Ulysseus
EUROPEAN UNIVERSITY

Mission Statement

Signed on January 27th, 2023

UNIVERSIDAD DE SEVILLA · Università di Genova · UNIVERSITÉ CÔTE D'AZUR · TECHNICAL UNIVERSITY OF KOŠICE · MCI THE ENTREPRENEURIAL SCHOOL · Haaga-Helia University of Applied Sciences · WWU MÜNSTER · UCG Univerzitet Crne Gore

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Universities at the forefront of Europe's future

Europe's economic and social prosperity depends on its capacity to innovate and transform, adapting to an ever changing and more competitive environment. As commented in one of the JRC science for policy report, "While green and digital technologies will play a major role in the 'green transition', their implementation will depend on several economic, social, and political factors"[1]. Accordingly, Universities enable new solutions to economic, social and environmental problems, joining forces to create the eco-systems that encourage innovation, research and innovation (R&I) and entrepreneurship.

In line with the European Strategy for Universities and the New European Innovation Agenda[2], Universities should also play a leading role in local and regional development, contributing to the economic, social and cultural growth of their communities. Specifically, Universities are **key actors of a just twin green and digital transition**, while participating in the construction of a coherent and reliable technology ecosystem and developing skills, competences and technological innovation.

To this end, working together to strengthen human capital, employability and competitiveness to **prepare the highly skilled European citizens of the future** is a key mission of today's Universities. It is imperative to build up an outward-looking culture of innovation and entrepreneurship, facilitating strong and durable connections between academy, government, industry, civil society, including students' associations, all bounded to the environment, in order to align educational, research, and innovation outputs with the society and market needs.

European values of social cohesion and respect to the human rights need to be enhanced to make the most of universities mission, becoming lighthouses of inclusion and excellence, also using educational and scientific collaborations among nations to address common problems and to build constructive international partnerships. European Universities should be **open to the world, acting as drivers of the European Union global role**.

European citizens are asking Higher Education to respond in new ways: the Ulysseus Innovation Ecosystem mixes the knowledge, infrastructure and talent needed to go beyond. Ulysseus is our Alliance response for strengthening the partners' European dimension, while contributing to overcome the United Nations, European, national, regional and local challenges.

1.	Muench, S., Stoermer, E., Jensen, K., Asikainen, T., Salvi, M. and Scapolo, F., Towards a green and digital future, EUR 31075 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-52451-9, doi:10.2760/977331, JRC129319.

2.	"Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a European Strategy for Universities" (18.01.2022) and "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a New European Innovation Agenda" (5.7.2022)

The Ulysseus 10-years journey, from port to port

The name of this project, **Ulysseus**, comes from merging **Ulysses + EU**. Ulysses is the hero of Homer's epic poem "The Odyssey", which means a long trip involving many different and exciting activities while searching for something. In this concept, we have found our leitmotiv:

"As you set out for Ithaca, hope your road is a long one, full of adventure, full of discovery."

Excerpt of Ithaca by C. P. Cavafy

Ulysseus is a European University, first founded by the Erasmus + European Universities Call 2020, with **a ten-year vision for 2030**: to **develop an excellency-recognized, internationally attractive, open to the world, persons-centred and entrepreneurial European University for the citizens of the future**.

Undeterred and audacious like Ulysses in his 10-year journey to Ithaca, our Alliance faces an ambitious **10-year endeavor** that will contribute **to shape the European Higher Education Area** and the **European Research Area**, and hence the future of Europe.

Ulysseus is our Alliance response to the forthcoming challenges providing solutions, knowledge, innovation and research for the European citizen of the future. In this 10-year lapse of time, the Ulysseus structures and activities will be settled and consolidated in a step-by-step approach in 4 stages (Figure 1).

Step 1 and Step 2 correspond to the EU 7 years Multi-Annual Financial Framework to come (2021-2027), when joint structures and activities are being launched (Step 1, pilots, three years) and consolidated (Step 2, consolidation, four years) in accordance with the new Erasmus + and Horizon Europe priorities and formulas. The 2028-2030 three-year period overlaps with the new financial framework and EU programmes, so Ulysseus will need to be rethought through another co-creation process to guarantee its sustainability.

Every step period counts on an **Action Plan and report**; every year counts on an Annual Plan and report. **Ulysseus RADAR**, our observatory for accurate following up and the Alliance reference structure to observe short- and long- term changes in economy, society, job market and competences, helps the Alliance to navigate through the roadmap.

Groundwork in the dockyards

From a position analysis that came up with the partners Universities common capabilities and strengths, the **Ulysseus Alliance was constructed**. We imagined the university we want to become in 2030 in order to give a response to five European specific challenges, developing education, research and innovation in the prime focus areas of our Innovation Ecosystem. Our first Mission Statement was signed by the Alliance Universities and the associated partners on January 28th 2020 in the Spanish Permanent Representation to the EU in Brussels, starting the next step.

STEP 1 - 2021-2023

Designing, co-creating and launching pilots

The Erasmus + European Universities Call 2020 project covers this phase. The main objective of this step is to **launch joint structures, governance and programmes** for building the foundations of Ulysseus European University. One pilot activity is being set up for each programme. A specific legal figure for Ulysseus University is being discussed. As an open university, and to maximize Ulysseus impact, two European HEIs have been invited

to join the Alliance for the next phase. Ulysseus has also been open to the incorporation of new associated partners (19 in the last 2 years, 114 in total in 2023) that contribute to our vision and goals.

Programmes and structures consolidation

The Erasmus + European Universities Call 2023 covers this phase. Aligned with the European Strategy for Universities and the New European Innovation Agenda, pilots of educational, research and innovation programmes of the Step 1 will be deployed in Step 2, in an inclusive and expanded community counting with solid structures. With

Erasmus + and Horizon Europe satellite projects, as well as complementary financial grant of national and regional calls, the **Ulysseus structures and programmes will be consolidated**. Going beyond the European borders is a strategical objective in this stage, so the Alliance will develop a networking expansion and settle three Ulysseus branches in non-European countries.

Rethinking Ulysseus: new challenges

In our changing world, new challenges must be faced continuously. Ulysseus will be a resilient European University. Its structures and

programmes will be based on forward planning in order to be feasible and adaptable, taking into account new Global and EU challenges. In this step, new goals, focus areas, structures and activities will arise from new necessities: **the cycle starts again**, developing a co-creation process, this time, within a consolidated, linked and united Ulysseus community.

STEP 0

Groundwork in the dockyards

(2017-2019)

STEP 1

Designing, co-creating and launching pilots

(2020-2023)

STEP 2

Programs and structures consolidation

(2024-2027)

STEP 3

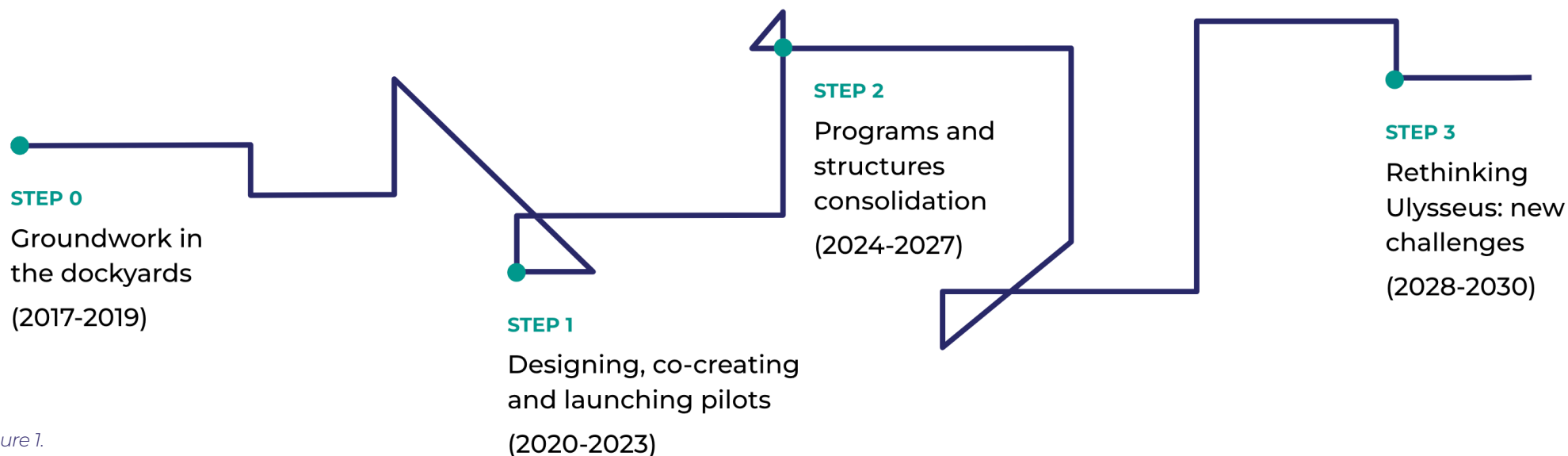Rethinking Ulysseus: new challenges

(2028-2030)

Figure 1.

The Ulysseus 10-years journey, from port to port

One joint vision, one model of university

Ulysseus, a model of exellence

The Ulysseus University as a model of excellence, innovation and inclusion

Understanding our Alliance as one Innovation Ecosystem developing solutions for specific R&I challenges from Innovation Hubs, is Ulysseus unique and distinguishing feature.

Ulysseus Alliance **vision for 2030** is to develop an **excellency-recognized** and **internationally attractive open to the world, persons-centred and entrepreneurial European University for the citizens of the future**. By doing so, our ambition is to contribute to shape the European Higher Education and Research Areas, and hence the future of Europe.

The process of transformation towards this European University started in November 2020 and involves the generation of a both **territorial and digital Innovation Ecosystem**, taken to a European Level, the Ulysseus Innovation Ecosystem, characterized by:

- » An integrative and democratic governance
- » The co-creation of education, research and innovation interlinked activities
- » High impact on UN, European, regional, and local challenges
- » Strengthened Open Education, Open Science, and Citizen Science
- » Multilingualism and Multiculturalism

- » Enhanced mobility with automatic recognition

Ulysseus aims to become a true role model of European University to create a better world.

To lead our European University to become a driver of the EU global role, being competitive and able to attract the best students and staff worldwide, Ulysseus is working on becoming a model of excellence and good practices based on:

- » Ulysseus gathers **a diverse and complementary, excellent, and inclusive** alliance, with participative and integrated governance.

- » Highly committed with **local and regional development**, with the **Ulysseus Innovation Ecosystem**, and its Innovation Hubs as joint structures for co-creation of interlinked education, research, knowledge transfer, ready to tackle the EU- global challenges raised by the twin transitions.

- » Ulysseus pursues to be an **active driver for change**, catalyser of strategic Partnerships, connecting local and regional systems to boost innovation-driven local and territorial transformation.

- » With a clear and ambitious **strategy and leadership**, offering attractive learning and career options, future-proof skills and good guidance, quality assurance, mobility, and first-rate research and innovation.

- » Efficiency in processes **management**, with qualitative and quantitative (RADAR Observatory) monitoring tools

- » With **Foresight capacity** of the RADAR observatory, looking forward future EU policies.

- » With **4 Openness**:
    - **Open Education, Open Science, Citizen participatory Science**.
    - Open and transparent **dissemination** of results and outputs
    - **Open arms** to other partner universities and associated partners.
    - **Open to the World**

Ulysseus Ecosystem rests on two solid foundations (see Figures 2 and 3): **the Ulysseus Community**, representing the helix and including the **8 Alliance partners and 158 associated partners**; and the **Ulysseus Campus**, with three new and innovative joint structures: the Central Management Office, the Digital Platform, and eight **Innovation Hubs** (one at each university) aligned with the overarching EU twin green and digital transitions and societal wellbeing challenges, and landed into eight R&I regional and local challenges. The Ulysseus European University gives Higher Education, Research and Innovation a crucial role in supporting social cohesion, economic growth and global competitiveness of our cities and regions.

Supported by the Digital Platform and the Central Management Office, Innovation Hubs are

the center of gravity of partners' collaboration, sharpening the co-creation process for transdisciplinary and challenge-driven education, intertwined with research and knowledge transfer, and the promotion of community and citizen involvement and European values. The Hubs will count on Joint Research Centers and Incubators, Living labs and Open classes for liaison, brokerage and joint designing, fostering multistakeholderism and the engagement of citizens.

Enhanced mobility within and beyond the campus, a **joint internationalization strategy** and well-structured sustainability and dissemination plans help to promote Ulysseus across international borders. Ulysseus **"Open to the World"** model of Alliance helps to pursue the UN Sustainable Development Goals and promotes worldwide human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities.
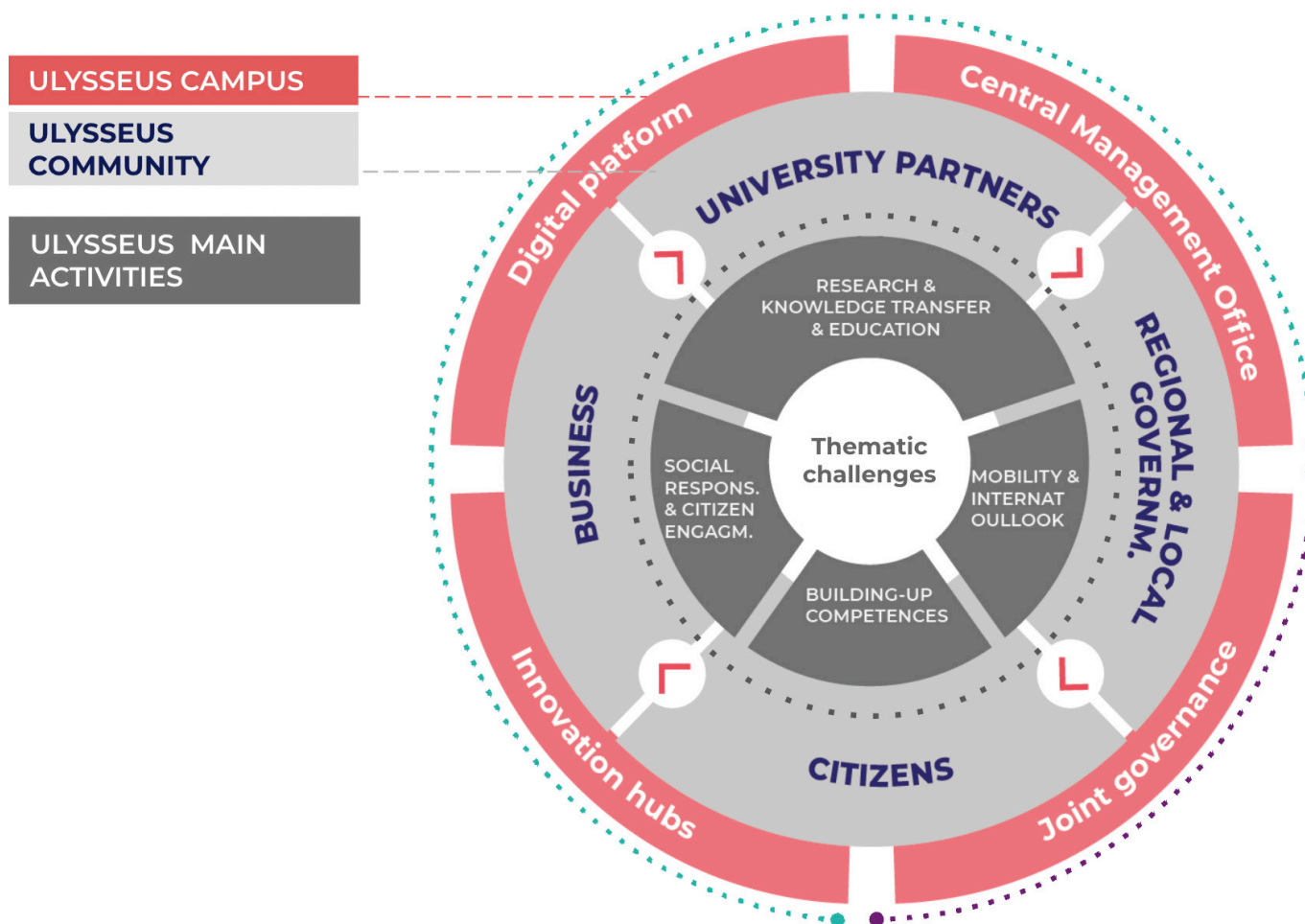

Figure 2.

The Ulysseus territorial and digital Innovation Ecosystem, a university for the future

Central Management Office (USE)
● General Coordination unit (USE)
● Dissemination Unit (USE)
● Digitalization Unit (UCA)
● Projects Office (UCA)
● Mobility Office(MCI)

Digital Platform (UCA)
● Personal sites
● Access to scientific facilities
● Joint repository
● Virtual courses and mobility
● M4C App
● Governance & joint structures toolbox

Ulysseus Students Association (TUKE)

8 Innovation Hubs (All)
● Joint Research Centers
● Incubators
● Living Labs
● Open Classes

IH Applied AI for Business & Education

IH Socio - Ecological Sustainability

Ulysseus Students Association
IH Digital Transformation of Industry

Mobility Office

IH Entrepreneurship & Impact

IH Robotics

IH Aging & Wellbeing

Projects Office
Digital Platform

IH Cybersecurity

IH Energy, Transport, Mobility, for Smart Cities

Central Management Office

Figure 3.

The Ulysseus Campus expanded

Ulysseus Crew, the community representing the helix

The Ulysseus alliance is diverse and complementary, and this diversity is our strengh

Ulysseus alliance is now more diverse in history and size and includes all types of Higher Education Institutions.

Originally composed by six Universities in 2020 (University of Seville, USE; Université Côte d'Azur, UCA; University of Genoa, UniGe; Technical University of Kosice, TUKE; MCI Management Center Innsbruck, MCI; Haaga-Helia University of Applied Sciences, Haaga-Helia), Ulysseus enlarges the family with two new members in 2023:

» **University of Münster, WWU**, in Germany, a country where the European Higher Education Area is consolidated, representing the expertise and the present of Europe.

» **University and Montenegro, UoM**, Western Balkans, in the process of joining the EU, as added value to contributing to the future of Europe.

