

EUT⁺

EUROPEAN UNIVERSITY OF TECHNOLOGY

Deliverable 88

D6.3.1 Plan for European Student Card: Staff summerschool - D6.3.2 Deployment of ESC services

Del. Rel. D6.5

WP 6

Description: **Organization of a summerschool for staff to establish a plan for ESC associated services** ; Report

Comments: the raw data from the surveys will be provided upon request to the WP leader

Dissemination level: **PU**-Public

<https://www.univ-tech.eu/phase-1-results>

The content of this deliverable represents the views of the authors only and is their sole responsibility. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

This initiative has received funding from the European Union's Erasmus+ programme under grant agreement 101004088 — EUT — EPP-EUR-UNIV-2020.

Foreword to deliverable D6.3.1

This deliverable presents the plan for the European Student Card. It provides a starting point for the development of the services provided by the partner universities.

The plan provides guidelines for the deployment of European Student Card services, the design of the European Student Card, and how to expand further the proposed services.

A survey was conducted in order to assess the different uses of the student card across the partners, as well as its relationship with the e-administration. This provides indicators for monitoring in order to attain the objectives of the European Student Card.

This deliverable paves the way towards the creation of a unique European student identity, which is a step towards the creation of a university of technology at the European level.

Table OF CONTENTS

Introduction	4
1 Analysis of the most useful research results (of the two surveys)	5
1.1 Internal services	5
1.2 External services.....	8
2 Important points and technical requirements	11
2.1 European Student Card actors	11
2.2 European Student Card identifier	12
2.3 European card lifecycle	13
3 Plan for European Student Card	14
3.1 Part I: Deployment of ESC services.....	15
3.2 Part II: Liaison with local ESC organizations	17
3.3 Part III: Design of ESC	17
3.4 Part IV : Development and expansion of associated ESC services	18
4 Recommendations	19
4.1 Main general guidelines	19
4.2 Main features.....	20
Conclusion	21

Introduction

The aim of the European student card project is to create a student status on the European scale. Thanks to this card, a student enrolled in an adhering institution can assert his rights anywhere and from all providers who have defined a dedicated student service offer.

This European student card establishes a common digital and graphic identity for all students in EUT+. It aims to become a true digital passport allowing the emergence of seamless digital services between the information systems of all partners.

Student services made available through this card will facilitate and simplify mobility in the Union's countries, and also within each country. They aim to improve students' daily lives and promote their success. Upgrading and standardization of the services offered to students in Europe will be based on the reciprocity's principle.

The new programming period of the Erasmus + program (2021-2027) runs under the title "Erasmus Without Paper", which adds the mandatory nature of the European Student Card.

Each partner institution should maintain the full control over the process of creating, producing and issuing its European Student Card.

This report highlights the indicators that need to be closely monitored to meet the objectives and the actions that each institution (campus) will need to consider to coordinate in the most effective way possible.

1 Analysis of the most useful research results (of the two surveys)

The starting point of the process is to analyse the lessons learned and best practices identified by the ESC partners, in relation to future users. We divided the issues of the offered internal services (related to the student status and controlled access) and external services (related to the development and expansion of the various discounts offered).

1.1 Internal services

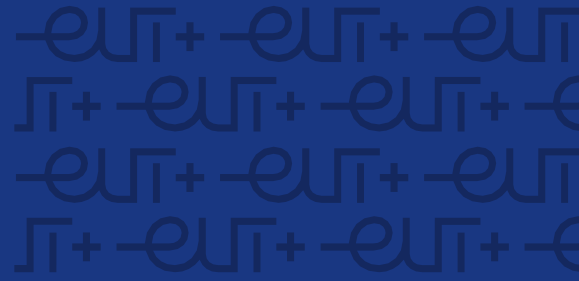
This internal services question shows that there are many necessary access points.

1. What status information do you use to access your e-administration?



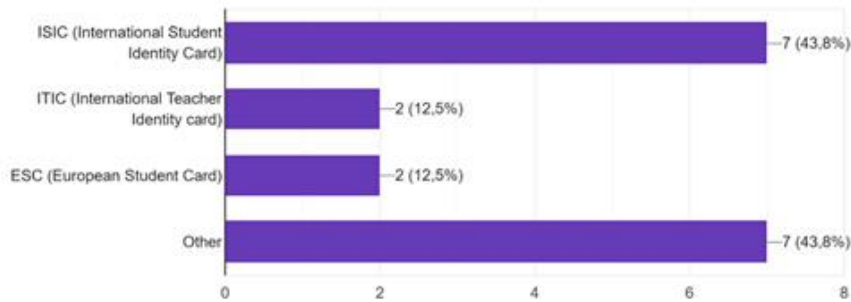
How to serve students or staff with an electronic card?





