JEDI White paper: an integrated European framework for engineering education

Deliverable D4.1

Date: March 2024

1

White paper: an integrated European framework for engineering education

Project title: Joint European Degree Label in Engineering – Toward a European Framework for Engineering Education

---

Project acronym: JEDI

Grant agreement: 101114604

Due date: 31/03/2024

Actual submission date: 27/03/2024

Project start date: 01/04/2023

Duration: 12 months

Work package concerned: WP4

Concerned work package leader: UNIVERSITÉ TECHNOLOGIQUE DE TROYES UTT - (FRANCE)

Dissemination level: PU [1]

Authors: Lucia Linares, Isaac Serody, Pierre Beauseroy

---

[1] PU – Public; PP - Restricted to other program participants (including the Commission Services); RE - Restricted to a group specified by the consortium (including the Commission Services); CO - Confidential, only for members of the consortium (including the Commission Services).

2

HISTORY OF CHANGES			
Version	Publication Date	Status	Authors
Version 1.0	24/3/2024	Draft	UPM UTT
Version 1.1	26/3/2024	DRAFT	UTT UPM RTU
Version 2.0	27/3/2024	First version	UTT UPM RTU

JEDI Partners

Name	Short name	Country
UNIVERSIDAD POLITÉCNICA DE MADRID	UPM	Spain
ÉCOLE NATIONALE DES PONTS ET CHAUSSÉES	ENPC	France
ISTANBUL TEKNIK UNIVERSITESI	ITU	Turkey
UNIVERSITATEA POLITEHNICA DIN BUCURESTI	UPB	Romania
BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM	BME	Hungary
UNIVERSITE DE TECHNOLOGIE DE TROYES	UTT	France
HOCHSCHULE DARMSTADT (UNIVERSITY OF APPLIED SCIENCES H-DA)	H-DA	Germany
UNIVERSIDAD POLITECNICA DE CARTAGENA	UPCT	Spain
TECHNOLOGIKO PANEPISTIMIO KYPROU	CUT	Cyprus
TECHNICAL UNIVERSITY OF SOFIA	TU-SOFIA	Bulgaria
UNIVERSITATEA TEHNICA CLUJ-NAPOCA	UTC	Romania
CHALMERS TEKNISKA HOGSKOLA AB	CHALMERS	Sweden
UNIVERSITE PARIS SCIENCES ET LETTRES	PSL	France
UNIVERSITAT POLITECNICA DE VALENCIA	UPV	Spain
RIGAS TEHNISKA UNIVERSITATE	RTU	Latvia
TECHNOLOGICAL UNIVERSITY DUBLIN	TU-DUBLIN	Ireland

JEDI Associate Partners

CTI: Commission des Titres d'Ingénieur

ENAEE: European Network for Accreditation of Engineering Education

4

Table of content

JEDI Executive Summary

In the field of policy experimentation in higher education under the Erasmus+ program, the Joint European Degree label in engIneering (JEDI) is a response to the 2022 Erasmus+ call for proposals ERASMUS-EDU-2022-POL-EXP-EUdegree - Pilot a joint European Degree Label.

The general objective of JEDI is to propose a prototype for a 'Label' for European joint degrees or programmes. This proposition/ or project has been co developed by 16 HEIs from three European alliances (EELISA, EUt+ and ENHANCE) accompanied by 2 associate members ENAEE and CTI. The specificity of the JEDI is it's focus on engineering, technology, and science-oriented education. Built on the shared ambition of the consortia to redefine the education of engineering and technology degrees in Europe, the JEDI project has the will and potential to contribute to the development of an integrated European Engineering Education Area.

The JEDI project started the 1st of April 2023 for a duration of one year. It has been structured around four work packages (WPs) that focus on four main themes: governance; review of the actual situation; the JEDI label prototype definition; future evolution.

This document reports on the WP4. WP4 has three crucial objectives: to communicate the project and its results, to disseminate the outcomes within our universities and amongst external consortia implicated in the development of joint degrees and to prepare recommendations for policymakers, accreditation agencies and European HEIs interested in implementing this label.

This project has not received any additional funding; the costs have been paid by EU funding and partners according to the initial budget.

7

1 About the deliverable

After mapping the existing joint degree programs in European educational institutions in the STEM (Science, Technology, Engineering, and Mathematics) field (WP2), a JEDI label prototype has been proposed (WP3). The main aim of this label is to evaluate and assess the transnational cooperation process implemented by the evaluated programme, its pedagogical framework that must include student mobility and embrace some general common values such as multilingualism and inclusiveness. In this deliverable the Joint European Degree Label in Engineering (JEDI) project takes a step forward towards the production of an ambitious long-term vision for the European label based on views from stakeholders involved or interested in the definition of an integrated European framework for engineering education. More precisely this deliverable aims to answer 4 main questions:

- How to facilitate the development of joint degrees in the European education area?
- How to measure this development?
- What institutional framework would enable this development?
- What institutional transformations should be made?

This part of the project involves two essential and correlated aspects that will be presented throughout this deliverable:

- Exchange with stakeholders to receive feedback on key issues for the future such as the possible impact of a label or a diploma for HEIs, the important features that would help to disseminate its adoption by many HEIs and its future.

- An extensive analysis of the stakeholders' feedback and further developments about the possible future of the label.

In this deliverable it is assumed that the criteria to award the JEDI label are defined as done by WP3. So, the criteria are not discussed here except when evolutions are considered.

The deliverable is structured as follows: in next section the overall organisation of the work is described. The third section is about the description of the methodology to create the different focus groups and the main issues addressed to each focus group. The fourth section is an extensive presentation of the collected data in the focus groups. The fifth section is an analysis of the collected data, and the last section is a blueprint about the future of joint degree labels that summarize the conclusions drawn from the focus groups and the consortium developed ideas about the future evolution of JEDI label toward a European diploma. The conclusion connects the views developed in this deliverable with broader concerns.

8

2 Organisation of the work

Two preparatory meetings were held in November and December 2023 (the 8th of November for kick off and the 12th of December to structure our approach to data collection. The aim of these two meetings was to agree on the conditions and means of collecting information, the organisation of the WP and to define the action plan, schedule, target information and settle operational issues.

2.1 Meeting 1

During the kick-off meeting of the work package, the general planning of the work was adopted, the mean to collect stakeholders' positions and how to choose the stakeholders was agreed.

We decided to organise 4 focus groups, to form 3 stakeholders' group and one mixing all the participants' categories to synthetise the collected views.

All attendees were invited to propose participants for these different groups.

The focus groups were formed via a direct contact with people who responded to the invitations that were send (see annex 2). Then, the organisation of the different meetings was established through the availabilities of the people in charge of the meetings and the people invited (focus groups detailed in annex 1).

The initial work schedule was discussed and adopted as presented in Figure 1.

	08-nov	15-nov	22-nov	29-nov	06-déc	13-déc	20-déc	27-déc	03-janv	10-janv	17-janv	24-janv	31-janv	07-févr	14-févr	21-févr	28-févr	06-mars	13-mars	20-mars	27-mars
Definition of interviewed groups																					
Identification of persons asking questions																					
Writing of the questionnaire																					
Review questionnaire				Meeting?																	
Send questionnaire to groups																					
Interviews																					
Analysis of interviews											Meeting										
Co-creation + dissemination and future												Meeting									
Deliverable Draft																	Meeting				
Final version																					
Feedback for stakeholder																					

Figure 1 – Initial GANTT of WP4

2.2 Meeting 2

During the second meeting it was decided who would be interviewed and, among the participants, who would be the facilitator and who would be the observers of the focus groups (all mentioned as moderators in the participant lists).

The questions to raise during the focus groups were discussed, and an asynchronous review process was organised using shared documents to prepare the focus groups.

9

In accordance with GDPR principles written in the Grant agreement, it was agreed that all interviewees would be forwarded a letter explaining the purpose of information shared in the interviews and requesting their permission to share any information collected in the interview process (see annex 3). Participants would be forwarded consent forms, requesting agreement to the uploading of videos, audio, or transcription of their intervention. All participants' consent was requested to allow data to be shared and reused. All data (except for personal contact details) would be available for verification. All data stored would be anonymized. Consent forms would be stored.

Finally, the following action plan was adopted (Figure 2). It excludes the analysis of the interviews and the drafting of the deliverable, which takes place after these actions but involves a more limited number of people and does not require the same level of coordination and steering.

1 — Invitation to propose the people to be interviewed and the people who will conduct the interviews (**all partners**)

2 — Write questionnaire proposals (**UTT & UPM**)

3 — Link to questionnaire proposal to review (**partners who want to participate**)

4 — Send questionnaire and doodle to interviewed people (**UPM**)

5 — Define groups and dates (**UTT & UPM**)

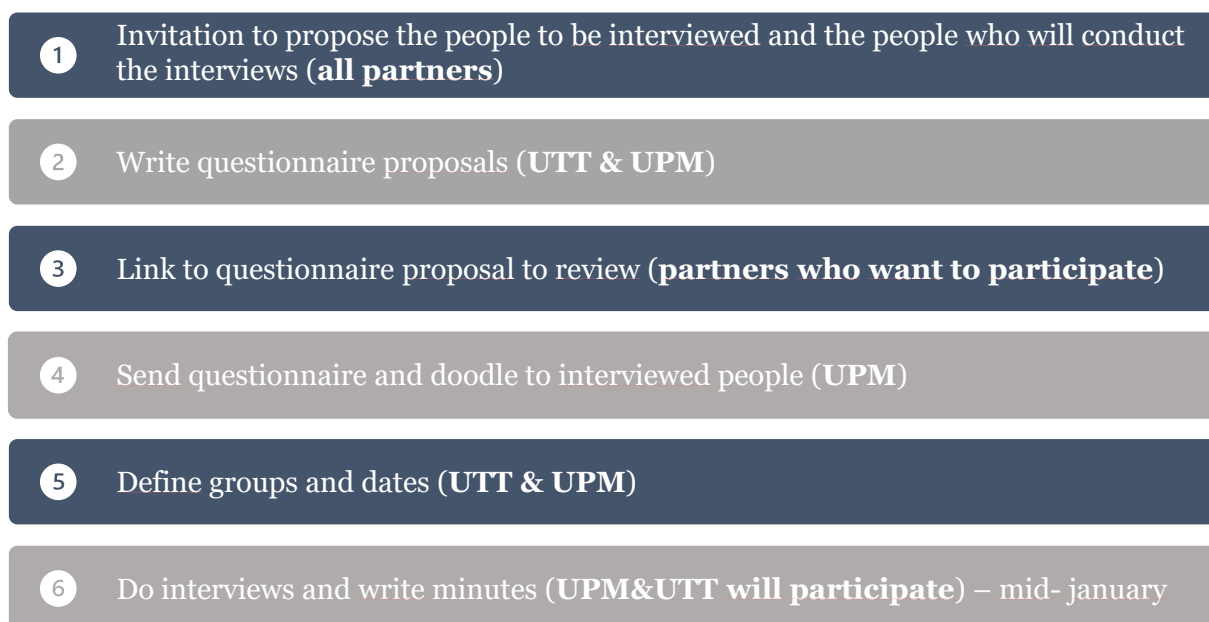6 — Do interviews and write minutes (**UPM&UTT will participate**) – mid- january

Figure 2 - JEDI WP4 action plan

This ideal planning and action plan shifted by a month du to professional constrains of the member of the WP, but its structure remains the same.