Ulysseus Alliance now includes **eight diverse Universities, solidly involved in the development of their regions and cities**: five comprehensive Universities (USE, UCA UniGe, WWU, UoM), one technical University (TUKE) and two Universities of Applied Sciences (MCI, Haaga-Helia). From the oldest to the youngest, from the largest to the smallest in number of students, from comprehensive to specialized

business and technical Universities, from established, research-based Universities, to experts in entrepreneurship and pedagogical innovation (Table 1).

The more traditional academic formation of USE, UniGe, TUKE & UoM will be enhanced by the innovative teaching techniques from UCA, WWU, MCI and HH. Our two Universities of applied sciences (MCI and HH) will promote the entrepreneurial character of Ulysseus.

Table 1.

Ulysseus universities Facts & Figures

[1]COMP (comprehensive), TECH (technological), UAS (University of Applied Sciences)

	USE	UniGe	UCA	TUKE	MCI	HH	WWU	UoM	Total in Ulysseus
Founded	1505	1481	2020	1952	1995	2007	1780	1974	
Scope (1)	COMP	COMP	COMP	TECH	UAS	UAS	COMP	COMP	
City Country	Seville Spain	Genoa Italy	Nice France	Kosice Slovakia	Innsbruck Austria	Helsinki Finlandia	Münster Germany	Podgorica Montenegro	
City selected for the Horizon Europe Cities Mission	Yes	No	No	Yes	No	Yes	Yes	Yes	
Language	Spanish	Italian	French	Slovak	German	Finnish	German	Montenegrin	
Students	69 876	34 590	30 853	11 021	3 550	11 000	44 585	20 000	225 475
Technical and Administrative Staff	2 863	1 211	1549	767	70	316	1 904	485	9 165
Academic Staff faculty	4 395	1 355	1853	690	330	415	5 584	628	15250
Faculties & Schools	32	22	21	9	15	6	15	23	143
Research groups	574	158	224	67	13	4	618	30	1 688
Science & technology based companies & partnerships	24	43	13	48	182	115	9	0	434
Patents and trademarks	140	114	183	246	10	4	47	7	751
Research centers	18	24	57	5	6	4	25	10	139

USE is a historic university with strong roots in its city and region, together with powerful international links. It is the second largest university in Spain, with a relevant and robust comprehensive formation and internationally recognized by its academic excellence, research and technology transfer background. USE ranks 8th in scientific production and 1st in international patents in Spain, has an extensive offer of international double degrees, both bachelors and masters, and runs 2 Erasmus Mundus Joint Master Degrees. USE provides strong expertise in coordinating consortia, both at the research (i.e., Horizon Europe) and academic (i.e., Erasmus +, including Ulysseus Step1) level.

UniGe is one of the largest and oldest universities in Italy. The main campus is located in Genoa metropolitan area, within the Liguria Riviera. UniGe is defined by an array of high-level multidisciplinary training and research activities, multicultural educational pathways, and innovative research projects with the aim of boosting technological and knowledge transfer. Unige is a key recipient of multiple fundings on key societal challenges, among which Robotics, Mobility, Energy, and Healthcare. Moreover, UniGe provides long-standing expertise in social cohesion, for example its gender equality actions with its Equal Opportunity Committee (EOC), representing a unique case in Italy, and expertise in public engagement empowerment.

UCA is a research-intensive university relying on a strong cluster of Higher Education and research institutions (i.e., Observatory of the Côte d'Azur, CNRS, INRIA, etc.). It was created following the merge of Université Nice Sophia Antipolis and the Communauté d'Universités et d'Etablissements Université Côte d'Azur. The actual UCA model of University relies on transdisciplinary cooperation and coordination between research, training and innovation, as well as strong and sustained partnerships with private sector entities and local policy makers. In January 2016, Côte d'Azur won a prestigious "IDEX" award from the French government, placing it among the top 10 world-class, comprehensive universities in France. UCA provides its own experience of transforming a campus.

TECHNICAL UNIVERSITY OF KOŠICE

MCI THE ENTREPRENEURIAL SCHOOL

Haaga-Helia University of Applied Sciences

TUKE was established in 1952 and is internationally recognized research and higher education institution that provides education and smart solutions for various areas of life. As a leading institution in the fields of innovation and technology transfer the TUKE acts as a key player in the regional triple helix - closely co-operating with public and private sector. The strong background with multidisciplinary and interdisciplinary approach to global challenges are key contributions of TUKE to the Ulysseus European University. It coordinates the European Digital Innovation Hub CASSOVIUM, aiming to help, through the innovative use of eco digital technologies, companies and organizations of the public sector to increase their competitiveness and efficiency. TUKE has a strong research and technological and knowledge transfer background, with multidisciplinary and interdisciplinary approach to global problems solving.

MCI Management Center Innsbruck (MCI) is a school for business and engineering in Tirol, Austria. It follows the concept of an Entrepreneurial School covering Higher Education, research and transfer into practice for management, society, technology and life sciences. MCI empowers motivated people to achieve outstanding performance, provides profound academic competence and creates innovative know-how transfer within a strong international network. As THE Entrepreneurial School®, applied research and development play an important role in fostering the innovative power of local businesses and in ensuring quality in teaching. MCI's strong international network and orientation will foster collaboration beyond the Alliance across the world. MCI provides profound experience in the coordination of Erasmus Mundus Joint Master Degrees and in the creation of innovative know-how transfer within a strong international network.

Haaga-Helia University of Applied Sciences (Haaga-Helia) is among the largest business educators in Northern Europe. Its core research areas corresponding to the needs of business life are: Entrepreneurship and business development, Sales development and digitalization, Service business development and design, and Engaging vocational pedagogy. In industry collaboration, Haaga-Helia focuses on entrepreneurial approach, co-creation, innovation, as well as international growth. In response to the rapidly changing needs of the world of work, Haaga-Helia is focused on developing flexible methods, tools, platforms, and environments for continuous learning in close cooperation with students, teachers, researchers, companies, partner universities and other organizations in Finland and abroad. Haaga-Helia brings innovative, student-centred pedagogies, longstanding experience in training future-proof competences, and experience in academic recognition and joint and double degrees.

WWU
MÜNSTER

UCG
Univerzitet Crne Gore

As one of the largest German comprehensive universities and looking back on a 250-year tradition, the University of Münster is internationally recognized for its top-level research, excels in how it trains its early-career researchers, and is particularly attractive for students due to its profile of research-based teaching. As condensed in its claim, "living.knowledge", the University of Münster embraces its responsibility in creating knowledge and transferring it into society and public culture. University and society are historically intertwined in the city and region, which creates the conditions for the bidirectional transfer of knowledge in the major areas of the humanities and social sciences, as well as in the natural and life sciences. WWU brings experience in inter-regional collaboration to boost innovation-driven territorial transformation.

UoM is the biggest and only public University of Montenegro, with the aim to create and spread knowledge through its excellence in education, science, and achievements to improve international cooperation, to create successful and socially responsible university graduates, and to promote the democratic and sustainable development of Montenegrin society and state. UoM is an integrated university, organized according to the principles of the Bologna Declaration, with curricula harmonized with those at the most respectable European universities. Internationalization is high on the agenda of the University of Montenegro, to foster recognition of the University of Montenegro in the EHEA and ERA and across the world. The 2020 UoM Internationalization Strategy 2021-2026 defines sustainable objectives within four priority areas: Internationalization of teaching, Internationalization of research, Mobility of students and staff and international positioning. UoM will contribute to bridge Ulysseus with the rest of the world.

The Ulysseus expanded Alliance represents the European geographical, social and economic diversity.

The expanded alliance is well balanced geographically with one University from Northern Europe (Haaga-Helia, Finland), three Universities from Western Europe (UCA, France; MCI, Austria; WWU, Germany), two Universities from Central and Eastern Europe (TUKE, Slovakia; UoM, Montenegro) and two Universities from Southern Europe (USE, Spain; UniGe, Italy). Therefore, the Ulysseus campus will integrate the **four European regions** (according to the categories set by EUROVOC),

As an open to the world University, Ulysseus keeps its arms open to new Higher Education Institutions that may be incorporated to the Alliance in the future as full or associated partners.

In step 2, Ulysseus will be more diverse and complementary, more multilingual and multicultural, richer in Education, Science, and Innovation. United in the diversity, as our European Values

Ulysseus universities are located **in eight EU NTU 2 regions with deep differences in economic growth, competitiveness, innovation performance and employment rates**. From very competitive regions and strong innovators with Gross Domestic Product (GDP) above the EU average and high employment rates, to much less competitive regions and moderate innovators with GPD below EU average and low employment rates (Table 2). In addition, Ulysseus countries' scores in the OECD's PISA (for young) and PIACC (for adults) programmes for assessing key skills are aligned with their corresponding economic and competitiveness data. **Ulysseus is socially and economically diverse**.

Additionally, five of the Ulysseus partner universities are in cities (Helsinki, Kosice, Munster, Podgorica, and Seville) selected as **Cities 2030** in the EU mission "Climate Neutral & Smart Cities", an opportunity to promote cross-fertilization in the field of climate change.

The Ulysseus Alliance speaks 9out of the 24 EU official languages and Montenegrin, with the four most spoken languages (Spanish, French, German and Italian) covering a native speaker's community of more than 718 million people worldwide. Ulysseus is multilingual and multicultural.

This diversity of universities, countries and regions has helped to **create a complementary, dynamic and versatile Alliance**, together with **158 associated partners**, to develop an agile, sustainable and proactive Innovation Ecosystem, which boosts synergies among

the missions of Higher Education Institutions: education, research, innovation, at the service of society, to address UN, European, regional and local challenges.

Ulysseus activity **helps to decrease the EU regional innovation divide**, strengthening social, economic and territorial cohesion through education linked to R&I.

Table 2.

Overview of the socio-economic indicators of Ulysseus NTU2 regions

NTUS 2 code[1]	NTUS 2 Name	Country	Population[2]	GDP[3]	RCI[4]	RIS[5]	Employment[6]	University Partner
ES61	Andalucía	Spain	8.427	67%	-0.88	Moderate	59.3%	USE
FRL0	Provence-Alpes-Côte d'Azur	France	5.065	98%	0.12	Strong	69.9%	UCA
ITC3	Liguria	Italy	1.533	105%	-0.30	Moderate	67.7%	UniGe
SK04	Východné Slovensko	Slovakia	1.625	49%	-0.72	Emerging Innovator	69%	TUKE
AT33	Tirol	Austria	0.754	135%	0.36	Strong	79.6%	MCI
FI1B	Helsinki-Uusimaa	Finland	1.671	143%	0.87	Leader +	79.7%	HH
DEA3	Münster	Germany	2.623	101%	0.5	Strong	79.0%	WWU
ME00	Crna Gora	Montenegro	0.622	50%	NA	NA	60.8%	UGC

1. Population in million inhabitants. Eurostat statistics of <u>regions and cities</u>

2. GDP per inhabitant in PPS (% of 27-EU average) 2019. Eurostat statistics of <u>regions and cities</u>

3. European <u>Regional Competitiveness Index</u> (2019)

4. European <u>Regional Innovation Scoreboard</u> (2022)

5. Employment rate (ages of 20-64), 2019. Eurostat statistics of <u>regions and cities</u>

The Ulysseus travel partners

Ulysseus partner universities are not alone in this trip. It is this Alliance's ambition to create a community where universities (including students and staff), regional and local authorities, business, and citizens, meet to contribute to regional development and to shape the future of the European Higher Education and Research Areas.

The eight University partners share a **strong involvement in regional and local development**. Therefore, Ulysseus Alliance has been built up on our common and complementary strengths (education, research, knowledge transfer, innovation, facilities, and key associated stakeholders), aligned with **eight priorities (R&I challenges) of our regions' smart specialization strategies (S3) and cities' strategic plans**. All together, these priorities are also lined up with the UN Sustainable Development Goals, the Green and Digital Transitions, and the EU societal wellbeing global challenges (Figure 4).

To this aim, **158 associated partners**, key stakeholders comprising **regional and local governments, business corporations, companies, citizen associations, students' associations** (including the Erasmus Student Network), **NGOs, as well as other HEIs** (academic associated partners), have joined Ulysseus adventure. All Ulysseus main travel companions are summarized in Table 4. Doubtlessly, the Alliance keeps open to incorporate new associated partners that could contribute to Ulysseus goals in the future.

Figure 4.

Ulysseus societal challenged-oriented innovation for territorial transformation

Alignment of the priorities of the Ulysseus Innovation Hubs with global, EU-, as well as national, regional and local priorities

Global

EU-level

EU International Policies

Global challenges
Sustainable Development Goals

EU challenges
Twin transitions + Societal wellbeing

Ulysseus challenges

- Ageing & well being
- Socio - Ecological Sustainability
- Energy, transport for smart cities
- Sustainable Entrepreneurship & Impact

- Applied AI for Business & Education
- Robotics
- Digital Transformation of Industry
- Cybersecurity

EU Policies

→ Cohesion policy
→ Industrial policy
→ European Strategy for Universities
→ European New Innovation Agenda

EU Funds

→ Recovery & Resilience facility
→ Erasmus +
→ Horizon Europe
→ Digital Europe

Member-state

- National Objectives

Region

- Regional S3 strategies

Local

- Local Objectives (i.e., EU Cities Mission)

STAKEHOLDERS

Table 3.

The Ulysseus associated partners in figures.

Entities common to all thematic challenges (Innovation Hubs)		Local / Regional / National Governments	17
		Chambers of Commerce / Business Confederations	13
		Citizens associations / NGOs	21
		Students Associations	11
		Research Centers / National Research Councils	14
		Think-tanks	1
		Higher Education Institutions	11
Entities specific to thematic challenges (Innovation Hubs)	**Private companies and University spin-offs**	Ageing and well-being	1
		Socio-Ecological Sustainability	4
		Energy, transport, mobility for smart cities	16
		Sustainable entrepreneurship and impact	19
		Digitalization transformation of Industry	8
		Artificial intelligence for business and education	7
		Cybersecurity	2
		Robotics	3
	Industrial clusters	Ageing and well-being[1]	1
		Socio-Ecological Sustainability[2]	1
		Energy, transport, mobility for smart cities[3]	2
		Sustainable entrepreneurship and impact[4]	2
		Digitalization transformation of Industry[5]	3
		Artificial intelligence for business and education	0
		Cybersecurity	0
		Robotics[6]	1
			158

1. Among the clusters related to Ageing and Well-being, there are 158 affiliated entities involved.

2. The cluster related to Socio-Ecological Sustainability has 25 affiliated entities.

3. Among the clusters related to Energy, transport, mobility for smart cities, there are 726 affiliated entities involved.

4. Among the clusters related to Sustainable entrepreneurship and impact, there are 539 affiliated entities involved.

5. Among the clusters related to Digitalization transformation of Industry, there are 158 affiliated entities involved.

6. The cluster related to Robotics has 25 businesses.

The Alliance takes a step forward in the shaping of Ulysseus European University

A general framework agreement for cooperation among the six Higher Education institutions is already in force since 2020. Moreover, all partner universities have been operating exchange of students (study and internships), teachers and staff through Erasmus agreements and the first Ulysseus project, funded by the European Universities 2020 call for proposals. The two new partners, WWU and UoM, have a strong previous education, research and innovation cooperation with several foundational partners.

Furthermore, to achieve its joint longterm vision, Ulysseus, in its Step 1, has already contributed with the **following outputs**:

(A) **For modernizing our universities for more innovation and co-creation**, the Ulysseus Campus is under development, including the Central Management Office, the Ulysseus Digital Platform and the Ulysseus Innovation Hubs (IH). The Ulysseus Students Association is being organized. The expansion to 8 universities and the new organization of Innovation Hubs and reinforcement of the International Projects Office will consolidate these structures in the following years.

In Step 1, Ulysseus has already set up a strong, integrative and feasible democratic governance and management structure including **8 Governance Plans** (Financial; Sustainability; Management, Quality and evaluation; Digitalization; Green; Equality; Dissemination; Internationalization) and an **agile, sustainable and proactive management** based on strategic planning and the PM² Project Management Methodology, and the **Ulysseus "RADAR"**, our observatory for internal monitoring (see Figures 6 and 7).

KG2) **To contribute to regional and local development**

Concerning Education, a common framework for facilitating the academic collaboration within the alliance has been established, including a Framework Agreement on Academic Recognition. With the building up of this academic framework, the Ulysseus Academic offer, consisting of joint and double degrees (formal or official offer) and Ulysseus Educational Activities (short courses/ activities, non-formal/informal offer) is organized with a holistic view.

» The **Ulysseus Joint Degrees** (Figure 5) combine challenge-based interdisciplinary training and competences with student-centred innovative pedagogies, offering flexible pathways, mobility and traineeships. In Step1, we seek to accredit one joint Master degree, followed by one joint PhD programme, per Innovation Hub thematic challenge, by using a combination of European Approach (where available) + national system + institutional-based,

accreditations, but leading to the awarding of a joint diploma. Our first pilot "Joint European Master Degree in Efficient and Sustainable Energy, Transport and Mobility to Build the Smart Cities of the Future (UlysseusCitiesMD)", has been submitted for accreditation, and the rest of the joint programmes are already under preparation.

» The Ulysseus Double Degrees. So far, 9 double degree agreements, 3 at the bachelor and 6 at the master, level, have been signed.

Concerning Research and Innovation, the Ulysseus Strategic Agenda for R&I, to help maximize the alliance R&I activities' impact, policy, influence, and visibility at European level, has been launched. **Researchers' weeks** gathering scientists from the 6 partner universities around the Innovation Hub challenges, as well as **webinars and seminars** around the IH priorities have been organized. The Ulysseus **R&I capacities and synergies database**, containing information on the Ulysseus researchers' expertise and capacities, and synergies, in relation to the Innovation Hubs challenges and the transversal

Table 4.

Ulysseus framework for accreditation of joint programmes and awarding joint degrees

| University/ Country	Evaluation Agency registered in EQAR	Accepts the EA for accreditation of joint programmes	Accepts cross-border quality assurance	Allow to accredit PhD programmes	Awarding a joint degree
USE/Spain	Yes	Yes	Yes	Yes	Yes
UCA/France	Yes	Yes	Yes	Yes	Yes
UniGe/Italy	No	No	No	Yes	Yes
TUKE/ Slovakia	No	No	No	Yes	Yes
MCI/Austria	Yes	Yes	Yes	No	Yes
HH/Finland	Yes	Yes	Yes	No	Yes
WWU / Germany	Yes	Yes	Yes	Yes	Yes
UoM/ Montenegro	No	No	No	Yes	Yes

areas of Social Sciences and Humanities, will be available soon through the Ulysseus Digital Platform. Our digital platform-**based research digital network Match4Cooperation App**, to boost research collaborations within the alliance and with Associated Partners, is already available. Two specific agreements to pool structures and equipment of all kinds (especially research centers and incubators) to facilitate and encourage collaborative research, are in their final stage of preparation.