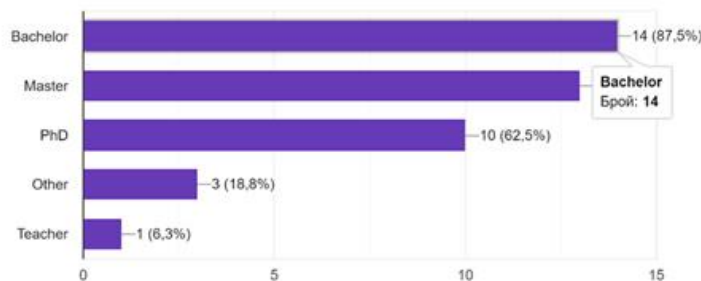
This internal services question shows that institutions operate not only with one but with too many cards. The number needs to be reduced to ESC only.

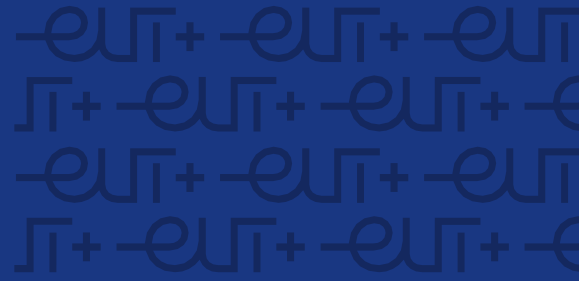
What cards does your institution operate with?



This internal services question shows that it is not enough to provide the card only to students. We will need a card also for teachers and staff members.

Who can be a cardholder in your institution?





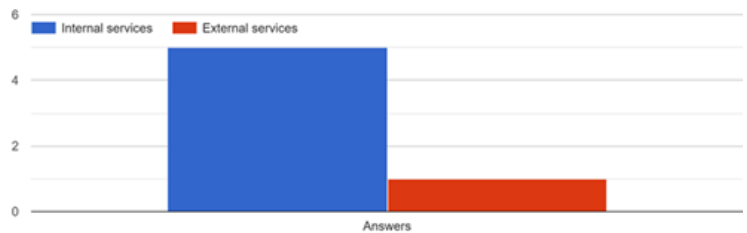
This internal services question shows that we must have the contact of all the partners producing the existing cards.

Who issues your university cards?

Answers:

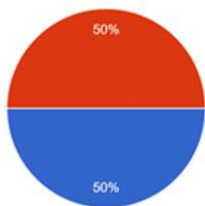
- Student services
- The university (administrative office)
- internal service
- IT Services with Student Service Center
- A company
- Training department
- ISIC Bulgaria
- In-house and external vendor for the mobile app
- DSK bank and the university itself helps with the process of issuing
- Student services
- TUI - Banco Santander
- Student organization

Who issues your student cards?



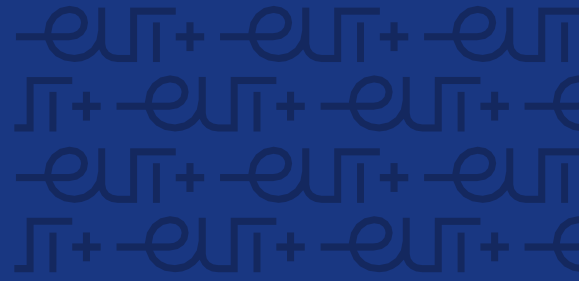
This internal services question shows that another possible option other than the plastic card must be provided. Maybe we will need to have a good working APP.

Can your data be used by an application in addition to plastic?



- Yes
- No

- At the moment no
- Digital work environment
- access control
- Yes with mobile app.
- I don't know...
- Yes, I can verify my status using an app, also get additional benefits which are not offered by the plastic.
- Yes, mobile app
- It can't. The card is not available to be added in Apple pay.
- no
- phone
- NA
- Yes, mobile app developed by Universia-Santander



1.2 External services

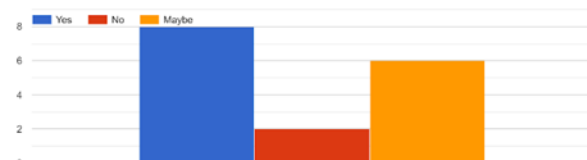
This external services question shows that some universities have contracts with local banks that can also produce student cards.

Can you pay for various internal and external services through your card?

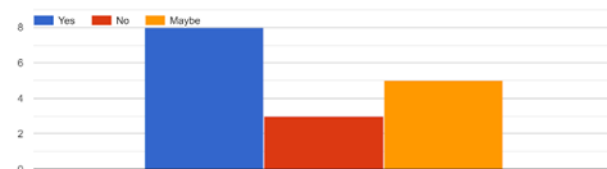


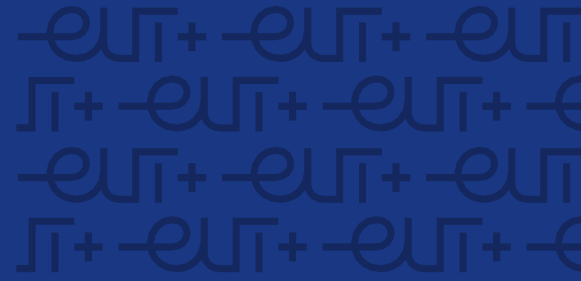
These external services questions show that we should expand existing services associated with the ESC. The card should provide numerous discounts, for human health, cultural events, foods and travels.

