EUt+

EUROPEAN UNIVERSITY OF TECHNOLOGY

Deliverable 41

D4.1.1 Design of Graduate Schools

Del. Rel. No D4.1

WP 4

Description: Structuration Strategy. Graduate school structuration strategy as knowledge creating team including M, D and the laboratory

Development of a graduate school curriculum on sustainability sciences, interconnection between at least 3 partners, including Cooperative PhDs between partners

Comments: to provide consistency of research objects, Memorandum of Agreement for the creation of European Research Institutes, the Related EUt+ Graduate Research School and Supporting Research Office, is common to many tasks of WP4. It therefore appears in several deliverables, related to these different tasks.

Dissemination level: PU-Public

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

Co-funded by the European Union

Contents

Preamble

This deliverable serves as the strategic orientation document for the designing of the graduate school within EUt+. At the same time it is also the first deliverable of task 4.1 "**Graduate schools for education inside the research**" and documents the activities undertaken and results achieved since the beginning of EUt+.

The task 4.1 is aimed at structuring research and formation within EUt+ in graduate schools, involving researchers, students, and also stakeholders in order to form knowledge creating teams around defined research topic areas.

PART I

Description of activities and results

Background and Rationale

A structuring of support for postgraduate research is intended to allow for a meaningful integration of research and education at all levels, benefiting both researchers, students and the laboratories and emerging research institutes of EUt+. Education through research helps aspiring young researchers and early stage career researchers to be directly acquainted with research, but is also more generally key to helping students at postgraduate level to learn, which is a core competence for adapting to a changing society and job market requirements. Learning through action, adaptability and flexibility, and proactivity – all skills that research sensibilizes to – shall become part of the toolbox of EUt+'s students.

This task is faced with a complex background as for starting a quite diverse set of institutional profiles in terms of structuration is given, so the task is foreseen to be based on a mapping of current research structuration within the consortium, conduct benchmark analysis of graduate and doctoral schools as well as responsibilities of the faculties of the partner universities, establish a roadmap for development and ensure implementation and progress. Therefore, this task is closely connected in this work package to tasks 4.2, 4.3 and 4.5 of the EUt+ proposal which focus onto the development of common pan-European networks, labs and research institutes.

Goals Statement and Objectives

The task 4.1 aims to put in place:

- the EUt+ Graduate Research School for interlinking the supporting activities and formats developed for doctoral and master-by-research students research activities,

- dedicated services and possibilities for research-based cooperation with regard to research-oriented education in EUt+, e.g., cotutelle possibilities and mobility enablement,

- graduate school curricula in close cooperation with the research activities, in particular at the EUt+ labs and EUt+ Research Institutes and partner universities,

- common master-by-research programmes and doctoral research schools in the labs and institutes in EUt+ as they emerge,

- an agreed structuration proposition in graduate schools to host research activities within the consortium,

- emphasis on intercampus links in relation with task 4.2, 4.3 and 4.5.

Assignments and Indicators

An agreed structuration proposition for the EUt+ Graduate Research School to host joint research activities within the consortium with a focus onto formation through research approach as described above requires mapping internal structures, designing, benchmarking, and implementing a strategic plan. Thereby, the steps to be undertaken need to be executed in accordance with related or complementing works with the work packages in place for creating EUt+ and the works within the work package dedicated to research and development of EUt+.

Anchoring in EUt+

All works within work package 4 together form the transformative path towards EUt+ with regard to enabling joint research. In this, overall links to all other works in EUt+ are given, where the closest relations are identified to work package 3 and work package 5 as depicted in figure 1.
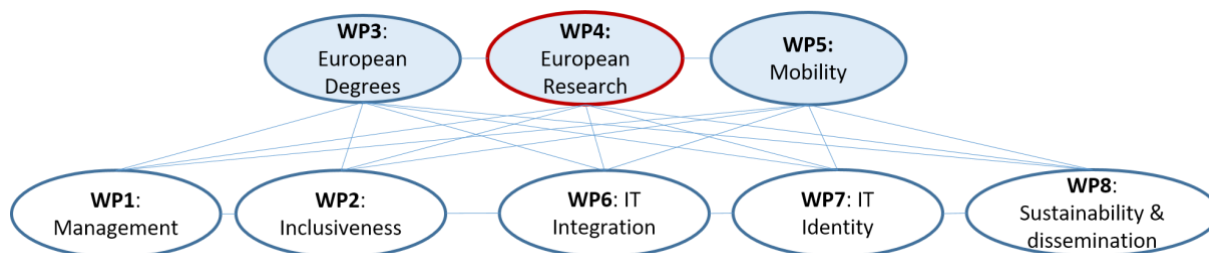
Figure 1: Relations between the activities for EUt+

The interlinking is based on various requirements for the realisation of the graduate school envisioned:

- Link to WP3 Task 3.2 "Integrating existing Master degrees" to coordinate activities regarding commonalities in the development and implementation of joint master programmes for the creation of joint master-by-research-programmes,

- Link to WP3 Task 3.4 "A common laboratory for pedagogical research and student-centred learning (ELaRA)" for cooperation in this research field with regard to needs and requirements of doctoral and master-by-research students and best practice identification for thesis supervision,

- Link to WP3 Task 3.5 "Shared project based learning platforms" to participate in the joint development and implementation of mutually usable tools or potential usage of platforms also for the needs to participants of the graduate school in EUt+,