KG3) **To reduce the competences gap, by preparing highly skilled digital, multilingual and entrepreneurial European citizens**, proof skills pilot programmes and activities have been deployed.

- » The **+2 Language programme** to knowing two languages in addition to one's mother tongue, has been launched in Open Access through the Digital Platform, currently offering English, Spanish, Italian, French, German and Russian courses.

- » **Entrepreneurship and design-thinking activities** are included as subjects in the curricula of the joint degrees, and also offered to all Ulysseus students as short courses and Entrepreneurship camps.

- » **Digital Skills** training activities for students and teachers are being piloted through the satellite project D2S@Ulysseus.

- » The **Career Development Programme**, to allow students at all levels to design their individual study plans will be develop through Artificil-Intelligence-based guidance.

Figure 5.

Main elements of the Ulysseus Joint Degrees

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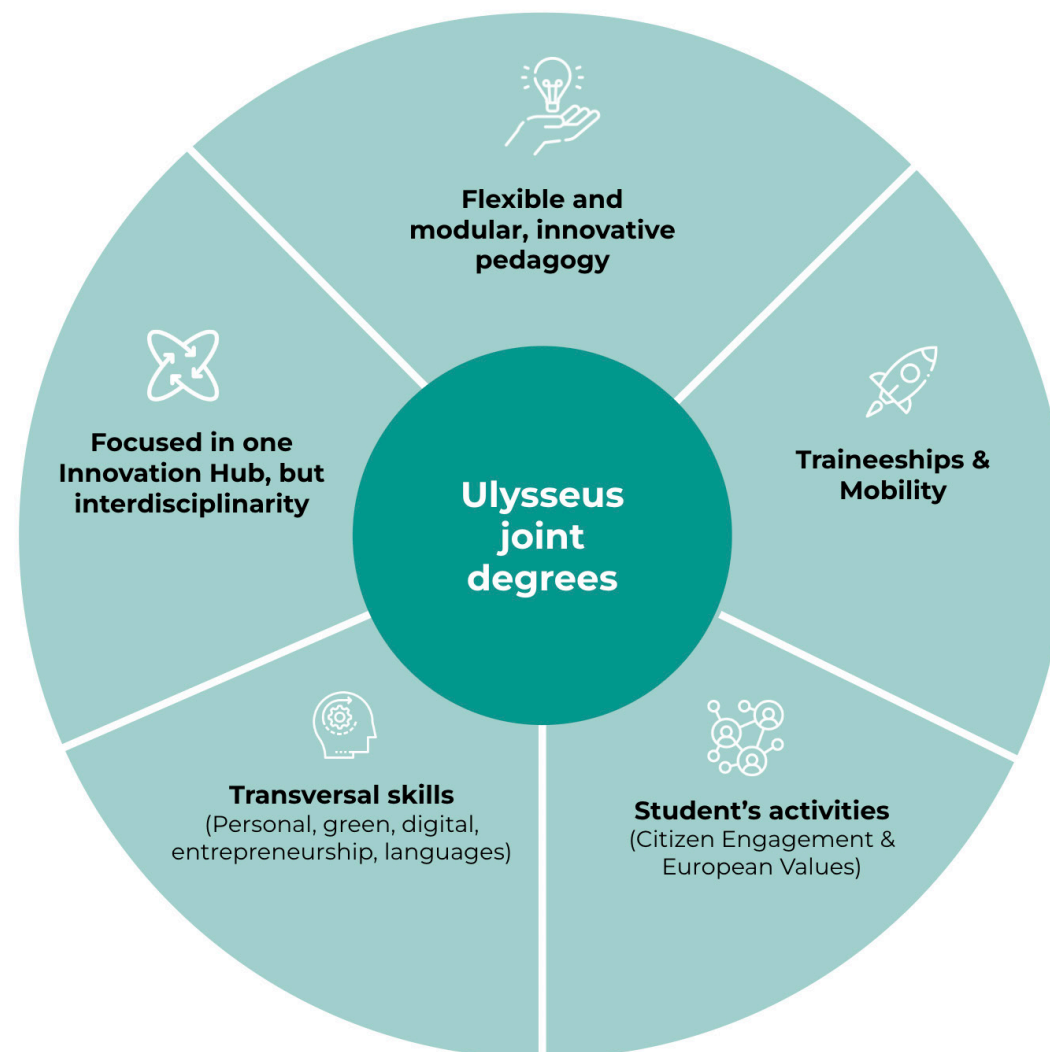
» The **Pedagogical mentoring handbook**, with the joint vision for Ulysseus pedagogy, is paving the way for the development of the Ulysseus Pedagogical Mentoring Network and corresponding for the mentoring program (to be implemented in Step 2).

KG4) **To enhance the knowledge and practice of the European values, shaping resilient, human rights respectful and socially committed European citizens, boosting citizen engagement**. A set of documents and programmes have been released and will be implemented in 2023-2027: Ulysseus Gender Equality Agenda, Ulysseus R&I Gender Agenda, Ulysseus Special Needs Programme, Elderlies' Internationalization Programme, the Scholarship programme for disadvantaged groups, the Citizens' engagement programme Handbook, and Open Classes Sites Agreement.

KG5) **To provide steady in-person and virtual mobility with automatic recognition and the massive use of the European Student Card, as well as an intense international activity**. The **Ulysseus Mobility Programme Handbook** (step 1) for mobility of students (at all levels), academic and non-academic staff, has paved the way for an efficient mobility within Ulysseus Community. From step 1, the Ulysseus Welcome

programme to support both international visitors and degree- job- seeking students and staff, and corresponding online **Welcome guide[6]**, and the **Green Deal mobility guide[7]** containing basic principles to contribute to a climate-neutral Europe, beyond transportation, are also in place. With the aim of promoting a more flexible academic recognition, the six partner universities of step 1 are in the process of signing a **joint Erasmus multi-Institutional Agreement open to all disciplines** and agreed in the use of **combined Learning Agreements** (i.e., agreements involving more than two partner universities, which in addition could include physical and virtual mobility). Finally, the **Ulysseus Framework for Academic Recognition** (step 1) defines an internal cooperation framework to reduce existing administrative barriers and obstacles in order to promote automatic recognition of credits earned in any Ulysseus university, facilitating the recognition of learning periods abroad.

Ulysseus is a European University without barriers aiming to building sustainable bridges with partners beyond EU borders by means of a well-coordinated **International Cooperation Programme** for boosting international collaborations in the four missions of the university. In step 1, seven **target regions** were identified as strategic for Ulysseus collaboration: (i) Western Balkans, (ii) Eastern Partnership

Countries, (iii) South Mediterranean Countries, (iv) Asia, (v) Latin America, (vi) African, Caribbean and Pacific Group of States, and (vii) Other Industrialised countries. They will form part of the broad Ulysseus International Cooperation Network and will have a crucial role in Ulysseus step 2. Within the satellite project COMPASS, Ulysseus will set up its **first international branch at the University of Da Nang (Vietnam)**. The Ulysseus Governing Council has also approved the establishment of future branches in other regions (especially Africa and Latin America).

The Ulysseus Satellite Projects[8]

As part of our Sustainability Plan, the Alliance has already a fleet of joint Erasmus+ projects that support Ulysseus in the development of academic activities, including the Erasmus Mundus Joint Master Degrees (EMJMD) Design Measures COBRING (to prepare a EMJMD proposal for the joint Master Degree in Energy), COMAI (to prepare a EMJMD proposal for the joint Master Degree in Artificial Intelligence), projects to promote digital skills of students and teachers (D2S@ULYSEUS) and projects to support virtual mobility (MOVIDIS) and students with special needs in their mobility experience (MOB4ALL). Additionally, the Horizon 2020 SwafS COMPASS project is being developed to become a model of excellence for research and innovation in line with the shared, integrated, long-term joint strategy of the alliance.

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6.   Ulysseus Welcome Guide.

7.   Ulysseus Green Mobility Guide.

8.   The Ulysseus Satellite Projects.

Figure 6.

Ulysseus Governance structure

Strategic level

GOVERNING COUNCIL

Strategic decisions, Alliance coordination, project monitoring approvals, financial approvals, Governance plans approvals, Innovation Hubs supervision

GENERAL COMMITTEE

WPs and IH coordination
Risk management, quality, and report

Students Association Student's Assembly

Advisory level

INTERNATIONAL ADVISORY BOARD

Monitoring process
Annual External
evaluation Consultation

Advisory level

RADAR

Internal quality
assurance and
foresight

Operative level

| Joint Structures Board (WP1, WP2, WP9) | Education, R&I Board (WP3, WP4, WP5) | Social Diversity and Public Engagement Board (WP6) | Mobility & International Outlook board (WP7, WP8) | Innovation Hub Committee | Students Board |

Innovation Hubs Local Steering Committees
Local coordination of activities performed within the Innovation Hubs

Strategic level

Advisory level

Advisory level

Figure 7.

Ulysseus Management structure

General Coordinator

CENTRAL MANAGEMENT OFFICE

COORDINATION UNIT

General Manager

Business Processes Officer

Financial & Adm. Officer

2 Financial & Administrative Assistants

8 Project Managers

Projects Office

Projects Office Director
Grant writers

Mobility Office

Mobility Coordinator
8 Mobility Managers

DISSEMINATION UNIT

Dissemination Officer
Scientific Dissemination Officer
Junior Assistant
Workgroup: 8 Communication Officers

DIGITALIZATION UNIT

Digital Platform Officer
Software Developer
Joint Facilities Coordinator
Workgroup: 8 IT Managers

8 INNOVATION HUBS

1 Innovation Hub Coordinator
8 Innovation Chief Scientific Officers
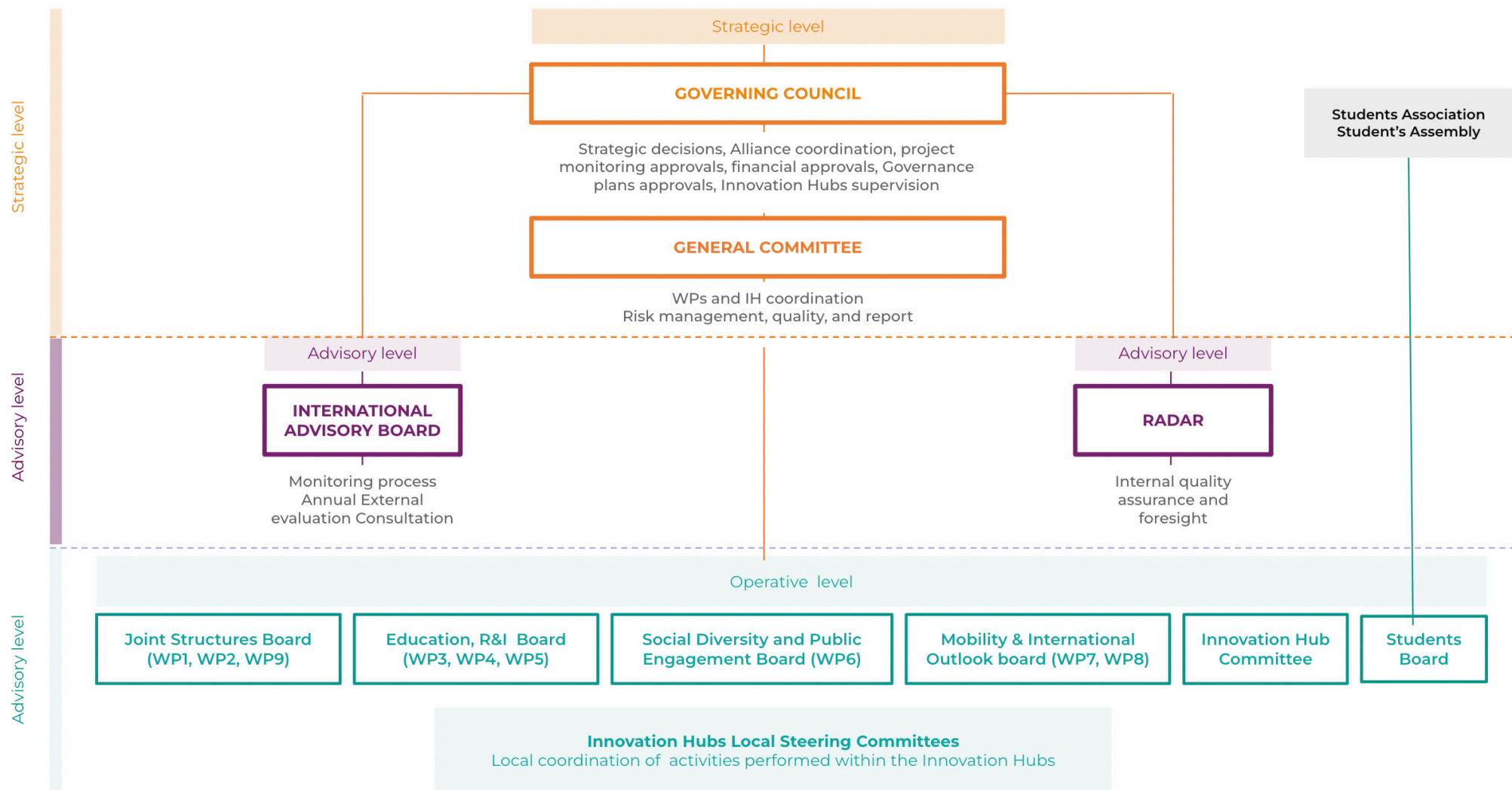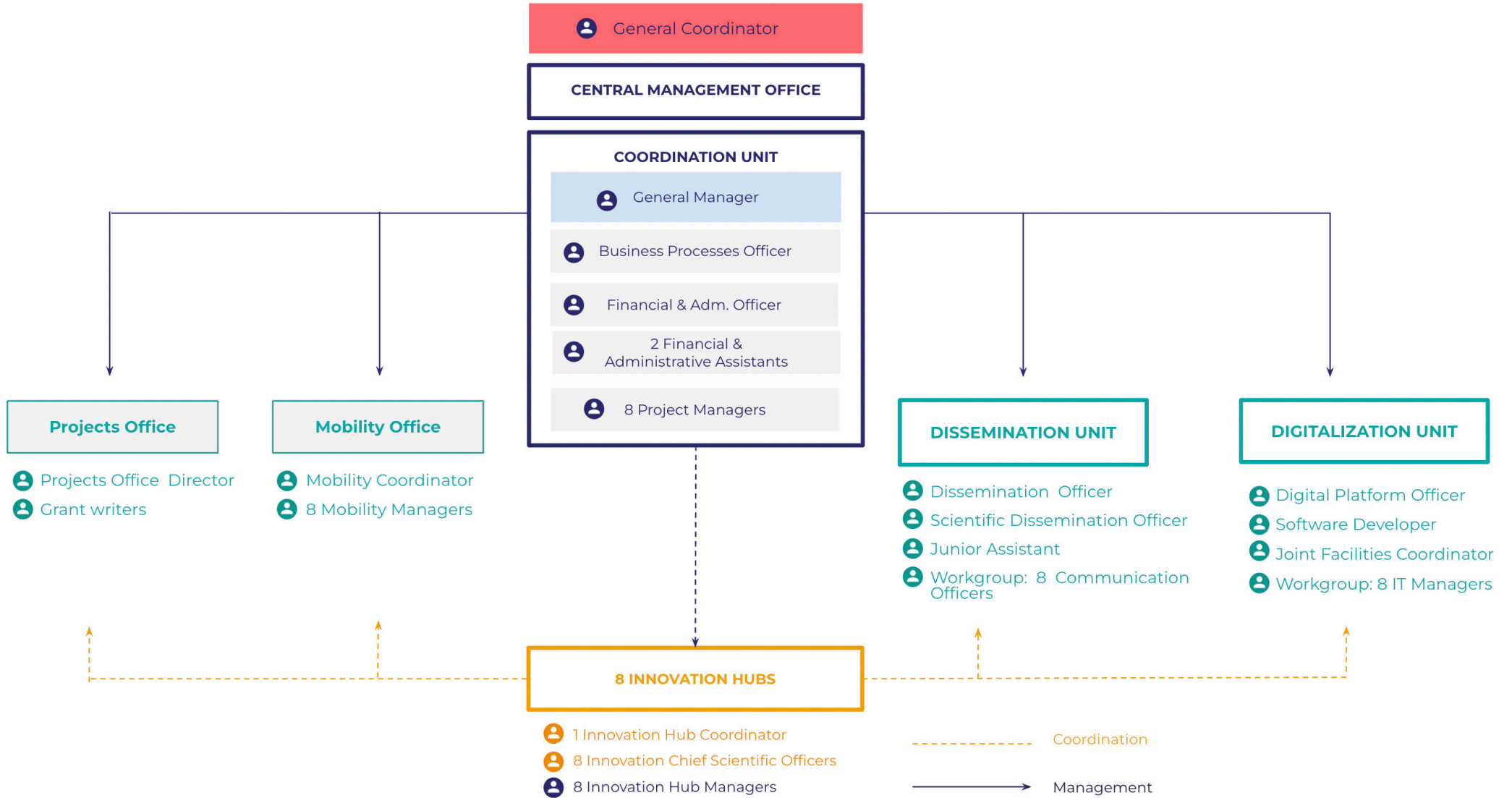8 Innovation Hub Managers

- - - - - - - - Coordination

———————→ Management

Five european challenges for higher education institutions

Europe is facing an era in which globalization, technological progress, sustainability changes, persistent social inclusion challenges, security concerns, political instability and demographic change are having a profound impact on societies and citizens.

The two main societal roles of education and training — their contribution to competitiveness, innovation and employability and their role in active citizenship, social inclusion, cohesion and personal development — are closely intertwined and fully complementary in today's societies.

The **Ulysseus** University **contributes to the achievement of 5 European Challenges**, identified on the policy documents for the future of the European Higher Education and Research Areas,[9],[10]

In 2030, the Ulysseus Innovation Ecosystem will have addressed five **Key Goals (KG) (see Figure 8)**:

» **KG1**. To modernize European Universities for more innovation and co-creation, by **developing a long-lasting Ulysseus territorial and digital Innovation Ecosystem** composed by the Ulysseus community, representing the helix, and the Ulysseus campus.