Are there any external preferences and discounts in your card?

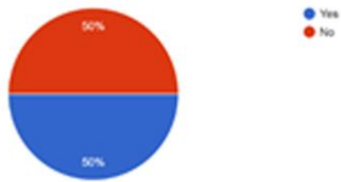


Does your card provide discounts to various services (shops, bookstores, restaurants, resorts, gas stations)?

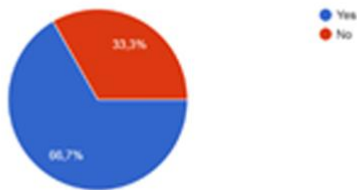




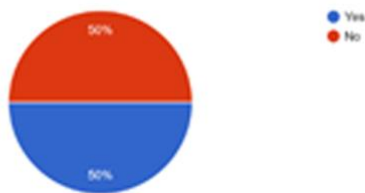
Does your card provide preferences when visiting cultural heritage?



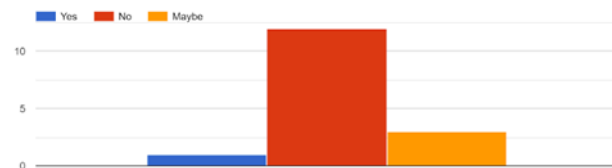
Does your card provide a discount on cultural events (theaters, concerts, art festivals)?



Does your card provide travel discounts?



Does your card provide preferences for medical and dental care?



This external services question shows that the card must be personal and well protected.

Can your family members and friends use your card and if so how many people?

- No
- No card
- I don't know...
- I'm not aware
- No, coz ISIC only sell this and nothing to do
- No. they can not





The last external services question shows that the work of partner organizations and universities needs to be improved in providing additional services and facilitating their use.

What external or internal services would you like to add to your card?

- I don't know
- Link with the phone app
- the same at every partner university
- physical identification, including electronically, should rely on national services and ID cards, while - specific services should be offered through mobile applications and B2B digital connectivity
- Services or things to pay for studying on campus
- Dental care discounts.
- I would not add anything.
- So far, everything is great.
- All available
- Apple Pay!
- more gas price discounts
- to be used in petrol stations
- Have similar online access: <https://www.frank.fi/>
- catering, transportation, bookings and more discounts

2 Important points and technical requirements

2.1 European Student Card actors

 <p>Users</p>	European student cards holders	10 millions students in Europe, 270 000 Erasmus students each year
 <p>European student card</p>	Truster third party between all the actors	A physical card, and its truster digital counterpart in a online registry
 <p>Data providers</p>	Data providers certify student status, and provide data about the card holder to service providers through connectors defined by ESC, Erasmus without paper, and EMREX.	4000 high education institutions in Europe
 <p>Service providers</p>	They provide various services to card holders (catering, transportation, booking lending, etc.)	Public and private organizations

The starting point of the process is to analyse the lessons learned and best practices identified by the ESC partners, in relation to future users.

Four types of actors remain around the European student card:

1. **Users** are all student, teacher and staff cardholders. Their numbers are growing every year. It is estimated that they are 20 million in Europe. Among them, at least 270,000 are in international mobility within the framework of Erasmus. For them, the card simplifies their exchanges with the institutions and the service providers.
2. **Service providers** are public and private organizations that offer a student service. These may include institutions of higher education themselves, clusters of institutions, student organizations, university libraries, public transport operators, central purchasing organizations, Etc. The European student card has the advantage of reassuring them about the student's student status with a high level of confidence.

3. **Data providers** are institutions of European higher education, uniquely qualified to certify that a person is enrolled in a training course within their institution. The registration of the student's card in a European context is a service offered to their students. It contributes to the international reputation of the institution. Providers of structured information about their student, institutions can provide this information to service providers, at the specific request of the person concerned.
4. A data provider can also be a **service provider**. This is the case of an institution that offers services to its students, for example through its university library.

2.2 European Student Card identifier

In order to identify student clearly in all countries in the European Union, a common identifier must be shared by all the actors. Instead of creating a new identifier, the proposal is to build upon already existing identifier in each country, region or high education institution. The guiding principles are similar to those used to build SEPA identifier, based on a local account number (IBAN) and on a code that identifies a banking establishment within a country or a town (BIC).

- + Country code of the High Education Institution that issued the card, on two upper case characters, according to the ISO 3166-1 norm:
 - o DE for Deutschland;
 - o FR for France;
 - o IE for Ireland;
 - o BG for Bulgaria.
- + Student unique code in the HEI where it is enrolled. From case to case, this code may be national wide, regional wide or the home institution own identifier.
 - o BG for Bulgaria;
 - o No region code;
 - o 99948994 is the PIC code of the university;
 - o The national student identifier (NSI, INE in French) contains ten digits and one letter, for example 1234567890G.
- + European Student Card and EUT+ identifiers (logos and etc.)