3 Focus Groups Methodology

Among the many methods of data collection, the members of the WP opted for the organisation of focus groups because of the qualitative nature of this approach. This is a group interview technique in the form of a semi-structured discussion, moderated by a neutral facilitator in the presence of at least one observer, the aim of which is to gather information on a limited number of pre-defined questions. It is a qualitative data collection technique that is fully in line with our approach and objectives.

When well conducted, a focus group stimulates different points of view and brings out a variety of new ideas. It allows us to gather the opinions of several people at the same time and to benefit from the group dynamic.

3.1 Groups' definition

We identified 6 categories of stakeholders:

- Students
- Universities
- Employers
- Professional bodies
- Politicians
- Accreditation agencies

To fully benefit from the dynamics of the groups and to reduce the number of interviews, we structured the work into 4 focus groups with a two-stage strategy:

- Gather data from the 6 categories identified by 'pairs' of categories sharing similar issues (3 focus groups) and carry out an initial simple analysis of the feedback from these representatives.
- Test the results of the analyses carried out during the first 3 focus groups with a fourth panel.

The pairs of categories formed are:

- Students and universities, who provide a "professional" view of the problem.
- Employers and professional bodies, who are on the side of the users of the university system.
- Authorities and accreditation agencies, who set the legal, regulatory and financial framework and the conditions under which university education is provided.

The fourth panel brings together representatives from all these categories. The questions were more specific and integrated elements of reflection resulting from WP3 concerning the definition of the label and questions raised by results of the analysis of the data collected during the first 3 groups of interviews.

3.2 Groups' composition

Choosing the composition of the groups, drawing up the questions and organising the groups are all important aspects in ensuring that a focus group runs smoothly, especially as the interviews are conducted by videoconference, which somewhat alters the dynamic of the debate that can develop during these interviews (creating the conditions for free and fluid discussion between people who don't know each other connected remotely is a little more difficult than in the context of a face-to-face meeting).

3.3 Structures of the questionnaires

The questionnaire of each focus group is divided is 3 sets of questions. An introductory question made to launch the discussion and to make speaking of each member of the group easy. A group of common questions for the 3 first focus groups and specific questions more related to the group itself.

The common questions are:

- What difference do you make between a Label and a Degree?
- What are the added values of the Label?
- What could be the criteria to evaluate the degree of success of a label?

Note that the questions list should not be understood as exact answered questions but more as issues raised during the undergoing discussion. They correspond to issues JEDI members consider important to tackle.

Important:

Note that at the time of this work the distinction between Joint European Degree Label, Joint European Degree and European Degree was not clearly established. But, for clarity's sake, these terms are used in the analysis as long as they do not distort the meaning of what was said. **But the term Label alone is applied when no distinction is made between these 3 different levels of certification, so that arguments or discussions applies to all 3.**

3.4 Conduct of a focus group

Each focus group started by the facilitator's quick general presentation of the JEDI label (see annex 4). The JEDI goals, and outcomes, elaborating with a JEDI label prototype and elements for the future were introduced. Then the meeting coordinator asked for participants' consent for being recorded and then could follow the debates and discussions surrounding the label's different topics. The conversation was conducted through a series of questions asked to the participants regarding the current situation and the future of the JEDI label (detailed for each focus group in the corresponding section).

Each meeting lasted approximately two hours. An example of meeting provisional planning is shown in figure 3.

JEDI presentation	9:00 – 9:10
General presentation of the project.	Pierre Beauseroy
Focus group presentation	**9:10 – 9:30**
Recording conditions & personal data protection	Lucía Linares, Project Manager
Round table	All participants
Plan discussion	Pierre Beauseroy, WP leader
Discussion	**9:30 – 10:45**
Purpose of a label	
Comparison with a diploma	
Motivations for a label adoption	
Criteria analysis	
Acknowledgments	**10:45 – 11:00**
Summary and review	Pierre Beauseroy, WP leader

JEDI members	University / Alliance
Pierre Beauseroy	UTT – EUt+
Zariņš Emīls	RTU – EUt+
Mattias Bingerund	Chalmers - ENHANCE
Nilüfer Ülker	ITU - EELISA
Lucía Linares	UPM - EELISA

Figure 3 – Example of Focus group provisional planning

13

4 Collected data

4.1 Principles of analysis

A written transcript was made available for JEDI members to analyse. From what was said during the meetings and written in the transcripts, a summary of the different topics, agreements, disagreements, and specific issues have been made. Then, a thorough analysis has been made by the JEDI members to write this section of the deliverable.

4.2 Effective schedule

The effective schedule has been mildly different compared to the planned one (Figure 1) but keeps its overall structure. One can note that 2 meetings have been added (italic):

- Students and Universities focus groups: Friday 12 January 2024
- Employers and Corporations focus groups: Friday 19 January 2024
- Accreditation agencies and National Leaders focus group: Monday 29 January 2024
- Synthesis focus group: Monday 5 February 2024
- *Meeting of WP members to discuss data analysis: Wednesday 21 February 2024*
- *Interview with a member of a non-EU university: 5 March 2024*

In addition, bilateral meetings were held with a representative of ENAEE and a representative of the CTI, which also provided inputs for the reflections, opinions and perspectives developed in the last section of this deliverable but that were not recorded.

4.3 Focus groups

4.3.1 Focus group "Students and Universities" (12/01/2024)

Participants

The participants external to the project were:

- Mobility Officer – TU Berlin.
- Mobility Officer – Politecnico di Milano.
- Vice-dean for international relations at the Telecommunication Engineering School – Universidad Politécnica de Madrid.
- Student representative – UTT.
- Professor in charge of joint degrees in EELISA – Istanbul Technical University.

The project members who participated in the focus group were:

- Pierre Beauseroy – UTT.

14

- Nilüfer Ülker – ITU.
- Mattias Bingerud – Chalmers.
- Zariņš Emīls – RTU.
- Lucía Linares – UPM.

Specific Questions

- What impact do you expect a Joint European Degree Label will have?
- What specific steps would you be prepared to take to add a label to your diploma?
- What difficulties can you foresee to spread the label?
- How can we ensure that the criteria are consistent and maintained over time?
- What can a Label become in 10 years?
- How can we promote a Joint European Degree Label?

Thematic view of discussed arguments

The main points and arguments of the discussion are summarized below and organised by themes that do not necessarily reflect the timeline of the exchanges.

Label and degree

Although there are confusions about the difference between a joint degree and a joint European degree label, a joint degree is defined by all participants as a single certification which provides a very clear framework for qualification recognition whereas a label is considered complementary focusing on different type of criteria and delivered alongside the certification.

Compared to a national degree, a label is an opportunity for the recognition of cross-disciplinary knowledge, which is coherent within the European educational system.

A label is an addition to a diploma, it cannot exist without a diploma and is not a qualification in itself. It certifies additional competences compared to a degree: *"… a label might certify some additional competencies to a qualification but doesn't constitute a qualification itself"; "The diploma is the title, the one recognized by the country or the university using it, and that gives you access to upper level of education of official education. The label is just an add on to the diploma and maybe it could be useful to specify the competencies or skills. It may be more addressed to companies or the business world or concerns the employability of the students getting it."*

The label is considered less clear, and it seems more complex to establish its presence in society (there may be more awareness when promoted and implemented within the university, but not externally).

It was also mentioned that the significance of labels varies among universities; while top-tier institutions may not prioritize them, others striving for higher recognition may find it valuable based on quality assurance approach.

Joint degrees are difficult to implement: "…*we as an institution, we don't want to implement joint programs in the sense as the European Commission understands them, because they are just a bureaucratic monsters*".

Criteria

The criteria of the label (label means Joint European Degree Label or Joint European Label or European Label) must be evaluated to give value and trust to the Label.

The most important aspect to ensure the review of the criteria is to establish a task force/board that guarantees the proper revision of the label and receive feedback from stakeholders, ensuring proper oversight from the agencies. This is typically what appends with EUR-ACE that was revised in 2018. Therefore, criteria would need to be modified over time, with a continuous review process performed by the board responsible and stakeholders through questionnaires. This process responsibility could typically be untrusted to an organisation such as ENAEE.

The accreditation criteria, their interpretation and the evaluation process must be the same in all EU countries.

Quality assurance, promotion, and recognition

The example of the EUR-ACE label, which remains little known among students despite its widespread use (over 4,000 degrees have been awarded the label that was created in 2007 and updated in 2018) and the promotion it receives, raises doubts about the potential impact of a new label in the European Higher Education Area. The question about means to quickly raise awareness about a new label is discussed without precise proposition.

The panel agrees that companies do not seem to be very aware of the existence of labels and that the existence of labels in addition to joint degrees and/or dual degrees might lead to confusions if no attention is paid to a clear definition and a clear promotion.

Promotion can be done by implementing participation incentives (i.e. grants) for a label, so that a student considers the possibility of obtaining

16

a degree with that label instead of pursuing a dual degree, which is, at date, more prevalent in the academic area.

Added Value and framework for European engineering education

The importance of a Label for students could come from the attractiveness to differentiate their degree from other degrees. This idea emphasizes the importance of proper integration into the job market and promotion. Therefore, to promote the label one needs to highlight what students achieve with the label, what makes awarded students stand out from others.

For universities obtaining a label helps to differentiate themselves, making their programs more attractive to students and enhancing their job market prospects. So, employers' recognition and the potential advantages labels offer in terms of differentiation, mobility, and international recognition is of first importance for universities.