In its second step (2023-2027) Ulysseus will consolidate its structures (Specific Objective 1) improving management & coordination (WP1), consolidating the Campus (WP2) and establishing clear impact pathways by means of dissemination and communication (WP9) .

» **KG2**. To contribute to regional and local development, by implementing transdisciplinary and interlinked **student-centred, flexible and work-based European joint degrees** and **research and innovation activities**, aligned with regional and local R&D specific & transversal challenges.

» **KG3**. To reduce the competences gap, by **preparing highly skilled digital, multilingual and entrepreneurial European citizens** through a range of combined innovative learning and teaching activities, with specific attention to career development and boosting competences that will be relevant in the future.

In its second step (2023-2027), Ulysseus will link KG2 and KG3 by bridging Education, Research and Innovation (Specific Objective 2), with an integrated Human Capital Development (WP3), intertwined with Research & Innovation (WP4) and Innovation-driven territorial transformation, including the collaboration with other European Universities Alliances for inter and intra-regional pilots for cross-fertilization (WP5)

» **KG4**. To **Enhance the knowledge and practice of the European Values**, shaping resilient, human rights respectful and socially committed European citizens, **boosting citizen engagement** through a number of outreach activities, **promoting equality and inclusiveness**, and **tackling under-representation of women in STEAM**.

In its second step (2023-2027), Ulysseus will work for creating an inclusive community (Specific Objective 3), including the Ulysseus activities for promoting Gender Equality, Diversity, and Inclusiveness (EID) and enhance the engagement of our community, including students (at all levels), staff (academic, non-academic), associated partners and citizens, in Ulysseus activities (WP6).

» **KG5**. To provide **steady** in-person and virtual **mobility** with automatic recognition and the massive use of the European Student Card, as well as an intense international activity **to promote Ulysseus as a highly attractive, competitive and open to the world** model of University.

In its second step (2023-2027), Ulysseus will boost its international outlook and mobility (Specific Objective 4), including a reinforced strategy for diversified mobility of the community (WP7) and expanding its internationalization and networking activities, including three branches outside Europe (Asia, Latin America & Africa) (WP8).

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9.   On a renewed EU agenda for Higher Education. May 2017 COM(2017) 247

10.   A renewed European Agenda for Research and Innovation - Europe's chance to shape its future. The European Commission's contribution to the Informal EU Leaders' meeting on innovation in Sofia on 16 May 2018.

Figure 8.

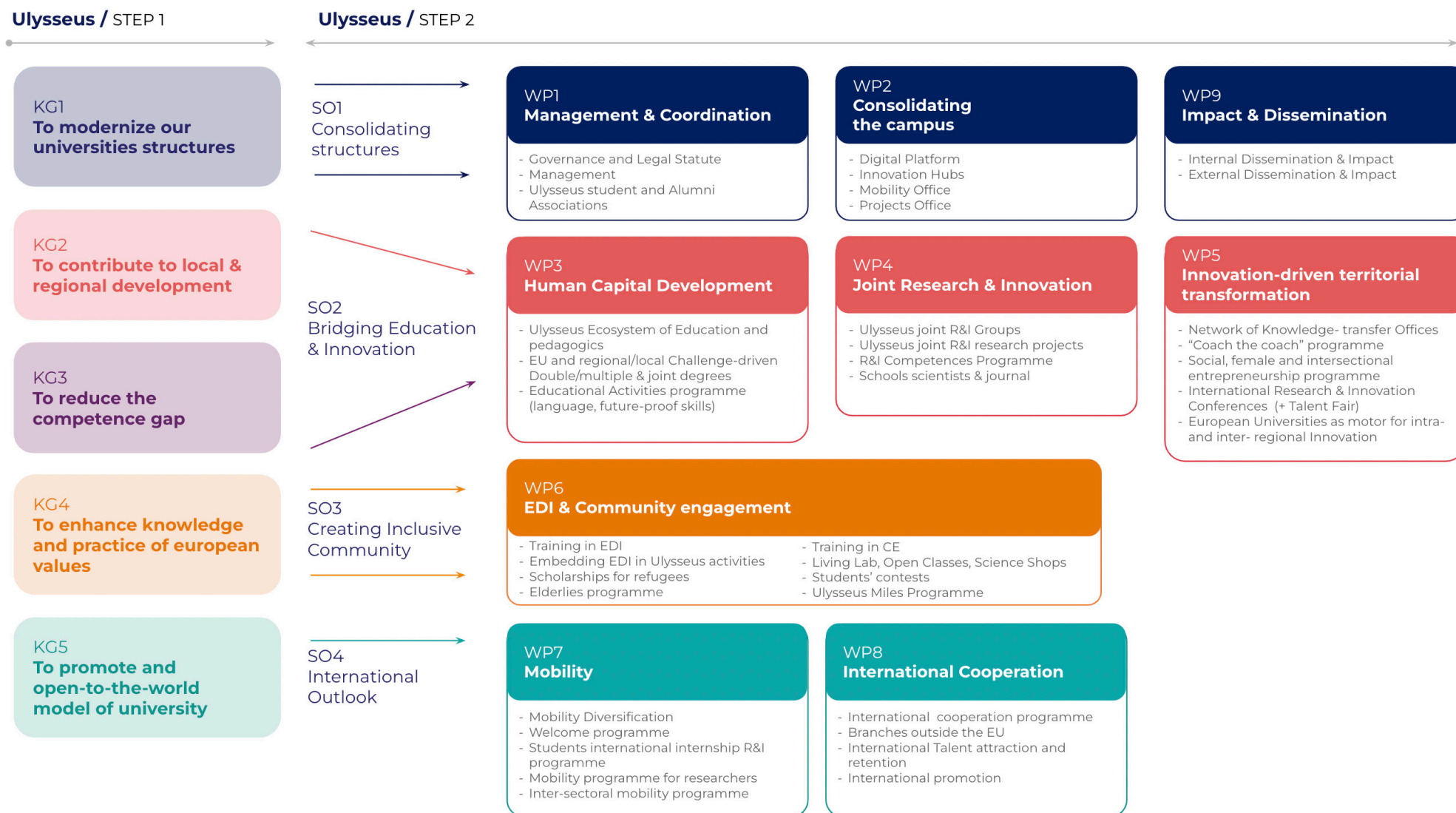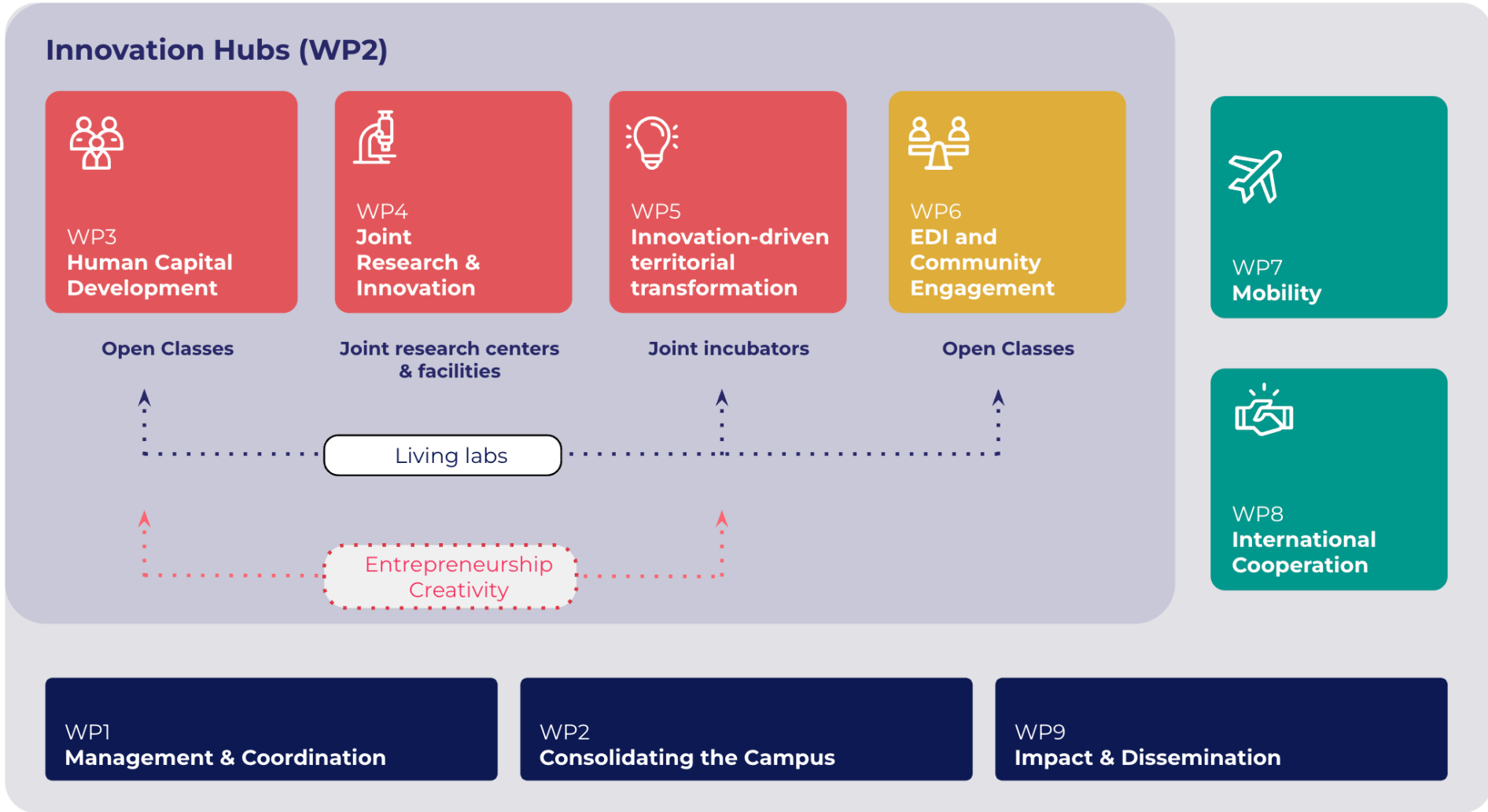*Alignment of Ulysseus (step 1 & 2) Specific Objectives and WPs/activities*

Ulysseus / STEP 1

Ulysseus / STEP 2

KG1
To modernize our universities structures

KG2
To contribute to local & regional development

KG3
To reduce the competence gap

KG4
To enhance knowledge and practice of european values

KG5
To promote and open-to-the-world model of university

SO1
Consolidating structures

SO2
Bridging Education & Innovation

SO3
Creating Inclusive Community

SO4
International Outlook

WP1
Management & Coordination

- Governance and Legal Statute
- Management
- Ulysseus student and Alumni Associations

WP2
Consolidating the campus

- Digital Platform
- Innovation Hubs
- Mobility Office
- Projects Office

WP9
Impact & Dissemination

- Internal Dissemination & Impact
- External Dissemination & Impact

WP3
Human Capital Development

- Ulysseus Ecosystem of Education and pedagogics
- EU and regional/local Challenge-driven Double/multiple & joint degrees
- Educational Activities programme (language, future-proof skills)

WP4
Joint Research & Innovation

- Ulysseus joint R&I Groups
- Ulysseus joint R&I research projects
- R&I Competences Programme
- Schools scientists & journal

WP5
Innovation-driven territorial transformation

- Network of Knowledge- transfer Offices
- "Coach the coach" programme
- Social, female and intersectional entrepreneurship programme
- International Research & Innovation Conferences (+ Talent Fair)
- European Universities as motor for intra- and inter- regional Innovation

WP6
EDI & Community engagement

- Training in EDI
- Embedding EDI in Ulysseus activities
- Scholarships for refugees
- Elderlies programme

- Training in CE
- Living Lab, Open Classes, Science Shops
- Students' contests
- Ulysseus Miles Programme

WP7
Mobility

- Mobility Diversification
- Welcome programme
- Students international internship R&I programme
- Mobility programme for researchers
- Inter-sectoral mobility programme

WP8
International Cooperation

- International cooperation programme
- Branches outside the EU
- International Talent attraction and retention
- International promotion

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Figure 9.

WP organization and interaction, highlighting the role of the IH in the co-creation of activities

Innovation Hubs (WP2)

| WP3 **Human Capital Development** | WP4 **Joint Research & Innovation** | WP5 **Innovation-driven territorial transformation** | WP6 **EDI and Community Engagement** | WP7 **Mobility** |

Open Classes | Joint research centers & facilities | Joint incubators | Open Classes

Living labs

Entrepreneurship Creativity

WP8 **International Cooperation**

WP1 **Management & Coordination**

WP2 **Consolidating the Campus**

WP9 **Impact & Dissemination**

Challenge 1.

Modernizing Universities' structures for more innovation and co-creation

Europe's economic and social prosperity relies on its capacity to innovate; thus universities are called upon to interact, co-create and achieve a far-reaching impact on regional, national and global development.

The Triple Helix innovation model focuses on **University-Industry-Government** relations, and their transforming roles. A fourth less institutionalized type of actor was added to the system, the **'media-based and culture-based public' and 'civil society'**, making it a quadruple helix in the eyes of some observers. Including the **natural environment** in this model contextualizes the actors' relations and includes the necessary socio-ecological transition of society and economy as a driver for R&I and education,

creating synergies between economy, society, and democracy. Including the environment makes the ecologically sensitive quintuple helix model of innovation.

This concept is enabled by **preceding institutional changes** such as increased autonomy, interdisciplinary organization, teaching and learning reforms, as well as **modernizing structures and institutional frameworks** in order to address challenges that are prioritized by all actors. **Co-creation and design thinking** are useful tools to integrate society into the innovation system.

The **New European Innovation Agenda**, the **European Strategy for Universities** and the

European Green Deal give crucial opportunities to enhance the Ulysseus Innovation Ecosystem model, transforming our universities for contributing to the twin green and digital transition and EU Societal Challenges.

In addition, strengthening the contribution of Higher Education to innovation requires **action across universities' missions — education, research, knowledge transfer, and engagement with the wider world.** Higher education institutions need to build an outward-looking culture of innovation and entrepreneurship.

Challenge 2.

Contributing to the development of our regions and our cities

Within Europe, there is an **innovation divide between regions**, with several European areas lagging significantly behind, regarding investment, innovation capacity and performance. For instance, this innovation gap is deeply reflected in Ulysseus Universities' regions (see Table 2).

As education and R&I agents, **Universities should play a wider role in local and regional growth**. University provides six key inputs for that: (i) a highly prepared human capital, (ii) as provider of knowledge and technology, (iii) as a talent attractor, (iv) as creator of industrial tissue, (v) the ability to connect multiple disciplines and institutional or sectoral perspectives within the same region, and (vi)

the ability to promote intra- and inter-regional collaborations to boost innovation-driven territorial transformation.

Universities can do more to boost regional and local growth, as (i) to facilitate connections between academics, entrepreneurs and public authorities, (ii) to align their educational offer and to tailor their research and knowledge transfer to Smart Specialization Strategies and cities strategic plans priorities, (iii) to seize opportunities for innovation in priority sectors, (iv) to help local businesses and other organizations to understand and adopt new ways of thinking, to promote cross-fertilization between regions to contribute to reduce the innovation divide, in collaboration with

other stakeholder, including other European Universities, among othes..

Making all this happen should be part of a wider cultural change, whereby Higher Education Institutions become **'drivers of change'** (and not only implementers of regional policies), , accelerating the uptake of innovation in the less innovative regions

Challenge 3.

Reducing the competences gap

It is expected that the demand for highly-competent, socially engaged people will outpace the supply in the decade to come. Driven by digital technology, **jobs are becoming more flexible and complex. Additionally**, "digital technologies could play a key role in achieving climate neutrality, reducing pollution, and restoring biodiversity". The twin green and digital transitions will result in profound shifts in the EU labour market and related skills. Thus, "both learning skills to adapt to a rapidly transforming technological reality and labour market, as well as green skills and climate awareness to support value creation in the green transition and responsible citizenship" are needed.

Ulysseus is highly committed to prepare the best skilled European citizens, as well as up-skilling and re-skilling lifelong learners (i.e., SMEs, general public). However, there are not enough opportunities for students to follow flexible curricula and inter-disciplinary approaches. This raises the risk of labor and skill shortages, provoking a drawback in innovation and competitiveness.

Recently, the Joint Research Center of the European Commission has released four strategic framework documents including the future-proof skills that European citizens will need, which have become reference documents for Ulysseus:

» GreenComp: The European sustainability competence framework

» DigComp The Digital Competence Framework for citizens

» EntreComp: The Entrepreneurship Competence Framework

» LifeComp: The European framework for the personal, social and learning to learn key competence

People's capacity to be **entrepreneurial, multilingual, manage complex information, think autonomously and creatively, use resources including digital ones, smartly communicate and be resilient** are more crucial

than ever. A specific issue is the learning of languages. Multilingualism represents one of the greatest assets in terms of cultural diversity in Europe and, at the same time, one of the most substantial challenges. Knowing two languages in addition to one's mother tongue shall be a standard. A crucial issue is the development future-proof skills, as green and digital ones, that will enable the twin transition necessary for a sustainable economy and society.

Despite teachers and trainers are the most important impact factor on learners' performance, too many Higher Education teachers have received little or no pedagogical training and systematic **investment in teachers' continuous professional development** remains the exception.

Finally, **lifelong learning of non-academic staff** is essential for the success of any university. To attain the ideal balance of personal development, administrative simplicity and transparency, an agile, sustainable and proactive University management based on quality standards is a must.

11.   Commission Staff Working Document. Proposal for a Council Recommendation on Key Competences for Lifelong Learning
          https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018SC0014&from=EN

12.   COM(2016) 381 final Communication from the Commission to the European Parliament the Council, the European Economic
          and Social Committee, and the Committee of the Regions. A new Skill Agenda for Europe. Working together to strengthen
          human capital, employability and competitiveness. {SWD(2016) 195 final} p.14

13.   https://publications.jrc.ec.europa.eu/repository/bitstream/JRC115008/futurgov_web_lq_v2.pdf

Challenge 4.