- + Logo of ESC



- + QR unique student code



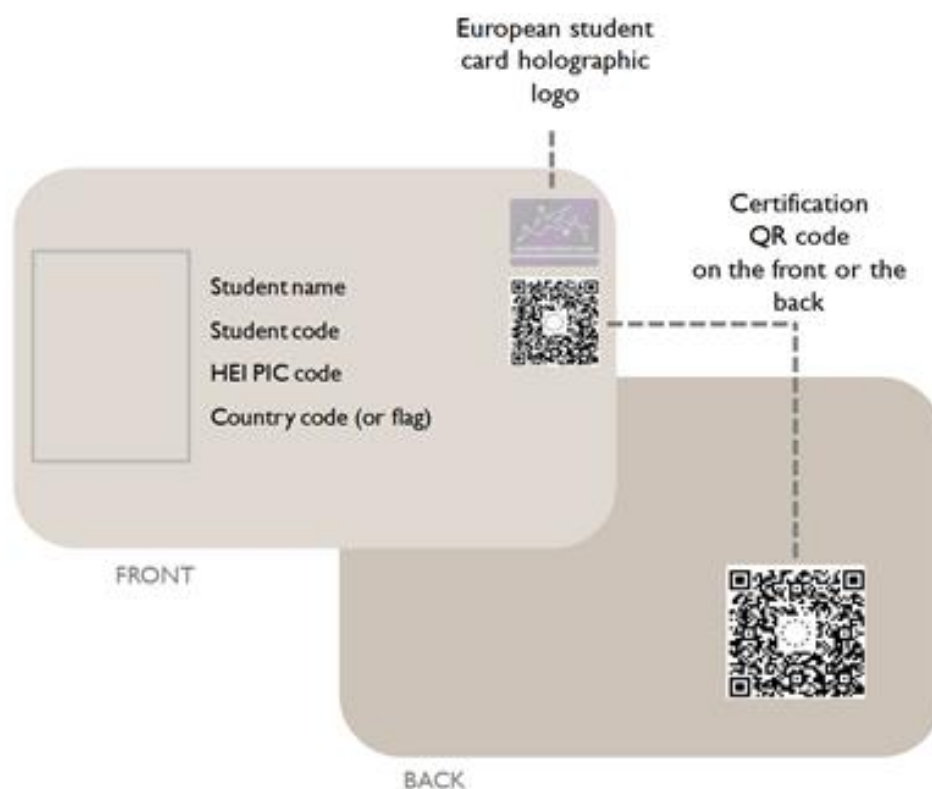
By using these methods, the uniqueness of this identifier is guaranteed. Two students will never have the same identifier.

2.3 European card lifecycle

Usually, the student card is issued when a student is enrolled in an institution, when his application has been accepted and paid for any admission fees.

European student card recognition modes and technical requirements

- + A human visual recognition by any person, who can control the presence of the logo, the photo of the card holder;
- + An automatic optical recognition by a scanner, to interrogate the registry certifying the authenticity of the card, and to obtain up-to-date information;
- + An automatic contactless electronic recognition by a card reader to interrogate the registry certifying the authenticity of the card, obtain up-to-date information, and even install applications to interact with local services.

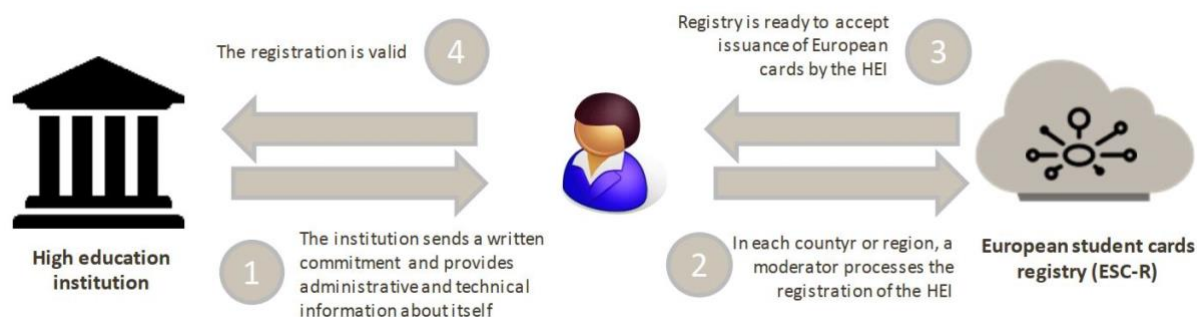


3 Plan for European Student Card

This plan provides guidelines for development and dissemination activities, which are planned to be completed by the end of the project, to ensure that all partners are involved in the initiative in the most effective and appropriate way. In addition, these instructions ensure that all consortium partners have access to the same information at the same time and use appropriate formats and effective communication procedures. Some of the planned tools and activities will be of general purpose, while others are more focused on specific university structures or their partners.

