or her personal data.
2. If the data subject's consent is given in the context of a written declaration which also concerns other matters, the request for consent shall be presented in a manner which is clearly distinguishable from the other matters, in an intelligible and easily accessible form, using clear and plain language. Any part of such a declaration which constitutes an infringement of this Regulation shall not be binding.
3. The data subject shall **have the right to withdraw his or her consent at any time**. The withdrawal of consent shall not affect the lawfulness of processing based on consent before its withdrawal. Prior to giving consent, the data subject shall be informed thereof. It shall be as easy to withdraw as to give consent.
4. When assessing whether **consent is freely given**, utmost account shall be taken of whether, inter alia, the performance of a contract, including the provision of a service, is conditional on consent to the processing of personal data that is not necessary for the performance of that contract.

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679#d1e1888-1-1

→ Consent requires a free given choice – the Erasmus Charter eliminates that option

# Result on Article 6

If the proposed Article 6 par. 1 lit. (a) will not work for any European Student Card what are the options:

1. Create a Union Law for Academic ID cards / eIDs
   - Advantage: the same for all member states
   - Mandatory data could be defined, similar to StaffIDs
     (e.g. AGO §35 Dienstausweis)
   - Data processing based on GDPR Article 6 par. 1 lit. (e)
2. Based on the national law and contracts (Erasmus)
   → GDPR Article 6 par. 1 lit. (e), (c), (b), (d) in combination with the law
   - LMUcard example (https://gitlab.lrz.de/LMU-Dez-VI-public/lmucard.terms-of-use/-/blob/master/StudentID-de.md)

     Article 6 par. 1 lit. (e) GDPR in combination with Art. 42 par. 4 sent. 1 BayHSchG for all personal data, as those data are required to fulfill the public duties of the university – identification and verification of student identity

→ ***If possible do not rely on consent***

# GDPR Chapter IV Section 1
# Controller and Processor – general obligations

## Article 24 – Responsibility of the controller

1. Taking into account the nature, scope, context and purposes of processing as well as the risks of varying likelihood and severity for the rights and freedoms of natural persons, the controller shall **implement appropriate technical and organisational measures** to ensure and to be able to demonstrate that processing is performed in accordance with this Regulation. Those measures shall be reviewed and updated where necessary.
2. Where proportionate in relation to processing activities, the measures referred to in paragraph 1 shall include the **implementation of appropriate data protection policies** by the controller.
3. Adherence to approved codes of conduct as referred to in Article 40 or approved certification mechanisms as referred to in Article 42 may be used as an element by which to demonstrate compliance with the obligations of the controller.

## Article 25 – Data protection by design and by default

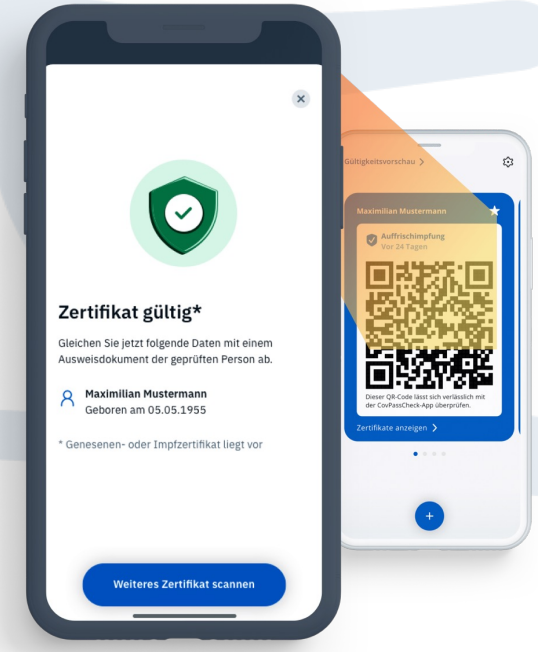
1. Taking into account the **state of the art**, the cost of implementation and the nature, scope, context and **purposes of processing** as well as the **risks** of varying likelihood and severity for rights and freedoms of natural persons posed by the processing, the controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, **implement appropriate technical and organisational measures**, such as pseudonymisation, which are designed to implement data-protection principles, such as **data minimisation**, in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect the rights of data subjects.
2. The controller shall implement appropriate technical and organisational measures for ensuring that, **by default, only personal data which are necessary for each specific purpose of the processing are processed**. That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that **by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons**.
3. An approved certification mechanism pursuant to Article 42 may be used as an element to demonstrate compliance with the requirements set out in paragraphs 1 and 2 of this Article.

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32016R0679#d1e1888-1-1

# QR-Code verification

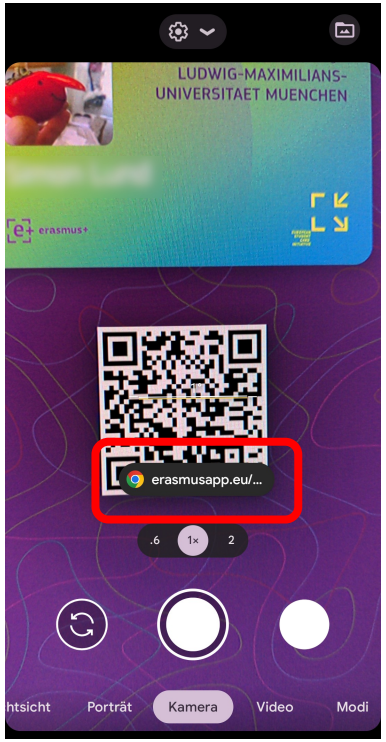
Done right – Example:
European Covid vaccine certificate and check app

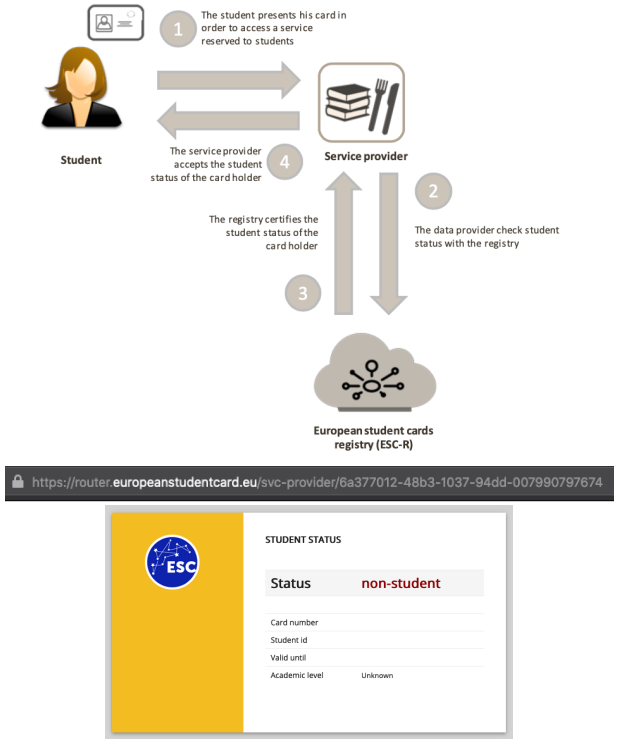
- Offline verification
- Chain of trust
- Data not a URL / executable command




