IO1: PLATFORM DEVELOPMENT
TECHINICAL BLUEPRINT PROPOSAL

ErasmusX

Online Courses for Mobile Students

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1. INTRODUCTION

This use-cases report will serve as a reference to illustrate the main ideas for the architecture of the ErasmusX central platform. This strategic planning document will serve as a reference point during the initial phase and will allow specifying which features/components need to be included and delivered for a functional beta version.

As indicated on the project application, once the online courses have been certified and the platform for the universities of the project (consortium) has been verified, it will be possible to open the availability to the rest of the universities in the EUF network that will be interested to join the partnership. Later and if we achieve main goals, to all European universities that wish to join. For the moment, this is a pilot.

2. IO1 PURPOSE

The aim of this Intellectual Output will be to create a centralized online platform as the main interface of the project, a platform that will guide users to the sections designed specifically for staff and students, at a time that offers different contents for each target group. The European University Foundation (EUF) will be the leader of this IO, focus on the creation and overall management of the central portal.

The EUF have 12 days as a "researcher" for the identification of core features (task 1 - IO1), and 110 days as a "Technician" for the development of tasks 2 to 8. Regarding these last ones, and after estimations, the organisation expects to use the following average of days for each of the different tasks mentioned above:

Initial version
(70%)

T2/ Development of the platform
T3/ Internal testing
T4/ Integration of courses
T5/ creation of the course catalogue
T6/ Promotion of the course catalogue

Beta version +
Final version
(30%)

T7/ Testing of the platform
T8/ Release of the platform

3. REQUIREMENTS

The requirements for the ErasmusX central platform are identified in this section, they are classified in the following categories:

- **Operational requirements (OR):** they define the actors that interact with the platform. The actors can include HEIs, academics, students, etc.

- **Design requirements (DR):** they identify the initial practices to build.

- **Technical requirements (TR):** it makes reference to relevant functionalities (system features). The core functionalities define the different functionalities that the platform needs to support. Under the scope of this deliverable, these requirements are thoroughly specified, in order to effectively design the ErasmusX platform architecture.

OPERATIONAL REQUIREMENTS (OR)

As mentioned above, OR makes reference to user roles. The roles of actors on the ErasmusX central portal will be the following:

- **Academic staff:** university teachers already delivering courses throughout the selected institutional MOOCs/or interested in to participate and upload their own course.

- **Erasmus students:** students involved in a grade or master's degree and going to mobility process for study or to do a traineeship.

- **University administrative staff:** administrative staff at IRO or dealing with Erasmus students (coordinators) at universities will have a specific user for the implementation of several tasks described under the next point (TR).

- **Administrator:** this user will be reserved for the European University Foundation, in charge of the management and administration of the portal.

DESIGN REQUIREMENTS (DR)

This section will present an initial idea about how the main page of the central platform will look like. First of all, the consortium needs to agree on a name for the domain. The EUF suggest: www.erasmus-courses.eu

The main page of the central platform will include on the top, the logo of the project as well as 4 bottoms in different colors (accordance with the tones of the logo): Login, Catalog, Resources, Contact. Each of these bottoms will include different functionalities by clicking on them.

At the center of the main platform interface, a brief video with explanations about the main functionalities of the website and the project could be included, helping users and visitors to navigate throughout the platform as well as contributing to the project dissemination activities. According to currently available resources, the EUF and the University of Alcalá won't be able to create such video. It is requested to other partners to estimate if they have a team of experts for the development of such material. Otherwise, new alternatives will be explored if the initial video ideas can't be implemented due to a lack of resources.
Moreover, a sign-up bottom should be also included within this main interface of the platform.

Under the above-mentioned video, a short description of the project will be presented, as well as small circles with the partner's logo inside. By clicking on these circles, we will be redirected to the partners' websites with the aim to get all the main information about the university/institution.

Going down and after these logos presentation, should be included in the logo of the European Commission co-funded project, and a section with the sitemap. At the end of the main interface, some bottoms could be included with the ErasmusX logo and the European Commission logo (co-funded project by the EU Commission).

➔ **The Platform In Images**

TECHNICAL REQUIREMENTS (TR)

As mentioned above, in this section we will explain more in depth the core features that should be included on the central platform.

➔ Authentication & Authorization

As indicated, a button on the top of the main interface will be created for login purposes. By clicking on him, the different actors (Erasmus students, administrative staff, academic staff, administrator) will find different functionalities according to their particular profile to fully navigate throughout the website.

Regarding the registration of new users, authorization and authentication, it will be possible by deploying connections with eduGAIN and the ongoing EUF project MyAcademicID in the case of students, and via the Dashboard, in the case of institutions. Please, for more information take a look below on "Development Perspectives". Moreover, the involvement of students in the online courses will be ensured and verified by their home or host university.

A CAPTCHA must be included also at the first steps of the authentication with the aim to prevent a number of security breaches.