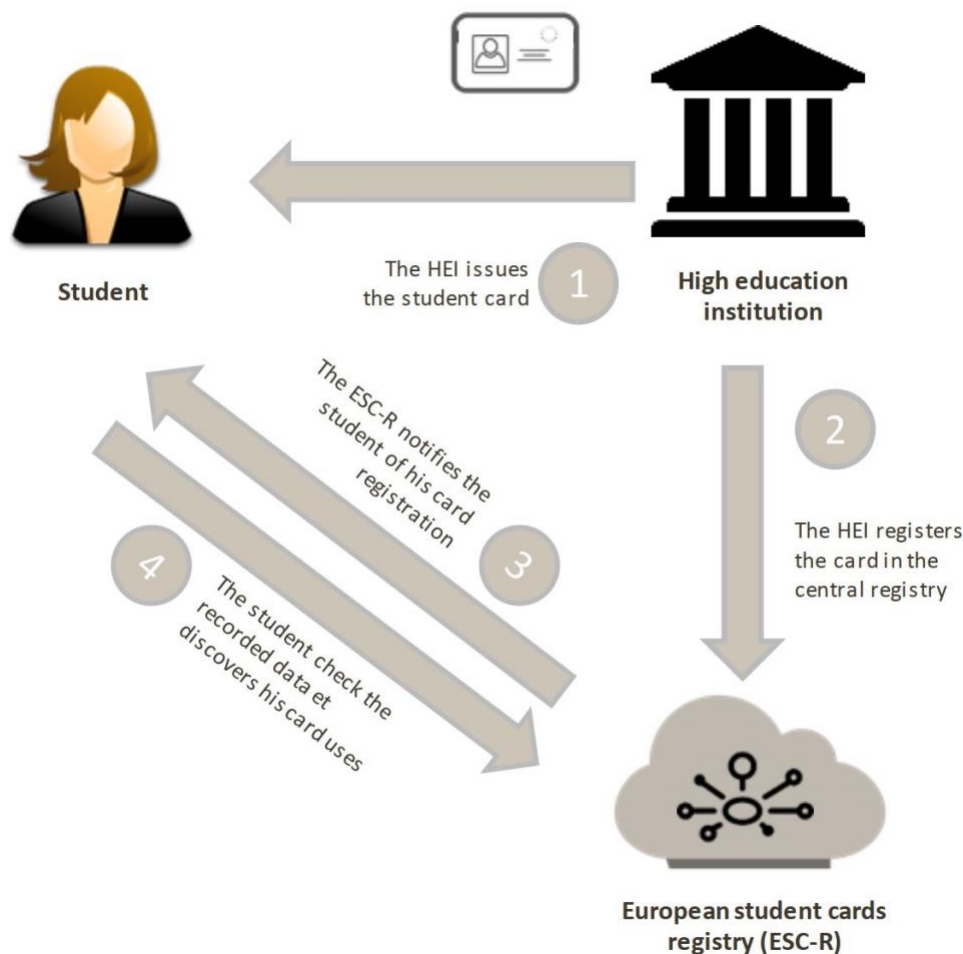
3.1 Part I: Deployment of ESC services

Each partner university must start timely registration (if it is not already registered) on the ESC platform. This will allow for a better connection of students with e-administration and student status when traveling between universities in different countries.



Any institution of higher education should freely choose membership with the European card system. Membership should be done and withdrawn any time by the institution. Each student registered in an HEI participating in the ESC program is free to opt in or out. Each institution should maintain the full control over the process of creating, producing and issuing its student card.

Once the institution is registered, it can issue ESCs. Once a card is issued, minimal required information allowing the certification of the card are registered on the ESC-R.



Student cards issued in Europe are very diverse in terms of both physical support and technologies used. Their production should be coordinated at a national, regional or local level. Other types of cards coexist with student cards, targeting a similar audience (for example ISIC). These should be essentially reduction cards. The European student card is distinguished from these devices by its institutional character. The offer of services backed by student cards shows a great disparity from one institution to another, even within each partner country.

When the student registers, it is common for the institution to add a sticker to extend the card's validity for the upcoming academic year. The lifetime of a card is therefore potentially several years. A student may be enrolled in several partners institutions. This is particularly the case for our co-accredited diplomas. To enable the student to access each campus and digital services, administrative registration is performed in each institution. The student will then have a student card for all institutions. During only one year of study, the student does not retain his rights and usually the status of a student card must be terminated electronically.

3.2 Part II: Liaison with local ESC organizations

Each HEI partners must contact the local companies (if not in the institution itself) responsible for the production and distribution of the ESC cards in the university network (or similar) and agree on the terms and price for their production.

Universities must negotiate the rights to use their trademarks with a manufacturing company, according to the local laws of the different countries.

The price of the card can be borne by the university or by each student.

3.3 Part III: Design of ESC

In order to clearly identify the student in all partner countries in the consortium, there must be common identifiers shared by all HEI partners. Instead of creating a new identifier and healing a new map, the proposal is to build on an existing identifier and map in each country, region or higher education institution. The guiding principles are similar to those used to build a SEPA identifier based on a local account number (IBAN) and a code that identifies a banking institution in a country or city (BIC).

Depending on the regulations in each country of the partner universities, a **bank card** can be used, thus saving on the issuance of the card and using the additional services provided by the respective bank.

