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JOINT AGENDA FOR RESEARCH AND INNOVATION IN THE T4E FOCUS AREA OF DIGITAL AND ENVIRONMENTAL TRANSFORMATION FOR SMART, SUSTAINABLE AND INCLUSIVE REGIONS (2030)

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Work package 2: Collaboration in Research and Innovation

**This Joint Agenda includes the contributions from all partner universities and stakeholders in the background work: including the surveys and tasks mentioned in this document.*

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Executive Summary

This *Joint Agenda for Research and Innovation in the Transform4Europe focus area of Digital and Environmental Transformation for Smart, Sustainable and Inclusive Regions (2030)*, from now on **Joint Agenda for R&I 2030**, is the result of several months of collaboration between all members of the alliance, the WP2 expert group and stakeholders from the T4ERI innovation ecosystem.

Specifically, the preparation of the Joint Agenda, coordinated by the University of Alicante, incorporates the results of the analysis of:

- 1) The **survey of Key Research Areas and Research Collaboration Opportunities** at Alliance level.
- 2) The **survey of shared joint projects, research expertise, internal and external factors and challenges** to joint Research and Innovation across all disciplines at the T4E universities.
- 3) The **survey among key stakeholders** in the regions to identify Research and Innovation interests, needs and opportunities concerning digital transformation and smart regions, environmental transformation and sustainability, and societal transformation and inclusion.
- 4) The **individual research strategies** (or equivalent) from all T4ERI partner universities to identify opportunities to align institutional research strategies as much as possible, to achieve competitive R&I results in the long term and create EU-level critical mass.
- 5) Current **Research funding opportunities** from major sources for collaborative initiatives, e.g. in Horizon Europe and corresponding capacity-building strategy programmes and in the T4E innovation ecosystem.

The main findings and insights from these components have been brought together in this final document which is also a T4ERI (Transform4European Research and Innovation) project deliverable: **(D2.2) Joint Agenda for Research and Innovation in the T4E focus area of digital and environmental transformation for smart, sustainable and inclusive regions.**

After the afore-mentioned analysis, the following challenges for joint R&I were identified:

- i) The need to enhance and improve human capital and research potential
- ii) Inexistent joint PhD programmes
- iii) Insufficient research support services and
- iv) Scant collaboration with the socio-economic sector and lack of public engagement

Thus, the **Joint Agenda for R&I 2030** has been divided into 4 main pillars and 1 cross-cutting pillar trying to address the main challenges for realising an effective Collaboration in Research and Innovation at T4ERI Alliance:

- PILLAR I: STRENGTHENING HUMAN CAPITAL & RESEARCH POTENTIAL
- PILLAR II: BOOSTING JOINT PhD “LINES”
- PILLAR III: STRENGTHENING RESEARCH SUPPORT SERVICES
- PILLAR IV: COLLABORATION WITH THE SOCIO-ECONOMIC SECTOR / PUBLIC ENGAGEMENT
- CROSS-CUTTING PILLAR: GOVERNANCE, IMPLEMENTATION, MONITORING & SUSTAINABILITY

Moreover, the **Joint Agenda for R&I 2030** includes a **Strategic Action Plan for the Implementation of the Agenda** with an estimation of the timing, Actions, Actors, Resources, Barriers and Key Performance Indicators based on the information available as of 2023.

This Joint Agenda is an organic document that **can be adapted to the resources available as well as to the reality and needs of the Alliance in the coming years** with the support and guidance of a Joint Agenda Initiative Group (to be nominated), the Management Board and the Steering Committee.

Whilst the Joint Agenda constitutes the basis for the collaboration in R&I until 2030, the complementary **Actions Plans** defined in T4ERI **Work Package 3** (for Human Resources –Best Careers–) and **Work Package 4** (Public Engagement in R&I, Science Communication and Open Science –Science4All–) are defined until the end of T4ERI project in 2024.

Thus, if needed be, **the Joint Agenda will be duly revised and adapted in 2024 after the Pilot Phases of both Action Plans.** The best results and most successful and impactful actions from the pilot phases may help fine tune and/or reinforce the corresponding actions of this Joint Agenda beyond 2024.

Besides, to guarantee the effective governance of the Joint Agenda and the alignment according to the progress of T4ERI Strategies and Action Plans defined in WP3 and WP4, the Universities will designate **members of a Joint Agenda Initiative Group.** This initiative group will supervise the successful implementation and adaptation of the Joint Agenda for R&I to the course of the years until 2030 (redefining specific actions if needed be with support and approval of the Steering Committee and Management Board).

Furthermore, a **roadmap for funding** is also included as part of the sustainability plan to continue supporting the actions proposed.