- Link to WP5 Task 5.1 "Student Mobility" for the placement of postgraduate students in partners' research facilities to provide for lively exchange and growth of joint thesis supervisions and placements in research facilities onsite at the partner universities,

- Link to WP5 Task 5.2 "Staff Mobility" for fostering research-based exchange of researchers as well as non-academic staff involved in supporting researchers and postgraduate research students,

- Link to WP5 Task 5.3 "EUt+ ePortfolio and pedagogical framework" for participation in its development for the area of postgraduate studies on the master-by-research and doctoral level,

- Link to WP6 Task 6.2 "Administrative integration and efficiency" to ensure the offers by the graduate school is taken into account at the time for figurating the EUt+ e-administration,

- Link to WP6 Task 6.3. "European Student Card and services" for extending the usage facilitation for placement of the graduate school participants at the partners' campuses,

- Link to WP6 Task 6.4 "Common digital tools" for foreseeing the use of shared platforms and common tools for research-related education and sharing purposes.

Exploiting the joining of efforts as described will be the foundation for developing the proposal and implementation of the EUt+ Graduate Research School.

Anchoring in WP4

Another level of anchoring the works is the grounding in the emerging research areas of EUt+ and the establishment of interlinkages to research labs and institutes in EUt+, in particular at the beginning:

- European Culture and Technology Lab (ECT Lab+),
- European University of Technology Institute on Nanomaterials and Nanotechnologies (EUTINN),
- EUt+ Sustainability Lab,
- EUt+ Data Science Lab.

Within the institutes the research-oriented education will be organised according to each institute's specific domain area while at the same time being aligned and supported in the graduate school. Further research institutes with further domain and interdisciplinary research fields are foreseen to be taken on board as to include their researchers and students into than existing offers as well as cooperating for the applicable extension of domain-related services and offers.

Agreement on strategy for the development of the EUt+ Graduate Research School

Based on the insights as outlined above, within work package 4 it was decided to join efforts and accumulate results to continuing addressing the path towards creating pan-European labs and institutes and supporting offices and units. In addition, linking into the other work package tasks results is deemed as positioning and placing the research-related activities in the overall EUt+ context in a meaningful way.

For developing an agreement the works in task 4.1 described here were brought together with the works of task 4.2 dedicated to the EUt+ Sustainability Lab and task 4.3. about the European Culture and Technology Lab ECT Lab+ as well as task 4.5 focusing on pooling technological research strengths at the EUt+ level by setting up thematic networks of laboratories as the core seed to EUt+ research institutes. The needs and requirements for the fulfilment of each of these tasks are directly comparable and partly complement each other with regard to the question of how to structure a Pan-European research lab within EUt+ and how to support them and their actors. These questions were brought together and lead into the formulation of the EUt+ Memorandum of Agreement creation of European Research Institutes, the Related EUt+ Graduate Research School and Supporting Research Office (included here in part II). Thereby, the creation of the EUt+ Graduate Research School has been defined together with a description of its tasks and relations.

The memorandum was jointly developed by the task managers and liaisons together with the work package manager in an iterative manner. The advice and input of the vice presidents and rectors for research has been included for finalizing. On 6th November 2021 during the EUt+ week held in Darmstadt the memorandum has been signed by all rectors and presidents.

PART II

EUt+ Memorandum of Agreement for the creation of European Research Institutes, the Related EUt+ Graduate Research School and Supporting Research Office: see appendix.

PART III

Outlook

The memorandum of agreement set the path for the upcoming steps towards the creation and establishment of the EUt+ Graduate Research School. During the EUt+ week in December an agreement for the graduate school is being established as the formal basis together with the proposal and implementation development of an overarching graduate curriculum which lay the foundation for the upcoming activities for their realization.

EUt+

EUROPEAN UNIVERSITY OF TECHNOLOGY

Deliverable 41

D4.1.2 Graduate curriculum

Del. Rel. No D1.4.2

WP 4

Description: Proposal and Implementation. Graduate school structuration strategy as knowledge creating team including M, D and the laboratory. Development of a graduate school curriculum on sustainability sciences, interconnection between at least 3 partners, including Cooperative PhDs between partners

Comments: As the health situation did not allow for a face-to-face week of training, we put in place an alternative solution to launch the project management. The training week will be held at a later date as soon as the health conditions allow it.

Dissemination level: PU-Public

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

Co-funded by the European Union

Contents

Preamble

This deliverable serves as the description of the planning of the proposal and implementation for the EUt+ Graduate Research School. In this, it is also the second deliverable of task 4.1 "**Graduate schools for education inside the research**" and documents the activities undertaken and results achieved since the beginning of EUt+ and the works reported in the first deliverable on the subject of the design of graduate schools.

The task 4.1 is aimed at restructuring research and formation within EUt+ in Graduate Schools, involving researchers, students, and also stakeholders in order to form knowledge creating teams around defined research topic areas. Such a structuring allows for a better integration of research and education at all levels, benefiting both researchers and students.

Background and Rationale

As reported, within work package 4 it was decided to join efforts and accumulate results to continue addressing the path towards creating pan-European labs and institutes and their supporting offices and units. The resulting EUt+ Memorandum of Agreement for the Creation of European Research Institutes, the Related EUt+ Graduate Research School and Supporting Research Office has been signed by all rectors and presidents. In the memorandum, the creation of the EUt+ Graduate Research School has been defined as well together with a description of its tasks and relations.