- + Each card must have automatic contactless electronic recognition by a card reader for interrogation in the register (or if the bank card is magnetic tape or chip) authenticating the card, receiving up-to-date information and even installing mobile applications for interaction.
- + Student identification code at the university where it is written. In any case, this code may be the national, regional or own identifier of the institution of origin.
- + Each card must have human visual recognition by anyone who can control the presence of the cardholder's photo.
- + There must be automatic optical recognition by a scanner to recognize the registry certifying the authenticity of the card and to receive up-to-date information, via QR code for example.
- + Each card must have the attributes of both the EUT + consortium and the issuing university on it.
- + Each card must have a European student holographic card attributes of a logo or, if it is a hybrid card, to have attributes of additional partners.

Due to the possibility of double-sided use of the card, both sides can have a completely different design to meet the needs of the project. In this way, one side will be the same for all partner universities (see

page 10) and the other is free to add additional functionality. The work on card design will concentrate on the possibility of presenting hybrid cards, both between different organizations and banks (see page 7).

3.4 Part IV : Development and expansion of associated ESC services

This activity will rely on the data exchange, administrative efficiencies and e-administration (to be defined by WP 6.1 and WP 6.2), but will also be a particularly important priority for the development of additional internal and external services and improvements made in the consortium. Each student must have the opportunity to check his/her status and benefit from the administrative services in the EUT+ partner universities with his/her ESC card, and there must be no additional obstacles to his/her residence and study.

The development of services is directly related to the opportunities for travel and accommodation of students. By presenting the results of the surveys, it is clear that the work of partner organizations and universities needs to be improved in providing additional services and facilitating their use. The card should provide numerous discounts, for human health, cultural events, foods, travels, college cafeteria, university library, etc.

A possible option is to use the connections of such student or bank cards as ISIC in the field of services in order to strengthen the functionality of ESC cards and to have a basis for further development and upgrading in the union.

4 Recommendations

Based on the analysis above, it has been possible to formulate the following guidelines and features.

4.1 Main general guidelines

- + Liaise with the European Student Card (ESC) partners with a view towards establishing a formal relationship between EUT+ and that initiative.
- + At the heart of the project is creation on a platform that gives ability to recognize students from all partners universities institutions.
- + The European student card should not be self-plastic, and should be implemented in the student University map, with added details.
- + To explore the possibilities of existing services offered so far in partner universities. Including external and internal. To explore the existing cards between students, faculty and staff. Search for information from card manufacturers at each university.
- + To study the attitudes of students to create a unified card system in the university network of the countries of the alliance. To get acquainted with the existing services and preferences arising from the student status.
- + Based on the two studies, an action plan should be made to provide the most desirable services for students and they should be implemented in the new European Student Cards.
- + Continuously inform, pilot and coordinate each other through the EUT+ Alliance's Common Erasmus Office.

4.2 Main features

The main features that ESC should cover have been identified:

- + Proof of student status
- + Access to all areas with controlled access to universities (libraries, dormitories, etc.)
- + Payment instrument
- + Erasmus right + mobility
- + Digital exchange of documents on program (via Erasmus + Mobile App)
- + Provide for services related, but not limited to:
 - *those typically offered at every partner university*
 - *services or things to pay for studying on campus*
 - *dental care discounts*
 - *Apple Pay*
 - *more gas price discounts*
 - *catering, transportation, bookings and more discounts*

Conclusion

The ESC plan as established is a starting point for the development of the services provided by the partner universities. Each of the institutions must take the guidelines in this report into consideration to best support the registration in ESC platform.

Internal services related to the easier use of the university network by international students should be provided, as well as additional services related to the student's life in the respective country (cultural events, shopping, travel, medical care, etc.)

Student cards must be well protected according to the regulations in each partner country. Their design must be closely related to these regulations and functionality.

Bases on the analysis of internal services and external services, it has been possible to formulate recommendations concerning guidelines and features.

EUT⁺

EUROPEAN UNIVERSITY OF TECHNOLOGY

Deliverable 88

D6.3.1 Plan for European Student Card: Staff summerschool - **D6.3.2 Deployment of ESC services**

Del. Rel. D6.5

WP 6

Description: Organization of a summerschool for staff to establish a plan for ESC associated services ; **Report**

Comments: the raw data from the surveys will be provided upon request to the WP leader

Dissemination level: **PU**-Public

<https://www.univ-tech.eu/phase-1-results>

The content of this deliverable represents the views of the authors only and is their sole responsibility. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

This initiative has received funding from the European Union's Erasmus+ programme under grant agreement 101004088 — Eut — EPP-EUR-UNIV-2020.

Foreword to deliverable D6.3.2

This deliverable assesses the data from each EUT+ partner that is accessible through the European Student Card (ESC) platform, as well as their capacity to exchange data through it.

The status of the use of Erasmus Without Paper is listed. Their registration status to the ESC platform is also provided, as well as the services they provide via the platform.

A list of actions to pursue is defined, with the registration of the Technical University Dublin to the ESC platform being a priority, with next in line the expansion of services proposed via the ESC platform, especially for the Cyprus University of Technology.