Long term vision

Harmonizing the European Higher Edication Area is challenging within such a short time frame. The idea of having educational degrees recognized across all countries may be considered as an option for a long run. Therefore, a joint European Degree Label could be considered a first step toward this goal.

The label will achieve its goal only if it is considered by relevant stakeholders as meaningful. Involving companies and NGOs to provide some opportunities as part of labelled joint degrees will add more value.

We must encourage institutions to adopt the label. Different kind of incentives can be used (grant programs, specific internships…). Increasing the number of institutions offering programs with the label will enhance its visibility and value.

While the vision of a universally recognized Joint European engineering degree or European engineering degree is considered ambitious and essential, focus group members mentioned the need for significant national changes to reach that goal. The path toward this achievement seemed not straightforward.

The move to a Joint European Degree or even to a European Degree (in the sense introduced by EC in January 2024) should be done maintaining, for a period at least, the corresponding national degrees. It could be, in France for instance, a joint European Master's degree as a double degree with the corresponding engineering degrees.

Other comments

17

There is mention about the importance of communicating with the students and employers' population, but at no point during the focus group was discussed the importance of engaging with joint-degree owners of existing programs. These discussions have been considered while designing the JEDI prototype in WP3.

The label must adopt a flexible approach through constant review of the criteria depending on the context, potential stakeholders, and new procedures. If we start building a label that is too rigid, it will be exclusive to a few students (mentioning the inclusion criterion).

There is no mention that a degree opens door to enroll in another higher degree, from Bachelor to Master and from Master to PhD for instance, while label does not. One can assume that the point was so obvious for all participants that it was not worth discussing it.

There is a challenge in communicating the significance of labels to both students and employers.

The definition of a clear and European harmonized framework for the Joint European Degree Label or a Joint European Degree, considering both institutional and student perspectives was considered as a necessary condition for the success of such a Label/Degree within the European Higher Education Area: "…*institutional, companies having students have no idea what they're academic world is doing, I'm not talking just about the label, but also double degree or join degree. I think there is a lot of confusion more than before*".

Facilitator's comment

Throughout the conversation, the balance between ambition and practical implementation emerged as a crucial consideration that mitigated the position of panel members.

Focus group "Unions and professional bodies" (19/01/2024)

Participants

The participants external to the project were:

- Institutional Relations Director - Colegio de Ingenieros de Telecomunicaciones.
- Professor - Evaluation and Accreditation of Engineering Programs in Türkiye.
- Senior Manager – Chamber of Industry and Commerce Darmstadt Rhein Main Neckar.

The project members who participated in the focus group were:

- Pierre Beauseroy – UTT.

- Nilüfer Ülker – ITU.
- Mikael Enelund – Chalmers.
- Luis Javier Lozano – UPCT.
- Lucía Linares – UPM.

Specific Questions

- If any, what would be the added value of a label on the job market?
- What do you expect to be recognized by a European label?
- What should a European diploma recognize?
- What difference would a European diploma make? What level of recognition is involved?
- Can you envisage considering the diploma of a labelled student as equivalent to a national graduated student? Could such a student become a member of a national body?
- What role does the EUR-ACE label currently play?
- How do you see the label and diploma landscapes in 10 years' time?
- Could the Label be granted to Life-Long Learning education program?

Thematic view of discussed arguments

The main points and arguments of the discussion are summarized below and organised by themes that do not necessarily reflect the timeline of the exchanges.

Label and degree

The significance of diplomas, accreditations, certifications in engineering context has been discussed.

The participants outline the diversity of views on qualification recognition and accreditation in engineering professions, underscoring the need for transparent, standardized, and internationally recognized systems to support professional mobility and ensure quality assurance.

The need for transparency comes first: in this context: "*I think that's for the companies the biggest issue and the biggest goal you can achieve with a joint degree, to offer more transparency and mobility across Europe.*", transparency refers to providing clear information about an engineer's degree, skills, and competencies.

Transparency is especially important when assessing potential hires. The difficulty of understanding the qualifications of candidates, especially those from different educational backgrounds or countries is a limitation to mobility.

It seems complex to harmonize curricula between different universities and countries while maintaining transparency for employers across all Europe. Participants agree that a balance between standardization and flexibility in

19

qualification frameworks is a solution to ensure simultaneous transparency and mobility across Europe.

Where regulated profession exists, the recognition of qualifications from other countries is even more complex. In many cases there is a need to homologate degrees to meet local requirements and the homologation needs might depend on disciplines.

Professional organizations are important in regulating specific professions by defining, often in relation with their national government, competences standards but, to facilitate the recognition of qualifications across borders, the question of national barriers should be addressed.

Labels such as EUR-ACE are of importance to ensure quality and enable mobility.

The complementarity between EUR-ACE and the proposed JEDI Label is acknowledged as a good option to support professional mobility and to ensure quality insurance. EUR-ACE would stand for disciplinary competences and JEDI for European and human skills: "…*one nice thing about what is being proposed is that JEDI will be a complementary label to EURACE label, because a lot of road has already been accomplished with the EURACE label.*".

Criteria

Defining a global model for engineering qualifications in the European area in term of a rigid list of subjects and credits is impossible: "*things change, … and this idea of very static curriculums with the same courses, the same signatures, the same credits and so on, it is not adapted anymore. Students that begins today don't know what's going to be their job position in the future*". Criteria should reflect the targeted final learning outcomes of the degree and enable to evaluate their connection to the professional needs on one side and on the other side the ability of the institution to properly operate the educational program that support those final learning outcomes.

Criteria should focus on general competences and include soft skills such as teamwork and decision-making autonomy.

Quality assurance, promotion, and recognition

There exists a significant variability in accreditation criteria across countries and there is a clear need for alignment within a European framework.

Measure employers' feedback with Jedi-labeled graduates to evaluate the label impact.

The importance of linguistic diversity and global citizenship in enhancing the label's benefits is underscore.

Success can be related to the number of alumni that studied in a country and are working in a different one.

Added Value and framework for European engineering education

Professional mobility and recognized quality assurance across Europe comes first: "*Today, if one engineer from any country in the European Union wants to work in certain types of activities in Spain, they have to homologate their degree, and this is not resolved*".

The label gives employers a guarantee that their future employee can work anywhere in Europe: "*it's not so easy to manage a team with different types of people, different languages and so on. He already knows this type of thing. So he got competencies connected to this.*"

Long term vision

Evaluate student competences, in addition to academic knowledge, is of major importance for engineering.

Student mobility in a European educational framework is of major importance, mechanisms that facilitate cross-border learning experiences must be supported.

University should have more flexibility to define their curricula within a European framework controlled by accreditation agencies.

Assuming JEDI Label is created, existing accreditation agencies that will grant the Label must based their evaluation on clear shared process, applying common requirements and common guidelines for European homogeneity sake.

There is a need for transparency, alignment with employer expectations, and the importance of ongoing discussions to refine the framework.

A common European framework would be great, it would give transparency.

There is a need to convince national authorities about the value of a common European framework, so that they implement legislative changes to remove barriers.

In the future, ideally JEDI label should be accepted by the European professional bodies so that future graduates do not have to pass additional assessment to work in any European country.

Other comments

21

There is a need for a clear distinction between double degrees and joint degrees for students.

There is a need to harmonize the duration of degrees across Europe.

Facilitator's comment

4.3.2 Focus group "Accreditation agencies and National Leaders" (29/01/2024)

Participants

The participants external to the project were:

- Member of the Committee of Experts – ARACIS – Romanian Agency for Quality Assurance in Higher Education.
- Scientific Advisor – French Ministry.
- Senior Manager – Swedish Council for Higher Education.

The project members who participated in the focus group were:

- Pierre Beauseroy – UTT.
- Thibaut Skrzypek – ENPC.
- Emelie Wennersand – Chalmers.
- Lubomir Dimitrov – TU Sofia.
- Lucía Linares – UPM.

Specific Questions

- How to promote and disseminate a Joint European Degree Label?
- What would be the best way to organize the quality assurance for a label?
- What aspect of a European label do you think would make a real difference in terms of professional value?
- What legal barriers do you think need to be overcome in the path to a European diploma?
- What could be a European Degree in 10 years?
- Do you think moving from a Joint European Degree Label to a European Degree is a good option for European higher education area?

Thematic view of discussed arguments

The main points and arguments of the discussion are summarized below and organised by themes that do not necessarily reflect the timeline of the exchanges.

Label and degree

Obstacles in Joint Programs: There are numerous obstacles in establishing joint programs, especially in engineering, due to differences in national regulations and requirements. These obstacles range from varying program lengths to specific regulations regarding diplomas.

22

Flexibility and Adaptation: Participants emphasize the need for flexibility and adaptation in joint programs. Different countries may need to compromise or adjust their regulations to accommodate collaborative efforts. This involves addressing specific regulatory issues in each country and finding common ground.

Role of Labels: While labels like the JEDI label may incentivize collaboration and quality assurance, they are not a solution to the underlying obstacles. Instead, they can serve as a catalyst for discussions and actions to remove barriers and create a more harmonized European framework for engineering education.

Employability and Prestige: A key goal of joint programs and labels is to enhance employability and prestige. Participants highlight the importance of enabling graduates to work in regulated professions across different countries, which can drive governments to relax regulations and support the development of joint programs.

Student Choice and Pressure: There's an agreement that student demand for international mobility and recognition drives the need for more flexible regulations and standardized qualifications: "…*it's the student choice, the student consumer, somehow, who will, in the end, put pressure on the states.*". The rise of private institutions offering European diplomas underscores the urgency for public institutions and governments to adapt and maintain relevance in the evolving educational landscape.

The discussion underscores the complexities involved in establishing joint European programs and diplomas, while emphasizing the importance of collaboration, flexibility, and alignment with student and employer needs.

EUR-ACE Label

Part of the discussion was devoted to the EUR-ACE Label. Here are the main points discussed:

Understanding of EUR-ACE Label: Some participants are unfamiliar with the EUR-ACE Label, indicating a lack of widespread awareness and recognition of the label, even among those involved in quality assurance and accreditation processes.

Purpose and Scope: The EUR-ACE Label is clarified to be a European label specifically for engineering degrees, awarded by accreditation agencies. It aims to instantiate the European study guidelines for engineering studies and goes beyond traditional accreditation by involving stakeholders in program definition.

Impact and Recognition: Participants express skepticism about the impact and recognition of the EUR-ACE Label, especially from the perspective of students. While it is seen as a step forward in accreditation, there is doubt

23

about its effectiveness in attracting students or increasing the visibility of accredited programs.