Done wrong – Example:
European Student Card / Erasmus+ App Card

- Pure Online verification + centralized structure
- QR-Code contains a URL / executable command



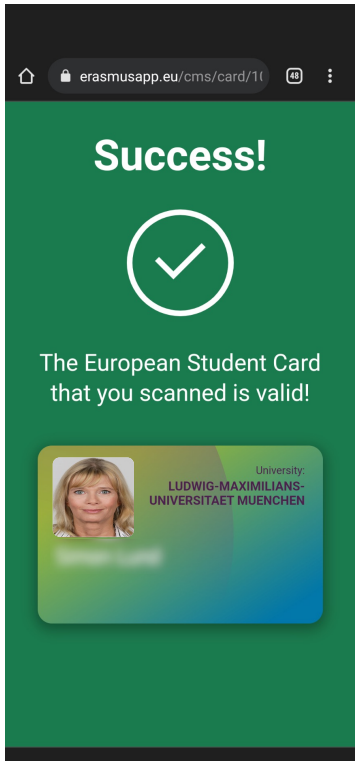
# BUT (existing implementations)

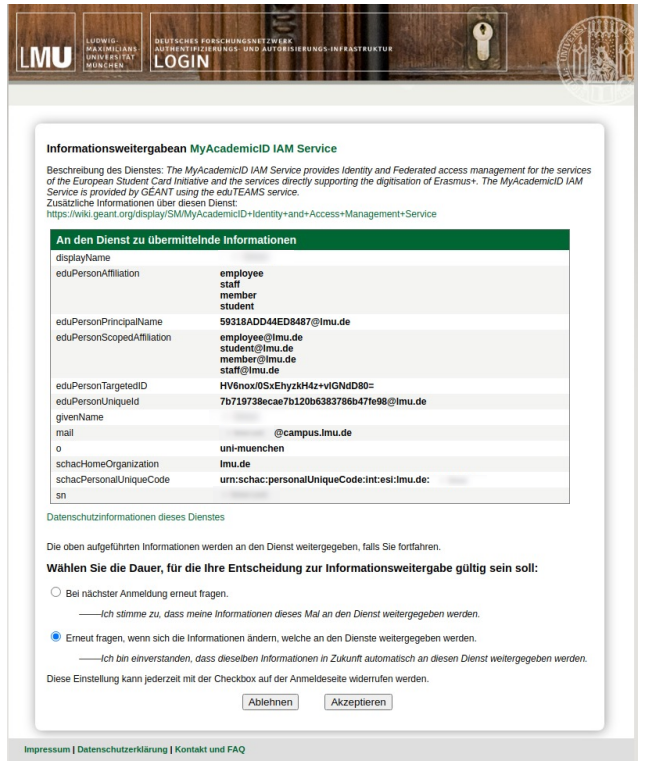
European Student Card Integration within the **Erasmus+ App** (https://erasmusapp.eu/card)

- Very simple for HEI, only the following LDAP-Attributes have to be passed on the IDM:
  - schacHomeOrganization
  - schacPersonalUniqueCode → **ESI**
- Simple for students, no interaction with HEI necessary

## BUT

- It is an absolute NO-GO
- Framework of trust → non-existing
  - Ignores all IT-Security best practices
  - QR-Code is not secure
  - Embedded URL → Phishing like attacks
  - No status verification with the HEI or Student Data
  - No security against screenshot sharing
- Issues for HEIs
  - No Branding of the HEI
  - Information propagation
  - No person or image verification
  - Issuing of virtual ID cards on behalf of the HEI without their consent


**This Implementation should be revised!**

# BUT

- Compliance problems make it hard to implement / procure necessary elements
- IT-Security issues that harm users and institution and damage the framework of trust
- Not as easy as stated
- Sole focus on students
- *Interoperability promises could not be fulfilled*
- Cost benefit relation not positive
- *no real benefits provided* without interoperability


→ Only the **hologram** is considered to be added

→ No trust in ESC-router and verification solution (GDPR, IT-Security problems)

→ Most HEIs (even ESC / ESC-Tension project partners) **refuse to apply** a QR-code and submit the data to ESC-router

→ DEUinfo App only on NXP Mifare DESFire cards feasible (smartcards often to expensive)

→ *the current ESC specification is a death solution*

# Success factors
# for an interoperable solution

*Understand what's make a solution interoperable*

*What are the problems*

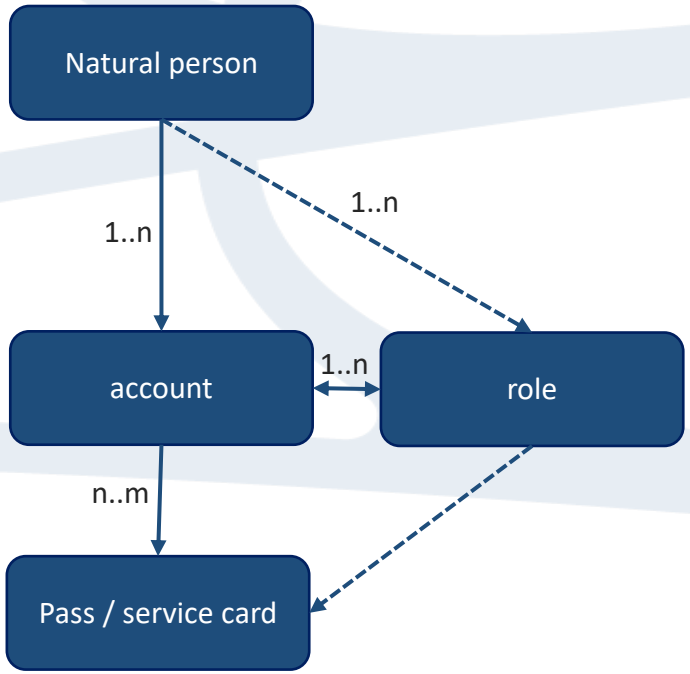
# Success factors – understand the critical points

