



# Student eID Framework Proposal



## NEWSLETTER January 2022

### Project Rationale

The European Campus Card Association (ECCA) is actively progressing with a "Consultation Process on the Development of a Proposal for a Trusted Student Identification Framework" (Student eID Project) that will support the provision of secure identification and authentication of students on a cross-border basis in Europe. Since established in 2002, the main policies and strategies of ECCA are dedicated to promoting research for the development and implementation of student electronic identification (eID) credentials in Higher Education Institutions (HEI) that supports student mobility and the provision of trusted identification and secure access to services across European countries.

Achieving cross-border student mobility will enable students to complete transactions online, which requires secure identification & authentication. The absence of trusted interoperable and an easy-to-use form of eID and authentication can pose obstacles to students completing these transactions securely and efficiently between the relevant HEI.

The Student eID Framework engaged in a process of dialogue involving the relevant stakeholders and policy makers to facilitate the requirements of the EU policy on a student eID. Combining their knowledge, opinions and requirements was an integral part of the Student eID Framework proposal to ensure it complements and supports the objectives of both the Educational and Service Providers requirements.

The project delivered an impartial across-the-board consultation process throughout Europe, which will culminate with the dissemination of the recommendations for a trusted student eID.

### Project 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.
- iv. Promote innovation and networking, particularly in the education, business and technological sectors, associated with the use of a cross-border student eID that supports student mobility and access to student services across Europe together with supporting active European citizenship and intercultural exchange programmes.

### Student eID Overview

The traditional student identification (ID) in HEIs across Europe generally consists of bespoke, stand-alone solutions that do not conform to any common standard. These solutions operate in isolation and therefore are incapable of facilitating mobility, interoperability, or student authentication between HEIs. The current process of student identification is generally based on the student's unique ID number; however, the format and process used to issue the student ID number varies from country to country, and in many cases, this format varies within a country. Furthermore, in some countries, there is no formal process in place to issue student ID numbers. In recent years, through innovation in technology and the use of mobile devices, the requirement for secure electronic identification is now becoming an important mechanism in the evolution of student life on campus. However, the customary core function of the student ID usually remains restricted to facilitating local access to services for students, academics, and visitors. This has resulted in a multiplicity of student identities in HEIs, which are required for the diverse range of academic and non-academic services both on and off campus. To overcome this problem, it is essential that there is effective collaboration, with past and on-going initiatives, to develop and integrate an infrastructure that supports the concept of a European Student eID for HEIs.

The European Commission, under their programme Connecting Europe Facility (CEF) in the field of trans-European Telecommunication network has prioritised its support for initiatives on cross-border student mobility. This support focused on solutions that facilitate cross-border online access to academic and non-academic e-services for students, together with the trusted electronic transfer of student information between students and the relevant HEI.

## EU Student eCard

The EU Student eCard initiative will enable every student to easily register electronically at the host educational institutions and thus have access to cross-border online student services when moving abroad. This will eliminate the need for on-site procedures and paperwork. It will also allow secure and seamless communication between the information systems of the HEIs in Europe, ubiquitous automatic recognition of the student status and identity, electronic exchange of academic data, as well as access to online campus and other student services, with a high degree of security.

The Student eCard initiative is part of the vision of the European Education Area aiming to improve the quality of student mobility in Europe. The goal is to make the eCard available to all students in Europe by 2025. The benefits go beyond students, as it will reduce administrative procedures for the HEIs and potential for errors (avoiding manual entry of data, duplications, etc). Fully compliant with EU personal data protection legislation, the card will guarantee a secure exchange of student information and allow for seamless transition between HEIs. Moreover, the card will give students the chance to access online courses and services provided at other HEIs. In addition to facilitating virtual mobility and blended learning, the EU Student eCard initiative will also give students a greater choice in the programmes they can follow. Over time, it will allow students to enjoy cultural activities throughout Europe at discounted rates.

The initiative is linked to the EU's electronic identification rules (eIDAS Regulation) and aims at re-using several CEF Building Blocks to provide a seamless cross-border electronic exchange of student data and documents based on the Once Only Principle (OOP). As a first step, the electronic services of the HEIs will be connected with the Member States' eID Nodes implemented in the framework of the eIDAS Regulation. This would make it possible for students to authenticate themselves (or their other academic related data) and use the online services of the HEI in another Member State with the national eID means of their country of origin. The initiative is interlinked with several digital projects of the Erasmus+ programme aiming to simplify student mobility: Erasmus without Paper, EMREX and the European Student Card. It is a step forward in the right direction towards a digital European society and a true European Education Area, in which spending time abroad to study and learn is the norm, and educational excellence is a reality for all.

## COLLABORATION WITH EXISTING eID PROJECTS

As part of this project we reviewed a number of reports, projects, and studies, all of which are relevant to the delivery of a European eID credential that supports student mobility and the provision of trusted identification and secure access to services across borders.