Usage in Different Countries: The discussion touches on the use of the EUR-ACE Label in various countries. Some participants mention that their institutions do not use it or have not been part of the accreditation process for it.

Accreditation Process: Different approaches to accreditation for the EUR-ACE Label are discussed. Options include simultaneous accreditation for the EUR-ACE Label and other accreditations, or a separate process specifically for joint programs seeking the EUR-ACE Label.

Overall, the discussion highlights a need for greater awareness and clarity regarding the EUR-ACE Label, as well as potential improvements in its recognition and impact within the engineering education community.

Quality assurance, promotion and recognition

The discussion centers around the accreditation process for the Joint European Degree Label, particularly in the context of engineering education. Here are the main arguments and points discussed:

Scope and Criteria: The conversation delves into the criteria for the Joint European degree label, which include aspects like mobility for students and staff, foreign language proficiency, and integration of European culture into the curriculum. There's a discussion about whether the label should apply to all programs or specifically to engineering both options might be possible but JEDI focusses on engineering education.

Accreditation Process: Participants debate the accreditation process for the Joint European Degree Label. Suggestions range from self-evaluation by universities with oversight from accreditation agencies to accreditation at the alliance level. It is also possible to make the label completely separate from a joint degree, the requirements of the label might apply with a composition of courses, for example micro-credentials or European Education Pathways (Enhance alliance). The goal is to ensure a sustainable process that is not overly burdensome for universities.

Flexibility and Innovation: There's a recognition of the need for flexibility and innovation in accreditation processes, particularly in the context of joint programs and microcredentials. Participants discuss the Swedish model of freestanding courses and pathways, which allow students to customize their education.

Quality Assurance and Lifelong Learning: The conversation touches on the relationship between accreditation, quality assurance, and lifelong learning. There's an exploration of how accreditation processes can

24

support lifelong learning initiatives and ensure the quality of educational offerings.

Third countries: the possibility is raised to market the label as a European framework for humanistic, sustainable, and ecological engineering to change the mindset of preconceived ideas associating Europe with a single country.

Added Value and framework for European engineering education

Here are the main arguments discussed:

Importance of Learning Outcomes: There's a consensus that final learning outcomes are crucial for defining a degree. They should be prominent in evaluation process and criteria.

Existing Framework: Participants highlight the comprehensiveness and stability of existing European frameworks for engineering education.

Addressing National Regulations: One key objective of an integrated European framework is to overcome national regulations that creates obstacles for engineers, such as the need for national examinations to work as an engineer in certain countries. The aim is to facilitate mobility within the European and global job markets: "*The first thing is to try to overcome with some national regulation for regulated profession. For instance to be able to work as an engineer in Italy You need to pass on national examination… this is a Needed value of the European framework education to get rid of some national constraints for organic professional engineering…*".

Global Competitiveness: Participants emphasize the importance of positioning European engineering education as a global leader, particularly in areas like the green transition and ecological sustainability. They believe that a European framework can enhance the attractiveness of European education for non-European students.

Recognition of Diversity: The discussion acknowledges the diversity of students studying in Europe, including those from non-European backgrounds. Participants see value in promoting European identity and multilingualism, which can benefit both incoming and outgoing students.

Challenges and Feasibility: While there's enthusiasm for the idea of an integrated European framework, participants recognize the challenges and complexities involved. They stress the importance of building upon existing frameworks like the Bologna process and proceeding incrementally to achieve meaningful progress.

On added value and framework questions, the discussion reflects a recognition of the potential benefits of an integrated European framework

25

for engineering education, tempered by a pragmatic approach to implementation considering the existing landscape and challenges.

Long term vision

Here are the main arguments discussed:

Governmental Perspectives: Various national governments express differing levels of skepticism and enthusiasm regarding the idea of the European Degree. Sweden, for example, emphasizes the need for proper evaluation and analysis before committing to a European Degree, citing concerns about national competence in education.

Concerns and scepticism: Some participants expressed scepticism about the practicality and necessity of a European degree. They stressed the need to preserve the diversity of European universities and to define a framework allowing this freedom to flourish. They fear that a unified framework leads to uniformization of European universities. This may depends a lot on the criteria used and the evaluation process implemented.

Quality Assurance and Recognition: The discussion touches on the importance of maintaining the quality and recognition of national diplomas while exploring opportunities for international cooperation and mobility. Concerns are raised about the potential rise of private education and the loss of recognition for national degrees.

Funding and Structural Changes: Participants discuss the financial sustainability of European university alliances and the need for long-term funding models to support structural changes in higher education. The challenges of project-based funding and the importance of securing ongoing financial support are emphasized.

Importance of Step-by-Step Approach: Overall, there is consensus on the need for a step-by-step approach to implementing changes in higher education. This includes proper evaluation, consideration of national regulations, and collaboration between universities, governments, EU institutions, student bodies and professional representatives.

Role of European University Alliances: Participants highlight the role of European university alliances in driving innovation and collaboration in higher education. They suggest that alliances can lead the way in developing joint programs and propose solutions to regulatory challenges.

Faced with a widespread growth of private studies, we must highlight the role of public universities, and the label can be the ideal opportunity to make themselves known externally.

The path being initiated with the labels and European Degrees is an opportunity to strengthen the sense of belonging to European alliances

26

and the networks they create among universities to foster a sense of "more Europe."

European Higher Education Area: could become a reference model: "*There´s a European approach of green transition and I guess our continent is a front-runner? If you look from other countries you will see that the value of a European framework for engineering education relates with this humanistic approach, with this comprehensive view, with this ability to discuss and associate and with this ecological transition touch…*"

In conclusion, the discussion underscores the complexity of implementing a Joint European Degree or a Joint Degree in higher education and emphasizes the importance of careful consideration, evaluation, and collaboration among stakeholders.

Other comments

Beyond legislation, there is also the issue of funding to carry out the plan. There is a concern about sustainability in the long term if we do not ensure adequate funding.

4.3.3 Focus group "Synthesis" (05/02/2024)

This group was significantly different from the 3 first ones. We had first a short list of closed questions, followed by an open discussion.

Participants

The participants external to the project were:

- President – QUACING Agency.
- Alumni representative – UTT.

The project members who participated in the focus group were:

- Pierre Beauseroy – UTT.
- László Gergely VIGH – BME.
- Mikael Enelund – Chalmers.
- Cristina Campian – UTCN.
- Lucía Linares – UPM.

Specific Questions

- Do you agree with these reasons to create a European label for joint degrees, and do you see others?
    - Define a European framework?
    - Clarify the criteria to satisfy to create a joint degree?
    - Helps to Promote a EU engineering model?

All three options were considered good reasons.

27

- How to reduce National regulations obstacles for the European framework for engineering education?
  - Step by step – A label an evaluation and iterate.
  - Create a common framework: European degree.
  - List issues and solve them one at a time…

The 2 first ones were considered possible, the second more challenging, more ambitious, but corresponds to the objective.

- Is there a thread that market adopts quality standards for education from outer Europe institutions or from private institutions?

The participants agreed that such a scenario could become a reality.

Thematic view of discussed arguments

The main points and arguments of the discussion are summarized below and organised by themes that do not necessarily reflect the timeline of the exchanges.

Label and degree

One of the main objective of the label is to increase the employability of the students. It should help to create an environment where students could move freely without national restrictions, working on sustainability and solutions for the global challenges ahead.

It is important to ask ourselves what it means to be an engineer today. The concept and role of the engineer have varied and evolved over time, and we need to consider how to define the engineer to obtain the diploma. Designing a label or a degree or working on accreditation of qualification is a time to reconsider what the true role of the engineer should be in society, and nowadays, that role is questioned now by all the society. This dimension should be considered.

Belonging to different engineering associations allows for more reflection on the scope of engineering and its relationship with the degree obtained.

Quality assurance, promotion and recognition

In many countries, only double degrees are authorized in the academic market since the possibility of proposing a joint degree is complex considering for instance that the duration of studies must be harmonized.

There is a clear need to harmonize accreditation and evaluation processes in Europe to address European values from the same platform and increase engineers' employability.

28

Added Value and framework for European engineering education

The label is a good opportunity to reduce national obstacles and improve integration into the labor market, depending on each country's circumstances regarding this matter.

The label must be transparent and demonstrate that it has added value to be included in the academic offer.

The label must maintain its roots in the university from which it is intended to be implemented for greater control of the outcomes and to give meaning and value to the university community.

Long term vision

During this meeting, the idea of giving the engineering higher education path a common structure, with the same number of years was brought. There needs to be a harmonisation of the different engineering curriculums among the countries by giving them the same number of years and the same academic structure to form joint degrees.

The creation of a European framework is a good thing to make the work carried out more legible and understandable. It would also make the creation of joint degrees much simpler in the future, as it would pave the way for others.

It is important to take further actions in the field of engineering qualifications. The label could be an opportunity to better develop curriculum plans and the evaluation of them in each country. In Italy, for example, each organization (company, public institution...) is responsible for evaluating if the degree meets professional standards. There is no single frame of reference or harmonized evaluation among all institutions in the country, so one person may go through several processes depending on which they choose to adhere to.

The label would be the perfect opportunity to streamline the mobility of foreign students to Italy.

A network should be set up for labelled alumni and students enrolled in these degrees, so that they can keep in touch and give each other advice, share useful information, and help new students when they arrive in their destination country during their mobilities.

The idea of rewarding green mobility and making it less expensive for students who choose environmentally friendly transport systems was also brought during the meeting.

Other comments

Enhancing engineers' competencies after graduation needs is a constant learning process. A Label could be a good tool to follow and assess such

29

a constant learning process. This could be implemented using micro-credential for instance. The use of Open Badge is also suggested for implementation. This might be another mean to be awarded with the label. It opens the door to another group of people that could be labelled and could disseminate the new brand in Europe.

The participants express appreciation for the meeting and look forward to continuing their work.

Facilitator's comment

The concluding remarks emphasizes the importance of clarifying the value of the label, engaging stakeholders, and considering the role of lifelong learning in the dissemination strategy.

4.3.4 JEDI Brainstorming (21/02/2024)

Participants

The project members who participated in the brainstorm were:

- Pierre Beauseroy - UTT
- Cristina Campian - UTCN
- László Gergely Vigh- BME
- Emelie Wennersand - Chalmers
- Emīls Zariņš - RTU
- Lubomir Dimitrov - TUS
- Luis Javier Lozano - UPCT
- Mattias Bingerud - Chalmers
- Mikael Enelund - Chalmers

Organisation

This was an open discussion between the members of JEDI. Only complementary elements to previous groups are reported.