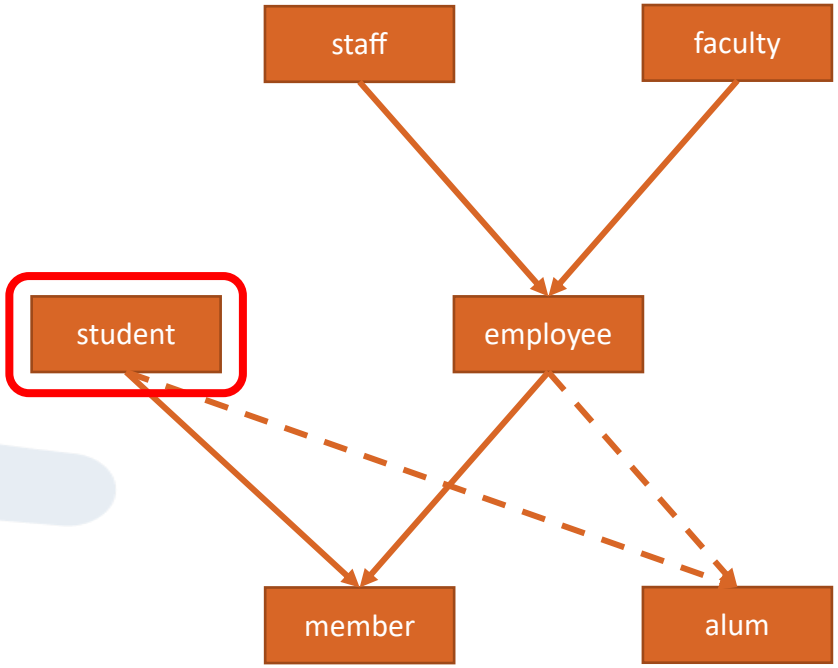
- Stakeholder
  - Users
  - Higher Education Institutions
  - Service Providers (*on and off campus + online*)
- Provided Services
  - Requirements for service provision
  - Requirements for identity or entitlement verification
  - Security Requirements
- Involved Technology and Providers

**→ Communication**

# Success factor – Stakeholder → User Scope

- Why focus on students and ISCED:2011 Level 6-8
- Providing services while on short-term mobility is the key
- Staff / faculty members are more likely on short-term mobility
  → leading by example




affiliate

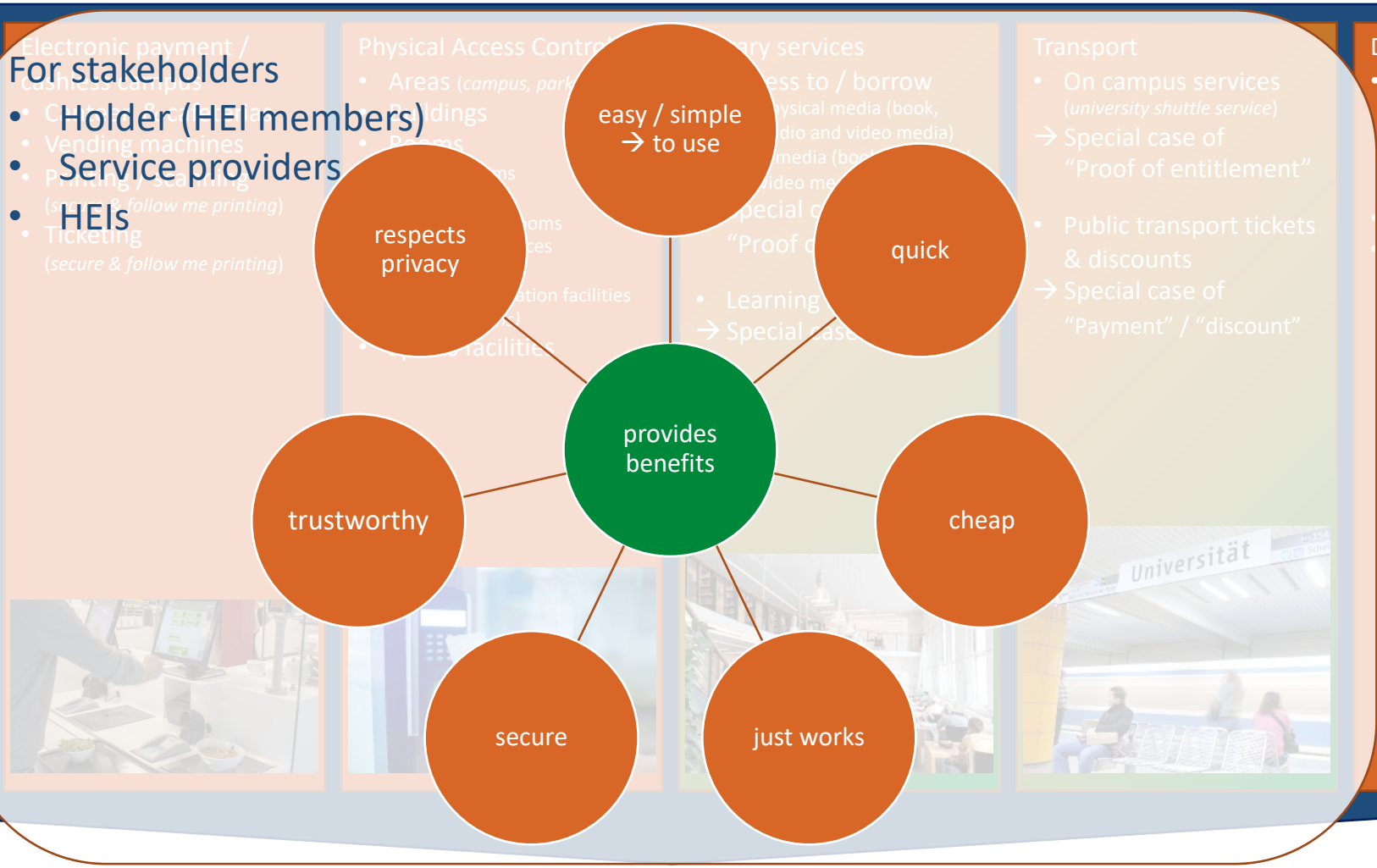
## ISCED:2011 Level

| Level | Label |
|---|---|
| 0 | Early childhood education |
| 1 | Primary education |
| 2 | Lower secondary education |
| 3 | Upper secondary education |
| 4 | Post-secondary non-tertiary education |
| 5 | Short-cycle tertiary education |
| 6 | Bachelor's or equivalent |
| 7 | Master's or equivalent |
| 8 | Doctorate or equivalent |
| x | Faculty or Staff member of HEI |

# Success factor – 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*)

For stakeholders
- Holder (HEI members)
- Service providers
- HEIs




Transport
- On campus services (*university shuttle service*)

→ Special case of "Proof of entitlement"