These initiatives have resulted in a lot of valuable research and knowledge of the current technological landscape of eID, which if utilised effectively can provide an important resource in the successful outcome for a European student eID. Many of these projects focused on the use of digital technology for connecting HEIs and facilitating secure exchange and verification of student data, interoperable with eIDAS. Compliance with EU policies and regulations in relation to eID and trust services is demonstrated in many of these projects.

The outcome of this collaboration has resulted in the review, and collation of the most recent and relevant student eID projects. Over the past 5 years, these projects have resulted in successful outcomes individually, but many are done in isolation from each other with inadequate collaboration between projects. There is a need to achieve better cooperation between the various

project stakeholders to enable the exchange of information and the sharing of best practices in the process of establishing a student eID. It is important for the stakeholders to be aware and understand the evolution of the eID landscape in order to support the needs and requirements of students and HEIs. This cannot be analysed or achieved in isolation. The following table is a summary of the 13 projects reviewed;

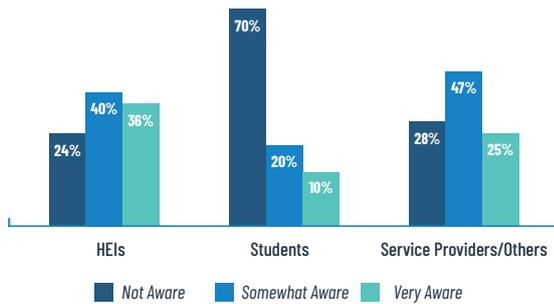
List of Projects / Reports Reviewed	Project Start/End Date	Funding Programme/EU Contribution	Project Website
e-Signature and Erasmus Student eCard in Greece	September 2018 to March 2021	CEF Telecom €270,400	<a href="https://gmet.gr/en/gmet-projects/cef-eid/">https://gmet.gr/en/gmet-projects/cef-eid/</a>
Erasmus without Paper (EWP1.0 & EWP2.0)	EWP1.0: November 2015 to October 2017 EWP2.0: January 2018 to December 2019	Erasmus+ EWP1.0 €499,982 EWP2.0 €499,613	<a href="https://www.erasmuswithoutpaper.eu/">https://www.erasmuswithoutpaper.eu/</a>
EMREX Project	January 2015 to January 2018	Erasmus+ €1,425,000	<a href="https://www.EMREX.eu">https://www.EMREX.eu</a>
European Student Card	September 2016 to August 2018	Erasmus+ €292,223	<a href="https://www.europeanstudentcard.eu">https://www.europeanstudentcard.eu</a>
MyAcademicID	January 2019 to December 2020	CEF Telecom €1,039,639	<a href="https://www.myacademic-id.eu/">https://www.myacademic-id.eu/</a>
SEAL (Student and Citizen Identities Linked)	April 2019 to March 2021	CEF Telecom €1,188,121	<a href="https://project-seal.eu/">https://project-seal.eu/</a>
StudIES+	March 2018 to December 2019	CEF Telecom €1,421,253	<a href="https://studies-plus.eu/">https://studies-plus.eu/</a>
Olympus Project	September 2018 to August 2021	Horizon 2020 €2,564,480	<a href="https://olympus-project.eu/">https://olympus-project.eu/</a>
Cross-border authentication in European cloud platforms according to the eIDAS Regulation (EUROLogin)	October 2018 to September 2020	CEF Telecom €598,952	<a href="https://imtgroup.eu/projects/eurologin/">https://imtgroup.eu/projects/eurologin/</a>
eID4U	February 2018 to October 2019	CEF Telecom €592,205	<a href="https://security.polito.it/eid4u/">https://security.polito.it/eid4u/</a>
European Digital University Card Student	September 2019 to August 2022	Erasmus+ €183,896	<a href="https://www.univ-rennes1.fr/">https://www.univ-rennes1.fr/</a>
European Digital Student Service Infrastructure (EDSSI)	September 2020 to August 2022	CEF Telecom €2,499,308	<a href="https://www.edssi.eu/">https://www.edssi.eu/</a>
EU Student Card Extension and Adoption (ESC-tension)	November 2020 to October 2022	Erasmus+ €299,138	<a href="https://www.esc-tension.eu/">https://www.esc-tension.eu/</a>

## Market Research Survey

An on-line survey was commissioned in 2021 to obtain the views and opinions of all relevant stakeholders regarding their requirements and the benefits of a European Student eID that will overcome the obstacles to the cross-border mutual recognition of students. This survey was representative of all stakeholders, which included HEIs, service providers, students, and others, from 25 countries across Europe, USA, Canada, and Asia. The total number of fully completed responses was 207 and HEIs accounted for 41%, students 44%, service providers 9% and others 6% (namely IT programmers/developers, government personnel, professional associations, manufacturers, etc.).