New arguments

Accreditation

- One accreditation for the joint degree and the label (European approach) valid and recognized by all countries.
- Need that accreditation agencies agree on a common framework
- Could be an agreement: one HEI is in charge of the common accreditation and ask for an agency to accredit for all according to the agreement.

Mobility issues

- Physical mobility is key
- Student and staff mobilities are important

30

- Staff mobilities for exchange of good practices
- Active teaching and active learning approaches
- Student centered learning
- Add value to the label/degree
- How to finance physical mobilities?

4.3.5 Interview with non-EU member (05/03/2024)

Participants

The participants external to the project were:

- Professor – Universiade Federal do Rio Grande do Norte.

The project members who participated in the focus group were:

- Pierre Beauseroy – UTT.
- Lucía Linares – UPM.

Specific Questions

The objective was to collect the views of different stakeholders outside EU. Du to technical issue only one out four participants could join the meeting and we had no time left to plan a new date (it was already the second date).

Thematic view of discussed arguments

The main argument was that mobility is a life changing experience and that students, when coming back home are not the same, they will not be the same engineers either. They improve their linguistic skills, their scientific skills, and mobility give them a broader vision, it opens their mind.

The Professor from the Universiade Federal do Rio Grande do Norte explained that European degrees are important in Brazil. Dealing with a Joint European degree or with European degree and with alliances would be even more beneficial for the students, more visible and valued by them.

Discussing with partner sharing the same educational framework would simplifies the creation of double degrees and educational cooperation. He was very interested by the idea of a Joint European Degree or a European Degree.

The added value for Brazilian students is also the opportunity they gain to join international companies after graduation thanks to their international experience.

31

5 Synthesis and Analysis

The following methodology was use to analyse the data collected in the focus groups. The subjects and topics brought for discussion by participants in each of the focus group were entered into the table shown below. This table lists the topics grouped by subjects. A cross indicates in which focus group (FC1, FC2, FC3) the topic was raised (2 crosses means that the topic was discussed in more detail). The table enables the reader see which topics were discussed in multiple groups and to consider the different points of view in the analysis.

The table includes data from the 3 first focus groups (columns FC1, FC2, FC3 in the table). The fourth group took the format of a brainstorming an the internal JEDI partners meeting brought less new material, so that they were not reported in the table. The meeting with no-EU participants was reduced to one participant, the questions raised are quite independent of those tackled in the other meetings and the discussion short so it was considered not useful to include it in the reporting table.

Subject	Topic	FC1	FC2	FC3
Degree	Clear Framework	X	X	X
	Qualification recognition	X	X	X
Label	Does not exist in itself	X	X	
	Addon to existing degree	X	X	X
	Opportunity to value soft skills	X	XX	
	Variable importance for HEI	X		
	Complex to promote	X		
	Must be evaluated	X		
	Multilingualism	X		X
	Inclusive for students	X		
	Award students or degrees?	X		
	First step toward European Degree	X		
	Stimulate collaborations between HEI			X
	Stimulate collab. between AQ agencies			X
	Helps discussions to remove nat. barriers			X
	Highlight the role of public universities			X
	Strengthen the identity of alliances			X
Accreditation	Same process in all EU	X	X	
	Same criteria in all EU	X	X	
	Board for monitoring (ENAEE)	X		
	Same system as EUR-ACE	X		
	Need for harmonised process		X	
	Self-evaluation with alliance accreditation			X
	Avoid burden for university			X
	Need flexibility and innovation in the process			X
	Means to support LLL			X

Joint Programs	Need for a unified framework	X	X	XX
	Obstacles related to national regulation			X
	Development complexity	X		X
	Role of micro-credentials as a facilitator			X
Attractivity	Clear definition needed (necessary condition)	X	X	
			X	
	Same definition in all Europe	X		X
	Increase HEI prestige	X	X	
	Need market recognition	X		
	Challenge to promote	X		
	Adopted by relevant stakeholders	X	X	
	Highlight student achievements	X		
	Incentives to participate to Joint Degree	X		
	Process to award alumni under conditions		X	
	Ease hiring process		X	
	JEDI Alumni feedback		X	X
	Multilinguism		X	XX
	Global European citizenship		X	
	Need to convince governements		X	X
	Increase student employability			X
	Global leadership			X
	Non-EU students			
	Embed Life Long Learning ?			
EUR-ACE	Little known	X		X
	Show little impact of label	X		X
	First step toward EU harminisation			X
	Ensure quality		X	
	Enable mobility		X	
	Complementarity with JEDI		X	
EU Harmonisation	Almost impossible	X		
	Challenging	X		XX
	Beneficial			X
European Degre	Long run project	X		
	Can create new standard	X		
	Need significant national changes	X	X	X
	Agreement on a list of ECTS impossible		X	
	Challenge			X
Joint European Degre	Need significant national changes	X	X	X
	Agreement on a list of ECTS impossible		X	
	Chanllenge			X
JED Label	Need significant national changes		X	
	Evaluation should be simple			X
National Degree	Double degree with ED or JED	X		
	Need to keep national degrees			X

33

Subject	Topic			
Mobility	Mandatory or not (Students)	X		
	Valuable	X	X	XX
	Economic issue	X		
	Professional mobility		X	
	Students' demand			X
	Staff			X
	Need support in the future			X
Label Evolution	Flexibility to ease adoption	X		
	Adaptation with time and needs	X		
Joint Curricula	Harmonization is a challenge	X		X
	Agreement on a list of ECTS Impossible		X	
	Flexibility	X	XX	XX
	Harmonisation of degree duration		X	X
	Student customized curricula			X
	Learning outcomes as keystone			X
Regulated Professions	Qualification recognition complexity	X		
	Local requirements depend on disciplines	X		
	Contraints for mobility			X
Future	Should be recognised by professional bodies	X		X
	JED supported by governments			X
	Flexible regulations			X
	Urgency to adapt to avoid non EU standards			XX
	EU education has a global leader			X
	Sustainability and funding issues			XX
	Controlled transformation (step-by-step)			XX
	Alliances pave the way to transformation			X
	Recommend extensive regulations review			X
Engineering	Stability of existing European frameworks			X
Pilot program	Evaluation need after implementation			X

Table 1 – Summary of discussed topics grouped by subjects

5.1 Analysis

A first observation is that many topics were raised and discussed during these meetings. Positions were not always aligned but many ideas are shared by most participants.

A second observation is that there is a common agreement on the diagnostic of the actual situation. This could be synthesised in a rather lapidary manner which is that building a joint European degree is considered too complex to be worth the time spent on it. By joint degree we mean a sustainable degree which is awarded by a single diploma, which limits very strongly the number of degrees that can be counted as joint degrees.

Next, we will discuss the common questions first, next the different issues making a difference between the actors (Students and universities), the users

34

(Employers) and the referees (the bodies that organise and monitor the operation of HEIs (professional bodies, politic authorities and accreditation agencies).

5.1.1 Common observations

Concerning the difference between a degree and a label the position is shared that a label certifies complementary skills and a degree certifies professional competences. Another difference is that a degree opens the door to further study while the label does not. This is a significant difference, so students and employers consider the degree first. The example of EUR-ACE label, despite all its qualities, shows that it is very difficult to promote and gain recognition of a label not considered as key by most stakeholders. This could also be explained by the fact that universities must pay to be evaluated to award it and that additional work might have to be done to obtain the label. When set against the expected added value, this often leads to not applying for the label. Note also that some countries do not recognise EUR-ACE (Austria for instance) but countries outside Europe do use it (Australia for example). The cost and workload to demand accreditation for the label may change significantly from one country to another.

The importance of a clear framework for the creation of joint degrees has been underlined by many participants of the project. Even the idea to have templates have been proposed and discussed in a public meeting organised by French ministry on European degrees in February 2024.

Note also that when talking about a near future, many interviewed persons expressed the opinion that we should keep realistic and not imagine that changes will occur soon. This might sound rather pessimistic, but the balance between the ambition, the need to ensure that the changes are done after all consequences have been investigated (this might be a little tedious to investigate) and experience leads to be cautious. What seems well shared among participants is that the impulsion must come from the European Commission which is in the best position to provide a common and coherent vision of these questions.

5.1.2 Actors

In addition to these general statements, participants underline the fact that, when created, a joint European degree, or a European degree must not be more complex than the national one to assess. This aspect is particularly important to avoid the discouraging effect produced by the real or assumed workload of accreditation procedures. To sum up, the proposed system must be as simple as possible.

The promotion of joint degrees also appears to be of significant importance. European flag makes value but not alone. If joint degrees are to be valued, not seen only as "niche", but as a mainstream objective it will be an important lever for supporting university evolution and transformation and for developing wider acceptance of the european degree qualification.

Joint degrees help to share good practices, to create new opportunities for students taking advantage of the diversity of teacher's skills and culture in the different institutions. The benefits to students of joint programs and mobilities, are not in doubt, improving linguistic competences, contributing to the ability to work in multicultural environments and helping to develop the competencies to tackle complex situations due to the exposition to other mindsets and approaches.

These skills are important for any citizen and are especially valuable in engineering contexts.

Joint degrees must be accessible to all students. Since, by nature, such program implements mobilities, it means that, if joint degrees becomes mainstream associated mobility should be supported. It implies that specific funding system should be implemented to help mobility at a large scale. A special care should be put to encourage sustainable mobility. In absence of mobility support, these programs will be regarded as elite programs, limiting participation to a limited socio-economic group.

Staff mobility is also important to consider and support. It is necessary to share practices and to deepen the integration between the partners of joint programs to make them durable.

To measure the success of the JEDI initiative, it would be necessary to monitor the number of mobilities, the number of students awarded with European Joint Degree Label, or European Joint Degree, the number of students that apply for such programs, the number of alumni that work in an international company, or that move to another country, the time to find job, the salary, … To these quantitative KPI, feedback from employers after graduation or during internships using surveys and tracking of the types of jobs the graduates obtain would contribute to the evaluation of the qualitative impact of joint degrees.

5.1.3 Employers

From employers' point of view, the biggest issue is the clarity, the meaning of the European joint degree label or European joint degree. The most prominent issue is that the added value of the label is crystal clear and of relevance for them. So, the criteria assessed by the label should be discussed with employers to make sure that they are meaningful for them.