For those users who want to unsubscribe, information will also be provided.

➔ Project & Institutional Profile

On the main page and as already indicated on this report, a brief description of the project will be included as well as an explanatory video for promotion purposes and clarification about the portal main functionalities.

Regarding "institutional information", some independent buttons will be presented on the main page (as indicated on DR - the platform in images) with the logos of the partners involved in the project. By clicking on the logo's, the visitor will be redirected to the website of each partner institution with the aim to have first-hand information.
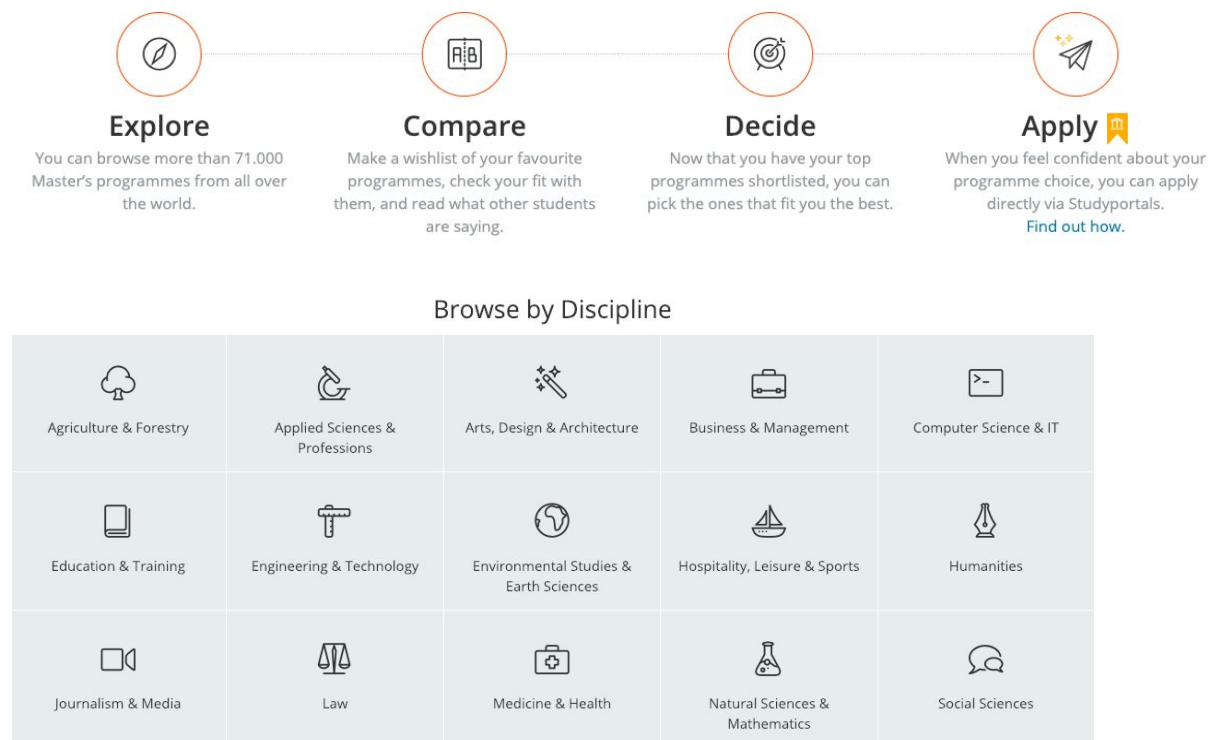
➔ **Search/Explore**

It would be interesting to include, on the catalog interface, a search bar component to explore/filter the catalog courses by discipline and country/university providing the course.

➔ **The Catalog**

One of the main objectives of ErasmusX will be to offer a catalog of online courses available for exchange students taking part in Erasmus mobility for study or training purposes. After the mobility process, students will be able to validate such courses for a certain number of ECTS that will be established by the consortium during the project.

By clicking on this bottom (placed on the top as indicated), we will be redirected to another interface. Despite to include a long list of courses (+/- 60) which will complicate the navigation of the user, we suggest to include several filters based on the university, country location, and the discipline (engineering, computing, economics, business, education) to facilitate the visibility. It would be also important to explain relevant information regarding the different functionalities and benefits that students can obtain if decide to register, such: apply, decide, and explore. Instead, the figure below illustrates an example of this:

Explore
You can browse more than 71.000 Master's programmes from all over the world.

Compare
Make a wishlist of your favourite programmes, check your fit with them, and read what other students are saying.

Decide
Now that you have your top programmes shortlisted, you can pick the ones that fit you the best.

Apply 🏛
When you feel confident about your programme choice, you can apply directly via Studyportals.
Find out how.