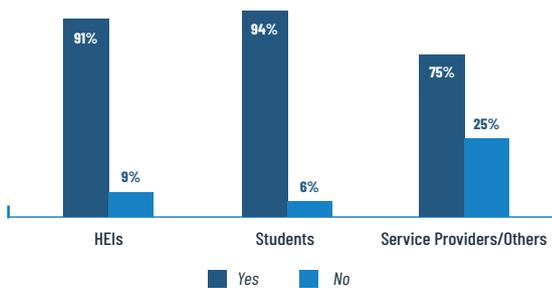
As part of the survey, we wanted to establish the awareness among the stakeholders to the Student eCard initiative, which is part of the vision of the European Education Area, with the goal to make the eCard available to all students in Europe by 2025. The level of awareness among the stakeholders varied considerably. 76% of HEIs were either 'somewhat aware' to 'very aware' and just 24% were 'not aware'. The Service providers / Others group was similar in that almost 72% were 'somewhat aware' to 'very aware' and just 28% 'not aware'. The level of awareness in the Student group however, was considerably lower, with only 30% 'somewhat aware' to 'very aware' and 70% 'not aware' at all. These findings suggest that the HEIs and Service providers have a high level of awareness of a European Student eCard. Nevertheless, the awareness of Students cohort, who probably are the most important stakeholder as they are the end user, is low. This is an issue that should now be addressed, as the opinion of the students must be taken into consideration when defining the requirements of an eCard.

### Awareness of European eID



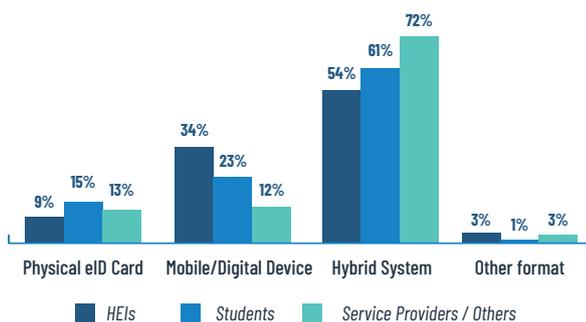
The HEIs are a very important stakeholder in the process of implementing and adopting the European Student eID. As they are responsible for the implementation of the campus card, their role will be significant in agreeing on a solution for its adoption and rollout. The results showed that over 90% of HEIs and Students agreed that HEIs will agree on a solution to make the European Students eID available to all students by 2025. Also 75% of Service providers/Others agreed. This is encouraging as it shows there is a high level of positivity among all the stakeholders that a common and unified solution can be agreed.

### Will HEIs agree on a solution to make the European eID available by 2025?



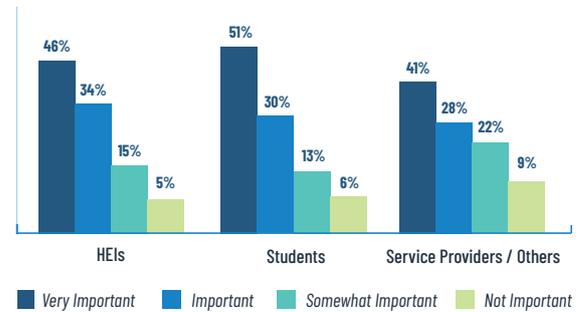
Currently the physical ID card is the most common form of student identification on campus. However, in terms of the preferred format for the European Student eID, on average over 62% of all the stakeholders selected a hybrid system (combination of two or more formats e.g., smart card and mobile device or another format). The physical eID (smart card) on a stand-alone basis was the least popular with the average at 12%. These findings indicate that a hybrid system consisting of a smart card, incorporated with a mobile device or another format, is clearly the most popular choice with the stakeholders. This is not surprising considering the emerging use of mobile and digital technology for eID credentials in recent times. This combined solution for students makes it possible, in the transition to a full mobile ecosystem, to provide access to services, particularly to those that do not have access to a compatible mobile device.

### Format for new European Student eID



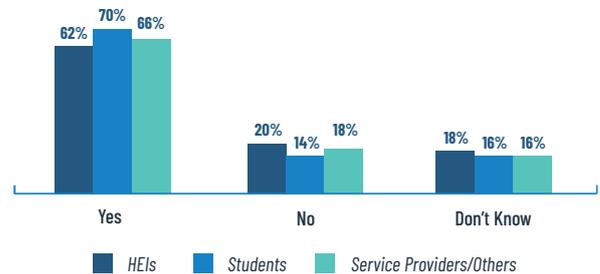
In most situations, each HEI issues their own unique eID/campus card to the student. Depending on the HEI, the services and functions of that eID/card can vary in its use, both on and off-campus. In terms of the importance of students also having a unique European Student eID, that provides access to services in other campuses, both in their home country and on a cross-border basis, this was quite high. Over 80% of HEIs and Students stated it was either 'important' or 'very important' as did over 69% of Service providers / Others. An average of 7% of all stakeholders said it was not important. Again, this is significant and shows how important it is, particularly to the students and HEIs to also have this European Student eID.

