

# Student elD Framework

Workshop Package 2: Activity 2.2: Workshop Report Report Date: June 2021



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**Executive Director** 

#### **DISCLAIMER**

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### 1. Introduction

#### 1.1. Project Overview

The European Campus Card Association is progressing with a 'Consultation Process on the Development of a Proposal for a Trusted Student Identification Framework' (Student eID Project). The aim of this process is to support the provision of secure identification and authentication of students on a cross-border basis in Europe. An essential element in this consultation process is to engage in knowledge sharing with the stakeholders and other groups through workshops. The aim of the workshops is to obtain feedback from the stakeholders on the future needs and requirements of a trusted eID credential. The workshop was attended by Higher Education Institutions (HEIs), Service Providers, Students, State Entities, Agencies and Research Centre's.

#### 1.2 Workshop Objectives

- (i) Engage in a process of dialogue with the relevant stakeholders to seek out their views and opinions on the needs and requirements of a trusted Student eID Credential (eIDAS compliant) that supports cross-border services.
- (ii) Identify the barriers that excludes stakeholders from enjoying the full benefits of a trusted eID that will facilitate cross-border provision of student services (academic and non-academic) and enable access to these services using their mutually recognised national student eID.
- (iii) Establish recommendations for the development of a proposal for a trusted student eID framework that will support the provision of secure identification and authentication on a cross-border basis in Europe.

# 2. Online Workshop

ECCA was to host its annual conference in Berlin, Germany in May 2020 (Event No. 8). However, due to the covid-19 restrictions this event was deferred to May 2021 in Porto, Portugal. Due to the ongoing pandemic crisis at that time, the event was again cancelled and an online workshop was therefore planned. The main aim of the event is to obtain feedback from the stakeholders on the future needs and requirements of a trusted eID credential. This online event was attended by 63 participants from a number of countries across Europe, USA and Canada.

# 2.1 Agenda

	AGENDA	
WELCOME & INTRODUCTION		
14.30	Rene de Koster (President) & Sinead Nealon (Executive Director) European Campus Card Association (Moderators)	
KEYNOTE SESSION		
14.35	'Innovate with a Purpose: The ID they want, when they want it' By Jeff Staples, Consultant specialising in security, payments and identification	
SESSION 1: eID OF THE FUTURE, RESEARCH PROJECTS & ADVANCES IN ONLINE LEARNING		
14.50	'From the ESC to the ESC-tension project: how the ESC is an e-Id and why it is essential for students to accelerate its adoption throughout Europe' By Andrea Baldin, ENDISU, and Silvia Faloretti, EDUCatt and Fondazione ENDISU	
15.05	'The use of Electronic Signatures in Higher Education' By Jacek Blahut, OPTeam	
15.20	'Learn Anywhere' By Oscar van der Linden, EPSON Europe B.V	
15.35	'From EWP to EDSSI – current developments' By João Bacelar, European University Foundation	
15.50	Break	
SESSION 2: MIGRATING TO MOBILE & VIRTUAL ID		
16.00	'The convergence of physical and mobile credentials on a university campus' By Martin Hoff, Entrust Corporation	
16.20	'Becoming a Mobile Campus' By Jeanine Brooks, University of Alabama	
SESSION 3: TECHNOLOGY INNOVATION & TRENDS		
16.40	'The Future of Access Control' By Iñaki Barettini, Infineon Technologies AG	
17.00	'Level Up Your Card Issuance Process' By David O'Driscoll, HID Global	
17.20	GENERAL DISCUSSION & CLOSING SESSION	

#### 2.2.1 Overview of Presentations

The workshop was divided into three sessions and a keynote session. Session 1 which focused on the eID of the Future, Research Projects & Advances in Online Learning included four presentations. The next session, Session 2 focused on Migrating to Mobile & Virtual ID and included two presentations. The third session, Session 3, addressed technology innovation and trends with two presentations.