This deliverable provides a plan for expanding the use of the ESC platform, which is a step towards the creation of a university of technology at the European level.

Table of Contents

1	<i>Purpose of the document</i>	4
1.1	Scope of the task	4
1.2	Applied methods.....	4
1.3	Evaluation	5
2	<i>Results from the discussions of the working group</i>	5
2.1	Participation in the seminar	5
2.2	Erasmus without paper status	6
2.3	ESC data deployment.....	7
3	<i>ESC data exchange and ESC platform resources</i>	9
4	<i>Conclusions and recommendations</i>	11

1 Purpose of the document

1.1 Scope of the task

The administrative implementation of the European Student Card (ESC) in the EUT+ is an important step to the optimization of students' mobility and students' lifestyle. The platform which is developed under other project funded by the European Commission is still in testing period but its functionalities are fully accessible for the educational institutions. Each university is able to register administrators at <https://router.europeanstudentcard.eu/loghome> who can manage (add or remove) provided services by their own institution and to restrict them to the different users (local or international/mobility students). The data exchange codes for the information transfer between home institution and cloud space of the ESC platform are provided in the technical administrators' profiles of each university. The current task (6.3.2) is related to summarizing of available data in the ESC platform of EUT+ partners and their readiness to exchange different services by their own administrative systems to the ESC users.

1.2 Applied methods

The work team by all eight partners is involved in the implementation of the task and every partner has previously declared the responsible person who gives and processes the information from the name of institution. The applied methods during the common work includes: on-line discussions via video meetings; on-line discussions in Whaller platform. A seminar in hybrid mode on the topic of current task was held during the Sozopol week at the end of June 2022.

For those who were unable to participate in the event an accessible file for the required data filling in cloud space was provided.

For the future work of EUT+ and the facilitation of data transfer between partners and students all participants in the seminar provided their PIC number in ESC platform and their ability for uploading of services based on current state of their own students' cards. The status of partners regarding the use of Erasmus without paper in the last two academic years as working digital process for administration of student mobility actions was also discussed.

1.3 Evaluation

The final evaluation of current state of the partners' availability to provide services is based on the discussions and the declared data by representatives. The performed analyses and recommendations are based on the provided data by partner Universities and the available information in ESC platform.

2 Results from the discussions of the working group

In this section of the document are presented briefly the results from the discussion during the seminar and the provided data from partners' representatives regarding actual status of Erasmus without paper implementation and availability for different services deployment in ESC platform.

2.1 Participation in the seminar

The seminar was chaired by Technical University of Sofia, who is the responsible institution for WP6 and Task 6.3. During the introductory part, the main points regarding European Student Card implementation in the future work of EUT+ and also shared the actual status of partners' work packages liaisons and task managers, was recalled. During the discussion panel, all representatives took an active part in topics covered and shared their opinions for future work over Task 6.3.

2.2 Erasmus without paper status

In the following table is presented the declared by the partners' representatives status regarding the use of Erasmus without paper in their own institutions:

Academic year	Insert name of full partner	2020-2021	2021-2022
Full partner 1 connected to Erasmus Without Paper and using its features (YES/NO)	Université de technologie de Troyes	YES	YES
Full partner 2 connected to Erasmus Without Paper and using its features (YES/NO)	University of Applied Science Darmstadt	YES	YES
Full partner 3 connected to Erasmus Without Paper and using its features (YES/NO)	Riga Technical University	NO	YES
Full partner 4 connected to Erasmus Without Paper and using its features (YES/NO)	Technological University Dublin	NO	YES
Full partner 5 connected to Erasmus Without Paper and using its features (YES/NO)	Technical University of Sofia	NO	YES
Full partner 6 connected to Erasmus Without Paper and using its features (YES/NO)	Cyprus University of Technology	NO	YES
Full partner 7 connected to Erasmus Without Paper and using its features (YES/NO)	Universidad Politécnica de Cartagena	NO	YES
Full partner 8 connected to Erasmus Without Paper and using its features (YES/NO)	Universitatea Tehnică din Cluj-Napoca	NO	YES

The detailed information about responsible technical administrators by all partners and the data exchange through Dashboard platform is an objective of WP5 of the project and they are available in their reports.

2.3 ESC data deployment

The data regarding the registration and PIC numbers of all partners and their availability for uploading services at ECS platform are listed below:

EUT+ partner	Registered YES/NO PIC of institution	Availability for services deployment
Université de Technologie de Troyes	YES PIC 997576228	<ul style="list-style-type: none"> • Access to library • Access and payment in the student canteen
University of Applied Science Darmstadt	YES PIC 986100255	<ul style="list-style-type: none"> • Proof of student status • Access to all areas with controlled access to universities (libraries, dormitories, etc.) • Payment instrument • Public transport
Riga Technical University	Yes PIC 999920718	<ul style="list-style-type: none"> • Proof of student status • Digital identity services • Access to some areas with controlled access to universities (libraries, dormitories)
Technological University Dublin	NO	<i>Only local students card services are provided</i>