Towards a more inclusive and engaged society

Promoting equality, social cohesion and active citizenship is one of the strategic objectives for cooperation in education and training at the EU-level. Human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities, are values which are shared by EU Member States. They form the cement of our Union that binds countries, communities and people together, as outlined in Article 2 of the Treaty of Lisbon.

Everyone should be able to **access high-quality education**, irrespective of their socio-economic background. Meaningful and innovative inclusion programmes have to be developed to boost common values and inclusive education. This must comprise **non-traditional students** and validate **non-formal and informal learning**: learning in the workplace, silver age, unemployed, disabled learners and disadvantaged students. "Most of the European workforce of the next two decades is already adults today. They need ongoing training to update their skills and exploit new career opportunities"[12].

A special issue is the **under-representation of women in Science, Technology, Engineering, Arts and Mathematics (STEAM)**. We must try to reduce the current gap between women and men in relation to skills and personal and professional development in the use of STEAM disciplines. Empowering women in STEAM sectors and, particularly, in the digital sector, is relevant for the development of European societies and economies.

As recommended in the Joint Research Center publication "The Future of Government 2030+: A Citizen Centric Perspective on New Government Models"[13] we may promote innovative strategies, use design and foresight for better policymaking, fostering multistakeholderism and the **engagement of citizens**. Universities should boost citizen engagement and help to transform ideas in realities, taking into consideration market needs, sustainable indicators and social conditions.
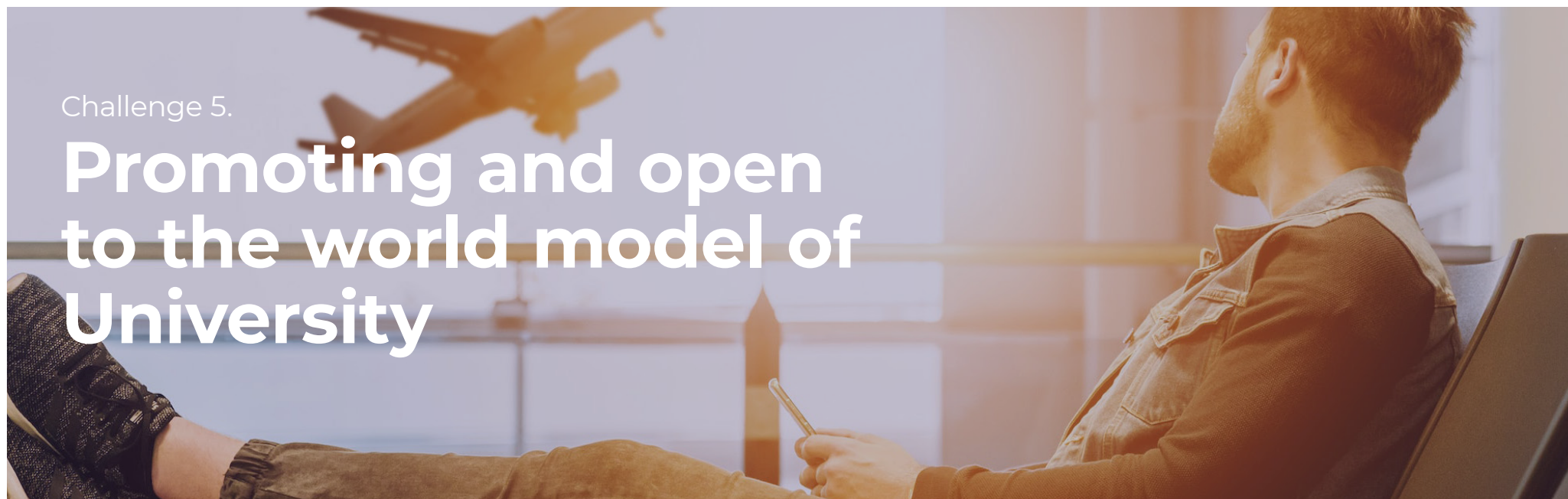
Challenge 5.

Promoting and open to the world model of University

European leaders and their citizens call for an **open Europe** in which mobility, in any stage of life and career, is enhanced in order to remain as a continent of **excellence, an attractive place to study, to carry out research and to work**.

One identified obstacle to **mobility** of students within Europe is the fact that, despite the Bologna process and other cooperation frameworks within the Council of Europe, Secondary School and Higher Education diplomas are not readily recognized in other Member States. **Removing obstacles to the recognition of qualifications** is imperative to promoting and fostering mobility and cooperation in education and training.

On the other hand, to be competitive and able to attract the best students and staff worldwide, **European universities should become models of excellence** based on attractive learning and career options, good guidance, quality assurance, mobility, and first-rate research and innovation. These **good practices models should be shared with the World and strengthened by adequate internationalization strategies**, including targeted international cooperation in education, research and innovation, as well as talent attraction and international promotion programmes.

According to international rankings, out of the 50 best universities in the world, only 10 are located in the EU. It is therefore **important that** Europe remains an attractive place to study and that more **European universities top the international rankings** in the future.

Ulysseus
Flagships

Ulysseus is a very ambitious endeavor. **Risks are high but gains are higher**. Our Alliance is going to significantly contribute to the achievement of critical European Challenges; adding value to regional and local growth through intertwined Education and R&I.

With Ulysseus 2030 key goals in mind, during the first three years (November 2020 – October 2023), the alliance has been focusing on building the pillars, the Campus and the Community, and on launching the first pilots of the main activities in interlinked Education and R&I, competences, citizen engagement, inclusiveness, mobility and international outlook.

In the next phase (November 2023 – October 2027), based on its background and aligned with the European Strategy for Universities and the New European Innovation Agenda , the General Objective of the alliance is to develop Step 2 of Ulysseus: "Consolidation of programmes and structures", as stated before. All the WPs tasks and activities for Step 2 in Ulysseus have been design for achieving specific mid-term outputs (tracked by key performance indicators) to get to the desired long-term impacts.

The Campus & the Community: Ulysseus Joint Structures & Joint Governance (WP1, WP2 & WP9)

Ulysseus Innovation ecosystem flagship.

The Ulysseus territorial and digital Innovation Ecosystem

Based on a new created community representing the quintuple helix (8 higher education institutions and 158 associated partners, bounded to the environment), **the Ulysseus Campus comprises partners' shared facilities and three new innovative joint structures** (Figures 2 and 3):

- » Innovation Hubs
- » Central Management Office
- » Ulysseus Digital Platform

The Campus is a **territorial and digital** entity to interconnect the community, coevolving capabilities around a shared set of knowledge, skills, technologies and cooperative work, for contributing to regional and local growth.

With an **integrative and democratic governance system** (see Figure 6), with full participation of the community, Ulysseus is an inclusive and open European University ready for going beyond 2023, with a **legal figure, and corresponding statute**. To guarantee a unique, flexible and sustainable European University a specific legal structure will be developed.

IMPACT
SO1 outputs will lead to consolidate Ulysseus as a digital and territorial European University covering all the call impacts, but specifically to

- » Institutionalised cooperation across all the HEI missions (joint structures, joint governance & management, legal statute, students, and alumni association)

- » Achieving the EEA, ERA and EHEA (legal statute)

- » Sustainability (legal statute)

- » Promoting our European way of living (democratic governance)

- » Share knowledge and good practices (internal and external dissemination)

Ulysseus Innovation Hubs flagship.

The Innovation Hubs, a unique Ulysseus innovative joint structure

Understanding our Alliance as an **Innovation Ecosystem** developing solutions for specific R&D challenges from **Innovation Hubs is Ulysseus unique and distinguishing feature**. Innovation Hubs are devoted to develop solutions for **eight R&I regional and local challenges**, turning ideas into reality.

Ulysseus main activities are co-created and developed in the heart of the Innovation Hubs (Annex 1). Collaboration and cooperation are the base of these structures, each one lead by the strongest partner in the R&I challenge in collaboration with all the rest through. After a reviewing process, these challenges have been better aligned with the regions and local governments priorities for the following years and the strategy of each partner, for boosting the activities impact. These activities include European joint degrees, joint Erasmus + and Horizon Europe projects, an incubator for spin offs, a joint research centre, a Living lab and an Open class settled in collaboration with the city government.

The **eight selected challenges** are **priority topics** in most of the **S3** and **cities' strategic plans** of Ulysseus Alliance and also of **UN SDG and European Green Deal, according to the green and digital twin transitions.**. Specifically, Innovation Hubs activities will deal with the twin green and digital transition, boosting the construction of a coherent and reliable technology ecosystem and developing skills, competences and technological innovation.

This institutionalized cooperation for Education, Research and Innovation in the heart of the Innovation Hubs, will lead (though specific activities) to a systemic, structural and sustainable impact for the European Education, Higher Education & Research Areas, sharing knowledge and spreading best practices.

Ulysseus Main Activities: Education, Research, Innovation, Competences, Citizen Engagement, Mobility and International Outlook (WP3, WP4, WP5, WP6, WP7 and WP8)

Ulysseus citizen of the future flagship

Preparing citizens for a changing, globalized, inclusive and high-skilled requesting society and job market of the future

Ulysseus students, academics and staff will have a recognizable distinction: besides being high-qualified professionals in key social and economic sectors, they will be multilingual, multicultural and entrepreneur citizens with environmental, social and inclusiveness awareness. As a lighthouse of European way of life, Ulysseus joint vision becomes a reality in the picture of those citizens of the future: a new generation of Europeans capable of changing the world and making it a better place to live.

Thereby, for human capital development, Ulysseus is building an innovative Higher Education and Pedagogical Ecosystem, including double, multiple and joint Degrees curriculum development and policy alignment, guaranteeing quality assurance and using the European Approach for Quality Assurance of Joint Programmes. For a start, a Framework Agreement on Academic Recognition within Ulysseus, including automatic recognition of qualifications and recognition of credit mobility, prior learning and work experience has been signed by the six original partners' Rectors, being new partners included in Step 2.

Focusing on collaborating on the identified specific and transversal R&I challenges, which are relevant to our community growth, Ulysseus is working in **16 high impact transdisciplinary European joint programmes** (a joint Master degree and a joint PhD programme, per thematic challenge). The first pilot "Joint European Master Degree in Efficient and Sustainable Energy, Transport and Mobility to Build the Smart Cities of the Future (UlysseusCitiesMD)" has been already submitted for accreditation to the EQAR-registered Andalusian Quality Assurance Agency DEVA. The EMJMD proposal for this master is now under preparation and will be submitted to the Erasmus + 2023 call. Curricula will be flexible and modular, including career guidance, work-based experiences (Ulysseus Internship Programme), lifelong learning skills (i.e. languages, entrepreneurship, digital and green skills), equality, diversity and inclusion and community engagement activities, mobility (in person, virtual, or blended), and feeding back education with research outputs.

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15. LifeComp (the European framework for the personal, social and learning to learn key competence), EntreComp (the Entrepreneurship Competence Framework (europa.eu), GreenComp (the European sustainability competence framework), DigComp (the Digital Competence Framework for Citizens),

Additionally, the Ulysseus Educational Activities programme provides flexible learning pathways such as short courses and activities leading to Micro-credentials. This is a general competences programme, continuation of that of step 1, addressing students (all levels), staff (academic, non-academic) and citizens. It provides short courses in languages and future-proof skills (competences for the twin transitions; following the EC reference frameworks: personal, entrepreneurship, digital, and green), as well as short courses related to Innovation Hubs or transversal topics, as well as activities such as seminars, summer/winter schools (i.e., for entrepreneurship), volunteering, civic engagement activities or activities related to the promotion of the European way of life, among others.

Ulysseus as a regional and local growth agent flagship

A significant contribution to sustainable regional and local development through interlinked education, research and contribution

Ulysseus aims to contribute to local and regional development with (i) a highly prepared human capital for the twin transitions; (ii) challenge-driven research and innovation, with the provision knowledge and technology; (iii) as a talent attractor; (iv) as creator of industrial tissue, boosting the generation of start-ups and spin-offs as well as IPR protection, and (vi) as catalyser of strategic Partnerships, connecting local and regional systems to boost innovation-driven local and territorial transformation, with a special emphasis in promoting collaboration activities between less innovative and more innovative Ulysseus regions, to reduce the innovation divide.

Moreover, Ulysseus, as actor of change in the twin and digital transitions, have also aligned the Innovation Hubs priorities with the future Global and European challenges, in order to contributing to the development of our regions and cities.

In this strategy of local and regional development, two opportunities to expand the collaboration to other European Universities are worth mentioning:

» Five out the eight Ulysseus Universities are located in cities (Helsinki, Kosice, Munster, Podgorica, and Seville) selected as **Cities 2030** in the EU Mission "Climate Neutral & Smart Cities", which seeks 50% reduction of emissions by 2030, and 0% emissions by 2050. This fact paves the way for an inter-cities' collaboration in the field of climate change promoted by Ulysseus.

» Four Ulysseus regions have been included in the pilot phase of the **Partnership for Regional Innovation** initiative of the European Commission, developed together with the Committee of the Regions. These are: (i) Andalusia (USE) as single region, (ii) North Rhine-Westphalia (WWU) as multi-level, multi-region, and cross-border region, (iii) Finland (HH) as Cross-border region, and Slovakia (TUKE) as member state. This fact paves the way for an inter-regional collaboration in the field of climate change promoted by Ulysseus.

» Additionally, the recently launched "Coalition of the Willing", officially created in July 2022 by the European Commission, is an opportunity for new possible stakeholders' involvement.

Figure 10.

The Ulysseus Roadmap to a structural, systemic and sustainable impact

	Strengthening the European dimension of HE	Universities as lighthouses of European way of life	Universities as actors of change of twin transitions	Universities as drivers of EU global role
Objectives of the European Strategy for Universities				
Expected outcomes of the strategy	Legal statute; Joint European degrees; Mobility and European Student Card; Quality Assurance	Future-proof skills (micro-credentials); Pedagogical Innovation; Diversity, Inclusiveness & Gender Equality; Promote and protect EU democratic values	Skills and competences & technological innovation for the green and digital transitions	Foster mobility between Europe and other regions; Consortia of worldwide leading universities, EMJMD, Recognition of qualifications
Expected Impact of the strategy	Achieving the EEA, ERA, EHEA; Institutionalized cooperation across all HEIs missions; Sustainability	Promoting European way of life; Open Education, Open Science, citizen's science	A united, innovative, digital, connected, green and open to the world Europe; Positive impact local communities and innovation ecosystems	Share knowledge and spread best practice; Improve attractiveness, & international competitiveness

Global Role Model of Inclusiveness and Excellence: best practices and networking

Impact Pathways by Dissemination, Communication, Future Projects, Exploitation

Ulysseus outcomes

Main Expected Ulysseus outputs

- Democratic Governance
- Joint Management
- Legal statute
- Students & Alumni Associations
- Joint structures
- CMO, Digital Platform, Innovation Hubs, Mobility and Projects Offices
- Pedagogical Innovation
- Joint teaching teams
- Joint & double degrees
- Quality Assurance
- Future-proof skills
- Open Education
- Joint Acad. projects
- Challenge-based knowledge
- Joint R&I projects
- R&I Competences
- Open Science
- Knowledge transfer
- Innovation-driven territorial transformation
- Embedding EDI in Educ, R&I
- Citizen's science
- Mobility Diversification & EU Student Card
- Talent circulation
- Green mobility
- Ulysseus international network & branches
- Talent attraction & retention
- **Recognition of Qualifications**
- Promotion of EU values beyond EU
- **Internal & external Dissemination & Impact**

Ulysseus WP

| WP1 Management & Coordination | WP2 Consolidating the Campus | WP3 Human Capital Development | WP4 Joint Research & Innovation | WP5 Innovation-driven territorial transformation | WP6 EDI & Community engagement | WP7 Mobility | WP8 International Cooperation | WP9 Impact & Dissemination |

IMPACT

SO2 outputs will lead to:

» Institutionalised cooperation across all the HEI missions (joint degrees, join teaching teams, joint R&I groups and projects)

» Achieving the EEA, ERA and EHEA (joint degrees, quality assurance)

» Sustainability (academic, research and innovation projects)

» Promoting our European way of living (future-proof skills, R&I competences, pedagogical innovation)

» Open Education (open courses), Open Science (open repository for results spreading)

» A united, innovative, digital, connected, green and open to the world Europe (challenge-based knowledge

» creation)

» Positive impact local and regional territories (knowledge transfer, innovation-driven territorial transformation)

» Improve attractiveness, & international competitiveness (joint & double degrees, excellence research)

Ulysseus as an inclusive community

Equality, Diversity and Inclusion for Community Engagement

Equiality, Divesity and Incluision (EDI) approaches in Ulysseus and partners' working life and activities are a sign of identity of the alliance. Policies aimed at promoting EDI in academia lead to improved students' retention and satisfaction, as well as discovery, integration, application and dissemination of knowledge. Academic excellence is pursued also giving support to all its members, irrespective of gender, race, ethnicity, religion, age, social class, and other factors, to embrace a diverse range of interests, abilities, and life experiences that will enhance the exploration of ideas vital to the academic mission. Integrating the EDI dimensions in academia contributes to more inclusive scientific and innovation processes and ensure people from underrepresented groups are included, remain visible and feel supported and valued.

Community engagement involves internally sharing academic research and training with all the university actors to establish and strengthen a strong idea of identity. By engaging an inclusive community, the university engages society in dialogue.

The set of EDI actions will include services, one-to-one and group consultancies, tailored seminars, videos, information pills, guidelines, checklists, audio instructions, and others, tailored to the different domains of applications (research, innovation, conference/meeting organisations, training, publications, and corporate identity).

Specifically, in Step 2, two new programmes will be launched:

» "**Ulysseus Miles**", an incentive programme for boosting engagement of students, academic & non-academic staff, in Ulysseus activities. (See Figure 11)

» "**Ulysseus Refugees Programme**": 89.3 million people worldwide were forcibly displaced at the end of 2021 as a result of persecution, conflict, violence, human rights violations or events seriously disturbing public order. The recent invasion of Ukraine by Russia confronts us with a new humanitarian crisis with millions of people fleeing the war in neighboring countries (Slovakia, where TUKE is based is specially affected) and in Europe in general. The programme will seek international refugee protection and inclusion in the Ulysseus community, by: internal coordination; spaces for training, awareness and debate; Humanitarian aid to the affected population; Humanitarian response to help the Ulysseus Community of Ukraine; and University Development Research, Transfer and Cooperation Projects.