#### 2.2.2 Keynote Session - 'Innovate with a Purpose: The ID they want, when they want it'

Presented by Mr. Jeff Staples, (Consultant)

The keynote address opened with the question, are we ready? Informing the goals is important, which includes university needs, student needs, avoiding the vendor myth trap and also preparing for contingencies. It was outlined that as a starting line, we need to look at the legacy credential toolset, which is good, but wanting to be great. These toolsets include barcode, magstripe, biometric and contactless. However, it was stated, we need to look at the opportunity and take advantage of the devices and habits that serve the greatest number of students, staff, and faculty. This is where we need to look at the options for Mobile, which include mobile badge-only, mobile badge with barcode, BLE mobile credential, and NFC mobile credential. BLE versus NFC was reviewed in terms of the advantages and challenges of each. It further stated NFC is however checking all the boxes in terms of security, speed, works online and offline, support for iPhone, Apple watch, and Google pay devices, works with depleted battery on enables devices, 24/7/365 over the air issuance, and remote lifecycle management. In terms of adoption of NFC mobile credential, it was stated it is growing steadily in North American universities and a recent survey by the National Association of Campus Card Users (NACCU), revealed 71% of campuses in North America either have mobile credentials or plan to deploy these in the next 5 years. In summary, research shows this is what students want. In terms of pursuing a path to success it was recommended to leverage the solution provider marketplace for insight, support and commitment, and also formulate and leverage a campus-wide unified strategy. In conclusion, the keynote stated you need to elevate the conversation, raise the bar with internal and external stakeholders, to exceed constituent expectations.

#### 2.2.3 Session 1: eID of the Future, Research Projects & Advances in Online Learning

#### 2.2.3.1 'ESC-tension – EU Student Card Extension and Adoption'

Presented by Mr. Andrea Baldin, Fondazione ENDISU & Ms. Silvia Faloretti Educatt, Italy.

This session focused on the EU Student Card extension and adoption project, which commenced in October 2020 for 24 months. The following was discussed:

- A background to the European Education Area by 2025 high quality education, no barriers to learning and training abroad, automatic mutual recognition, speaking two languages to be the norm, and strong sense of a European student identity.
- European Student Card (ESC) initiative background digitalising & standardising student mobility administration and rolling out the ESC & enabling online authentication of students' identity across Europe.
- Important timescales were outlined by 2021 inter-institutional agreements and online learning, by 2022 nominations, by 2023 transcript of records, by 2025 the goal is to have the ESC available to all EU students in Europe.
- ESC roll-out is increasing but is still slow due to operational, implementation and administrative challenges.
- Objective of ESC-tension project is to promote the services which represent the driver for
  the adoption of the ESC, which are digital services (mainly in relation to adoption) and
  physical services. This is the main reason behind the ESC-tension which will develop a
  multidimensional matrix connecting cards with services.
- The ESC is a set of technical and visual standards that once applied to existing Campus
  Cards make them interoperable throughout the network of European HEIs that already
  opted in, so they can use them as a trusted means of identification of the card holder as
  students.
- ESC is the first level of implementation of an eID and can be seen as an ideal complement to more robust existing systems such as eduGAIN and eIDAS who offer greater levels of assurance, but also greater costs of implementation.
- In order to accept the ESC, the Service Provider needs to harmonize his service management system to the ESC standards:
- A profiling tool will also be developed and aimed at supporting HEIs and SSPs to clearly
  identify all the aspects that need to be addressed to adopt the card. The matrix covers
  everything related to the card, but also the services, both from an organisational point of
  view, and a technical point of view.

- ESC-Tension outputs will be delivered through a localised platform, starting with four different countries represented in the consortium, and built to be easily replicated in other countries.
- This will be achieved by implementing an ESC-tension multilingual online platform, multidimensional matrix, card issuance and adoption toolbox, ESC compliant student services roadmap and then validating these tools.