When hiring new employees, employers verify first the candidate's degree and then university that awarded the degree. So, the degree, and its definition, or the associated label is very important. On university side, the degrees are important on a long run, but if joint degrees are valued and show clear added values on job market, they can be a game changer for university reputation also increasing the determination of HEI to develop these degrees.

The actual limited impact of EUR-ACE, even though it exists for more than 15 years and concerns more than 4000 degrees around the world, clearly shows the

36

challenge that represents the banding of a label. But EUR-ACE label is mostly attached to the professional competencies that could be considered covered by the associated degree. In the case of JEDI the idea is to label competencies that are not the core part of the disciplinary competences and that could be qualified as soft skills. This difference might help to ease the branding.

5.1.4 Referees

All participants agreed that existing joint degrees are always taylor made. This means that the workload to develop a joint degree is significant, and also that the experience gained when designing one joint degree, might not be transferable to another joint degree with other partners.

When creating a joint degree, problems may arise in many small details that make them tedious to track, identify and solve. Even though accreditation agencies agree to work in collaboration with HEI ahead evaluation to help tackling the problems, the scalability of such a degree customized approach is necessary limited.

Compared to degrees, labels are easier to create and define since they are not part of nationals' legislation. So, the creation of a label is rather simple, but its impact might be limited as assessed by the EUR-ACE example.

The condition of accreditation appears to be very different in the EU countries, some countries rely on accreditation of the HEI's , others on degree accreditations and others on program accreditations. These differences clearly show the distance in terms of flexibility in the assessment of degrees between the different partners. Flexibility was discussed in all focus groups and is perceived as necessary to unlock the European joint degree puzzle. Flexibility can be found in considering final learning outcomes and their adequation with professional needs as the core of the evaluation approach implemented.

European Approach for accreditation is assumed to be a solution, but the European approach is not recognized in all countries, restrictions apply in many places (figure 3), and, in practice, it is not very often used even if the idea is very well suited for joint degrees.
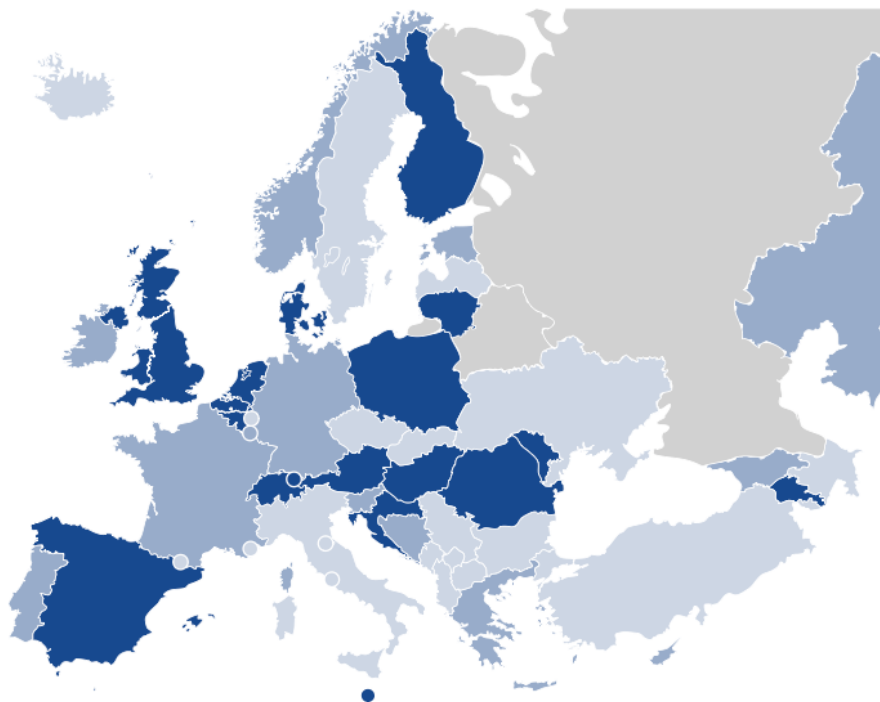
Figure 3- Map of European approach application (the darker the better)/ source :
https://www.eqar.eu/kb/joint-programmes/national-implementation/

As was pointed out, the label or joint European degrees accreditation should not be restricted to European university alliances and that it should serve to promote and strengthen public universities.

The extra-European view on European Joint Degree was very enthusiastic during the interview, and this position as been confirmed by university heads of international affairs who hold the view that it would ease collaboration and makes Europe much more attractive for foreign students.

5.1.5 Concluding remarks

Based on this analysis, it is clear that a label will not solve the core problem that blocks the development of European joint degrees which is the diversity of national rules and regulations that prevail to define a degree. At best the Label can be consider as a first step toward a European Joint degree. But how much time do we have to make the second step? Taking too long would mean leaving private institutes that have a strong education model supported by their home country for instance to promote their own standards. International companies are already familiar with these standards and might consider them as the first standard before national ones if the delay is too long. These standards would become our implicit standards, and Europe would lose most of its capability to define its own educational model.

To avoid this scenario, common rules and a common framework should be put in place by the European Commission. Creating a European Joint Degree would be

38

a convincing step in that direction. This move would also help to create a visible, trusted and recognized European engineering model.

In next section we will try to give some recommendations to draw a path in that direction. It is not a turnkey solution, but we expect to light the way.

6 Perspectives for the future

This section first introduces possible options for the future and next makes some recommandations drawn from the analysis.

The first observation is that the mobilisation of HEI, ministries, accreditation agencies has been very important when considering these questions during the year the JEDI project lasted. Many meetings were organized, and discussions held between all the actors.

The second observation is that without doubt the positions of all actors have changed quite a lot within that past year of discussions and the importance of the questions asked for our future is clear for all.

The third observation is that, if the objective is to spread an education model with joint degrees, it is essential to establish a framework, without framework these programs will remain the exception.

The fourth observation is that the problem is complex and driving the system to a solution is challenging.

At this point four options could be considered:

- Keeping the actual regulations and trying to tailor make joint degrees. This would probably lead to stall in the actual situation, with a very limited number of joint degrees.
- Implementing a European Joint Degree Label. This means minor legal changes if any in most countries and mild progress can be expected if significant work is done to promote the Label among students and employers. It would be a small step. If would however be useful as a means to initiate a more ambitious dynamic, depending on the opportunities. The risk is that the changes stops there and that we end up in 10 to 15 years with a label that is not really valued by employers or by students and that is given to a very limited number of joint degrees.
- Implementing a Joint European Degree. This option is more ambitious and more challenging but not out of reach. Twelve years ago, the countries participating in the European Higher Education Area (EHEA) committed to a long-term goal of automatic recognition of comparable academic degrees. This is almost a reality now meaning that a bachelor in telecommunications, for instance, should give the same right to the awarded student of the EHEA to follow a master program without considering the issuing country of the bachelor. Implementing a Joint European Degree goes a step forward but no so much further. To make that step, first the global requirements of such a degree must be defined (in terms of specific criteria mostly related to european adde values should be considered), second, the evaluation criteria and process should be

40

defined so that an approach similar to the European approach for evaluation could be used and last but not least changes of national regulation might be necessary to introduce this new degree, or these new criteria as options to existing degrees to open the possibility to award a European Joint Degree in addition to the national one). Introducing this new degree based on an equivalence to, or embedded in, a national degree should be considered to keep legibility of the awarded degree in each country and to ease its adoption. The Joint European degree could be conceived and seen as the Esperanto language for intercultural exchange or XML for computer systems data exchange but for degrees. This mechanism would allow students to receive both the national degree and the Joint European degree. From the European university alliances point of view, it would also enable the alliances to symbolically award degrees, making the European University a symbolic reality (the legal status of European Universities is not considered here). This is meaningful for students, for university and will be for employers.

Another legal option would be to create in each country a special status for the Joint European degree that allows to derogate from certain national rules when entering in the Joint Degree framework.

- Creating a European Degree. This option is the most ambitious and requires more than an agreement on the legal framework for degrees. Most of the JEDI partners and the participants to this pilot projet agreed that this could be a great achievement but out of reach in a close future.

Analysis of the collected data and the position of the JEDI partners, indicates that the long-term target is to design a European degree. Beginning with a Joint European degree in a close future would be a realizable and important step forward. It would help to unlock the creation of joint degrees ease European exchange and professional mobility for the benefit of all the society.

The fast adoption of a Joint European degree seems to the best and most achievable option at least for engineering degrees.

Evaluation is an important part of quality assessment in Higher Education. It is needed and addressing the issue of accreditation is mandatory. Regarding the accreditation process for a Joint European degree, different paths are possible:

- A European agency could give a joint accreditation - this European agency would have to be created. This option might introduce an extra layer in the system that does not seem necessary to most participants.
- Creation of a European board of national agencies and universities that receives the application, considers it and returns a common answer. The European board would be the unique interlocutor. There are however some dissentions regarding the cost and added value of the creation of such a structure.
- A chosen national accreditation agency could deliver the joint accreditation for all partners, with the same principle as the European approach..

The preferred proposition is the last one that seems simpler to implement. A European federation such as ENAEE could oversee defining common guidelines and processes for Joint European Degrees evaluation.

Joint European degree should not concern only degree creation. When universities create joint degrees, as for any new degree the number of students involved is limited and the visibility of these new degrees is also limited. Better visibility could be obtained by unifying existing degrees under a Joint European Degree umbrella. This option should be considered and supported because it enables to increase the number of students involved and later awarded with a Joint European Degree much faster than with a creation, the degree should not cost much more than the existing unified ones (additional costs would be related to the students and staff mobilities, but not much more), and this mutual degree should be durable, since it's national version already exists and has been promoted for a while.

7 Conclusion

The development of a strong European Higher Education Area is of first important for European sovereignty and values.

Universities interact with society in many ways, but education and degrees are the foundation. Without the ability to provide and certify Hight standard education they have not real justification. A degree, let say a master in mechanical engineering, should enables anyone to understand the contents provided. The diploma is the culmination of a course of study, and for the holder it legitimises the recognition of a set of skills and certifies to the society his or her ability to fulfil certain roles.

As part of the JEDI project, we consulted representatives of all the stakeholders in higher education - students, universities, employers, accreditation agencies and government ministries - about the future of a European label. Their responses shed light on certain aspects of the problem and also raised new questions.