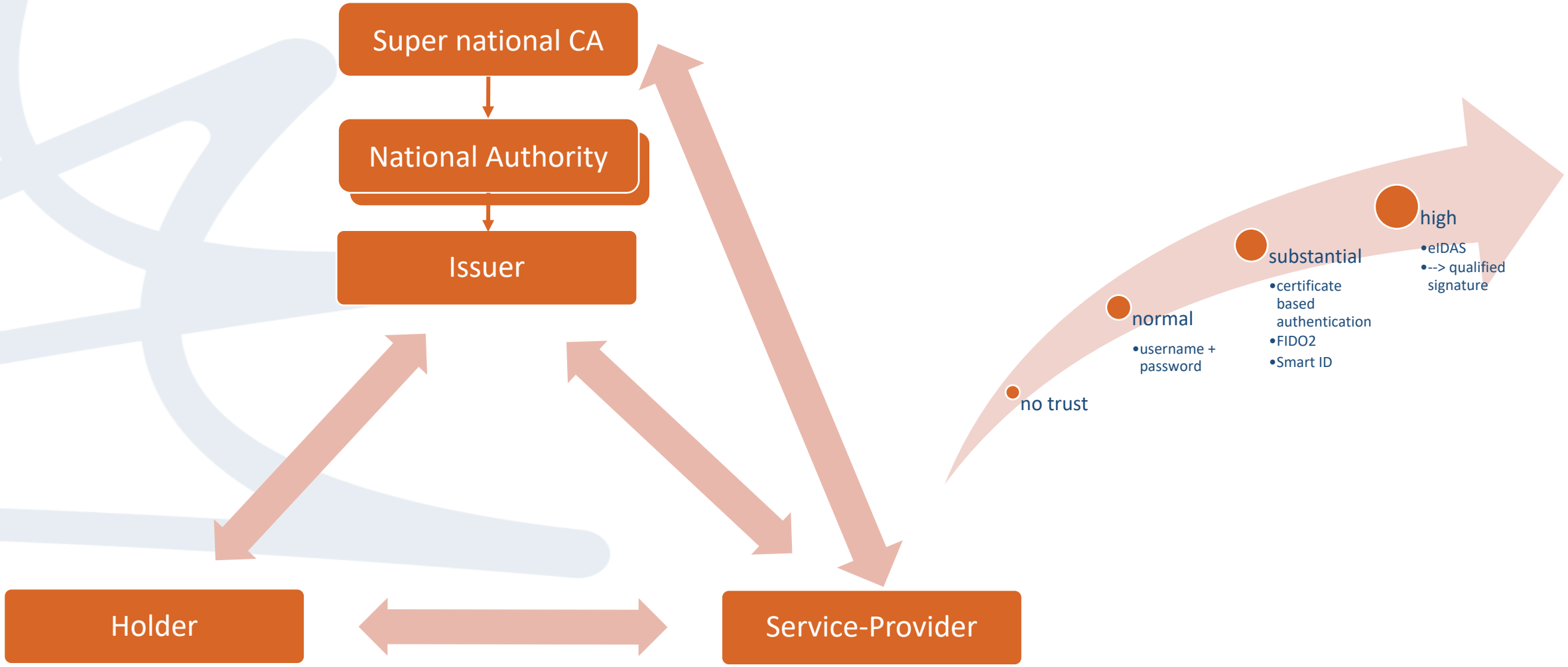
- Public transport tickets & discounts

→ Special case of "Payment" / "discount"

Discount and promotions
- Discounts on cultural activities
  - Museums
  - theaters
  - cinemas
- Shops
- Restaurants

providing service → create benefits

# Chain of Trust & Trust level



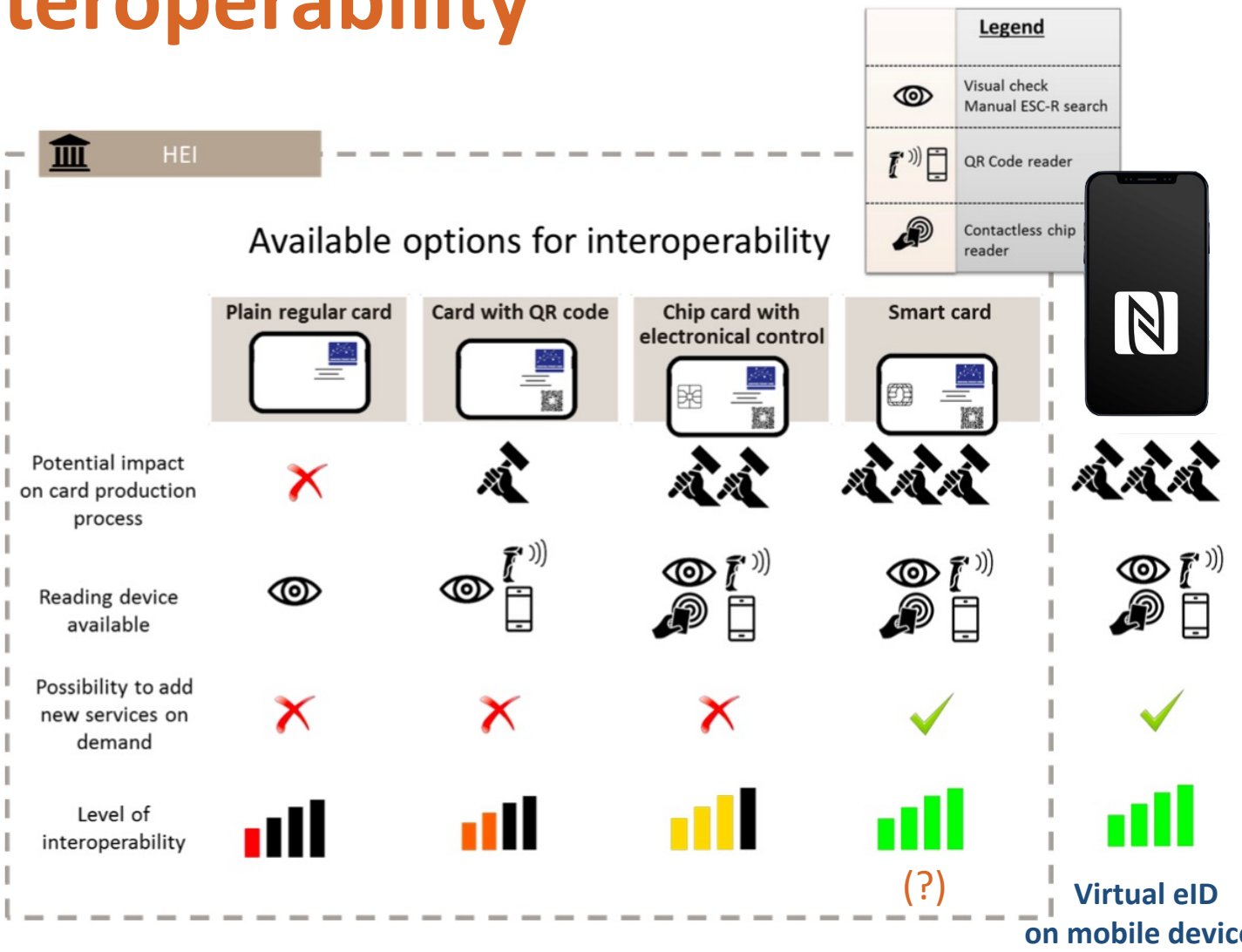
# Available option for interoperability on medium side

Possible technological implementations:

1. Plain Card with Hologram
2. Plain Card with Hologram + QR-Code
3. Chip card (with Hologram + QR-Code)
    1. Chip card technology neutral
    2. NXP Mifare DESFire chip card with App
    3. Multi-technology chip card with App
4. Smart card (with Hologram + QR-Code + App)
5. Virtual eID (Smartphone) ✓