#### 2.2.3.2 'The use of electronic signatures in Higher Education'

Presented by Mr. Jacek Blahut, OPTeam, Poland.

This presentation was in relation to the use of electronic signatures in HEIs and in particular the CEF funded project 'esignforstudy', which commenced in April 2021 for 18 months.

The goal of the esign4study Project is to design and develop a system for Higher Education Institutions that will enable the use of electronic signatures and electronic seals in line with eIDAS Regulation and standards (signature/seal creation and/or validation). Initially it will focus on enhancing document handling in Polish HEIs and on secure cross-border exchanges, but eventually it will be made available for use in small medium-sized enterprises.

Specifically, this highly configurable esignature solution will be deployed in Polish Higher Education sector and validated in the cross-border exchange of documents using a European-wide platform for the secure transfer of student data between HEIs (Erasmus Without Paper platform and EMREX Network).

The eSign4Study will be based on the eSignature DSI Building Block's DSS open-source library (incorporating the library's code). It will resemble a black box concept, with optional/interchangeable components and open interfaces to enable interoperability. It will support an easy way of handling and interacting with the components of a PKI, considering systems with certificates stored in local secure repositories (HSM), its software equivalent, or encrypted databases. If qualified signatures are required and cannot be downloaded to the local infrastructure, they can be stored in a remote cloud managed by the Qualified Certified Authority. It will allow for using trusted timestamp services delivered by certified providers.

For testing and validation, the University of Warsaw and Czech Technical University will integrate the eSignForStudy with their Student Information Systems, connected to the Erasmus Without Paper (EWP) platform and EMREX Network. Both platforms allow for secure transfer of student data. The new tool will allow the signing and validation of documents, thus providing a missing key security component. The integrated solution will be deployed in over 70 HEIs in Poland using the same SIS.

#### 2.2.3.3 'Learn Anywhere'

Presented by Oscar Van der Linden, Epson, Europe B.V.

This presentation was in relation to a new product launched by Epson, called 'Learn Anywhere'. The product was designed based on new circumstances and challenges facing educational institutions. As students are not always physically present, Learn Anywhere is an innovative total solution, allowing teachers to continue teaching in a traditional way and allowing students to attend classes anytime, anywhere. Learn Anywhere supports familiar teaching methods and is immediately ready for use when the teacher enters the classroom. The smart combination of proven technologies ensures a natural interaction between people, locations and information flows.

Learn Anywhere combines a large analog writing surface with an interactive projection surface for an effortless transition between the digital and analogue domain. The teacher can make analogue notes on the whiteboard to illustrate the material and use the same whiteboard to present digitally in large format (up to 100 inches). To make remote teaching as natural as possible, Learn Anywhere uses two different cameras: an overview camera in the classroom aimed at the teacher and a content camera aimed at the whiteboard.

The Logitech TAP solution works with Extron Control Systems, which makes it easy for the teacher to control how and when the projectors are used and which information flows are shared with the students at home. No specialized knowledge or training is required for this.

The Learn Anywhere platform uses Microsoft Teams. This service is part of Microsoft 365 and is already used by a large proportion of educational institutions and students, which will ensure rapid adoption.

The solution is an upgrade from the traditional classroom to the hybrid classroom, allowing teaching to continue under all circumstances, even during emergencies or pandemics. Whether students attend class from home, in the classroom or both, with Learn Anywhere classes can always continue while supporting the existing workflows of teachers and students.