Proposal Development

The works for fulfilling the task assignments as defined in the previous deliverable consists of two complementing parts. On the one hand the graduate school encompasses the activities in relation to curricula development and joint European degrees for master-by-research and doctoral students together with the creation of support and training offers for postgraduate research student and researchers involved. On the other hand the relations to the other work packages of EUt+ as depicted and the EUt+ research institutes in the making influence the forming and coming into being of the graduate school's developments.

This principle of joining activities results in interdependencies in order as to not risk any divergence in developments or redundancies. Accordingly, a guiding principle is to proceed in an iterative manner to provide for room for alignment, optimization and incorporation of results. This is of particular importance with regard to the specifics to each EUt+ research institute's domains of research. This interdependency is illustrated in figure 1.
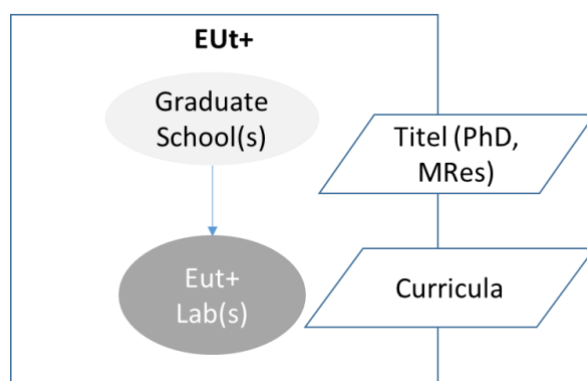
Figure 1: Interdependency of the development of the EUt+ Graduate Research School and the EUt+ Research Institutes

Subsequently, the process path to be followed for the creation of the EUt+ Graduate Research School has to be synchronized over time in accordance with the viability and the becoming of availability of structures.

Implementation Map

Based before this background, the sequence of activities for the implementation of the graduate school has been defined. Thereby, several subsequent phases can be distinguished. In each phase the development of the results envisioned is acting as the basis for the following activity over time as illustrated in figure 2.

Figure 2: Implementation sequence for the EUt+ Graduate Research School

The initial phase encompassed the creation of a common basis, i.e., the definition and setting into force of the graduate school as reported. On this foundation an in-depth-analysis of given structures and instruments facilitated the next big step. This is foreseen as the creation of a working environment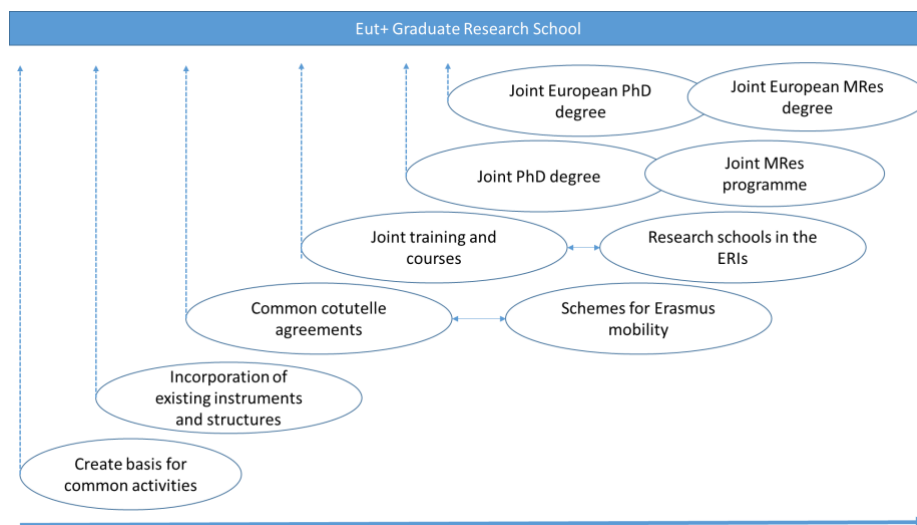 for the researchers and postgraduate research student with the goal of establishing common cotutelle agreements and putting suitable mobility schemes in place. Accompanying the EUt+ research institutes during their creation and coming into being guides the development of fitting curricula and creation of support offers for ultimately developing a joint European doctoral and a joint European master-by-research programme and degree.

Deriving Action fields

The implementation plan has been devised against the background of the existing conditions and given local structures at the partner universities and existing regulations. Thereby it was deemed to be of assistance to follow a route from a common basis via extending existing possibilities for the goal of European degrees so that obstacles arsing can be tackled along the way also with reference to the experience already gained from the previous steps undertaken.

As the starting point for all developments a survey of all existing conditions and influencing factors has been conducted. The survey form is attached in the appendix to this document. The result revealed several actions fields where differing processes and facts influence the integration potential of instruments and establishing of a trajectory to common instruments to be newly created. The cornerstones are described in the following.

Degree awarding powers

The scope of doctoral degree awarding rights and the form of obtaining a doctoral degree in either part-time or full-time defines the creation of supervisory agreements and doctoral provisions. Furthermore, the procedures vary with respect to the point in time for the registration which could be before and or after the defence. However, for agreeing the tasks and duties of supervisors and reviewer by means of a supervisory agreement, the differences observed are rather insignificant. The same applies to the requirements for quality assurance and setting of criteria for decisions about the acceptance of PhD research proposal, thesis assessment and constraints for defence.