IMPACT

SO3 outputs will lead to

- » Institutionalised cooperation across all the HEI missions (EDI in the 4 university missions)

- » Promoting our European way of living (fostering gender equality, diversity and inclusion, promoting European values, becoming a participative university)

- » Citizen science (open classes, living labs, science shop)

Figure 11.

The Ulysseus Miles Programme of incentives

Ulysseus Miles		Get Ulysseus Miles for...	Change Ulysseus Miles for...
	Students	• Participate in the Ulysseus Language exchanges (WP3) • Participate in Ulysseus Students Contest (WP3) • Participate in the Ulysseus Special Needs programme (i.e., mentoring a peer with special needs) (WP6) • Participate in the European Students Assembly • Participate in the Ulysseus citizen's engagement programme (see above) (WP6) • Mobility periods (physical, blended, virtual), extra Miles for Physical and Green Mobility (WP7) • Participate in the Ulysseus Buddy Programme (WP7)	• Badges/Micro-credentials (i.e., Diploma Supplement) • Extra-credits (i.e. LA) • Ulysseus promo material (i.e., sweaters, rack sacks, notebooks)
	Academics	• Mobility periods (physical, blended, virtual), extra Miles for physical and Green Mobility (WP6) • Participating in Ulysseus Activities (all WP)	• Badges/Micro-credentials • Ulysseus promo material (i.e., sweaters, rack sacks, notebooks)
	Professional staff	• Mobility periods (physical, blended, virtual), extra Miles for physical and Green Mobility • Participating in Ulysseus Activities (all WPs)	• Badges/Micro-credentials • Ulysseus promo material (i.e., sweaters, rack sacks, notebooks)

Ulysseus beyond Europe

An Open to the world European University

"Europe needs more than ever to reach out to the rest of the world. Universities are instrumental in building Europe's connections with the world and in promoting European values globally"[14].

First, enabling physical, blended and virtual mobility in the Ulysseus digital and territorial Campus, breaking down geographical, economic and administrative barriers is in the heart of all Alliance partners. The Ulysseus Alliance pays special attention to the coordination, execution, monitoring and broadening of mobility opportunities. The main goal consists in reaching the 50% overall student mobility for 2030 with a strong focus on creating equal, inclusive opportunities for all. This includes students who would typically not be able to partake in a traditional mobility experience, due to familial or financial circumstances, while also not forgetting about academics and non-academic staff. Aiming to encourage more environmentally friendly travel, the promotion of green mobility schemes is one of the priorities.

Physical mobilities, which shall account for 10% of overall student mobilities, include traditional, long-term exchange programmes as well as internship opportunities for students with the Alliance. A strong Ulysseus Welcome Programme is already drafted and will be put in place at each partner university to ensure the overall success of mobility experiences. The bulk of mobilities, i.e. up to 90% of overall student mobilities within the Ulysseus Alliance, will be made up of virtual and blended mobilities.

A joint Ulysseus staff mobility policy will be established by exchanging best practices on teaching mobility organization, labor and tax law regulations. The policy will be implemented by Ulysseus teaching mobility calls. Furthermore, the activity casts an even wider net on a global scale by targeting audiences outside the Ulysseus Alliance, attracting global talent and international connections within and beyond Ulysseus.

In this sense, to increase the attractiveness and competitiveness of Ulysseus on the global scene, a strong International Cooperation Programme & Networking will be developed. It is the framework for Education, Research, Innovation and Development cooperation with the Ulysseus more strategic geographical regions and university partners, turning Ulysseus into an international model and fast-track cooperation institution. A main tool to strengthen the boundaries with the regions and institutions will be agreements and the Erasmus + Capacity Building call. Also, the international visibility and positioning of our Universities in the main international rankings will be boosted. To be open and connected, the alliance also needs a networking plan that will include

attending to international events of other European University alliances, annual conferences as the European Association for International Education, and other international entities.

Finally, after a joint decision making process, where three strategic zones (Asia, Africa and Latin America) have been targeted, in 2024, the alliance will settle its first branch in Vietnam. The process will continue with two new branches.
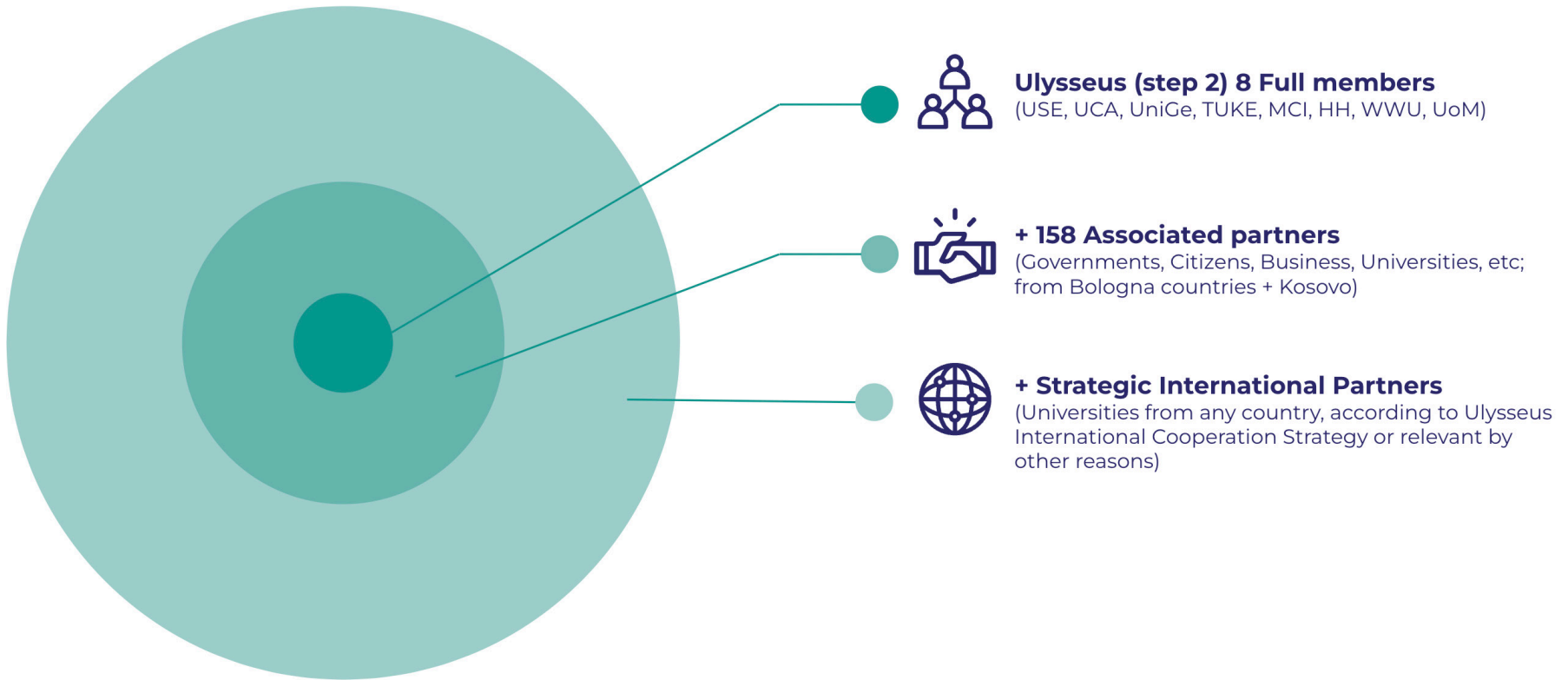
IMPACT
SO4 outputs will lead to

» Institutionalised cooperation across all the HEI missions (mobility)

» Achieving the EEA, ERA and EHEA (European Student Card, recognition of qualifications beyond Europe)

» Promoting our European way of living (promotion of EU values beyond Europe)

» A united, innovative, digital, connected, green and open to the world Europe (green mobility, talent circulation, international networks and branches)

» Improve attractiveness, & international competitiveness (international network and branches, international reputation, talent attraction & retention)

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14. "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a European Strategy for Universities" (18.01.2022)

Figure 12.

The Ulysseus Network, beyond Europe

Ulysseus (step 2) 8 Full members
(USE, UCA, UniGe, TUKE, MCI, HH, WWU, UoM)

+ 158 Associated partners
(Governments, Citizens, Business, Universities, etc;
from Bologna countries + Kosovo)

+ Strategic International Partners
(Universities from any country, according to Ulysseus
International Cooperation Strategy or relevant by
other reasons)

Endorsements
of partners
universities

UNIVERSIDAD DE SEVILLA

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MIGUEL ÁNGEL CASTRO ARROYO
Rector

Date:

UNIVERSITÉ CÔTE D'AZUR

JEANICK BRISSWALTER
President

Date:
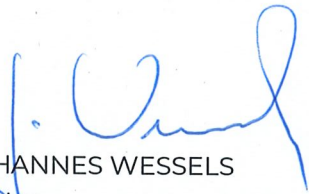
UNIVERSITA' DEGLI STUDI DI GENOVA

FEDERICO DELFINO
Rector

Date:

Firmato digitalmente da:
FEDERICO DELFINO
Università degli Studi di Genova
Firmato il: 26-01-2023 17:29:29
Seriale certificato: 818306
Valido dal 03-11-2020 al 03-11-2023

WESTFÄLISCHE WILHELMS-UNIVERSITÄT MÜNSTER

JOHANNES WESSELS
Rector

Date: 26.01. 2023

UNIVERZITET CRNE GORE

VLADIMIR BOŽOVIĆ
Rector

Date: 25/01/2023

Crna Gora
UNIVERZITET CRNE GORE

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Podgorica, 25. 01   20 23 god.

TECHNICAL UNIVERSITY OF KOŠICE

STANISLAV KMEŤ
Rector

Date:

**HAAGA-HELIA UNIVERSITY OF
APPLIED SCIENCES**

MINNA HIILLOS
President, CEO

Date: 25. 1. 2023

MCI MANAGEMENT CENTER INNSBRUCK
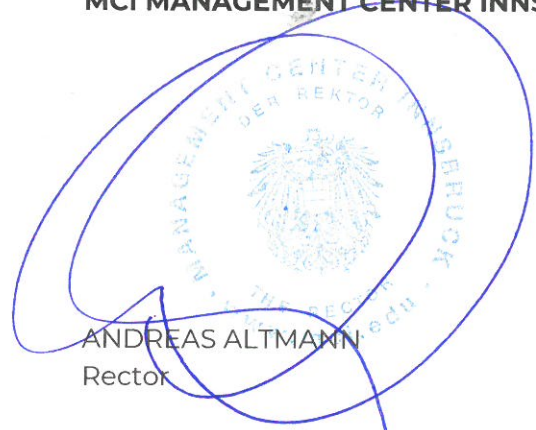
ANDREAS ALTMANN
Rector

Date: 2023-01-24

ANNEX 1.
Ulysseus (step 2) Innovation Hubs

The green and digital transitions are the two main trends that will shape the future of the European Union. Unlike the green transition, the digital transition is not primarily being pushed by necessity but is driven by the vast new opportunities it creates. The term 'twin transitions' refers not only to two concurrent transformational trends (the green and the digital transitions), but also to uniting the two challenges, which could accelerate the necessary changes and bring societies closer to the level of transformation needed[1].

Ulysseus seeks to tackle the twin green and digital transitions challenges and the long-term societal wellbeing (EU sustainability policy), securing Europe's capacity to boost technology-driven economic growth and competitiveness by developing a strong inter-connected, excellent and inclusive, diverse and complementary, European University.

The transformation process towards our Ulysseus European University involves the development of a both Territorial and Digital Innovation **Ecosystem taken to a European level, of which the Innovation Hubs are a distinguished element.**

Ulysseus Innovation hubs, understood as thematic ecosystems deployed both at a territorial level and as a European network, are the center of gravity of partners' collaboration. They constitute the focus of the co-creation processes for transdisciplinary and challenge

driven education intertwined with research and innovation, the promotion of citizens' involvement and European values.

Co-design approach

Nowadays, Ulysseus has six Innovation Hubs (IH), one at each foundational partner University, addressing six Research & Innovation challenges, shared with our regions and cities. The hubs work as concentrators of all the collaboration and cooperation activities coming from the Ulysseus community (the alliance and the associated partners). Hubs are connected to local nodes around each partner University, to consolidate the Innovation Ecosystem. Relying on the Ulysseus Handbook delivered during the Step 1; the Innovation hubs are now in the process of building their joint research centers, living labs, incubators and open classes. University of Münster and University of Montenegro will start their co-creation process for their Innovation Hubs in 2023.

Objectives

» Design new joint academic offer, challenge- and research-driven, transdisciplinary, and inter-sectoral, integrated in flexible programs in which also key competences are provided

» Develop joint challenge-driven transdisciplinary and inter-sectoral research and knowledge transfer activities

» Facilitate and promote entrepreneurship within the academic community of students, faculty and staff to improve the number and success of start-ups created

» Promote citizen engagement and the appropriation of European values

» Offer scientific material conditions (technological platforms, data centers, etc.) to gain in talent attraction and visibility.

Thematic challenges

Innovation Hubs evolution and adjustment in Step 2

If the approach and objectives will be unchanged, the in-depth discussions among all Ulysseus stakeholders during the first phase led to propose an evolution of the Innovation Hubs topics and and governance. Furthermore, thanks to the inclusion of two universities as new full members, but also, due to the readjustment of territorial strategies after the pandemic period and subsequent European and national recovery plans, some regions, in alignment with their universities, decided to revise their strategic position. The evolution of Ulysseus Innovation Hubs scopes reflects such adjustments. Finally, possible overlapping segments have been encouraged to ease and boost cooperation between the universities of the alliance (see table 1 and 2 of the present Annex).

All eight challenges will be addressed from a interdisciplinary perspective and will search to contribute to the twin transitions and the overall long-term societal wellbeing (see Figure 1 to this Annex)

These specific thematic of the Innovation Hubs will be complemented by 2 transversal axes:

» Open Data Warehouse and data

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1.   Towards a green & digital future. JRC 2022.

management. Interconnected to all Innovation Hubs, the challenges linked to data must be addressed transversally to provide secured yet open modalities supporting the development of inter and cross collaborative dynamics.

» Culture and Creativity. Initially included in the Innovation Hub hosted by UniGe, Culture and Creativity will be deployed as a joint challenge. Indeed, in coherence with the

recent launch of the EIT dedicated to Culture and Creativity (CC), to which Ulysseus is an associated partner, we believe Culture and Creativity must be transversal to all innovation hubs to favour appropriate spill overs. This will provide a mirror approach to the EIT CC which was positioned as a transversal EIT to the other thematic EITs.

Annex Figure 1

Revisiting the focus of Ulysseus Innovation Hubs

AGENDA 2030 & EUROPEAN GREEN DEAL (GREEN TRANSITION)
DIGITAL AGENDA FOR EUROPE (DIGITAL TRANSITION)
EUROPEAN STRATEGY FOR UNIVERSITIES
NEW EUROPEAN INNOVATION AGENDA. DEEP-TECH INNOVATION
PARTNERSHIPS FOR REGIONAL INNOVATION (JRC)
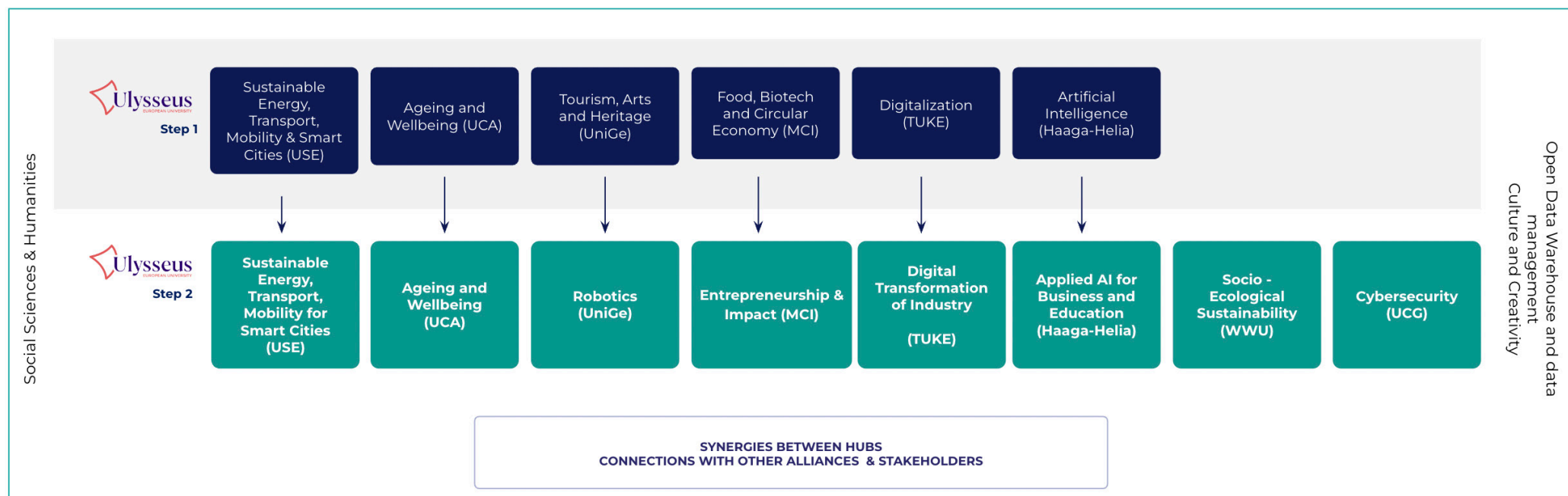
NATIONAL, REGIONAL, LOCAL PRIORITIES
INTERNAL UNIVERSITY STRATEGY

Governance and management

Entering phase 2 of Ulysseus, Innovation Hubs will enter a more operational phase, with the following roles (see **Figure 2** of the Annex):

The **General IHs Coordinator** to help the coordination within the network of IHs on each thematic, to exchange best practices between IHs to ensure the viability of the 2-transversal axis, to chair the Ulysseus IH Committee and make the necessary link with the General Committee.

The **Chief Scientific Officers (CSO)** to design and deploy the overall strategy of IH. The CSO will be a prominent expert on the field of the IH and will provide the strategic vision at an educational, scientific and technical level, oriented to the Ulysseus final objectives, as well as a guide to achieve them. The CSO will chair the Local IH steering commitee and will establish the institutional connection with local/regional/national/international institutions, and business forums providing to the IH Manager with opportunities at these levels. Each CSO will by appointed by the university that runs the IH.