#### 2.2.3.4 'From EWP to EDSSI'

Presented by Mr. João Bacelar, European University Foundation

The presenter gave a background to the European Student Card initiative which is in line with the vision of the European Education Area by 2025. The European Student Card initiative will develop an online one-stop-shop through the Erasmus+ Mobile App for students to manage all administrative steps related to their mobility – before, during and after their stay. It will allow

students to find all the information they need to experience a high quality mobility experience abroad. The goal is to have full deployment of the initiative during 2021. By this time, HEIs participating in the future Erasmus+ programme will be expected to use the Erasmus Without paper (EWP) network to exchange student mobility data. The use of the EWP network will become obligatory according to the below milestones;

- 2021 to manage online learning agreement
- 2022 to manage inter-institutional agreements
- 2023 to exchange student nominations and acceptances and transcripts of records related to student mobility
- 2025 all students in Europe should be able to enjoy the benefits of the European Student Card initiative

An overview of the European Digital Student Service Infrastructure (EDSSI) project and its partners was also outlined. The EDSSI project will develop a system which will allow HEIs to exchange and authenticate student data in a seamless and secure way. This initiative is the future of student mobility infrastructure, which will provide a single point of entry to all academic and non-academic services across Europe. It will provide a simplified administration, faster processes and better mobility experiences.

The milestones for Q1 of 2021 were outlined as now completed, and included the Erasmus+ App launch, MyAcademicID Proxy (Security and privacy audit), and a new semester mobility template at OLA/Dashboard.

The project commenced in 2020 and will be for a duration of 2 years.

#### 2.2.4 Session 2: Migrating to Mobile & Virtual ID

#### 2.2.4.1 'The convergence of physical and mobile credentials on a university campus'

Presented by Mr. Martin Hoff, Entrust Corporation

This presentation focused on converging campus identities from physical to digital. The question was posed as to how big will the global digital identity solutions market size reach by 2025? It was outlined that expectations are rapidly evolving which include; choosing simple, self-serve experiences; access to services instantly on mobile; digital IDs/credentials are becoming the expectation; contactless (social distancing is impacting behaviour); businesses prioritising higher value transactions; seamless security crossing borders and accessing facilities. Digital credentials are powering new generation of services and customer experiences through mobile identity verification (establish trust), physical and digital issuance (issue

credentials), and trusted mobile credentials (enabling new digital services). The importance of a trusted infrastructure is necessary as you need to establish trusted identity (know your student), issue the student credential (through trusted education credentials) and provide interoperable validation to enable your student wherever they are. Some of the key challenges were identified as a result of covid-19 with students/employees returning to campus. It was therefore stated the importance of requiring a solution that enables enrollment & issuance from any device, any location, at any-time. The solution is to enable remote enrollment and issuance. The benefits include a scalable solution, contactless and flexible. Self-Registration for Touchless Self Certification was provided as an example of a solution that can address the challenges of bringing students back safely. And the answer to the opening question is \$33 billion, which clearly demonstrates the rapid growth in digital identity is happening.

#### 2.2.4.2 'Becoming a Mobile Campus'

Presented by Ms. Jeanine Brooks, University of Alabama, USA.

The next presentation was a case study from the University of Alabama (UA) who were one of the first campuses to go mobile. The project drivers in 2017 included; meeting student technology and security expectations; meet industry standards for secure transaction; retain a campus wide credential standard; protect the campus-wide ID#; and environmental. The NFC infrastructure implemented included American national standards institute (ANSI) for the issuing of the 8-digit identification number, NFC chip technology using Mifare Desfire EV1, and encryption standard (transact encryption key and single encryption credential). When it was launched the results were very positive. The presenter outlined the many mobile card benefits for both the cardholder and the institution. In May 2020 the goals of the Action Card Office at UA included;

- Mobile First credential issuance
  - Self service process for cardholder
  - Contactless transaction experience
  - Limits contact for customers and employees
- Mobile credential downloads prior to summer/fall terms
  - Promotes community
  - Ensures access to critical card services on Day 1 (Access control, dining, etc.)
- Physical card option for cardholders without eligible smart devices
  - By appointment
  - Social distancing practices

The current available card tools include ACT card in Apple Wallet, ACT Card Website/videos, Equipment upgrades, Online photo submit and ID validation, ACT Card in Google pay. It was outlined the importance of having an implementation strategy which should include your

project proposal, proof of concept, funding, along with identifying key campus partners, vendor solutions, merchant programs and online services solutions. The project was launched in 2017 and during that time many lessons were learned from both a project and cardholder perspective which the presenter shared. In summary it has been an extremely positive move for the university and this is seen in the increase in ACT card mobile credential provisions since 2018 to date.