### Importance for Students to also have unique European Student eID



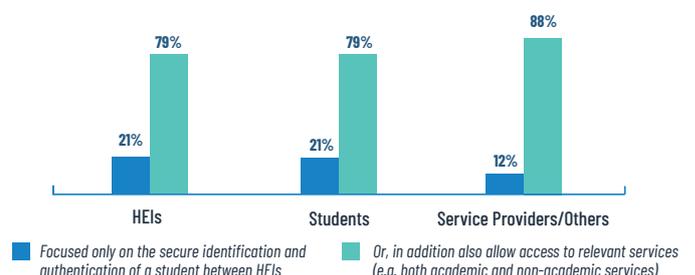
However, despite the importance of students also having a unique European Student eID, a high percentage of the stakeholders, 66% of them, believed that the European Student eID can replace the existing student ID/Campus Card and integrate with the relevant services. This view was highest among the students group at 70% approval.

### Can European Student eID replace the existing student ID/Campus Card and integrate with the relevant services?



In terms of the functionality of the European Student eID, an average of 82% of the stakeholders stated it should not only be focused on the secure identification and authentication of a student between HEIs but, in addition, allow access to relevant services, both academic and non-academic. This is important, as the vision for the European Student eCard outlines its aim is to 'give students the chance to access online courses and services provided at other HEIs'. This will not only facilitate virtual mobility and blended learning but will also give students a greater choice in the programmes they can follow. Integration and functionality that supports service providers to facilitate access to non-academic services is also important to students. Over time, this will allow students to enjoy cultural activities throughout Europe at discounted rates.

### What should European Student eID be?

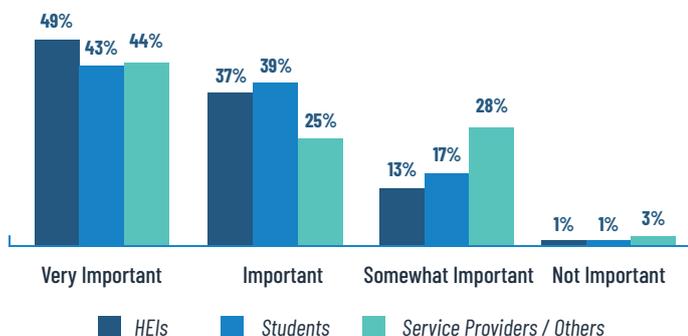


The European Student eID has many benefits. Five of these potential benefits were specified in a survey question. The responses to this question clearly reveal that the stakeholders indeed realise the benefits as all scored highly. For HEIs, the benefits that ranked highest were enabling identification of students in a trusted manner, followed by enabling the secure transfer of student data/records. This benefit also ranked highly with Service providers/Others, as did having a single student identity. For the Student group, they outlined having access to services both on and off-campus and on a cross-border basis ranked highest, followed by enabling identification of students in a trusted manner.

As previously outlined, access to services both on and off-campus, and on a cross-border basis is seen as an important benefit and the most important benefit to students. In addition, having discounts to these services is important for students, as they are typically more price sensitive due to their lower disposable income. Companies regularly attempt to target this market by offering wide ranging discounts. In the survey we asked what types of off-campus services that a student would most benefit from with the European Student eID. Travel, technology & mobile phones, and food ranked highly among all stakeholders, with clothing & beauty ranked lowest.

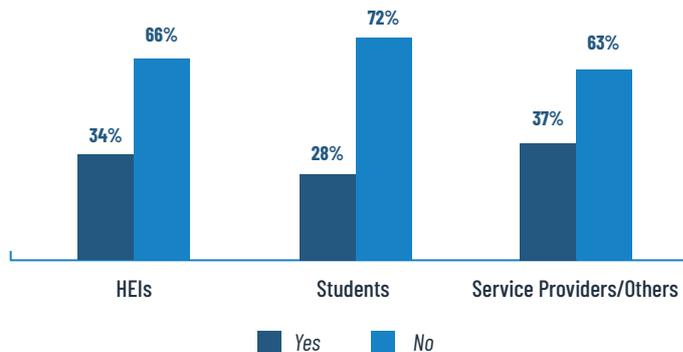
All stakeholders ranked the usage of the European Student eID for the secure transfer of student data/records as an important benefit. Electronic signatures are now becoming very common tools to legally obtain consent or approval on electronic documents, which can replace handwritten signatures. In the survey we asked the stakeholders to rate the importance of having the student electronic signature (personal certificate) linked to the European Student eID. 86% of HEIs and 82% of Students stated it was either 'important' or 'very important' as did 69% of Service providers / Others. These findings support the concept for the use of student digital signatures in the Higher Education Sector.