Graduate Schools

One of the biggest divergence concerns the present setup of graduate schools at the partner universities ranging from having all responsibilities with regard to the awarding of postgraduate degrees being sometimes completely in delegation at the faculties or departments respectively. Alternatively, central as well as decentral graduate schools or dedicated doctoral schools are in place. As a consequence, a central office is not trivially given and the organisation of masters by research degree and doctoral degree awarding differs significantly presently from a procedural point-of-view and may require agile processes in the long term.

Curriculum

Across the partners the shape and scope of doctoral curricula ranges from individual doctoral phases not requiring the obtaining any credit points to fully structured PhD programmes with a defined number of mandatory credits points. As a results, for integration and the development of a joint degree the support programme and accompanying courses have to be of decreasing scope. Thereby, the processes for eventually sharing and the recognition of modules needs to foresee differing gradation.

Cotutelle

In principle all partner universities already foresee the possibilities for cotutelle agreements, even though variations in details are given. However, as per present, not all partners offer possibilities for double or joint doctoral degrees or allow for industrial doctorates. As a consequence for the creation of a common EUt+ cotutelle agreement as a vehicle for starting cooperations in the research institutes and among the researchers at EUt+, supporting the emerging research institutes and setting a starting ground for the development of a joint degree a basis is given.

Thesis

The handling and publication for prize awarding for a dissertation or further mentioning is handled a little differently according to local or national practices. Furthermore, the life cycle of a doctoral thesis before and after the defense may vary slightly.

Master by Research

The other big difference of presently given possibilities concerns the availability and forms of research-oriented master degrees and their organisation. Several partners concentrate solely onto the obtaining of a masters degree in the classical manner of attending taught modules. However, some of the partners already have experience in the operation of a master-by-

research programme. Thus, linking the efforts to task 3.2. dedicated to the development of joint master degree can complement the creation of a joint master-by-research as a complement on the European level.

Mobility

For establishing mobility schemes and encouragement the cooperation with the EUt+ research institutes supplies the basis. In addition, the degree of interest in mobility windows and facilities within programmes needs to be closely observed for suitable support offering. In particular, doctoral mobility seems to be guided by some other factors in comparison to student mobility as due to the further advancement into an early career stage and usually later stage in life professional and personal requirements with regard to the reconciliation of family and career need to be considered as well.

Pedagogy

For the development of research-based teaching and education the inclusion of pedagogical aspects specifically onto the education with regard to academic working and scientific practices is deemed important and needs to provide suitable guiding.

Tuition

One question typically for the case of collaborating across national borders in Europe concerns the charging of tuition fees. Consequently, allocation and use of the funds has to be defined in an overall manner between the partners.

Funding

The funding of postgraduate research students covers a broad span of possibilities, e.g. funds can be obtained or offered by colleges or the partner universities directly and complemented through applications with national agencies and for European projects. A suitable mix of research funding by way of job positions or stipends can be supported through the graduate school as needed by the researchers.

Outlook

The memorandum of agreement has set the path for the upcoming steps towards the creation and establishment of the EUt+ Graduate Research School. During the EUt+ week in December an agreement for the graduate school is being established as the formal basis. In combination with the proposal and implementation development of a graduate curriculum the foundation for the upcoming activities for their realization has been determined.

Appendix

- Survey Form

Questionnaire for overview survey about graduate schools at partner universities

Partner University :

Questionnaire filled in by :

Degree awarding

Does your university offer master degrees programmes in form of **master by research** (next to taught master programmes)?

Yes ◯   No ◯

Does your university have unrestricted doctoral degree awarding rights in all fields represented in teaching and research?

Yes ◯   No ◯

If no, do you have partial rights ?   Yes ◯   No ◯

If partial rights, in the field(s) of *(please specify)* :

What are the rules for obtaining the **right to award doctoral degrees** and who awards it ?

Please specify :

Does the rule apply that an supervisor and/or examiner can take the exam for the **degree** that he himself has successfully completed?

Yes ◯   No ◯

What are the rules for obtaining the **right to supervise** doctoral candidates ?

    Number of scientific publications   ◯

    Amount of third-party funds raised   ◯

    Supervision experience   ◯

    Other   ◯ *(please specify)*:

What are the rules for obtaining the **right to review / examine** doctoral candidates ?

    Number of scientific publications   ◯

    Amount of third-party funds raised   ◯

    Reviewer b/ examiner experience   ◯

    Other   ◯ *(please specify)*:

Organisation

How is the organisation setup at your university for the **awarding** of Masters by research degrees and doctoral degree awarding ?

    central   ◯   decentral   ◯

Does your university distinguish between **doctoral and graduate schools** ?

    Yes   ◯   No   ◯

Does your university have a **central graduate school or office** where the administration of all doctoral students comes together?

    Yes   ◯   No   ◯

    If no, are there decentralised graduate schools   Yes   ◯   No   ◯

    If yes, these are *(please specify)*:

    Other setup of organization   ◯ *(please specify)*:

Master by research programme(s)

Does your university offer master by research degrees or plans to do so ?

Yes   ◯   No   ◯

If yes, in the field(s) of / department(s) of *(please specify)* :

Do **fees** apply for master by research studies ?

Yes   ◯   No   ◯

If yes, these are *(please specify)*:

Doctoral degrees

Do your doctoral regulations foresee joint supervision / **cooperative doctorates** with supervisors from a partner universities with the degree issued by your university?