#### 2.2.5 Session 3: Technology Innovation & Trends

#### 2.2.5.1 'The future of access control'

Presented by Mr. Iñaki Barettini, Infineon Technologies AG

The presentation focused on the following key topics;

- The Access Market Today
  - An overview of the market is that it is a niche market, which is resilient to economic
    downturns, has seen a steady growth yoy, perceived as commodity for end user,
    and is eager for innovative solutions as differentiator.
  - In terms of the trends it has traditionally been card orientated with new forms including mobile/wearables. The NFC depends on the regions.
  - There are 5 major players world-wide which include ASSA-Abloy (HID),
     Allegion, dormakaba, Johnson controls and Salto Systems.
  - Physical Access & ID Use cases include residential, events, education, card access, corporate, industry, hospitality & leisure, healthcare. Form factors and system features vary depending on; Security requirements; Aesthetic design & Architectonic needs; and Use cases & Regions.

#### Trends in the Access Industry

- Market Trends Technology & Innovations. Main drivers include Access Control
  as a Service (ACaaS), Mobile access, Standalone components 'smart locks', NFC
  vs BLE vs UWB, Standardisation, Eco & Green, Biometrics after covid-19 (touch
  & contactless).
- o The pros and cons of ACaaS, Mobile access & Smartlocks were outlined
- The trends and expectations in relation to NFC vs BLE vs UWB were outlined and also Biometrics and Standardisation
- The Access Market in the next 5 years

- Opportunities included Security requirements expected to increase due to integration with 3rd parties (IoT; Smart Cities; Smart Buildings), Mobile Access and migration to Cloud, Contactless on the rise to replace old technologies, Biometrics: Facial, Iris and Bio sensor cards to raise attention in the Covid-19 aftermath, Convergence: Payment, eID, e-Wallet, transit expected to increase convergence among applications and technologies.
- Risks & Challenges includes Extremely fragmented and crowded market landscape, Commodity business. Security won't sell by itself, Covid impact still unclear in the mid-long term.

#### 2.2.5.2 'Level up your card issuance process'

Presented by Mr. David O'Driscoll, HID Global

This presentation focused on cloud printing. Cloud-based card issuance platforms simplify the complex, bringing together all the elements of a secure card issuance program into a centralized and integrated system. With cloud printing you can design unlimited, robust card templates, full printer visibility and control via the platform's real-time dashboard, remotely support printers anywhere, flexibility of an on-premise or hosted cloud solution, utilize secure print feature to safely and securely send encrypted print jobs to remote locations and enjoy peace of mind with end-to-end, banking-level certificate-based encryption of all sensitive card print data. The pain points of isolated workstations include locally installed PC-based software requires on-going reliance on IT support and limited flexibility to issue outside of the traditional card or security office. It was also stated distribution issuance can cause problems due to it being impossible to simply issue credentials in a distributed environment today with costs, no visibility and weak security cited as the main issues. It was stated the smarter way to issue ID cards is through a unified user interface. The most significant improvement that the HID FARGO Connect solution makes to the card issuance experience is simplicity: Enabling operators to manage records and issue cards from a single, user-friendly interface. No longer do they need to jump between the primary credential management solution and the card personalization software. Through a connected cloud you can issue from any device anywhere, provide centralized visibility, secure remote issuance and inline personalization. Security and compliance were outlined as two important factors to consider and in particular cybersecurity must be a top priority, end-to-end encryption; Personally Identifiable Info (PII) should never be stored; and complies with data privacy requirements: GDPR compliant.