Technical University of Sofia	YES PIC 999868532	<ul style="list-style-type: none"> • Proof of the student's status • Access to the library • Services in a student dormitory • Access and payment in the student canteen • Sports complexes and facilities within the campus • Option to connect with a bank account and debit card at the student's request
Cyprus University of Technology	YES PIC 999597223	<ul style="list-style-type: none"> • Access to library
Universidad Politécnica de Cartagena	YES PIC 999828859	<ul style="list-style-type: none"> • Access to all areas with controlled access to universities (laboratories, libraries, dormitories, etc.) • Access and payment in student canteen
Universitatea Tehnică din Cluj-Napoca	YES PIC 999897244	<ul style="list-style-type: none"> • Access to all areas with controlled access to universities (laboratories, libraries, dormitories, etc.) • Access and payment in student canteen

Seven of all partners have been already registered in the platform for ESC managing and only Technological University Dublin has not been done it. Most of the partners have the availability to provide services as: Access to all areas with controlled access to universities (laboratories, libraries, dormitories, etc.); Access and payment in student canteen; Proof of student status and Payment in local Universities structures. Only Cyprus University of Technology is not able to provide additional services except the access to the library.

Regarding the banc accounting and common implementation of debit and ESC student card only Technical University of Sofia is able to provide this service under the agreement with DSK bank. The e-payment option is one of the priority aspect of the ECS development according to the European Commission purposes. Other partners shared the results from their inquiry in local banks and card issuers which do not have politics to cooperate their plastic cards with other services. The major

debit card issuers, Visa and MasterCard, refuse to issue joint student cards because of their security and privacy policies.

3 ESC data exchange and ESC platform resources

In this report's section are presented some key points regarding the organization of service deployment by Universities at the ECS platform. The source of data is ESC guide uploaded in the platform (<https://router.europeanstudentcard.eu/docs/deuinfo>).

The Data European University Info (DEUInfo) is the name of a standardized, readable data area to reinforce the security of the European Student Card. This zone contains the ESCN, a digital signature and a certificate that allows to prove the authenticity and the integrity of the European student card. With this zone, we can expect the development of new services that require a high level of security like payment or access control. Writing DEUInfo is a prerequisite to develop Data Management Application (DMA).

Currently, the DEUInfo is designed to DESFIRE (EV1 and EV2) chips by NXP, but the specification aims to ensure a future portability to any other ISO 7816-4 compliant IC or mobile phone chips.

The key features are the following:

- + Data should be accessible in the clear, without prior authentication
- + Data integrity could be validated thanks to a digital signature and a certificate
- + The size of the data should remain as small as possible, to save storage for the universities or partners
- + The system should be based on open and standard features, OpenSSL being the underlying tool for all examples.
- + PKI Architecture
- + Every university shall create and manage its own University authority.

At every university, this authority has the following roles:

- + Create the university's private key(s) and have the corresponding certificates integrated in the PKI hierarchy
- + Populate the student's card with appropriate data
- + Sign the data and write the signature, together with the corresponding certificate, onto the student's card.

The DEUInfo authority is the supervisor of the system. This top-level authority has the following roles:

- + Sign the certificates issued by the universities
- + Manage these certificates (backup, revocation)

DESFIRE Application. The standardized application DEUInfo contains:

- + ESCN is the European student card number.
- + SIGNATURE is the European student number concatenated with card UID. This concatenation is encrypted by the private key of the university intermediate CA.
- + UNIVERSITY CERTIFICATE is the certificate created by university intermediate CA from university root CA, DEUInfo intermediate CA and DEUInfo intermediate CA (see PKI Architecture).

4 Conclusions and recommendations

This report was developed based on the performed inquiries, analyses, and discussions. In order to facilitate future information exchange activities between the partners, the personal identification codes of the universities in the ESC platform are provided. Technological University Dublin is still no registered to the data basis and this is one of the main recommendations, this action to be performed by the responsible people as soon as possible.

Most partners are willing to provide basic services through the platform when it becomes active for working with students. The next recommendation is directed to expanding the services which Cyprus University of Technology could provide for its own students and for those of EUT+.

Finally, the services concerning the e-payment and bank accounting is a key point regarding ESC implementation which has to be intensively developed. In this context the common opinion of all participants in the working group of 6.3 is that national legislations and politics have to be adapted to possibilities to jointly use of debit and student card.

In order to successfully introduce all functionalities of the European Student Card for the needs of EUT+, it is necessary to have a clear strategy from the European Commission regarding the actual commissioning of this attribute. The national policies of the countries where the partner universities are located also need to be adapted and operational. As long as these conditions are not met, the integration of the ESC into the EUT+ can only be developed at a conceptual level.

Next important point is that the EUT+ partners should strive to ensure similarity in the services offered through the students' cards when the real educational process throughout the eight universities begin. In order to proceed to ensure these conditions, during the implementation of the next task (6.3.3), each of the partners will explore the possibility of expanding the services offered by the student cards of their own students and their subsequent integration into the work process. The availability of developed services is a prerequisite for their successful inclusion in the ESC platform.