#### Importance of Electronic Signature linked to European Student eID



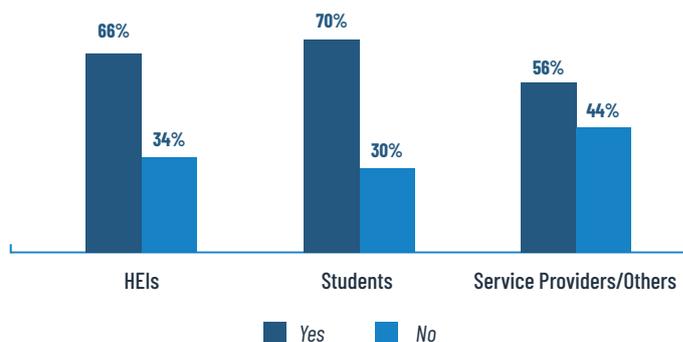
Student identification is generally provided using a physical ID Card, but mobile applications for identification are now becoming more widespread. In the survey we asked the stakeholders if their HEI was using mobile applications for the purpose of student identification. In their responses, 30% of the stakeholders confirmed HEIs are using mobile apps for student identification. Of those that are using this technology, they also stated that other functionalities/applications should be included in the App such as payments, public transportation, student identification & authentication, library services, access control, registration, discounts/loyalty, booking of campus services. It would therefore seem that the use of mobile applications for identification is increasing but also for services that were typically provided and accessed using the physical card.

#### HEIs currently using mobile applications for student identification



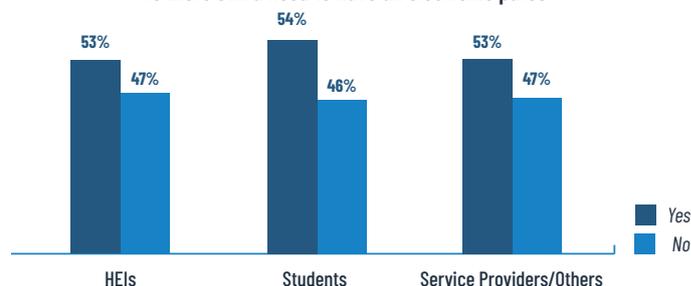
There is an increasing use of Biometric technology on mobile phones/ devices. In the questionnaire we asked the stakeholders if the European Student eID should use Biometric technology to provide digital identification of a student. 66% of HEIs and 70% of Students were of the opinion the European Student eID should use Biometric technology to provide digital identity of a student. The opinion of Service providers / Others was lower at 56%. This may be due to the legal aspects and the sensitivity of storing biometric data. Overall, there is still a significant percentage in favour of using this technology to provide digital identity of a student.

#### Do you think the European Student eID should use Biometric Technology to provide digital identity?



The banking sector has invested heavily in trying to persuade customers of the merits of cashless payments. A boost in such payments resulted from the arrival of chip and pin credit and debit cards, followed shortly after by the appealing and hassle-free concept of "contactless" transactions for small payments by card and electronic phone wallet. In addition, since the COVID-19 pandemic more adults are using digital banking or contactless payments in preference to cash. Previously people used to reserve card payments for large transactions. Nowadays younger generations, more comfortable with new technology, have happily turned to card for almost all transactions, no matter how small. With the advancement of this banking technology, we therefore asked whether there is still a need for the European Student eID/Campus Card to also have an electronic purse, allowing payments both on and off-campus. The average response from 53% of the stakeholders was that there is still a need for the electronic purse on the card. When this finding is compared with the finding from a previous ECCA Survey in 2019 it highlights a consistent pattern regarding the need for an electronic purse.

#### Is there still a need to have an electronic purse?



## Recommendations for a Framework Proposal on a Trusted European Student eID

The recommendations for the Framework Proposal are as follows and have resulted from the various project consultations undertaken:

### Campus Card / eID

- 1 The physical/virtual identity of the student both on and off campus is important and in line with the European Student Card Initiative. The physical campus card is of value to the student as it can represent a student's identity in the most traditional and effective way and can also enable access to a wide range of services on a cross-border basis. The campus card and the eID can integrate and evolve together, either in concept or shape to provide the necessary form of identification for the particular situation.
- 2 There is a need to connect the traditional physical card to an electronic ID (eID), as part of a hybrid solution that uses multiple technologies. The physical card can coexist with a virtual card. It is perceived that in the future, a virtual card will be capable of replacing a physical one in an effective way, providing compatibility with most of the legacy systems implemented across European HEIs for on and off campus services.
- 3 The physical ID card will continue to be required, however the use of a physical ID card in a hybrid system together with mobile devices should be promoted, as this is the most favoured option with HEIs and students.
- 4 The student eID needs to be a flexible solution in order to be integrated as part of a hybrid solution that facilitates a wide range of applications and services provided by both the HEI & Service Providers for on and off campus.
- 5 Multiple eID devices should be available, and the use of one or another will depend on the services that are being accessed, which means that the enablers of such devices will play an important role on the entire ecosystem. e.g., the use of physical/virtual campus card for identity, use of mobile device as 2FA to access online services etc.
- 6 As European countries have different needs and requirements for a student eID, it will be extremely challenging in the foreseeable future to develop a standardised European student eID for use in pan European campus solutions. The regulations/laws/systems in every country differs diversely as does the lifecycle of the campus card/eID.