→ Costs are an essential point for decisions

→ Smartphones are cheap for HEIs



# ID Card – recognition modes

## How to verify a European Student Card

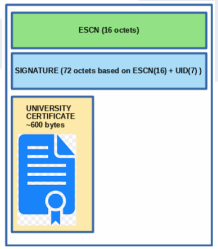
1. Human visual recognition

2. Automatic optical recognition and verification

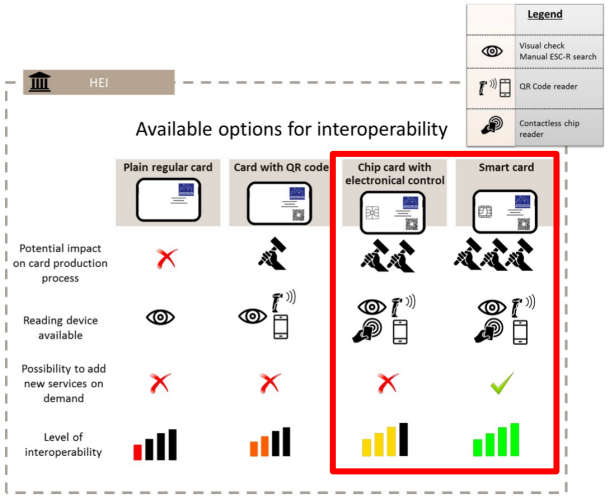
   QR code on card → 2D optical reader

3. Automatic contactless electronic recognition and verification (read data from chip / DEUinfo data container)

   DEUinfo data container on chip  contactless reader



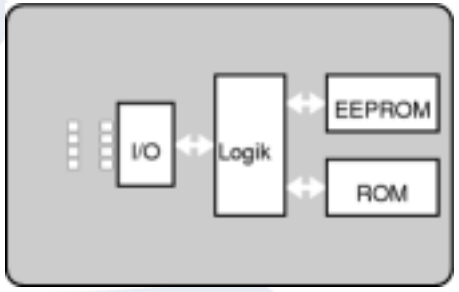




# Interoperability on card side?

Chip cards → bind to one certain technology

- NXP Mifare DESFire
- Legic Advant
- HID iClass
- …

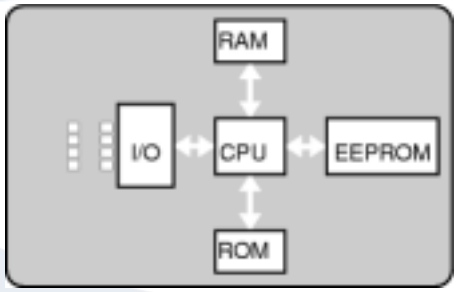


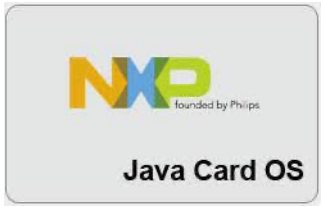




Smartcards → expensive

- JCOP




→ Plastic cards are not the solution

✓ Sustainability
✓ Interoperability

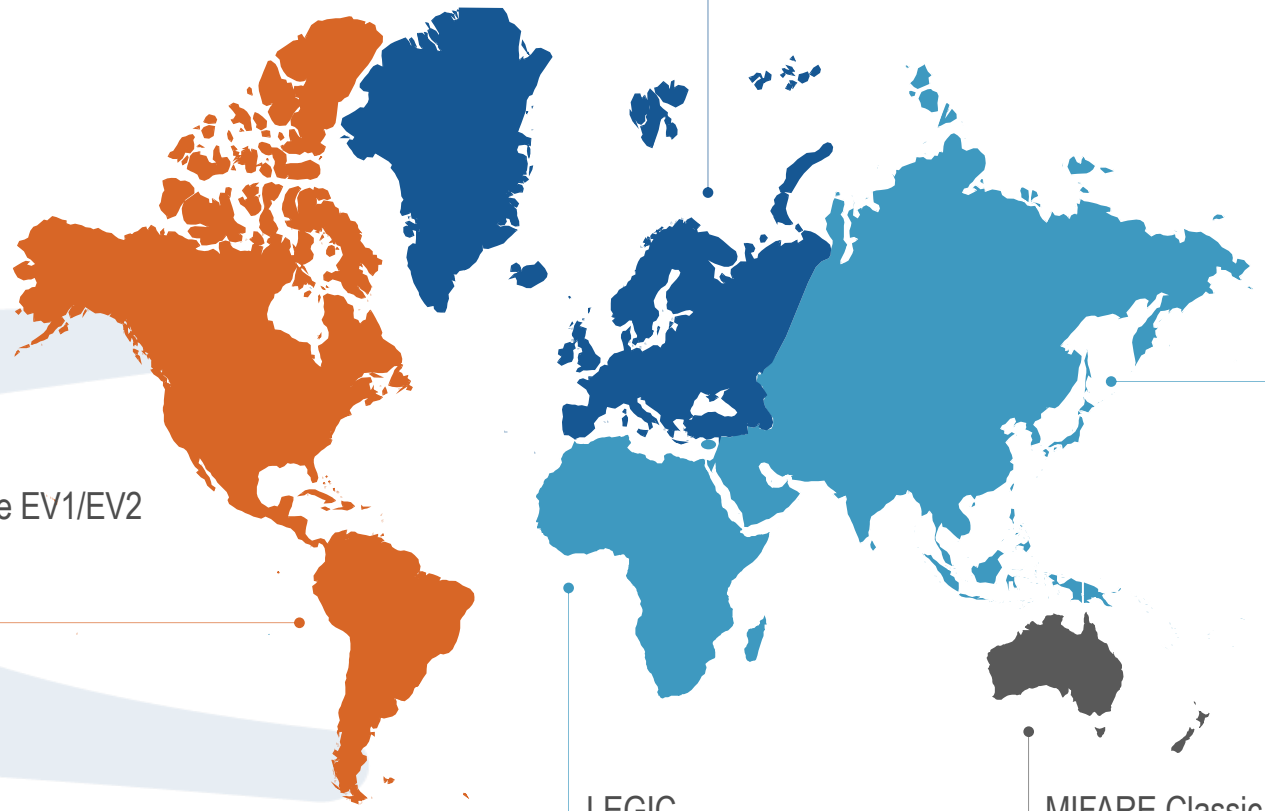
} Responsibility

# Interoperability on card side?

## Different standards of transponder technologies – “standards” – not compatible with each other

MIFARE Classic
MIFARE DESFire EV1/EV2
HID iCLASS
HID Prox
Indala
ioProx
AWID
Keri
CASI-RUSCO

MIFARE Classic
MIFARE DESFire EV1/EV2
HID Prox
EM4102



MIFARE Classic
MIFARE DESFire EV1/EV2
LEGIC
Calypso
Moneo
Oyster
HID Prox
EM4102

LEGIC
MIFARE Classic
MIFARE DESFire EV1/EV2
SONY Felica
TIRIS
CEPAS
Octopus
EM4102