Finally, the Executive Board as the highest decision-making body of the Alliance has approved the agenda at its in-presence meeting in October 2023. Members of the Transform4Europe Alliance, who have participated in the surveys and activities that

have made possible the development of this **Joint Agenda for R&I 2030**, support its implementation considering that:

1. The Joint Agenda is not a legally binding document but has been designed to **support and foster joint Research and Innovation across the Transform4Europe Alliance until 2030** based the common challenges identified and considering the context of the Alliance at the time of completion of the document **in the year 2023**.
2. The **Joint Agenda for R&I 2030** includes a suggested **Strategic Action Plan for the Implementation of the Agenda** with an estimation of the timing, Actions, Actors, Resources, Barriers and Key Performance Indicators based on the information available.
3. The members of the alliance will use the Joint Agenda for R&I as a roadmap to support and facilitate joint Research and Innovation across the Alliance. However, the implementation of each action will be **subject to the resources available for the corresponding timeframe**.
4. The Joint Agenda, including the **Strategic Action Plan for the Implementation of the Agenda**, will be an organic document that **may be adapted to the reality and needs** of the Alliance in the coming years upon the request of the members of the Transform4Europe Alliance.
5. **Should the needs of the Alliance change with the course of the years, the Joint Agenda Initiative Group will join the Management Board and Steering Committee and they will suggest** new timing, resources, tasks and/or actions to accommodate to the potential new scenario.

For instance, if needed be and if agreed by all members, the Joint Agenda can be duly revised and fine-tuned after the Pilot Phases of T4ERI Work Package 3 and 4 Action Plans in 2024 to reinforce most successful and impactful actions.

6. To the possible extent, the universities will **give visibility** to this **Joint Agenda for R&I 2030** and integrate it into their institutional strategic planning related to R&I.

To facilitate the process, the Joint Agenda **has been developed taking into consideration the main action lines of each institutional strategic plan**.

Introduction

The present document “**Joint Agenda for Research and Innovation in the T4E focus area of Digital and Environmental Transformation for Smart, Sustainable and Inclusive Regions (2030)**” is one of the main outcomes of T4ERI Work Package 2: Collaboration in Research and Innovation. The objectives of this Work Package (WP) were to:

- O2.1 Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas
- **O2.2 Create a joint agenda for research and innovation in the T4E focus area of digital and environmental transformation for smart, sustainable and inclusive regions**
- O2.3 Develop innovative and collaborative cross-alliance research centres
- O2.4 Enable access to partners’ key research infrastructures

More specifically, the present work incorporates the main result of a number of tasks implemented to achieved the objectives of WP2. The inputs from those different tasks have laid the foundations of this Joint Agenda for Research and Innovation 2030. To begin with, *Task 2.1 Online research collaboration opportunity map and partnering tool* served to elaborate the **Map of Key Research Areas and Research Collaboration Opportunities** at Alliance level.

The first objective of this task was to conduct a detailed survey and the corresponding analysis to have an in-depth overview on the Key Research Areas and research undertaken at all T4ERI universities in view of exploring existing bilateral research collaboration schemes and activities, the potential for increased collaboration with the Transform4Europe Alliance as well as the existing international collaborative research formats at the beneficiary institutions.

The results of that survey have been used also for the development of the partnering and infrastructure-sharing tool, where the UA IT team incorporated the areas identified in the survey to the Researcher Form to facilitate the definition of the researchers’ profiles.

The results of the surveys have been fundamental for both: i) the development of the T4ERI partnering tool and ii) for the development of the T4ERI Joint Research Agenda.

Then, the UA Team coordinated *Task 2.2* which was directly linked to the preparation of this **Joint Agenda for Research and Innovation: T4ERI 2030**

The Alliance

Transform4Europe (T4E) is a university alliance of proven excellence in strategic collaboration. It has been awarded European funding to pursue joint strategies in education and mobility, focussing on collaboration between the universities and a

wealth of non-university stakeholders from the surrounding regions in a multi-actor knowledge and innovation ecosystem. For the T4E universities, the logical next step is to capitalise on this ecosystem to transform their achievements in research and innovation. Together, the diverse actors in the T4E ecosystem can serve as powerful engines for the mutual development of innovation and performance capacities, jointly fostering both research of excellence and impact, and smarter, sustainable, competitive regions.

Transform 4 European Research and Innovation (T4ERI) devises new strategies to harness this untapped potential, with the focus mission digital and environmental transformation for smart, sustainable and inclusive regions. In this light, the consortium has developed a joint agenda for research and innovation, a joint strategy for attracting and retaining outstanding researchers, and a joint strategy to open science to all members of the T4E ecosystem. True to the essence of the alliance, T4ERI is collaborating with regional stakeholders from business and industry, culture, politics and civil society at every step of the process.

The importance of research for HEIs and the importance of its internationalisation

Knowledge creation represents the classic rationale for international cooperation in science and technology. It entails a wide range of cooperative activities throughout the process of knowledge creation, curation and dissemination, carried out by public authorities (governments and academic institutions) in bilateral or multilateral settings (e.g. UNESCO). They aim at creating, curating and sharing knowledge and data, including through major scientific equipment.

International cooperation in Research and Innovation has increasingly contributed to EU preparedness for and response to global challenges such as climate change and the COVID-19 pandemic. According to the 2019 edition of the United Nations (UN) Global Sustainable Development Report, those challenges are characterised by the need to generate factual certainty at global level and to build societal support. In these circumstances, science is able to elaborate and inform underlying facts and interactions, and thereby to help frame evidence-based policies in a systemic way.