# 3. Summary

The aim of the workshop was to consult with and obtain feedback from the stakeholders throughout Europe and beyond on the future needs and requirements of a European Student eID. The 63 participants that attended the workshop comprised of personnel who collectively possess an extensive and diverse range of knowledge and expertise regarding the requirements of a trusted eID credential from each of the stakeholder's perspective.

The mix of presentations, which included speakers from Europe, USA and Canada provided a worldwide perspective on the topical issues in relation to eID credentials as it relates to students.

The keynote address provided an insight to the progression and evolution of campus ID technologies and how to best align the interests of HEIs with the credential-centric needs of the students, staff, faculty, visitors, alumni, etc. It focused on the opportunities and the potential advantages of mobile devices and the challenges of adopting mobile credentials. The discussion set-out the context in relation to the steady growth of NFC mobile credentials in North America and the positive reaction from students to the introduction of mobile devices.

Session 1 discussions primarily focused on three research projects and a new innovative solution that supports the concept of a hybrid learning classroom that facilitates teaching under all circumstances where students can have the option to attend class from home or in the classroom.

The ESC-tension – EU Student Card Extension and Adoption research project, promotes the services which represent the driver for the adoption of the European Student Card, which are digital services and physical services. The focus of ESC-tension is to develop a multidimensional matrix connecting cards with services. This initiative will support the digitisation and standardisation of student mobility administration, enabling online authentication of students' identity across Europe.

The esignforstudy project main goal is to design and develop a system for Higher Education Institutions that will enable the use of electronic signatures and electronic seals in line with eIDAS Regulation and standards (signature/seal creation and/or validation). Initially it will focus on enhancing document handling in Polish HEIs and on secure cross-border exchanges, but eventually it will made available for use in small medium-sized enterprises. The outcomes from this integrated solution will be deployed in over 70 HEIs in Poland.

The European Digital Student Service Infrastructure (EDSSI) project is part of the European Student Card initiative and is in line with the vision of the European Education Area by 2025. The aim of the research project is to develop a system which will allow HEIs to exchange and authenticate student data in a seamless and secure way. This initiative is the future of student mobility infrastructure and will provide a single point of entry to all academic and non-academic services across Europe. It will provide

a simplified administration, faster processes, and better mobility experiences that will allow students to find all the information they need to experience a high-quality mobility experience abroad.

Session 2 focused on Migrating to Mobile & Virtual ID. The convergence of campus identities from physical to digital and the market growth for digital identity by 2025 was explored by Entrust. The discussion focused on the importance of trusted infrastructure in establishing trusted identity and provision of interoperable validation of the student regardless of their location. The challenges resulting from Covid-19 were identified and the requirements to enable remote enrollment and issuance were reviewed, which included the option of Self-Registration for Touchless Self Certification.

The case study on the University of Alabama journey to becoming one of the first campuses in the U.S.A. to go mobile highlighted the core benefits of using mobile credentials. The main drivers to implementing the project included the need to meet student technology and security expectations, comply with industry standards for secure transaction, retain a campus wide credential standard and protect the overall campus-wide identification process.

Session 3 focused on Technology Innovation & Trends. The future of access control was reviewed in terms of today's market requirements, current industry trends and the requirements for access control over the next 5 years. The migration from the traditional card to new forms that include mobile and wearable devices were discussed, together with the risks and challenges of an extremely fragmented and crowded market landscape.

The use of cloud printing in the student ID card instancing process was evaluated in terms of integrating together all the elements of a secure card issuance program into a centralised and integrated system. Cloud printing can now provide many advantages to the card issuing process, including full printer visibility and control via the platform's real-time dashboard, remotely support printers anywhere, provide the flexibility of an on-premises or hosted cloud solution, utilise secure print feature to send encrypted print jobs safely and securely. In addition, cloud printing removes the pain points of having to provide isolated workstations and the associated infrastructure.

In summary, the presentations and outcomes from this workshop will be important in our efforts to develop a proposal for a 'Trusted Student Identification Framework'.