LEGIC
MIFARE Classic
MIFARE DESFire EV1/EV2
EM4102

MIFARE Classic
MIFARE DESFire EV1/EV2
HITAG
HID Prox

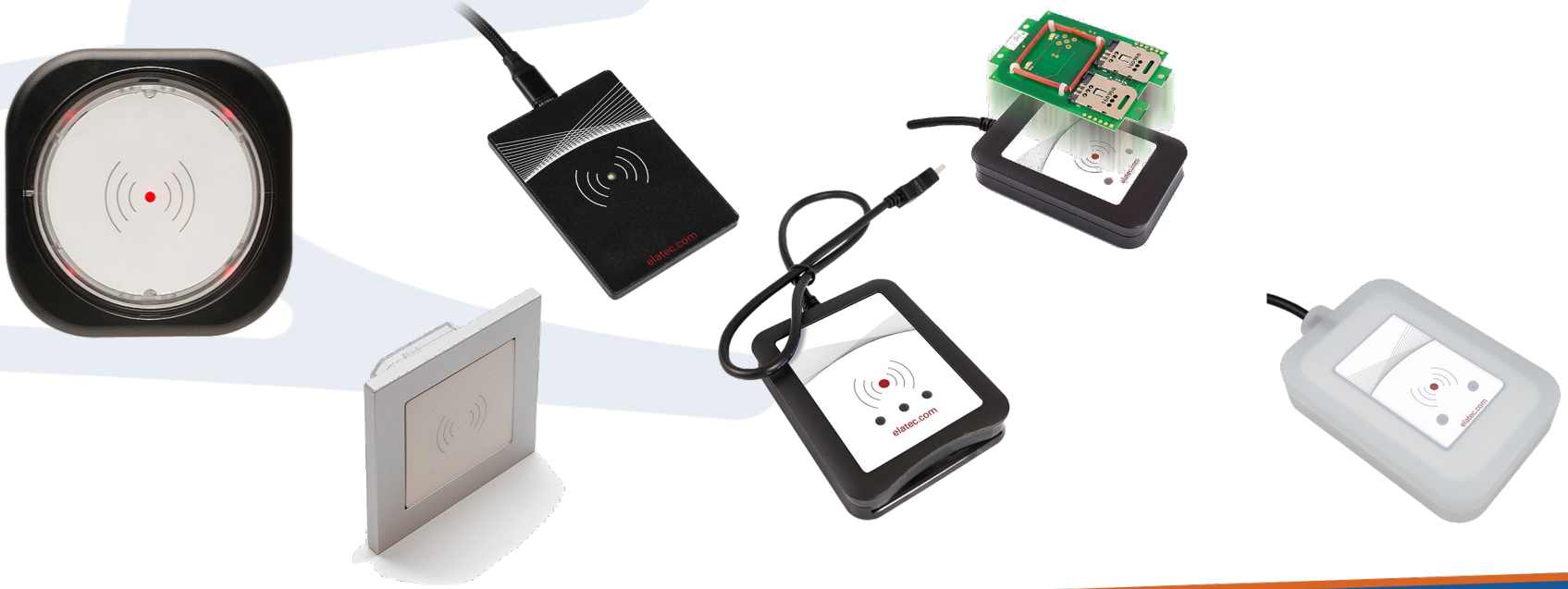
ISO 14443A
ISO 14443B
ISO 15693
ISO 18000
ISO 18092

ECM-340
ECMA-352
ISO 11784
ISO 11785
NFC Tag Types 1-5

# Interoperability happens on the reader side

- Almost all readers in the market could read more than one standard (*maybe a firmware upgrade necessary*)
- QR-Codes are not considered a secure identification element
- NXP Mifare DESFire is currently the base line for being read everywhere
  → **Core Application / Card** is Mifare DESFire
  all other services could use their preferred technology

→ classic migration approach



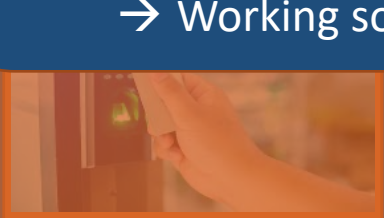

# Services

**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*)

eIDAS

**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



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

→ Special case of

**Transport**
- On campus services (*university shuttle service*)

→ Special case of "Proof of entitlement"

**Discount and promotions**
- Discounts on cultural activities
  - Museums
  - theaters
  - cinemas
- Shops
- Restaurants

**Legacy problem**

**Legacy systems**
- Legacy identifiers
- Technical limitations
- Specific solutions

→ Working solutions by solutions providers

providing service → create benefits

# Working Group Partners

## Technology Partners

## Service Providers Partners

Studentenwerk München

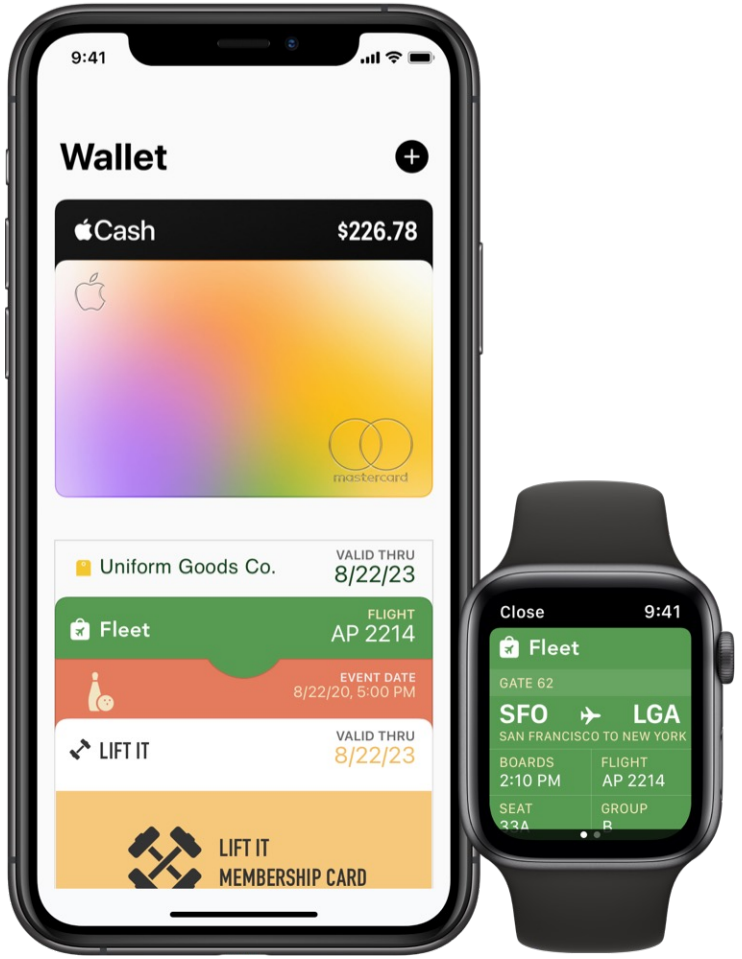
Bayerische StaatsBibliothek
Information in erster Linie