Yes   ◯   No   ◯

Do your doctoral regulations foresee the conclusion of cotutelle agreements ?

Yes   ◯   No   ◯

Do your doctoral regulations foresee the awarding of **joint doctoral degrees** issued by the partner institutions on one parchment?

Yes   ◯   No   ◯

Do your doctoral regulations foresee the awarding of **double doctoral degrees** issued by the partner institutions according to each partner's regulations on one parchment?

Yes   ◯   No   ◯

Does your university have so-called **industrial doctorates** (doctorates in cooperation with partners in practice)?

Yes ◯　　　　No ◯

Can employees of the industry partner with a doctorate act as supervisors in industrial doctorates?

Yes ◯　　　　No ◯

May employees of the industry partner with a doctorate act as reviewers or examiners?

Yes ◯　　　　No ◯

Duration of **doctorates**

Average time in years needed by doctoral candidates :

Can candidates choose :　　part-time ◯　　full-time ◯

Do **fees** apply for doctoral studies ?

Yes ◯　　　　No ◯

If yes, these are *(please specify)*:

Procedures

Is the **doctoral procedure** at your university defined and described in terms of credit points (CP)?

Yes ◯　　　　No ◯

If yes, how are the CPs distributed?

Total number of CPs:　　　　　　　　　　I_____I CPs

The doctoral text/thesis:　　　　　　　　I_____I CPs

The final exam:　　　　　　　　　　　I_____I CPs

Courses accompanying the doctoral procedure: I_____I CPs

Other:　　　　　　　　　　　　　　I_____I CPs

Others are *(please specify)* :

Can the **doctoral regulations** be found on the web ?

        Yes ◯   No ◯   Link :

Do you provide a **doctoral study guide** ? On the web ?

        Yes ◯   No ◯   Link :

Can doctoral candiates be **enrolled** / matriculated after being accepted as doctoral candidates ?

    Optionally ◯   Mandatory ◯   No ◯

Does your university have **rules regarding the research results** in place

    non-discloure agreements ◯

    for patents arising from theses ◯

    intellectual property rights ◯

    techology transfer ◯

Does your university have **rules** regarding the **thesis format** or a template?

        Yes ◯   No ◯

Does your university have **rules** regarding the **form of examination** / defence?

        Yes ◯   No ◯

Quality assurance

Does your university **separate the tasks of supervision and review** for doctorates?

        Yes ◯   No ◯

Is the **relationship between supervisor and doctoral candidate** regulated or largely free?

Regulated ○   Freely ○

Is there such a thing as a **supervision agreement** between supervisor and doctoral candidate?

Yes ○   Optional ○   Mandatory ○   No ○

Who decides on the **acceptance of a doctoral application**/topic/doctoral candidate?

The supervisor(s) ○   A doctoral committee of the department ○

The department ○   An overarching Academic Board ○

Other ○ *(please specify)*:

May doctoral candidates **start the reserach work** before acceptance as a doctoral candidate ?

Yes ○   No ○

Are quality assurance and **defined criteria** for theses defined ?

Yes ○   No ○

Are there specific measures in place to ensure **quality control**, academic probity and a certain standard of content?

Yes ○   No ○

(please specify):

Are there specific measures in place to set constraints for the defence?

Yes ○   No ○

Are there specific measures in place which determine the lifecycle **of doctoral theses** before and after the defence?

Yes ◯   No ◯

(please specify):

Do your doctoral regulations include

Examination scores ◯   Recommendation for title awarding ◯

Do your doctoral regulations include specific rules for **awarding « cum laude »** ?

Yes ◯   No ◯

Does your university have **rules for prize awarding** or further mentions ?

Yes ◯   No ◯

Graduate studies

Does your university have a **central office** that offers students in master by research programmes courses to support them in their doctoral studies?

Yes ◯   No ◯   If no, those are offered by *(please specify)*:

Does your university have a central office that offers doctoral students courses to support them in their doctoral studies?

Yes ◯   No ◯   If no, those are offered by *(please specify)*:

Are there rules according to which these **courses** must be attended by the doctoral candidates?

Yes ◯   No ◯

Are the **structured PhD / doctoral programmes** in place with a comprehensive and interdisciplinary or domain specific curriculum with mandatory credits points ?

Yes ◯   No ◯   Number of programmes :

(please specify in which areas):

Interest in programme

In some countries, it is very difficult for university professors to attract local graduates from their own universities to pursue doctoral studies. How is this in your country?

University graduates are very interested in doing a doctorate: Yes ◯   No ◯

Enough local graduates can be found: Yes ◯   No ◯

Our local prospectives have rather little interest   Yes ◯   No ◯

Doctoral mobility

Are doctoral candidates interested in traveling abroad ?

Yes ◯   No ◯

Are doctoral candidates interested in joint supervision ?