The **IH Managers** involved in IH Management (IHM) to implement the scientific strategy of IH. There role will thus be strengthened to ensure they provide the necessary expertise to promote and design collaborative projects and programmes. The IHM manages the local IH ecosystem and activities. The IHM will be hired by Ulysseus and chosen by the university that runs the IH. The IHM will administer the IH and will be a link with the Innovation Ecosystem. The IHM will coordinate locally the IH activities and projects (supported by Ulysseus Project Office) and search for oportunities

of funding and activitie. The IHM will implement the projects and thus must have an expertise in European projects (managing, if possible writing) and an expertise in research (ideally PhD).

Beyond the Ulysseus IH Committee chaired by the General IH Coordinator gathering all IH stakeholders, Step 2 will welcome the creation of Local Steering Committees to be implemented for each IH. These Committees, chaired by the CSO including the IHM, experts from Ulysseus, associated partners and students will oversee designing and adjusting the IH strategies. The scientific experts of each local steering committees will form the IH scientific boards and act as evaluation committees for the different seed funding calls launched in the activity-driven WPs. Importantly, even though decentralised, IH will still rely on a shared and cooperative principle as each IH will include representatives of other Ulysseus members, including associated partners in the LC.
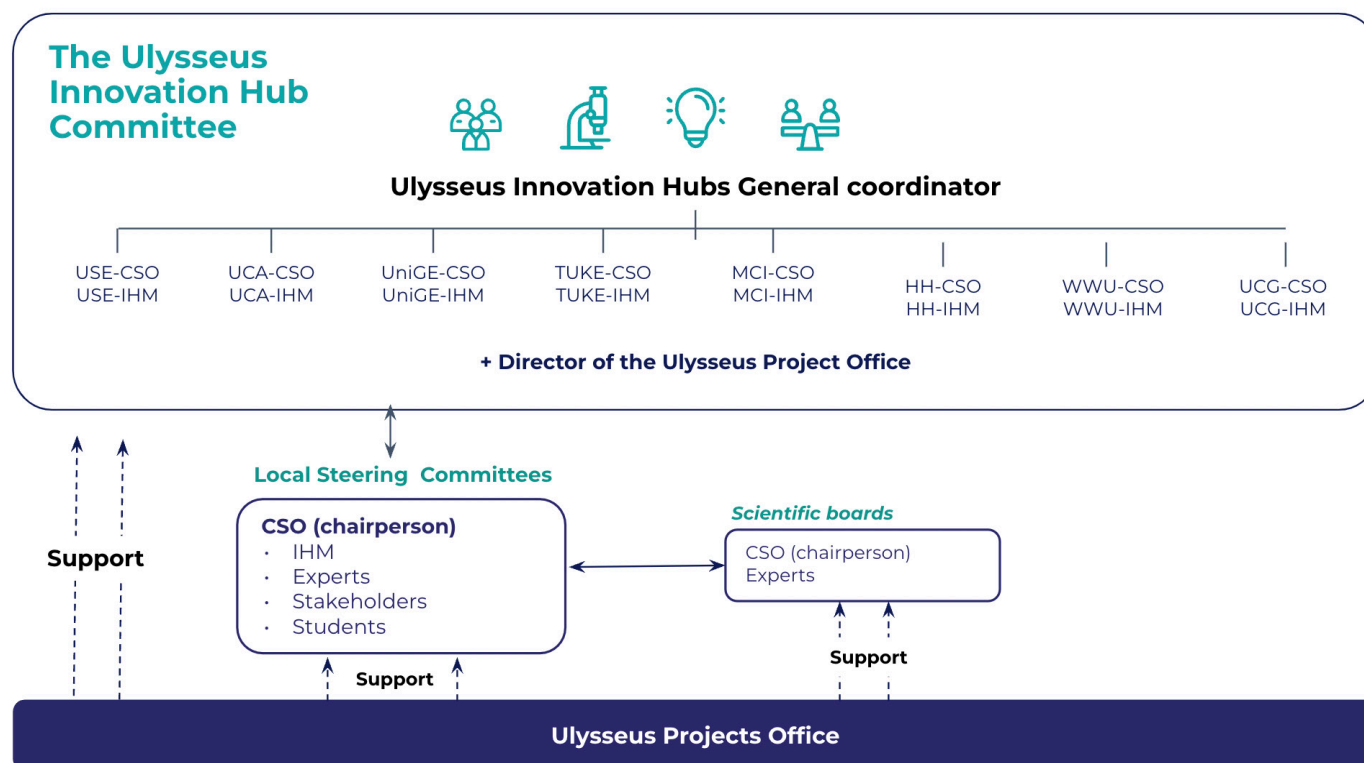
Annex Figure 1 - Revisiting the focus of Ulysseus Innovation Hubs

Annex Figure 2 - New governance and management of the Ulysseus Innovation Hubs

Annex Figure 2

New governance and management of the Ulysseus Innovation Hubs

The Ulysseus Innovation Hub Committee

Ulysseus Innovation Hubs General coordinator

| USE-CSO USE-IHM | UCA-CSO UCA-IHM | UniGE-CSO UniGE-IHM | TUKE-CSO TUKE-IHM | MCI-CSO MCI-IHM | HH-CSO HH-IHM | WWU-CSO WWU-IHM | UCG-CSO UCG-IHM |

+ Director of the Ulysseus Project Office

Local Steering Committees

CSO (chairperson)
· IHM
· Experts
· Stakeholders
· Students

Scientific boards

CSO (chairperson)
Experts

Support

Support

Support

Ulysseus Projects Office

Unipersonal positions

IH coordinator
· Chairs the Ulysseus IH Committee
· Coordinates the network of IHs
· Coordinates activities and projects transversal to more than one IH (supported by Ulysseus Projects Office)
· Link between General Committee and Innovation Hubs

IH Chief Scientific Officer (CSO)
· Chairs the IH Scientific Committee and the IH Local Board
· Provides the strategic vision at an educational, scientific and technical level, oriented to the Ulysseus final objectives

IH Manager (IHM)
· Coordinates locally the IH activities and projects (supported by Ulysseus Project Office)
· Expertise in European projects (managing & writing)
· Link between IH and Innovation Ecosystem

Committees & Boards

IH Committee
· Ulysseus IH coordinator (chairperson)
· 8 CSO
· 8 IHM
· Director of the Ulysseus Projects Office

IH Local steering committees (can be modulated, according to the activities)
· CSO (chairperson)
· IHM
· Experts (from 1-8 partner Universities)
· Stakeholders (from 1-8 partner Universities)
· Students

IH Scientific boards (sub part of local steering committee)
· CSO (chairperson)
· Experts (from 1-8 partner Universities provide scientific or thematic expertise and advice)

Management of the Ulysseus Innovation Hubs

· 1 IH Coordinator, linked to the strategy and General Committee
· Local strategic visión and coordination: CSO (Step 1 IH coordinators)
· Stronger management: IH Management (Step 1 IH Officers), in connection with the territory.
· Scientific advising: Scientific Committee
· Stronger support of the Projects Office
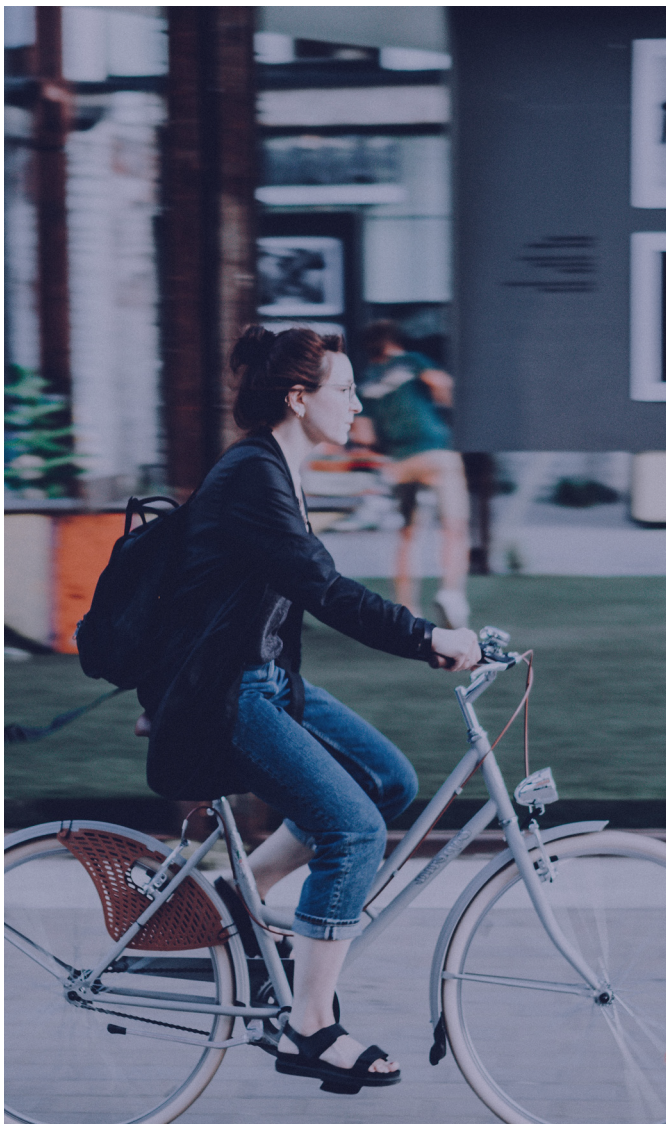
Sustainable Energy, Transport, Mobility for Smart Cities – USE

SCOPE

The Hub focus on eefficient and smart energy production and storage, transport, and mobility to build up the smart cities of the future. Within this framework, the main objectives are:

i.   Make Ulysseus an international **leader in education** in energy, transport, mobility, and Smart Cities.

ii.   Become a **collaborative space** between the five elements of the helix, improving the competitiveness of these sectors in our regions, through **research and innovation**.

iii. To educate **well-informed students**, equipped with a great range of topics and transversal competences, **to become leaders** in the use of innovative technologies and providing competitive and socially responsible solutions to challenges in energy, transport, mobility, and Smart cities.

iv.   To create an international, consolidated, and inclusive **network** of international experts and stakeholders.

DESCRIPTION
Targeted challenges

As the European Commission states in the Introduction of the *EU Mission: Climate-Neutral and Smart Cities*[2]: "Cities play a pivotal role in achieving climate neutrality by 2050, the goal of the European Green Deal". Aligned with their regions' S3 and cities' strategic plans, Ulysseus has identified "energy, transport, and mobility for the smart cities of the future" as one of the thematic priorities for interlinked education, research, and innovation, with its IH coordinated by the University of Seville. This is especially important when Seville, Helsinki, Münster, Podgorica and Košice, five of the cities of the Ulysseus Innovation Ecosystem, have been included in the 100 EU cities that will participate in the EU Mission for 100 climate-neutral and smart cities by 2030, the so-called Cities Mission.

Possible solutions

Through the Innovation Hub, USE will foster interdisciplinary and intersectoral research and innovation on the field, in collaboration with associated companies and other regional and local stakeholders. The following research areas have been identified: (i) Energy systems, (ii) Energy for society, (iii) Smart cities, and (iv) Materials in Energy. The main headquarter of the IH is the USE Innovation Centre (CIU3A) located at the Seville Port. Equipment and lab for transport, renewable energy, energy storage, new materials, ecology, sustainability; Ulysseus Incubator; Living Lab; Spaces for co-creation and demonstration (Open Classes), as well as Offices.

Pilots

UlysseusCitiesMD is the first pilot programme of the Ulysseus joint degrees pipeline. It offers a joint and fully transnational, challenge-based master degree that bridges the areas of Energy, Transport, Mobility and Smart Cities in an interdisciplinary way, to address the key challenges in energy transition and decarbonized systems. Under the coordination of USE, UlysseusCitiesMD has been

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2.   EU Mission: Climate-Neutral and Smart Cities

co-created by experts, companies, and students of the six Ulysseus university partners (step 1) and prepared by using the European Approach for quality assurance of joint programmes. UlysseusCitiesMD was sent for accreditation to the EQAR-registered Andalusian evaluation agency DEVA in October 2022, to be offered in the next academic year 2023-2024. Due to regulatory constraints, the joint master will be accredited and awarded in a first step by USE, MCI, and UCA (HH is not allowed to accredit joint programmes in the knowledge area of UlysseusCitiesMS), and will run parallel accreditations in Slovakia (upon the self-accrediting status of TUKE) and Italy (through the Italian evaluation agency, not yet registered in EQAR). After these three accreditation rounds, UlysseusCitiesMD will be jointly offered and awarded by USE, UCA, MCI, TUKE and UniGe, with the participation of HH. In addition, Ulysseus has been granted and Erasmus Mundus Joint Master Degrees Design Measure, and is currently preparing the Erasmus Mundus proposal for funding provision for both running the programme and offering competitive scholarships to the best students worldwide.

Ageing & well being - UCA

SCOPE

Ageing and Well-being must encompass a continuum between formal science, natural science and social and human science to address the following scope:

- » Health Promotion

- » Components of Wellbeing

- » Prevention

- » From molecules to organs

- » Pathological Ageing

At a transversal level, the Innovation Hub will also address:

- » Acceptability

- » Health Data

- » Cohorts (monitoring, epidemiology, demography)

DESCRIPTION
Targeted challenges

The demographic transition is a major challenge that makes it essential to address mechanisms of ageing and social, political and economic sustainability. Ageing is linked to increased vulnerability to diseases that lead to functional decline, loss of autonomy and health care system overload. As a result, while life expectancy has increased by 5 years over the last 20 years, the increase in healthy life expectancy has been very slow and has stagnated at 64 years in Europe. Beyond the essential health issues, the associated economic and budgetary impact is considerable, with dependency-related spending accounting for 1.7% of GDP according to the Organisation for Economic Co-operation and Development (OECD) and up to 1.9% in France.

Possible solutions

Through the Innovation Hub, Université Côte d'Azur wishes to strengthen and promote innovative

disciplinary, inter-, and transdisciplinary research to better understand and explain the biological process of ageing and its implications. Furthermore, being healthy is defined as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. This implies finding solutions to promote health, prevent diseases and help individuals live healthier lifestyles. This will only be possible through the development of sustainable connections between researchers, citizens, companies, and local authorities and once more by placing people at the centre of the approach. Finally, in the context of abundant multisource health data and the development of simulation and artificial intelligence (AI), it is also important to develop the ethical and sustainable interaction of citizens with AI-based algorithms that support healthy living.

The Innovation Hub is installed in a 750m2 building that belongs to the Municipality located 50 metres from the Hospital University and from some of our research units dedicated to health. In this building you have 36 rooms dedicated to: office space, 4 start-ups, conference room to organise events such as Ulysseus workshops and Ulysseus brokerage sessions, a learning lab, and a living lab.

Pilots

The Living Lab (LL). The LL allows for experimentation in an environment that links citizens, patients (users of the health system in general) with primary care actors (GPs, Physiotherapists, Nurses), researchers (in health, biomaterials, computer science and mathematics, social and educational sciences in

particular), institutions (Regional Health Agency, Region, Department, Metropolis, etc.), companies and non-profit facilitators.

The Living Lab will be supported by a common warehouse that collects data from health professionals, environmental data, and patient feedback. Importantly, this data warehouse must also accommodate data from scientific projects (including participatory science) other than health data, such as biological and specific environmental data covered by the other existing platforms. This stored data must serve for reproducibility studies but also for cross-referencing with health or environmental data from other projects.

Research pilots. The Innovation Hub launched a call for proposals for the recruitment of one-year post-Doc to support emerging collaboration on the topic of Ageing and Wellbeing at the level of Ulysseus.

Robotics - UniGe

SCOPE

Robotics and the associated fields of Artificial Intelligence, Human-Machine Interaction, and Automation, are considered as key enabling technologies for tackling societal challenges, facilitating the long-term sustainable development of local communities. UniGe and the whole Ulysseus consortium will leverage Robotics-related research and training in: the automation of industrial sectors; smart cities and communities; the health sector and the associated demographical challenges; tourism
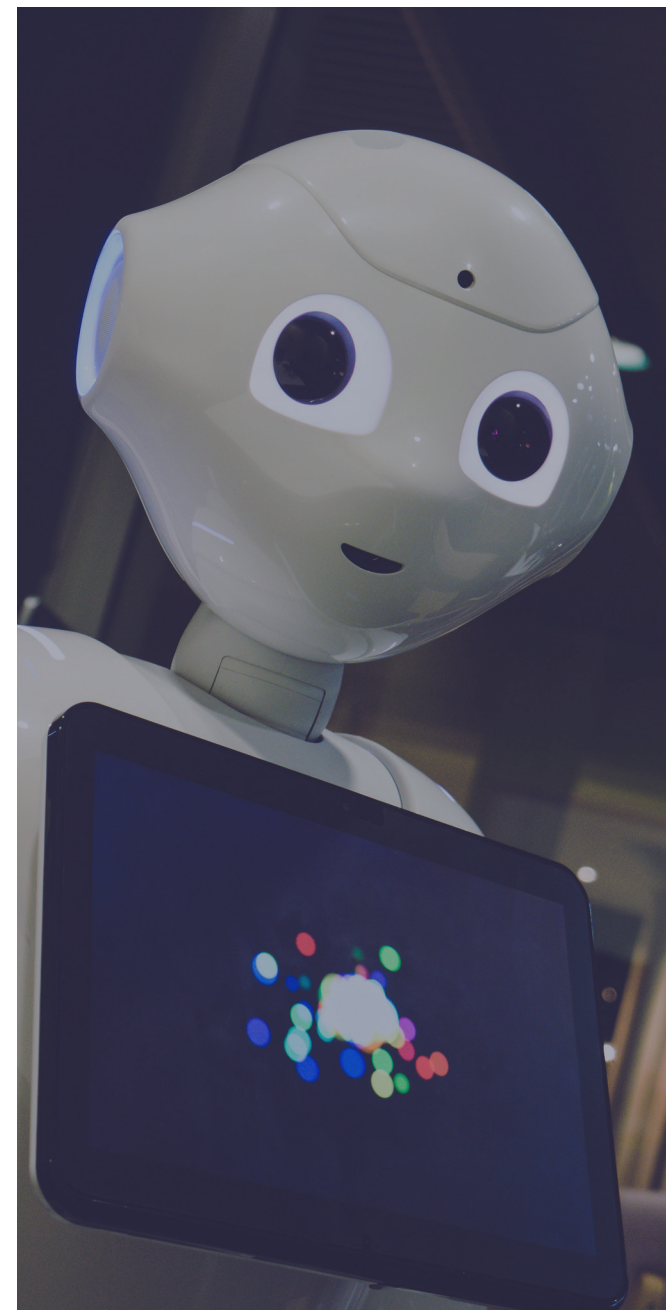
and cultural heritage; building and construction; logistics and mobility.