## Solution Providers Partners

# Success factors – Users Expectations

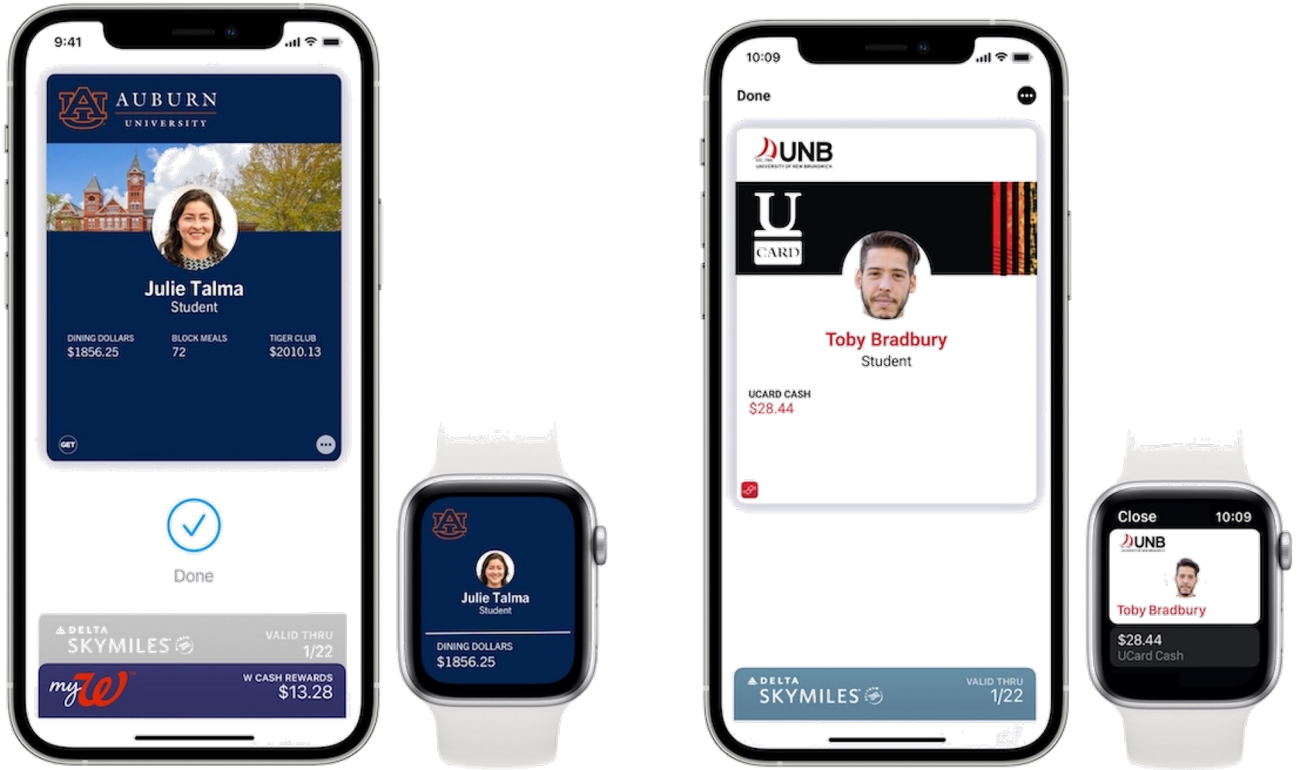
- Don’t stick to old technology if your user expects something modern
- Integration and Interoperability
- **Smartphone** is the essential working tool for younger generations
- Higher Education Institutions should provide credentials in modern ways
- **Student IDs / Campus IDs should be recognized and accepted anywhere**

- ✓ Be compliant
- ✓ Be Secure → implement IT-Security best practices
- ✓ Respect privacy
- ✓ Respect self sovereignty and decisions of users

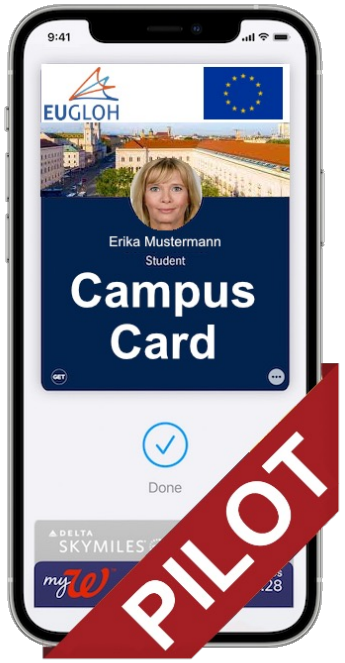


# Success factors – Enhanced Benchmark

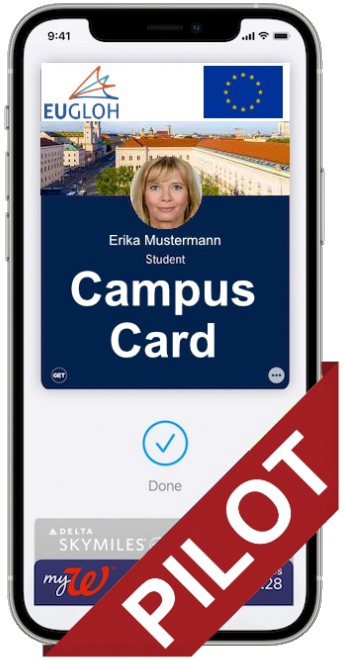
- ✓ **Sustainable & Interoperable Virtual eID on Mobile Devices in Europe**
- ✓ **Fulfil User Expectations**

# EUGLOH Digitized Campus Card Pilot – A digitized European Campus Card for interoperable Services



# The Future of ID & service cards – Wallet passes

# 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*)

A common ID pass for all HEIs

eIDAS

**Electronic payment / cashless campus**
- Canteen & cafeterias
- Vending machines
- Printing / scanning (*secure & follow me printing*)
- Ticketing (*secure & follow me printing*)

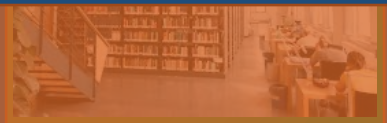
**Physical Access Control**
- Areas (*campus, parking lot*)
- Buildings
- Rooms
  - Classrooms
  - Labs
  - Computer rooms
  - Learning spaces
  - Offices
  - Accommodation facilities (*i.e., dorms*)
- Sports facilities

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

→ Special case of "Proof of entitlement"

- Learning spaces

→ Special case of "PAC"



**Transport**
- On campus services (*university shuttle service*)

→ Special case of "Proof of entitlement"

- Public transport tickets & discounts

→ Special case of "Payment" / "discount"

**Discount and promotions**
- Discounts on cultural activities
  - Museums
  - theaters
  - cinemas
- Shops
- Restaurants