Browse by Discipline

Agriculture & Forestry	Applied Sciences & Professions	Arts, Design & Architecture	Business & Management	Computer Science & IT
Education & Training	Engineering & Technology	Environmental Studies & Earth Sciences	Hospitality, Leisure & Sports	Humanities
Journalism & Media	Law	Medicine & Health	Natural Sciences & Mathematics	Social Sciences

The catalog will be visible for everyone navigating throughout the platform, as well as information of each particular course such content information and modules, application deadlines, accreditation/ECTS recognition, requirements for registration, duration, university and teacher delivering the course. Nevertheless, only students who have been registered and login will be able to enjoy from certain functionalities such the registration into the course. As the central platform of ErasmusX will be just a site to centralise information, the student will be redirected to the MOOC (Federica, Moodle, Blackboard) hosting the course of their choice to register. The involvement of students will be ensured by their home or host universities.

➔ Resources

Information for academic staff and administrative staff/coordinators will be provided under this bottom. We suggest to include publicly available information about the benefits for staff to register on the website, deliver courses or become partners by using the same "circles" idea than presented above under the "catalog" section.

Regarding those staff already registered into the platform, some tools and guidelines will be included under this "resources" section with: common evaluation methodology of the courses; how to deliver innovative courses with high-level standards; upload new modules to the course catalogue; edit and update their own existing modules on the different MOOCs; view the registered students at any moment; where to visualise the supervision and evaluation of their students; upload the final evaluation to the central platform; guidance to work with the e-learning platforms used in this project (links to the best tutorials in the internet), etc.

➔ HelpDesk

The website will have a contact button (on the top) with an FAQ option for students and institutions. Information contact of the institutions providing the online courses on the catalog, and hosting the selected MOOCs (Federica, Moodle, Blackboard) will be included.

➔ Map of the website

At the end of the main interface, a sitemap should be included to list the different pages/options of the website.

4. DEVELOPMENT PERSPECTIVES

Erasmus+ App/Dashboard

Both the App and the Erasmus Dashboard are built to serve the function as a single point of access for students and HEIs respectively. The connection with the Erasmus Without Paper as well as MyAcademicID project ensures the technical execution of such task and hence allows to connect crucial services and put them conveniently at the fingertips of the users. Both platforms already have a solid user-base and are actively used - the Erasmus+ App has been downloaded more than 55,000 times and almost 800 HEIs have requested access to the Erasmus Dashboard.

The Erasmus+ App already enables students to receive the most up-to-date information from the higher education institution as well as peers, student organisations as well as the EC, but also to easily use the Online Learning Agreement platform and get the latest updates. In the future, the app will allow students to apply for Erasmus mobility as well as get easy access to even more student services.

On the other hand, the Erasmus Dashboard serves as a management platform for the HEIs to interact with the mobile students as well as partner institutions. It is directly connected to the Erasmus+ App and in the future will offer even more functionalities for the HEIs to support and manage mobile students.

MyAcademicID

MyAcademicID aims at establishing a critical digital infrastructure that enables secure and seamless exchange of data to provide services related to student mobility. The project focuses on integrating the European Student Card and eduGAIN student identification systems, as well as on establishing bridges with the eIDAS Interoperability Framework. This will pave the way for students to identify and register themselves electronically at HEIs when going abroad on exchange.

OpenU

OpenU (led by Paris 1 and for which the technical development is undertaken by the EUF) will contribute to the creation of the eU.university online hub and will notably provide the following outcomes:

1. Establishing a single point of access for online learning in Europe, putting open educational resources at the fingertips of students, leveraging on synergies with existing providers and communities such as the Erasmus+ mobile App;

2. Providing pedagogical cooperation methodologies to academic communities that can accelerate the joint delivery of courses, enhance curricular cooperation and provide useful expertise in the field of digital learning and pedagogy;

3. Supporting the establishment of European universities by creating a shared digital infrastructure that offsets the need for developing redundant online platforms;

4. Striving towards a sustainable integration of flagship projects such as the European Student Card. Systemic changes will be enabled through the platform itself as it will support a) existing bilateral and multilateral university partnerships; b) enable HEIs to identify new cooperation avenues; c) allow new stakeholders to integrate and/or index their educational resource and tool; d) allow students and academic staff to seamlessly navigate between connected platforms using single authentication.

When seeking to develop the sustainability of the ErasmusX platform, the OpenU hub could host the functionalities of ErasmusX and make them available to a wider community. The ErasmusX platform could also take inspiration of some of the technical features deployed for OpenU (HE registry, scientific classifications, etc.).

5. CONCLUSION

In this deliverable, an initial draft version of the ErasmusX central platform architecture was presented. The design and functionalities of the portal has been driven by the outline of the features identified on the "requirements" section.

This report has been defined according to the needs of the project and the capacity available on the development team. It is foreseen that additional requirements or modifications on the current identified functionalities may occur during the development and testing phase of the platform as well as **after collection of feedback from the whole consortium**.