### Mobile Devices

- 1 There is a growth in the use of mobile devices as an alternative to the traditional campus card in North America, which are retro-compatible with existing legacy systems such as access control and other applications. In the European context, several initiatives have emerged in recent years, i.e. AppCrue (<https://tic.crue.org/app-crue/>). The positive reaction to their introduction must be evaluated immediately in a European wide context, to explore the potential opportunities of similar mobile credentials, allowing users to use their mobile devices in systems where physical campus cards are currently used. However, it would be advisable that OEM or OS mobile manufacturers are not allowed to impose their proprietary solutions.

The level of awareness of the European Student eID - to be implemented by 2025 - varied among the stakeholders but was particularly low among the student group. We therefore asked, 'Do you think there are other methods that may be used to promote and disseminate its rollout?' An average of 35% of the stakeholders (this being 40% amongst students), said there was, and the prevalent methods mentioned were internal communications with the HEI using social media platforms and communication tools. These findings highlight the need to explore and implement other means of information dissemination that will enhance the current methods in targeting the student population. The current methods of information dissemination, mainly through HEIs are not effective. Relevant European associations and groups could be used to assist in this process e.g., European Students Union, ECCA, EUNIS, EMREX, eID Forum and the European University Foundation.

### Discussion of Survey Results

The main objective of the survey was to obtain the views and opinions of all stakeholders regarding their knowledge, requirements, and the benefits of a European Student eID that will overcome the obstacles to cross-border mutual recognition of students. Moreover, it will provide access to both academic and non-academic services on a cross-border basis. The study was representative of all stakeholders which included HEIs, Students, Service Providers and Others, from 25 countries across Europe, USA, Canada, and Asia.

The awareness levels among the student group of the European Student eID and the intention to implement it by 2025 is considerably low and therefore needs to be addressed. It would seem there are little if any barriers to its implementation as a high level of HEIs and Students were of the view a solution could be agreed by HEIs for its implementation. Moreover, there seems to be a high demand for the European Student eID particularly among the HEIs and Students. Furthermore, a significant number of respondents were of the view it could replace the existing student ID/campus card, most notably among students. The results clearly demonstrate that the preferred format of this new eID is a hybrid system.

In terms of functionality, it was generally agreed it should extend beyond secure identification and authentication to also include access to services both on and off-campus. Therefore, discounts will be important if the use of the Student eID is to extend to services off-campus and particularly for services relating to travel, technology & mobile phones, and food. In addition, mobile applications for student identification are common as are other apps for various services on and off-campus. Consequently, the demand for a hybrid system. Furthermore, Biometric technology for digital identification was popular, particularly among Students and HEIs, as was the requirement for the electronic signature to be linked to the eID. Despite the increase in banking technology card payments, there is still a demand for the European Student eID to have its own electronic purse.

Overall, the study revealed there is strong support for the European Student eID and also identified further important information in terms of its format and other functionalities. The awareness levels do need to be addressed and further dissemination, particularly among the student group, is necessary using the HEIs social networking platforms and other communication tools. In summary, analysis of the results from the 207 stakeholders', has identified much knowledge and potential for establishing a European Student eID, which clearly revealed that there are significant benefits for all stakeholders. The data from the survey has also provided a broad understanding of stakeholder's knowledge and awareness. In addition, this data will make a valuable contribution towards the implementation and rollout of the European Student eID set for 2025.

Instead, we must urge them to contribute to standardisation and open APIs, promoting competence, broadening the catalog of solutions and therefore enhancing the future mobile eID ecosystem.

- 2 There is an increasing demand for the use of identification application using mobile devices, together with services that traditionally were provided using the physical ID/campus card. There needs to be a coordinated approach to the use of mobile devices for campus applications to establish best practices and avoid duplication of efforts.
- 3 It is important to note that currently it is not possible to reach the 100% of the educational community, either because some do not own a mobile device or because their mobile phone is not compliant with the new mobile eID ecosystem. We must be extremely careful not to exclude any potential user and try to offer alternatives to access services, maybe not with the same high security standard, but with a similar quality of experience. In any case, it should be without jeopardizing the functionalities and security of the whole new ecosystem.