Yes ◯   No ◯

Other input

Please provide links to information on the web, doctoral regulations and/or doctoral study guides :
(Files may be mailed to janina.fengel@h-da.de)

Please feel free to add any possible further comments or thoughts :

EUt$^+$

Memorandum of Agreement for the creation of European Research Institutes, the Related EUt+ Graduate Research School and Supporting Research Office

English version

BETWEEN the following other partners:

University of Technology of Troyes (France), whose headquarters are located 12 rue Marie Curie - 10000 Troyes, France, represented by its Director, Mr Pierre KOCH,

Hochschule Darmstadt, Darmstadt University of Applied Sciences (Germany), whose headquarters are located at Haardtring 100, 64295 Darmstadt, represented by its President, Mr Ralph STENGLER,

Rīgas Tehniskā universitāte, Riga Technical University (Latvia) with its seat at Kaļķu iela 1, Rīga, 1658, represented by its Rector Leonīds RIBICKIS,

Ollscoil Teicneolaíochta Bhaile Átha Cliath, Technological University Dublin (Ireland), whose registered office is at North Circular Road 191 Park House Grangegorman, Dublin D07 EWV4, represented by its President David FITZPATRICK,

Технически университет София Technical University of Sofia (Bulgaria) with seat at Kliment Ohridsky Bd 8, Sofia 1000, represented by its Rector Ivan KRALOV,

Τεχνολογικό Πανεπιστήμιο Κύπρου, Cyprus University of Technology (Cyprus) with its seat at Archbishop Kyprianos 31 Savings Cooperative Bank Building 3rd Floor, Lemesos 3036, represented by its Rector Panayiotis ZAPHIRIS,

Universidad Politécnica de Cartagena, Technical University of Cartagena (Spain), with registered office at Plaza del Cronista Isidoro Valverde, Edificio la Milagrosa, Cartagena 30202, represented by its Rector Beatriz MIGUEL HERNÁNDEZ,

Universitatea Tehnică din Cluj-Napoca, Technical University of Cluj-Napoca (Romania) with seat at Str Memorandumului 28, Cluj-Napoca 400114, represented by its Rector Vasile ŢOPA.

Hereinafter referred to as "**the partners**".
Where a provision applies indiscriminately to the "Coordinator" and the "Partners", in the context of this Agreement, they shall be collectively referred to as the "Partners".

The initiative or project "European University of Technology" is also referred to by its acronym "EUt+".

All the active partners for the development of the project are also called "the Alliance".
FIRST OF ALL, THE FOLLOWING IS SET OUT:

Having regard to the second call for Erasmus+ "European Universities" projects,

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Having regard to the application file for this call for projects and its annexes, which the partners submitted on 26 February 2020,

Having regard to Grant Agreement N°101004088 (Annex 2) signed by the partners and the European Commission on 16 October 2020,

In the event of a conflict between the terms of this agreement and the Grant Agreement, the terms of the Grant Agreement shall prevail.

HAVING STATED THIS, IT IS AGREED AND DETERMINED AS FOLLOWS:

1 European Research Institutes in the EUt+ Alliance

The partners of the European University of Technology (EUt+) Alliance have defined a trajectory of convergence towards common research institutes across Europe to actively enable joint research activities between the partners. To enable these activities EUt+ Research Institutes (ERI) will be established. The emerging institutes are envisioned to become a point of reference for research in Europe. An ERI is a group of researchers and academics from the EUt+ partner universities joining efforts and infrastructures either on an inter- or transdisciplinary topic field or on a concentrated domain specific research area. The form and procedures are described in detail below.

In addition, there are two supporting transversal entities besides the ERIs which are the EUt+ Research Office (ERO) and the EUt+ Graduate Research School (EGRS). The ERO supports research administration and capacity building, in particular, for joint applications in European and other funding schemes. The EGRS supports doctoral or PhD students and Master-by-Research students (MRes) within and outside of the ERIs and helps to organize training and educational activities.

2 European Scope

The ERIs are aligned to the EUt+ objectives; in particular, the description of work package 4 outlines the institutes, offices and their relations. The ERI of EUt+ share a common European vision and agree to work along the same EUt+ principles to create, exchange and transfer knowledge. The overall structure of research in EUt+ is shown in Fig. 1.
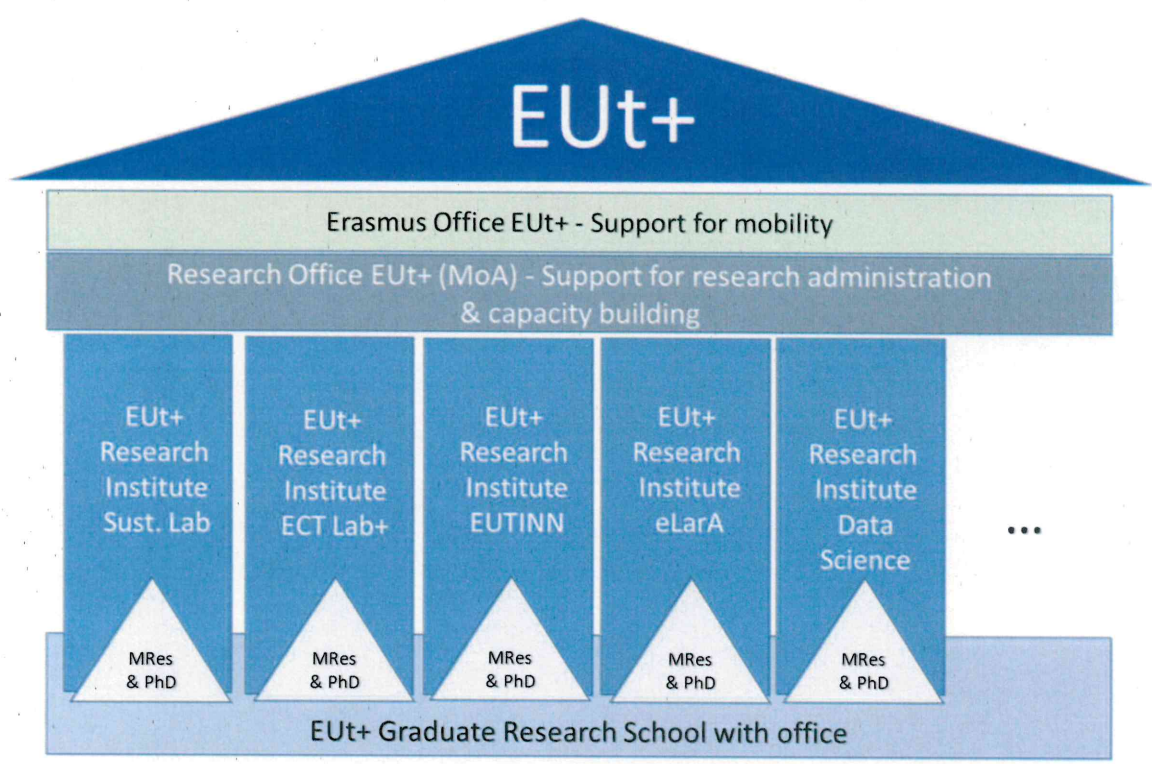