In WP4, the work carried out on the future of the JEDI label highlights a number of general points:

For engineering fields, the criteria associated with the JEDI label correspond to soft skills (languages, culture, mobility, etc.). There is no doubt about the value and contribution of these criteria, which are viewed positively by all the players consulted.The questions remain how it is possible to value these criteria using a label and finally is the aim of the label solely to add value to these criteria? The ambition of the label goes beyond the criteria themselves.

There is unanimous agreement on several points:

- The complexity of designing joint degrees within an alliance due to the combination of existing national constraints.
- The difficulty of requiring an additional step to obtain a label which certifies elements that are complementary to a joint degree, but which are not a strong structural necessity, since students do not need it to continue their studies and the label will only be valued by the labour market and students after a communication and feedback process that can be lengthy.

At the same time, universities outside the EU and private bodies have free rein to develop and promote their own standards, outside national frameworks, which can lead to a situation of implicit standards or total confusion about the qualifications awarded in the field of higher education. Confusion undermines the clarity and acceptance of qualifications and would be detrimental to European society, whilst the emergence of implicit standards deprives states of their sovereignty over higher education.

43

Ultimately, what is at stake is whether we have the will to move towards an education model that can become the benchmark in Europe and internationally. Without this ambition, the value of our degrees will no longer derive from the competences they carry or the educational model they implement, their legitimacy will no longer be a matter of adherence but of legislative constraints. All the ingredients for a loss of meaning and an abandonment of these national models will then be in place, leaving the field wide open to private institutions, particularly non-European ones with their internationalised models.

Despite the potential value of a label, we believe that we need to press ahead, with serious intent, working together towards the goal of the Joint European Degree. Among the priorities is to propose legislation that opens the door to a Joint European Degree, which is an urgent necessity for the Commission and the Member States if our ambition is to build a higher education area that we can control.

Because engineering is a field in which national issues ultimately have a more marginal influence than in other fields on the nature of the skills to be imparted in training, engineering is probably the field in which it is easiest to find the balances that would allow the creation and concerted implementation of Joint European Degrees. Because the European university alliances form networks of institutions on a European scale, it seems natural that they should be the first to be involved and that they should be at the forefront of this movement to create joint degrees. To take this line of reasoning to its logical conclusion, it would seem strange to an outside observer, to say the least, that members states initiate and support a dynamic for the development of European universities with the mission of embodying training to European standards without providing these universities with the tools that will enable them to exist through the qualifications that they will award to their students.

The JEDI project is coming to an end, but the task of developing a mechanism to create a European engineering area is not. The first steps with the alliances and the pilot projects have been made but a lot must be done to move further in that direction. Within the JEDI consortium the unanimous will is to continue this task to help designing these new recognition models that are so necessary to prepare the future of Europe.

8 Acknowledgement

We would like to thank cheerfully all the persons we contacted to contribute to this deliverable:

In first instance, all the persons who accepted to give some of their time to share with us their views during the different focus groups:

We also want to thank the persons who work behind the scene to make all this possible, the secretaries who took care of our missions, the technicians who helps with the online meetings and computer issues.

The persons who accept to review this document and all the JEDI members who contribute to its content.

Special thanks to Lucia Linares who organised all the logistics for the meeting and keep track of all the contacts and mails during this year, never loosing her patience and humour.

Annex 1 – List of external participants for the focus groups

Accreditation agencies & national authorities	
ARACIS	Member of the Committee of Experts - **confirmed**
French Ministry	Scientific advisor - **confirmed**
Swedish Council for Higher Education	Project Manager - **confirmed**
Universities & students	
Technical University Berlin	Mobility Officer- **confirmed**
Politecnico di Milano	Mobility Officer - **confirmed**
Universidad Politécnica de Madrid (UPM)	Vice-dean for international relations at the Telecommunication Engineering School at UPM - **confirmed**
UTT	Student representative - **confirmed**
Istanbul Technical University	Professor in charge of joint degrees in EELISA - **confirmed**
Unions & professional bodies	
Colegio de ingenieros de Telecomunicaciones	Institutional Relations Director - **confirmed**
Evaluation and Accreditation of Engineering Programs in Türkiye	Professor - **confirmed**
Chamber of Industry and Commerce Darmstadt Rhein Main Neckar	Senior Manager - **confirmed**
Synthesis meeting	
QUACING Agency	President - **confirmed**
UTT	Alumni representative- **confirmed**
Interview with non-EU members	
Universidade Federal do Rio Grande do Norte	Professor - **confirmed**

Annex 2 – Invitation to focus group

Subject   Fwd: Participation in the JEDI focus group for the European Commission
De   Lucía Linares Diamant <lucia.linaresd@upm.es>
To
Date
Priority High
Focus group _DISCUSSION ON THE LABEL.pdf(~213 KB)

Dear all,

We are pleased to contact you in the framework of the one-year project, Joint European Degree Label in Engineering (JEDI), co-funded by the Erasmus+ program to pilot a joint European degree label aimed at recognizing the value of innovative transnational learning experiences and increasing the visibility, attractiveness, and reputation, both in Europe and beyond, of joint programs provided by alliances of European higher education institutions.

The objective of JEDI is to develop a prototype label for engineering, technology, science-oriented and European joint degrees in Europe. Such a label would be issued as a complementary certificate to the qualifications obtained by students graduating from joint programs delivered in the context of transnational cooperation between several higher education institutions.

The project is based on the collaboration and discussion between agencies, academia, and diverse stakeholders. To ensure visibility and engage students, JEDI has created three co-labs for the decisive steps of validation and demonstration. With the purpose of gathering opinions and recommendations for the proper development of the label, we would appreciate your participation in different surveys to summarize all the objectives and strategies to be followed for the accurate creation and implementation of the label.

With your approval, we are reaching out to you to invite you to participate in a focus group along with some members of JEDI to discuss the long-term pathway of the label.

The session will take place on Monday, February 5th from 9 to 11 am CET and will be conducted virtually via Teams (link available here [1]).

As soon as you confirm us your assistance, we will provide you with a document that we will need you to sign for the protection of your personal data.

We hope to be able to count on your participation.

Kind regards,

Links:
------
[1] https://teams.microsoft.com/l/meetup-join/19:meeting_MDIwNDk4M2ItZTZmOS00NzQ5LTg2NmYtY2RhYmZlODU5MDQ3@thread.v2/0?context=%7B%22Tid%22:%226afea85d-c323-4270-b69d-a4fb3927c254%22,%22Oid%22:%22b49887f0-5122-4fcb-bb0e-b3388f4af199%22%7D

JEDI - Joint European Degree Label in Engineering
Focus group – Discussion on the label

The Joint European Degree Label in engineering (JEDI) is a project funded through the Erasmus+ Programme, specifically under the ERASMUS-EDU-2022-POL-EXP call for policy experimentation in higher education. This initiative involves the collaborative efforts of 16 higher education institutions (HEIs) spanning 11 countries. The project's primary objective is to investigate shared and drawing up common criteria for a potential European label for European joint programs within a one-year timeframe.

The JEDI quality framework operates under the auspices of three European Universities' alliances: EELISA, ENHANCE, and EUt+. By reinforcing the network and incorporating the project's outcomes into this cooperative effort, these three alliances are better positioned to leverage the opportunities presented by European Alliances with joint programs and other innovative recognition systems for transnational learning experiences.

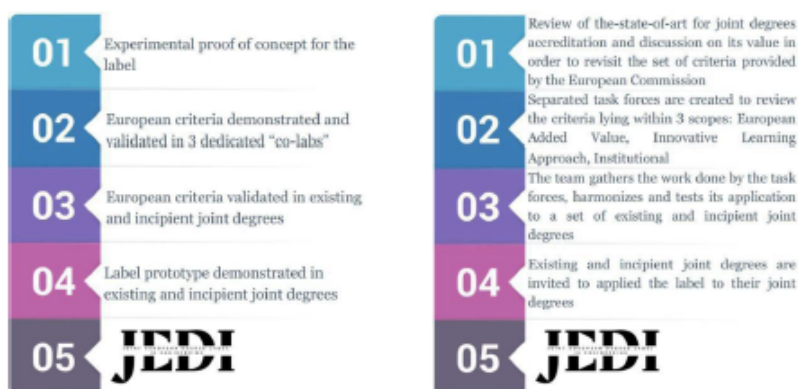|	
01 Experimental proof of concept for the label	**01** Review of the-state-of-art for joint degrees accreditation and discussion on its value in order to revisit the set of criteria provided by the European Commission
02 European criteria demonstrated and validated in 3 dedicated "co-labs"	**02** Separated task forces are created to review the criteria lying within 3 scopes: European Added Value, Innovative Learning Approach, Institutional
03 European criteria validated in existing and incipient joint degrees	**03** The team gathers the work done by the task forces, harmonizes and tests its application to a set of existing and incipient joint degrees
04 Label prototype demonstrated in existing and incipient joint degrees	**04** Existing and incipient joint degrees are invited to applied the label to their joint degrees
05 JEDI	**05** JEDI

Figure 1: Project design and implementation mentioned in the call

The project's primary objective is to investigate shared criteria for a potential European label for European joint programs. Focused on the realms of engineering, technology, and science-oriented education, the aim of the JEDI project is to establish a supplementary certification, alongside students' existing qualifications. Additionally, it seeks to make progress toward creating a framework for engineering education at the European level.

By involving different stakeholders interested in the definition of engineering degrees in Europe, the aim of this working package is to collect points of view to identify the key issues and the features for a long-term evolution of the degrees.

This analysis will give a broad view of the open options for a future integrated European framework for engineering education in order to co-create a consistent and ambitious proposal for a long term integrated European framework for engineering education.

Co-funded by
the European Union

As part of the "Discussion on the label" focus group, which will take place on **Monday, February 5th, from 9 to 11 am CET**, we would like to provide you with the topics that will be addressed for your preparation and interest.

- Definition & contextualization of a label and a joint programme.
- Analysis of the structure added value and promotion of the European label.
- Differences, barriers and challenges between a national diploma and a European label.
- Training curricula and job market analysis.

Co-funded by
the European Union

Annex 3 – Consent document for personal data management

Protection of personal data of participants within the framework of the focus groups of the Joint European Degree in Engineering project (JEDI)

Name:

Surname:

Email:

ID:

In the context of the Joint European Degree Label in Engineering project, focus group XX aims to gather data on XXXX. Therefore, the focus group will take place on XX at XXX hours, bringing together various categories of representatives from XXX.

In relation with the personal data of the participant:

Through this document, it is hereby informed that the personal data of the participant will be incorporated and processed in the consortium´s internal register of processing activities for the purpose of the focus group.