## Security, Trust and User Authentication

- 1 The convergence of campus identities from physical to digital, together with the projected market growth for digital identity by 2025, requires trusted infrastructure in establishing reliable identity and the provision of interoperable validation of the student regardless of their location.
- 2 The card, the mobile phone or any security module hosted in the cloud are secure locations where the identification information (e.g., a certificate) is stored. Using self-owned certified devices as a traditional smartcard or delegating the identification in a trusted third party as a remote Hardware Security Module accessed through the non-secure user's mobile phone could lead to different levels of trust between users and service providers considering the security requirements and the risks involved. We must enforce not only the technical means, but also the user concerns, to properly and seamlessly perform the authentication and authorisation processes.
- 3 The issuing of the eID credentials in terms of authentication and trust is of paramount importance and the process for certifying and issuing needs careful consideration. The different laws and regulations in each of the member states is an important factor and needs to be addressed to establish a mutual solution. Although the existence of a physical identifier is important, the process of validation and authentication of the relevant data must provide a high level of trust. Therefore, a good trust framework that uses existing standards and infrastructure is desirable in this process. The issue of Self Sovereign Identity as an achievable solution is one option and the current work of EBSI should be considered, as it is empowering citizens to have control and management over one's own identity (and data). In addition, the use of eIDAS for authentication of eID issuance should also be considered.
- 4 Security in the verification process – a secure structure of trust is essential to confirm the authentication of a genuine student identity.
- 5 Mutual authentication between the eID credential or token and the service is mandatory in order to avoid token counterfeit and/or impersonation.

- 6 In addition to providing trusted student identification & authentication between HEIs on academic requirements, the verification process should also provide the required verification to allow access to relevant services both on and off campus.
- 7 Both HEIs and Students support the use of Biometric technology in a European Student Card/eID to provide trusted digital identity of a student. Further innovation and research should be pursued to establish trust and acceptance for the use of this technology.

## eIDAS

- 1 Compliance with eIDAS regulations is important and there is a need to link with qualified certificates/signatures to unify systems. eIDAS regulations will provide a student eID with consistency & transparency, together with legal security for cross-border transactions.
- 2 eIDAS – requires parallel profile. Focus should be on ecosystem development that is adaptable to HEIs. Profile could be accessed joining both government and HEI services with global adoption.
- 3 There is already an acceptance at EU level that eIDAS is based on a country issuing the credential. The lack of a European issuer was identified.

## HEI Requirements and Standards

- 1 HEI environments are continuously evolving and therefore the eID solution needs to be future proofed and adaptable to the on-going changes in technologies and the requirements of HEIs. Implementation of standards are important in this regard to avoid the reliance on proprietary solutions.
- 2 Local existing standards or legacy systems are relevant as they cannot be changed and therefore the challenges of integrating such systems needs to be considered.
- 3 Existing established federated identity standards should be built upon. e.g., eduroam and eduGAIN.
- 4 In the use of online based systems enabling the availability of real-time student data, tokens should be independent to the service. The solution should be valid for services in both online and offline mode.
- 5 Supporting student mobility is one of the higher priorities for the use of a European Student Card/eID. On a cross-border basis, access to host and guest HEIs services and availing of discounts to services is important to students. This should be a basic requirement of a Student Card/eID.

## Service Provider Requirements and Standards

- 1 In the creation of an identifier and authentication process for a student eID there is a need to make it generic and use online/offline systems or APIs to facilitate service providers requirements.
- 2 In the provision of academic and non-academic services both on and off campus, Service Provider will require a process that provides a trusted single student identity to facilitate access to services.

- 3 European Standards are important as without them the process is currently fragmented. A clear direction is required on this and the semantics and syntactics are important. By not having a single agreed standard for data interchange is a hindrance. It would be beneficial if there could be an accepted standard. Such standards will result in good cooperation and enable investment by service providers for a secure future.

## Legal Issues and GDPR

- 1 The European Student eCard as an ID will need to consider the legal aspects of personal data and the GDPR regulation.
- 2 It is recommended that further clarification is required on the EU Regulation N°910/2014 (electronic identification and trust services) in terms of the student card. Clarification is required on which campus services are within the scope of the regulation as the practices can be different for various countries.
- 3 Compliance with European Guidelines/laws to harmonise national laws that allows HEI to issue identity documents for the processing of a European Student eID.
- 4 Engagement with the HEI sector is required to deliver recommendations and guidelines that will determine how the specific law/regulations in each country can be implemented in compliance with European regulations.
- 5 Creation of specific educational qualified digital certificates should be considered. Depending on the needs (applying for work, grant, etc.), the student would require the issuance of a certificate where the student will share only the desired information. The certificate should therefore be valid and created in real-time.
- 6 Cross-border eID validation is essential. The validity of an eID issued in a country should be valid as student identification in any country. This interoperability will allow students to benefit from discounts, access to libraries, etc.
- 7 In spite of numerous legal issues and GDPR, the implementation of the Digital Covid Passport across EU should be analysed. With all its imperfections, there was an urgent need, so the implementation was done with the existing minimalist/effective technology and ready to grow (e.g. QR Codes linked to personal profiles and mobile phones/numbers).