Fig 1: Structure of Research at EUt+

Initially, the ERIs are embedded into the existing organizational structures of each partner university of EUt+. Infrastructure and the institutes' human resources can be distributed and shared between the partner universities.

The Erasmus Office of EUt+ is the support unit concerning mobility for MRes students, PhD students and researchers.

3   EUt+ Research Institutes

The structure of an ERI, its relation to the ERO and the ERGS and the supporting offices is shown in Fig. 2.
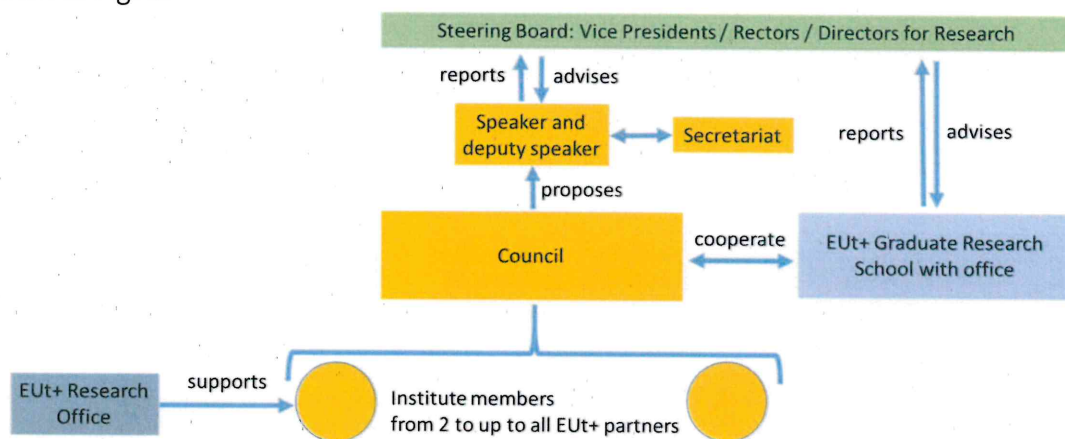

Fig.2: Structure of European Research Institutes

In the following the structural elements are described.

3.1   Steering Board

The vice presidents or rectors, or respectively senior directors for research, of all EUt+ partners form the steering board qua office and each have a deputy assigned. The board takes on an overall perspective and supports the creation and operation of the ERIs. Its function is to be understood as described in the EUt+ application as the intercouncil commission of research.

3.2   Institute Members

The members of an ERI can be researchers from two or more of the partner universities of EUt+ who decide to join activities in the topic field of the institute. For the initial phase researchers may use their home affiliation together with the EUt+ affiliation for their publications.

3.3   Institute Council and Speaker

The institute members elect the members of the institute's council, one for each member university and related deputy. The elected council members will be delegated by the partner universities involved in the ERI.

For management and communication purposes the council members elect a speaker and deputy speaker from among themselves. The speaker fulfills the function of an executive director. The speaker reports to the steering board, who in turn report to the board of EUt+. The council and the speaker are supported for their daily work by a secretariat.

The council develops a research strategy based on the research topics of the involved members of the institutions. Each ERI will manage its own infrastructure. It is also responsible for conflict management within the ERI in accordance with the steering board and the speaker. This is based on the European Charter for Researchers.

3.4 Functionality and Characteristics of an Institute

The characteristics are :
- It is a platform for building research strengths of all partners, enabling researchers to join forces and team up for joint projects, capacity building and implementation of best practices, as well as to share resources and infrastructure.
- An institute complements existing structures of partner universities.
- Participants' research will be carried out locally by mutual consent, enabling lively exchange and mobility.
- The minimum number partners for a European Research Institute is two, to up to all partners of EUt+.
- The question of usage of a common PIC will be addressed in the context of evolving European regulations.