Working solutions by solutions providers

→ Separate service pass (can chose technology)

providing service → create benefits

# The Future of ID & service cards – Wallet passes

- ✓ Sustainable & Interoperable Virtual eID on Mobile Devices in Europe
- ✓ Online & Offline verification of data, and load additional core data from issuer
- ✓ Link data and applications



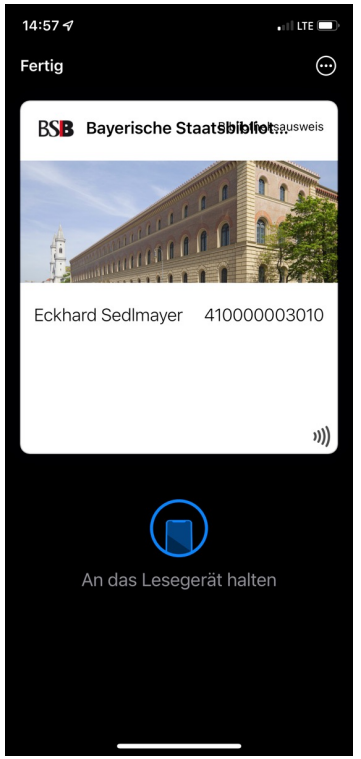
Apple Wallet / Google Wallet

# The future of passes in HEI context

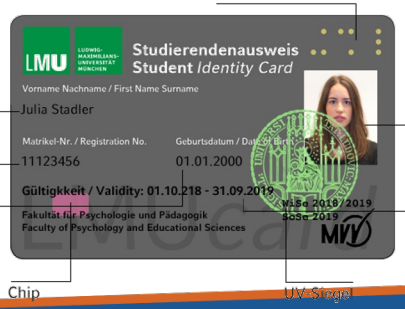
**LMU / EUGLOH working on a cross-university pilot for wallet passes**

- **Prototype** for a better solution to the ESCI vision→ **concept phase**
- Not yet completed, but **first examples available**
  - Library cards for university library and Bavarian State Library as **Wallet Pass in iOS und Android**
- It is a migration to a new solution
  - Continuation of cooperation with service providers
  - Existing infrastructure and solutions will be considered
  - Most readers just need a firmware upgrade
  - Passes on plastic cards as fallback
- ONE **core pass** (European Campus Card / eduCampusCard) +
  + any number of service cards (one pass per legacy service)
  or apps of the service provider

**goal:** **staring 2023** issue ID passes in wallets for LMU members (students and staff)
→ Core ID card + cards for services:
  - Studentenwerk → payment
  - Library






# The future of passes in HEI context

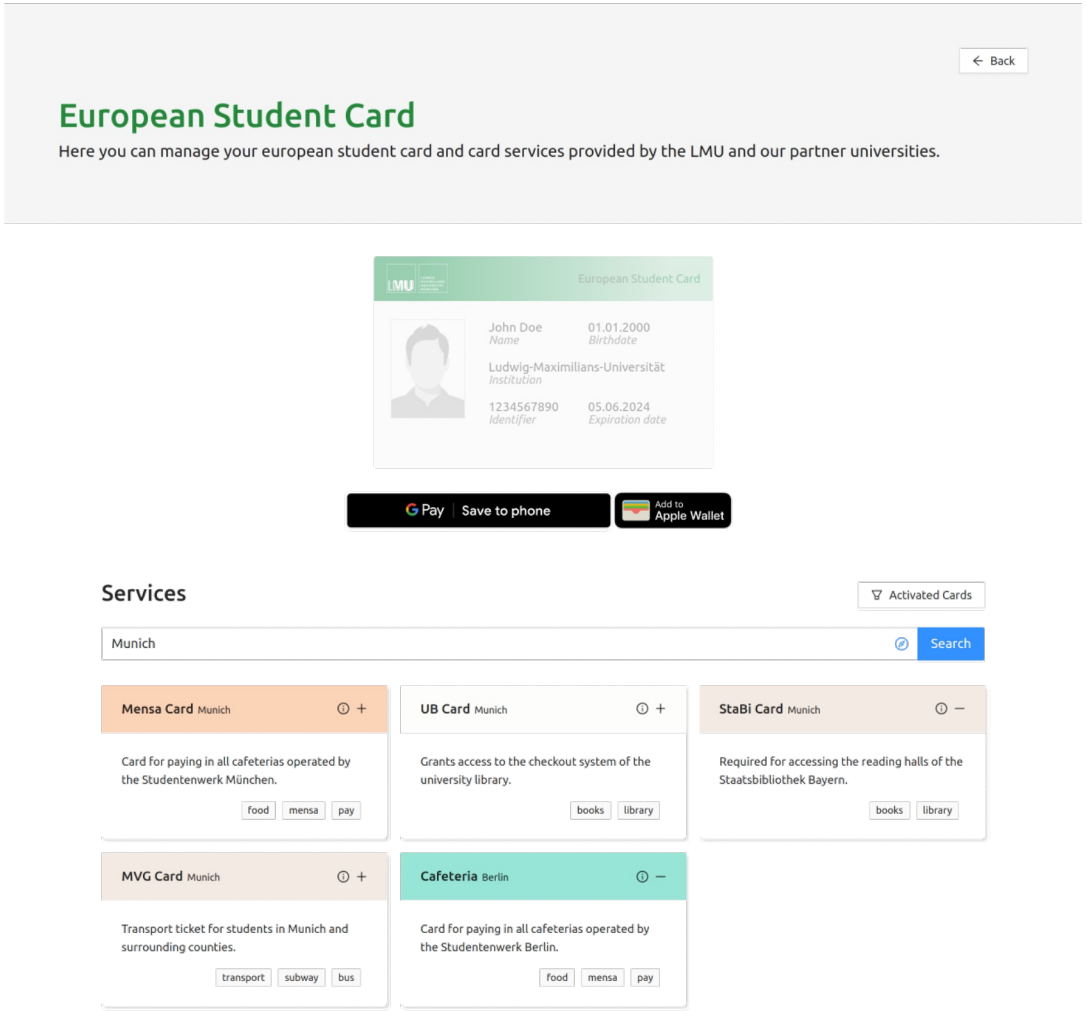
Each HEI will have a ***„European Campus Card Portal“***

## For the user:

- Request / download European Campus Card
- Users can search for and book / download additional services
- Service listing with further information (including search)
  - Which university / which university location (e.g., Munich), category
  - What personal data is required → Privacy information
  - The user himself decides which services he would like to use and for this purpose, passes on his data → Self Sovereignty Identity (SSI)
- Listing of all linked services with the possibility of blocking / deleting them, and calling the account / information pages of the service provider.

## For the Service-Provider:

- Centralized service provider directory
- Data is transferred via identity linking trough eduGAIN infrastructure
- Own passes or apps are made available via own website



# Questions

# Discussion

# Next Steps
# & Closure of the Meeting

# We’d love to hear from you!

## Get in touch:

EUGLOH Work Package 5 – Campus Life

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