The Joint European Degree Label in Engineering project is committed to protect your personal data and to respect your privacy, under the Regulation (EU) N° 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data (repealing Regulation (EC) No 45/2001).

In order to provide JEDI´s mission, the personal data is collected for the time necessary to fulfil the purpose of the project and will be deleted after a period of 5 years. You can exercise your rights of access, rectification, deletion, opposition, limitation of treatment and portability by writing to us lucia.linaresd@upm.es.

The information collected will not be given to any third party, except to the extent and for the purpose we may be required to do so by law.

The JEDI project will not share user personal data with third parties for direct marketing. In other words, the coordination of the project will not use your personal data to contact you with newsletters, marketing, or promotional information. However, we may use your email address to contact you with information or updates regarding the project.

You have the right to have recourse (i.e. you can lodge a complaint) to the European Data Protection Supervisor (edps@edps.europa.eu) if you consider that your rights

50

under Regulation (EU) 2018/1725 have been infringed as a result of the processing of your personal data by the Data Controller.

In relation with the camera recording:

The participant expressly agrees with the signature of this document that the focus group will be recorded, and that the right to privacy, the right to one's image, private life in the workplace, and the fundamental right to data protection will always and at all times be respected.

Among the purposes of the recording is the subsequent analysis of the discussions and transcriptions of the focus group. The recordings will be only shared with the members present in the focus group for the proper study of the conclusions to be developed for the project's deliverables. The images will not be publicly disseminated or shared with project members who did not participate in the focus group.

All the recording information will be stored in the Microsoft Teams channel created to achieve the main goals and purposes of the project, following the security, compliance, and protection of Microsoft server data.

Place and date	Name and surname	Signature

Annex 4 – Focus group presentation of JEDI

Joint European Degree label in Engineering

JEDI
JOINT EUROPEAN DEGREE LABEL
IN ENGINEERING

EELISA European University   ENHANCE   eut+ EUROPEAN UNIVERSITY OF TECHNOLOGY

FOCUS GROUP 4│Synthesis
February 5th, 2024

1

Goals

1   EU Context : Build a harmonious and sustainable joint degrees system
    Consolidation of the European Education Area
    Consolidation of the European Universities alliances

2   Develop a label prototype for European joint degrees that can be applied to any European joint degree

3   JEDI focuses on **engineering**, technology and science-oriented degrees and programs

Partners

| EELISA European University	eut+ EUROPEAN UNIVERSITY OF TECHNOLOGY	ENHANCE
UPM (Coord.)	UTT CUT	CHALMERS
ENPC UPB	H_da TU Sofia	UPV
PSL ITU	TU Dublin UPCT	
BME	RTU UTCN	

Associated partners

European Network for Accreditation of Engineering Education (ENAEE)
Commission des titres d'ingénieur (CTI)

52
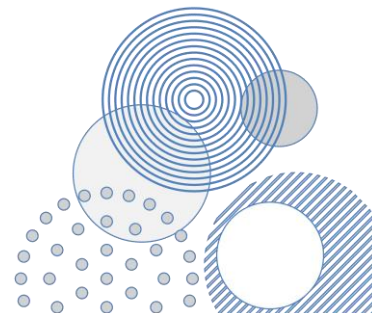
Current landscape
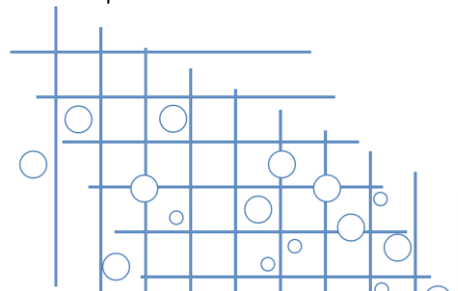
- Need :
  - Recognition requirement of foreign qualification or need for a professional license,
  - Clear framework for HEI
- Situation :
  - Few existing joint degrees
  - A vast number of Double-degrees programs.
  - Design of joint degrees has been carried out in the absence of a set of common criteria or rules.
- Observations :
  - Current joint programs not recognized enough by society.
  - National regulated professions
  - Some of the degrees for regulated professions are conceived as verticals with deep specialization in the specific discipline but lack of transversal components.
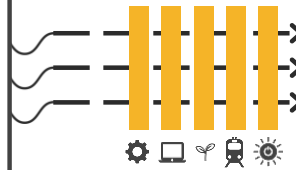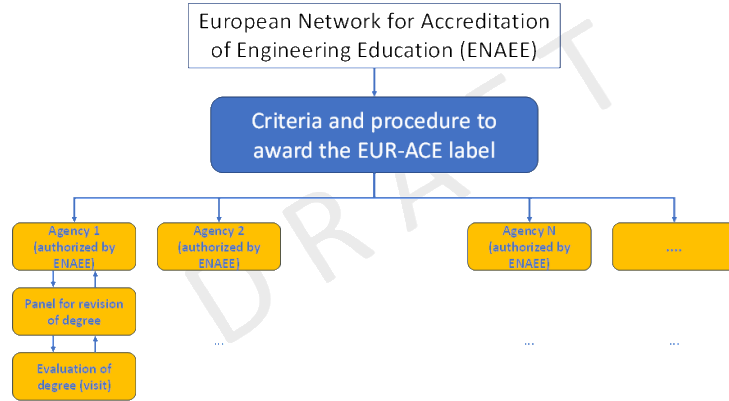
No homogeneity
No common framework

Expected project outcomes such as…

▷ Provide a **label prototype** for joint programs

▷ Provide **results** on the **application** of the **JEDI label** to existing Joint Degrees.

▷ **Inspire** other EU alliances in the **design** of EU Joint Degrees.

▷ Design the guidelines for the **delivery** of JEDI label in the **long-term.**

▷ Contribute to the **future of education of science, technology and engineering** degrees in **Europe** building an **integrated** European framework for engineering education.
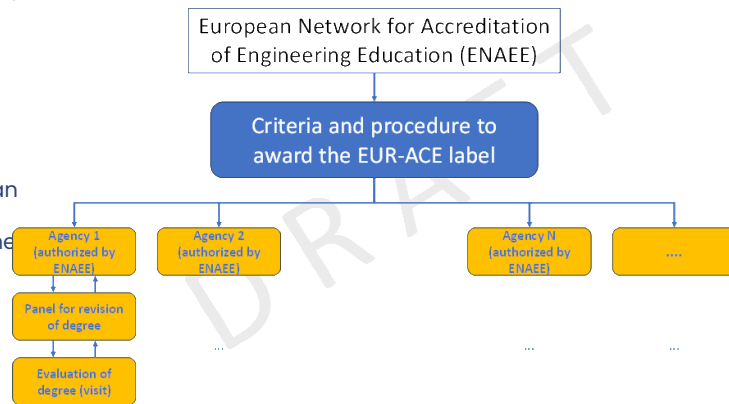
JEDI Label Prototype – Overview

European Network for Accreditation of Engineering Education (ENAEE)

Criteria and procedure to award the EUR-ACE label

Agency 1 (authorized by ENAEE)

Agency 2 (authorized by ENAEE)

Agency N (authorized by ENAEE)

....

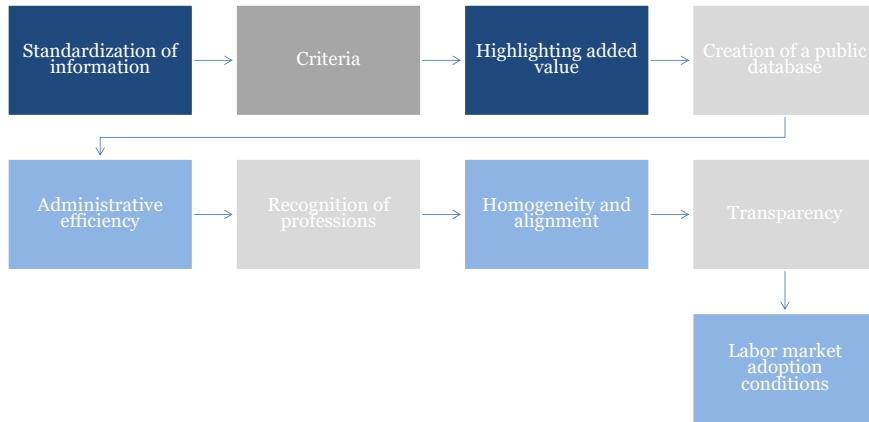Panel for revision of degree

Evaluation of degree (visit)

JEDI Label Prototype – Overview

The EUR-ACE® label : awarded by an authorised agency to a HEI in respect of each engineering degree programme which it has accredited
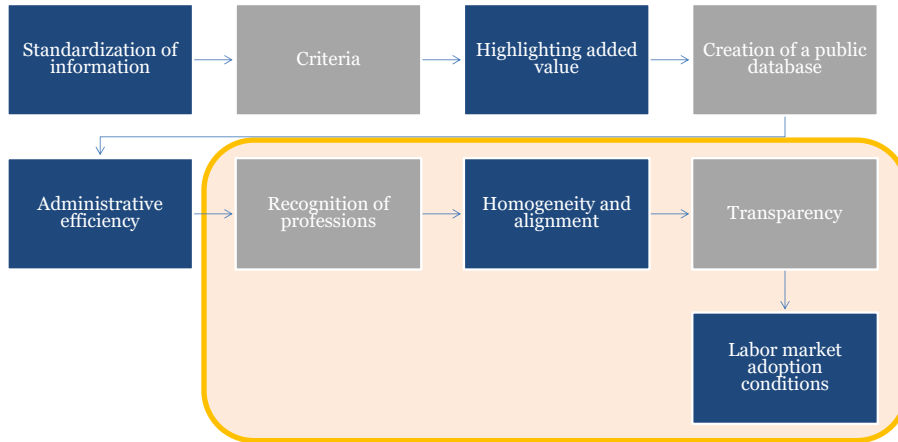
Ensure that engineering education programmes graduates students who can demonstrate satisfactory achievement of programme related competencies

European Network for Accreditation of Engineering Education (ENAEE)

Criteria and procedure to award the EUR-ACE label

Agency 1 (authorized by ENAEE)

Agency 2 (authorized by ENAEE)

Agency N (authorized by ENAEE)

....

Panel for revision of degree

Evaluation of degree (visit)

54

Elements to highlight in the future

Elements to highlight in the future

55

Focus group presentation

27/3/24

How the focus groups are organized...