4 Foundation of and Membership in an Institute

The following outlines the process for the formation and membership of an ERI:
- Two partner universities of EUt+ are the minimum number for foundation.
- An application of a new ERI is submitted to the steering board. The steering board proposes to the board of EUt+ the foundation of a new ERI.
- An application and proposal of an institute should include a description of planned activities, a justification of the motivation, the lines of research that it covers, a list of researchers that endorse it (with their CVs) as founding members, and associated researchers, together with a strategy and institutional sustainability plan as well as a guideline/process for conflict management.
- There will be individual core memberships for researchers, but double membership is not permitted, although associated individual memberships in other ERIs is possible.
- Only core members of an ERI are entitled to become members of the council, and be recipient of funding of the institute.
- MRes and PhD students are individual members until the end of their studies.
- The application process for membership will accomodate:
  - o an individual person as a member of a partner university submiting a formal application to the council,
  - o a laboratory or research institute from a partner university submiting a formal application to the council in accordance with approval by the partner university,

- o an EUt+ partner wanting to become a member of an existing ERI, in which case the partner needs to apply to the steering board and council of the ERI.
- End of membership can be applied for on demand, or by decision of the council:
  - o for an individual membership an application is to be submitted to the council,
  - o partner university membership can be ended in the same manner as for individual membership,
  - o ending an ERI requires an application to the steering board or can be ended by the steering board or the board of EUt+.
- Each member adheres to the internal rules of their European Research Institute.

5 Funding

5.1 Initial Seed Funding for the first five years

Each partner university will allocate resources by providing infrastructure for use and at least one new PhD student stipend or funding and their environment (e.g. project costs such as consumables, conferences attedance etc.) per year for the first three, maximum four years. The secretariat is to be jointly financed.

The respectives amounts have to be negotiated and agreed between the founding partners before the foundation of an ERI.

5.2 Funding Strategy

The financial sustainability of each ERI will be linked to the acquistion and achievement of competitive projects and external funding. For this, an institute will develop a specific strategic plan including specific indicators. The indicators will be developed within EUt+ in a holistic manner.

In the same way, the sustainability and viability of the institutes will be evaluated periodically based on the fulfillment of objectives related to the institute's own capacity to raise funds. This monitoring and verification of fulfillment of objectives will be done by the steering board.

6 Mobility of researchers and staff

Mobility is fundamental for the European Research Institutes to create cohesion and accelerate the formal and informal exchange of information necessary to ensure a smooth and gradual convergence. Researchers and other institute members are encouraged to spend time at the partner universities, combining research and education activities. At the MRes and PhD level, ideally, several weeks up to one semester is spent with a partner, according to an offer and a free mobility between the partners.

7 EUt+ Research Office

This office supports grant applications, administrates the funding to the ERIs, collects data for reporting, and provides capacity building in a transformative way
This capacity building may include:
- dissemination of information about open calls,

- review, coordination and support pre-proposal, during implementation and post-proposal,
- collect statistics such as success rate in each topic or call,
- economic justification of research projects.

The creation and formation of the EUt+ Research Office will be jointly worked together the WP 8 of EUt+, in particular task 8.1 regarding projects to support and growth of EUt+.

8 EUt+ Graduate Research School

Within the ERIs MRes and PhD students are an essential part. The institutes provide training and support related to their research work. Next to training, knowledge exchange and support for preparing the next generation of European academics for academic and industry oriented career paths at Masters-by-research and PhD level is provided.

Each partner university delegates a member for the EUt+ Graduate Research School. For management and communication purposes the members elect a speaker and deputy speaker from among themselves.

Its various tasks are listed here in chronological order for implementation:
- common EUt+ cotutelle agreement,
- including PhD students in the Erasmus mobility scheme,
- training provision in cooperation with and for the ERIs in alignment with local graduate or doctoral schools,
- including jointly supervised PhD outside the ERIs,
- creation of a joint EUt+ PhD title awarding,
- development of a MRes programme in cooperation with the European Research Institutes,
- building a European degree for Master by Research (MRes) in alignment with the European degree offered by EUt+.

9 National and European Framework

In accordance with the call for European Universities, the partners identify the obstacles in the path towards what would be a European Research Institute and negotiate, when necessary, the adaptations, derogations and adjustments needed to progress.

10 Implementation

The convergence trajectory for institute creation encompasses the linking of activities so that researchers' common fields of interest are identified and thematic networks are created.

The creation and implementation of ERIs is foreseen in steps. A first wave of institutes will start the process. To enforce the implementation of the European Research Institutes, the eight universities of EUt+ agree on the following operational schedule. The first institutes based on the networks are:
- European Culture and Technology Laboratory (ECT Lab+),
- European University of Technology Institute of Nanomaterials and Nanotechnologies (EUTINN),

- EUt+ Sustainability Lab,
- EUt+ Data Science Research Institute,
- European Laboratory for Pedagogical Action - Research And Student-Centred Learning (ELaRA)

The first four research institutes listed will serve as testbeds as described in the EUt+ EXTRAS.

Further institutes will be founded according to the emergence of joint research interests or thematic networks arising with EUt+.

Hochschule Darmstadt
Darmstadt University of Applied Sciences

Τεχνολογικό Πανεπιστήμιο Κύπρου
University of Technology of Cyprus

Prof. Dr. Ralph Stengler, President

Καθηγητής Παναγιώτης Ζαφείρης, Πρύτανης

Rīgas Tehniskā universitāte
Riga Technical University

Universidad Politécnica de Cartagena
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Prof. Dra. Beatriz Miguel Hernández, Rectora

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Technological University Dublin
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