At a transversal level, the Innovation Hub will also address:

» the acceptability and inclusiveness of different methodologies and technologies;

» knowledge transfer, and the marketability of methods and results;

» the replicability, scalability, and adoption of different solutions.

DESCRIPTION

The Innovation Hub in Robotics adopts the Kendall Square model (web: https://kendallsquare.org/) to organize a distributed, territory-oriented innovation ecosystem where different types of actors interact to design novel Robotics-based solutions to open, global challenges, and to accelerate their wide adoption in international settings. The rapid, exponential evolution of Robotics and other Artificial Intelligence powered technologies is expected to pervade all aspects of our future everyday life. The pace at which the society as a whole will adopt the outcomes of such technologies will be accelerating over time. Therefore, it is necessary to integrate education-oriented activities with innovation via novel forms of entrepreneurship mindset, which are informed by deep knowledge and domain expertise. IH Robotics will adopt a flow model coordinating existing activities on the territory and establishing missing links when needed between all the involved actors, to structure an underlying ecosystem able to leverage mutual, fluid synergies.

Target challenges

The application of Robotics and Artificial Intelligence related technologies in various sectors is becoming one of the major trends nowadays, thanks to the possibility of using methods, techniques, and technologies to increase productivity, optimise processes, and compensate for job shortage and qualified work. Despite the many advances, Robotics is still far from being fully developed, and – due to demographics and innovation barriers – many potential applications are still far from being tested.

IH Robotics will focus on such domains as logistics, including port- and intra-modal logistics, mobility, assistive technologies, and green automation. A specific key role will be given to human-centric approaches able to design and build technologies around human needs. This will, in turn, target aspects related to process optimisation, green economy, sustainability, and manufacturing/demanufacturing, as well as construction.

Possible solutions

In order to develop it in an organic and ecosystem-like fashion, UniGe has already been involved in a number of flagship projects, such as the creation of an ad-hoc innovation ecosystem (i.e., RAISE, which stands for "Robotics and AI for Social Empowerment") aiming at transferiing know-how to regional strategic sectors and doctoral programmes with the aim of both advancing research in Robotics and mentoring future experts.

IH Robotics will feature a unique program in business which will be developed in a MSc program leading to a double/joint degrees. In parallel, ideation and open innovation programs will be organized to channel inspiration, thinking,

and to promote engagement with a number of international stakeholders on big, global challenges to be addressed also via Robotics and Artificial Intelligence technologies. Two specific measures will be organized annually: 1) the Robotics. Launchpad, a business idea competition related to Robotics, with the mission to synthesize unlock potential hidden in Robotics technology to address a series of global challenges; 2) the Robothon, a possibly distributed 24-hour hackaton that may be carried out simultaneously in different cities, with the goal of attracting innovators, entrepreneurs, students and professionals together.

Digitalization transformation for industry - TUKE

SCOPE

The Innovation Hub on Digital Transformation of Industry is an integral part of the **University Science Park TECHNICOM** (uvptechnicom.sk/en) at TUKE and thanks to park's background and organisational position it is fully integrated with the university R&D, innovation and technology transfer ecosystem. The hub acts as an interface between internal university potential (university researchers, R&D laboratories, centres of excellence, competence centres and digital innovation hubs), regional innovation and research ecosystem (regional authorities, stakeholders, other universities and clusters in the region, industry partners) and the Ulysseus campus.

The IH participates in activities of the **Startup TUKE and Incubator TUKE** (startupcentrum.sk/en), which are ones of the most successful entrepreneurship acceleration and start-up initiatives in Slovakia. Furthermore, the IH, as a part of USP TECHNICOM ecosystems, plays an important role in the development of the regional **European Digital Innovation Hub CASSOVIUM** (www.edihcassovium.sk).

The thematic scope of the IH is aligned with the current regional research and innovation priorities and initiatives while at the same time closely interconnected with the European challenges in the field of digital transformation.

Description

Digital transformation is one of the European Union top priorities to achieve European sustainable and green growth while still being competitive to other world regions. The IH supports the digital transformation through **implementation of advanced and emerging technologies and approaches** in the various industry segments (including e.g. manufacturing, creative industry, health etc.). Through its activities, the IH aims to tackle the advanced and emerging technologies, like: advanced materials and manufacturing, electronics, aerospace, internet of things, artificial intelligence and machine learning, robotics, big data and data analytics, simulation and modelling, biomedical engineering, virtual and augmented reality, digital supply chain, digital twins, sustainable green energy, clean technologies, cyber-physical systems.

The TUKE background in the digital transformation can be presented through the following experiences:

» Digital Innovation Hubs (DIHs) at TUKE: **DIH TECHNICOM and DIH Robotics** developed in TUKE in 2020 with Horizon 2020 funds are fully operational (see JRC Catalogue) and are aligned with the strategy of the digital transformation of industry. More information: https://dihtechnicom.tuke.sk, http://roboticshub.sk/en/

» **EDIH CASSOVIUM** (EDIH = European Digital Innovation Hub) is a member of the EDIH network in Europe. The EDIH CASSOVIUM (budget of 3 mil. EUR for 3 years) is created in 2022 as consortium of 2 universities and IT cluster (Ulysseus associate partner), with TUKE as a consortium coordinator. EDIHs are one-stop shops for support of companies

and public sector in respond to digital challenges and become more competitive and efficient. EDIHs combine the benefits of a regional presence with the opportunities available to a pan-European network. This regional presence leaves them well-placed to provide the services local companies need, through the local language and innovation ecosystem. More information: www.edihcassovium.sk

» **University Science Park TECHNICOM** is an ecosystem for technology transfer and innovation at TUKE (entrepreneurship acceleration initiatives), established in 2017. More information: www.uvptechnicom.sk

» **Participation in EEN network** (since 2021): European Enterprise Network (EEN) is supporting European network for helping local SMEs to grow, internationalise and enter new markets. TUKE is a regional node of the network. More information: https://uvptechnicom.sk/een/

» Best-practice in H2020 and cascade funding projects

Sustainable Entrepreneurship & Impact – MCI

SCOPE

The envisaged Innovation Hub at MCI | The Entrepreneurial School® in Innsbruck focuses on the acceleration of technological business models by exploiting established structures, integrating partner services of the regional ecosystem and creating new formats and structures at the university. Prioritized actions at MCI | The Entrepreneurial School® itself include the creation of an Entrepreneurship Center and a range of associated activities (e.g. provision of entrepreneurship programs), the active involvement of companies in the identification of innovations (e.g. hackathons) and the access to venture capital for students and staff of the partner universities.

Target challenges

By implementing the Innovation Hub "Sustainable Entrepreneurship & Impact", MCI | The Entrepreneurial School® aims to actively contribute to the competitiveness of the Tyrol region, but also to that of its European partners and the European Union itself. It strives to create a space in the Ulysseus network for motivated talent - regardless of their geographic location - to implement innovative ideas sustainably in the spirit of entrepreneurship.

Possible Solutions

The solution approach of the innovation hub to be implemented suggests successfully transferring academic innovations into the market by increasing

the number of spin-offs and startups initiated through the various European partner universities. In order to enable academic innovation, MCIs innovation hub on "Sustainable Entrepreneurship & Impact" will initially focus on the following activities: Installation of a Service- and Entrepreneurship Center; Implementation of Entrepreneurship Programs; Fostering Corporate Innovation network; and Providing Access to Venture Capital   .

Existing partnerships have proven particularly effective in the past. For example, a jointly established association called STARTUP.TIROL and the associated facility acts as an incubator and is operated by staff dedicated to this sole purpose. This incubator supports the development of sustainable business models for early-stage startups offering them budgetary resources and technical assistance.

Furthermore, a close cooperation with I.E.C.T (Institute of Entrepreneurship Cambridge-Tyrol) focuses on supporting international deep-tech startups to take part in well-known programs such as the Summer School on Entrepreneurship or the Innovators Road. MCI | The Entrepreneurial School® also receives financial support for its activities in the field of entrepreneurship from Austria Wirtschaftsservice (AWS), a federal development bank wholly owned by the Republic of Austria. Lastly, wide-ranging partnerships between the different academic institutions within the region of Tirol and its neighbor regions are also connected with the innovation hub. Entrepreneurship MOOCs (massive open online courses), amongst others, were developed and aim at facilitating the path to entrepreneurship for a larger audience.

In order to foster existing efforts and to create a basis for continuous development, the Innovation Hub "Sustainable Entrepreneurship & Impact" will be established as part of the Ulysseus European University. Most importantly, it will provide training and support to start-ups with the support of experts. To increase the probability of success significantly, a structured mentoring and coaching process during market entry and beyond is envisioned. All of these planned services will be offered to all partners in the Ulysseus network by granting them access to the services of this Innovation Hub. Since they play an essential role in the joint advancement of technical innovations they will be actively involved. Funding opportunities for mobility opportunities are currently being explored.

Pilots

Initial arrangements that will help in ensuring the success of such an Innovation Hub have already been made and serve as proof for our commitment to this project. A co-working space (approx. 300 sqm) is currently under construction at the Entrepreneurship Center at MCI | The Entrepreneurial School®. Furthermore, the projected "mentoring and coaching program" is being tested with first startup companies. All formats and activities are closely coordinated within the regional startup ecosystem around Startup.Tirol to exploit existing synergies in the areas of training, networking and financing.

Applied AI for business and education – HH

SCOPE

Haaga-Helia's Applied AI for Business and Education Innovation Hub (IH) concentrates on the application of AI opportunities across many domains. Specifically, the application of AI tools and methods will be studied and implemented in a wide array of contexts related to business and education.

DESCRIPTION
Target challenges

The use of AI in Europe has increased substantially and represents both huge opportunities and major challenges both socially and economically. The European Green Deal has indicated the adoption of AI as one of the key tools in achieving the goals of the twin transition and this is especially the case related to business and education.

The use of AI in education represents a number of challenges and still remains a subject that requires further research and practical application. Data usage, ethics and advancing the use and knowledge of AI in education require further competence development of teachers, school administration and students to extract the full potential of this new technology.

Possible solutions

Through the IH, Haaga-Helia will endeavor to promote the application of AI tools and methods to meet the challenges presented by this advancing technology. To achieve this, Haaga-Helia will leverage its extensive synergies in the world of work and business and provide the platform to support researchers and teachers to identify synergies and skill mismatches in the labor market. The IH's core strength is its applied relationship through an extensive regional innovation ecosystem consisting of SMEs eager to learn and adapt to the growing use of AI and lead to future economic growth.

Haaga-Helia is at the forefront of developing pedagogical practices and in identifying new use cases and approaches related to the integration of AI methods into curricula. The IH will lead to the increased collaboration of AI experts within the Ulysseus Innovation ecosystem through the development of research groups focusing on applied AI and business solutions, jointly developed projects under Horizon Europe and Erasmus+, the involvement of associated partners to provide guidance, and the input of regional industrial stakeholders.

In its strategy, Haaga-Helia aims to strengthen its entity of learning and research environments (a.k.a. Haaga-Helia Labs) by strongly integrating research, development, and innovation activities with learning. Haaga-Helia's IH is an inherent and natural part of the Lab infrastructure, where the strengths of different labs (altogether 19 of them) can be tapped to advance the uptake of AI skills, methods and tools by external stakeholders, students, and researchers. Learning activities, in the IH will be partly funded by the Ministry of Education and Culture. Research projects will seek funding from external EU funding instruments and other stakeholders.

Pilots

Haaga-Helia's IH will also play a key role in the Finnish AI Region (FAIR) consortium, which attained a European Digital Innovation Hub status

last year. In this consortium, the IH will provide services and expertise to local companies to advance their uptake of key AI skills, methods and tools. Haaga-Helia's IH has led to the increased collaboration of AI experts within the Ulysseus Innovation ecosystem through the development of research groups focusing on the application of AI in the fields of business and education. This has been achieved through jointly developed projects under Horizon Europe and Erasmus+, the involvement of associated partners to provide guidance, and the input of regional industrial stakeholders.

Socio-ecological sustainability - WWU

SCOPE
Sustainable development is a central challenge of the present and requires comprehensive societal transformation. Innovative strategies and ideas to enable societies to navigate and solve today's complex social and ecological challenges are urgently required, and interdisciplinary and especially contributions by Social Sciences and Humanities (SSH) to sustainability research and governance are needed as urgently to address global challenges such as climate change, biodiversity loss, energy transition, and questions of peace and democracy. Analyzing, discussing, and answering the manifold epistemological, organizational, cultural and political requirements of global solutions to current sustainability challenges, the Münster Innovation Hub will pursue inter- and transdisciplinary sustainability research, teaching, and transfer activities with a particular emphasis on perspectives and approaches from SSH.

Description
The Innovation Hub "Socio-Ecological Sustainability" will contribute significantly to Ulysseus by developing innovative ideas and solutions for the pursuit of sustainable wellbeing in Ulysseus regions and cities. A Joint Research Centre for collaborative research, Living Labs and Start-up Incubator programs will foster both civic engagement and needs-based innovation. Open Classes and a Teaching Innovation Lab will enable innovative research-based learning experiences that address the urgency of sustainability by contributing sustainably an intergenerational public discourse.

Münster's IH ecosystem for Socio-ecological Sustainability
The Innovation Hub "Socio-Ecological Sustainability" integrates cutting-edge research activities in the field of sustainability, a research profile area at the University of Münster that comprise outstanding basic research and application-oriented projects. The hub is built on the solid foundation of the long-standing expertise of the renowned Center for Interdisciplinary Sustainability Research (ZIN) that combines sustainability related research, teaching and consulting in social sciences and education, law and economics, religious studies, humanities, and the natural and environmental sciences. In its focus on transformative, transdisciplinary research, it also serves as a contact point for questions on sustainable development for all levels of governance, especially the State of North Rhine-Westphalia, the City of Muenster, the media, and nongovernmental organizations.

Other outstanding infrastructures, such as the MEET Battery Research Center, the International Graduate School Battery Chemistry, Characterization, Analysis, Recycling and Application, the Helmholtz Institute Ionics in Energy Storage, the Fraunhofer Research Fab Battery Cell Production, the Center for Nanotechnology, and the REACH EUREGIO Start-up Center, provide a perfect framework.

This excellent institutional environment is surrounded by the green city and larger region of Münster. It has received the European Energy Award in Gold for its local climate protection activities with in as early as 2012. Under the motto "Our Climate 2030", the city of Münster is now striving to achieve climate neutrality by 2030 and to adapt to the consequences of climate change. For this aim, Münster is receiving strong support from the European Union, which selected Münster as one of the 100 cities that will now lead the way together with the EU in implementing the "Green Deal" and achieving climate neutrality by 2030.

Cybersecurity – UoM

SCOPE
As the other Ulysseus IH the one run by UoM on Cybersecurity will promote a living lab, joint research, incubator and education. Most of these activities will be structured around a cybersecurity clinic (Cybsec Clinic).

Target challenge
Industries are facing cyber threats on a daily basis, and it is challenging to acquire the talented employees needed to confront them. The complexity of offensive tactics has increased, with fraudulent content effectively customized to regional contexts. According to ISC 2, there are 4.7 million employees on the global information security labour market, which represents an increase of 11.1% over last year and an additional 464,000 positions. Continual digitization processes have broadened the threat frontier and contributed to a constant rise in incident figures reported by key stakeholders. Cybercrime tends to dominate the security challenges, with malware, phishing, ransomware, and Distributed Denial of Service (DDoS) among the most prevalent threat vectors.

Description
CybSec Clinic is a pioneering initiative created to overcome several of the most demanding factors affecting the employability of cyber security experts by providing students with the early possibility to combine academic study with real-world experience. In order to create sustainable cyber security education, it must include both formal and informal education. Key elements are cybersecurity literacy at the lowest levels of the education system and specialized higher education such as postgraduate and master's degree programs.

Through the Clinic's engagement, students will get the opportunity to develop real-world marketable skills as well as the experience of working with the Ulysseus cybersecurity experts and researchers whose mentorship will enable them to advance in their chosen field. Implementation of fresh projects, initiatives, and programs will emerge from the Cybsec clinic of the IH.

The IH will promote innovation and multidisciplinary performance across academia

and the business communities. Furthermore, as a living lab researchers and students will interact directly with customers, providing on-the-ground cybersecurity competence to address evolving concerns and aid in the implementation of legal, technical, and organizational standards.

The Cybsec will be supported by a cybersecurity lab a co-working environment outfitted with cutting-edge technology, high-speed internet, and modern digital security standards, which will provide a multitude of networking possibilities.

The IH will bring together internationally renowned researchers and companies in a friendly environment to foster talent development, boost research, and advance knowledge in the constantly evolving field of cybersecurity. These will be closely matched to changes in the marketplace and appealing to private equity investors to drive market-driven innovation across academic and business communities, hands-on training programmes, entrepreneurial incubation, and production advancement.

The IH will organize an international conference on cybersecurity which will bring together prominent academics, company leaders, and government officials to generate ideas, engage, and develop solutions to address the rising cybersecurity risks and the lack of cyber capabilities. This Ulysseus Conference will also offer business leaders the opportunity to discover talented employees and the range of different of cyber educational plans from universities, including entry - level positions, student internship programs and fellowships

The IH will also organize a Ulysseus summer school in English for mature, academically-

motivated students who are interested in gaining a comprehensive overview of cybersecurity as well as the chance to research further into the field. Participants will experience the dynamic, interactive, and encouraging academic setting with colleagues from across the alliance and beyond and get opportunity to get credit certificate.

Ulysseus

EUROPEAN UNIVERSITY

UNIVERSIDAD DE SEVILLA

Università di Genova

UNIVERSITÉ CÔTE D'AZUR

TECHNICAL UNIVERSITY OF KOŠICE

MCI THE ENTREPRENEURIAL SCHOOL

Haaga-Helia University of Applied Sciences

WWU MÜNSTER

UCG Univerzitet Crne Gore