## Supporting European Strategy & Initiatives

- 1 The student eID must support the European Digital Education Action Plan in advancing student mobility and cooperation between HEIs and the acceleration of existing trends towards online and hybrid learning.
- 2 The European Student Card Initiative will enable every student to identify and register electronically at HEIs within Europe thus eliminating the need for onsite registration. It is part of the Digital Education Action Plan and is aimed at improving student mobility. This initiative is linked to the EU's eIDAS regulations and will provide cross-border electronic exchange of student data based on the once-only-principle to facilitate access to online services in the hosting HEIs and countries.

- 3 The ESC-tension project aims to promote the adoption and roll-out of the European Student Card (ESC), the card management systems harmonisation, and the local students service systems. The purpose of ESC-tension is to facilitate the local and national adoption of the European Student Card, as a part of the wider vision of the European Student Card Initiative. This adoption is currently slowed down due to technological, administrative, and operational gaps: the main goal of the project is to fill these gaps, through a free, open-source, multilingual and multi-country platform, providing the results and guidelines.

- 4 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. There is a need to develop a structure to promote the values and benefits that may accrue to the stakeholders, which could be far-reaching and cost-effective for all stakeholders.

## Engagement and Collaboration with the EU and Stakeholders

- 1 There is a need for more engagement between HEIs and support associations with the relevant department responsible for electronic identification of students in the EU to develop agreed regulations and guidelines for the issuing of a Pan-European student eID.
- 2 Knowledge and expertise in eID innovation continues to grow throughout Europe resulting from the successful outcomes of numerous research projects, however much of this has been done in isolation. There is a need to develop a structure of knowledge convergence and collaboration, the benefits of which could be far-reaching and cost-effective for all stakeholders.
- 3 There is significant support for the concept of a European Student eID from HEIs and Student particularly in a hybrid system. Both stakeholders express a strong view (Market Research Survey) that the concept could replace the existing student ID/campus card. Engagement and collaboration are required to promote this belief.
- 4 As part of this project, we reviewed 13 past and on-going projects. We found it particularly difficult in many cases to source the relevant information and/or the project outcomes. It is recommended that a more transparent process be provided by the EU to facilitate easier access to this valuable research and information.

## Marketing, Dissemination and Promotion of a European Student eID

- 1 Collaboration between the EU, HEIs and all Stakeholders to implement a marketing strategy to promote the acceptance of a European student eID that guarantees unambiguous identification of a student needs to be established.
- 2 In gaining end-user acceptance there is a need to determine what is the priority of a student for a European Student eID. Is it to provide secure identification and/or access to services? The needs of students as the end user are fundamental to the overall acceptance and use of a European Student eID. This includes both access to services on and off campus and as a physical identity for cross border use. Access to such services will also need to be carefully considered as they will include a mix of both academic and non-academic services in both online and offline modes, which will result in different levels of authentication requirements.
- 3 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. This project is developing a multidimensional matrix, connecting cards with services, which will support the digitisation and standardisation of student mobility administration, enabling online authentication of students' identity across Europe. There needs to be a pan European approach to the dissemination of the outcomes from this project.
- 4 The student cohort is an important stakeholder in the successful implementation of a European Card/eID. However, in relation to a new eID solution, it has been identified that the awareness of this group is extremely low. This is an issue that needs to be addressed, as they are the end-user and an important stakeholder.
- 5 The research survey undertaken as part of this project has established that two out of every three students believe that that European Student eID can replace the traditional physical card and integrate with the relevant services. Initiatives should be developed to promote this positive trend.

## Summary

In summary, the project has established a strong collaborative partnership with the relevant stakeholders and has provided valuable knowledge and information on the needs and requirements of a European Student eID Credential that supports cross-border services. The outcomes from this partnership, through a knowledge-sharing process has identified many potential solutions to the obstacles that may be encountered in the task of implementing a student eID credential. The networking and collaboration achieved throughout the project demonstrates a strong enthusiasm and commitment of support from the stakeholders to the concept and requirement for a European student eID. There is a need to exploit and build upon this cooperation, together with the significant expertise, research, and innovation available from existing eID research projects.

Finally, the concept of a European student ID card was first mooted with the foundation of the European Campus Card Association in 2002 (as per their constitution). Although it has been a 20-year journey, this concept is now a reality and will be an important requirement in the provision of trusted student identification and authentication, together with supporting mobility and facilitating access to services across European countries.

The full project report 'Student eID Framework Proposal' is available to download on;

<https://eidproject.eu/>

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# Student eID Framework Proposal

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