A common mission of most Higher Education Institutions (HEIs) in Europe is to contribute to shape informed and evidence-based policies but it is also to ensure the comprehensive training of its students, to promote cutting-edge scientific research and innovation and to support its effective transfer to our society and environment. Collaborative and international Research and Innovation are therefore essential to create new knowledge which can have a positive impact in the European society and can help tackle its most pressing societal and environmental challenges.

For the Higher Education Institutions in the Transform4Europe Alliance, it is also vital to support high-level and diverse science at the level of fundamental research, applied research, experimental development and artistic research, while creating

liberal learning conditions for the individuals, developing partnerships and taking an active part in the life of the European citizens to advance its future and contribute to the global cultural and academic development.

The Transform4Europe Alliance is committed to collaborate in Research and Innovation taking into consideration the values of academic freedom, Democracy, Openness, Responsibility, Creativity, Sense of community, Sustainability and Academic excellence. Besides, through international R&I –including academic and artistic– new partnerships and bonds are formed at European level that can contribute to a more sustainable development, to better mutual understanding and to a more resilient and inclusive Europe.

Aim of the document and expected impact

The **T4ERI Joint Agenda for Research and Innovation 2030** aims at increasing collaboration in research and innovation across all disciplines in the Alliance, considering the overall Transform4Europe focus areas: digital and environmental transformation for smart, sustainable and inclusive regions.

The Joint Agenda will guide the efforts of the Transform4Europe Alliance in terms of Research and Innovation (R&I) until the year 2030. Therefore, the consortium identified the main challenges for R&I at alliance level, in order to define specific goals and to propose concrete Tasks and Actions to address those challenges in a defined timeframe and with Key Performance Indicators (KPIs) to help monitor the progress in the implementation of the Joint Agenda.

The Joint Agenda is expected to contribute to further paving the way towards the European University of the future. The implementation of this common agenda and it will maximize its impact, complementing with other key outcomes of the T4ERI project that conform the complete roadmap: the T4ERI partnering and matchmaking tool, the joint access to key research infrastructure across the alliance, the targeted joint action plans to launch major joint research centres relating to its focus mission, to attract and retain excellent junior and established researchers, and to foster engagement and involvement of civil society in research and innovation.

Actors involved

The T4ERI Joint Agenda 2030 has been developed by dedicated experts from the University of Alicante involved in Work Package 2, who have analysed the individual Strategic Plans –or equivalent documents– provided by each University. Moreover, the agenda also incorporates the inputs collected in different surveys provided by different stakeholders within the alliance such as: the Project / Grants Management Offices, the Vice-Rectorates for Research –or homologues– from each University and the external stakeholders from the T4E innovation ecosystem in the survey conducted in August–September 2022.

Methodology

Firstly, in a comprehensive survey launched in August 2022, where the UA T4ERI team collected the key Research Areas for the Transform4Europe Alliance –and therefore for all T4ERI partners–, and prepared a mapping of potential Research and Innovation Opportunities across the Alliance, with the inputs from all member Universities.

The survey comprised several components:

- 1) **the T4ERI Research Areas Map:** With the support of the R&I Vice-Rectorate for Research (or similar), we collected the information about all research areas in each University (including the sub-areas) indicating an estimation of the level of competence and regional impact. These two factors helped identify in which areas the Alliance could have more impact doing Research and Innovation.
- 2) **the T4ERI Research Collaboration Opportunity Map:** With the support of the Vice-Rectorates for Research (or similar) and the Project Management Offices (or equivalent) the following information was collected:
 - experience/current participation of the members of the Alliance in different Research Collaboration Programs.
 - interest in participating in those programs in the future.
 - past and present projects that involve more than one member University, including EU, Regional and/or International funds that led to joint research collaboration opportunities.
 - factors, tools and metrics that support, facilitate, assess and/or improve the level of research collaboration among our Universities.
- 3) **Internal factors:** T4ERI partners selected the aspects considered to be more important to support research collaboration among members of the T4ERI alliance
- 4) **External factors:** The consortium identified those issues that could impact the collaborative research approach within each institution and are instrumental in supporting collaborative research and partners engagement
- 5) **Stakeholders:** The consortium collected the information about the experience and interest of the T4ERI Stakeholder Network members in Research and Innovation (R&I) funded projects and programmes, research tools, etc... in order to support the definition of a joint agenda for Research & Innovation among the T4ERI members.

The analysis of the results of the surveys helped to:

- explore existing bilateral research collaboration schemes and activities,
- analyze the potential for increased collaboration with the TRANSFORM4EUROPE Alliance,
- analyze the existing international collaborative research formats at the beneficiary institutions,

- identify internal and external factors that contribute or hinder collaboration in Research and Innovation
- study the needs and expectations of key regional stakeholders
- incorporate the results of all the above into the T4ERI Joint Research Agenda

The information collected contributed to have an in-depth overview on the Key Research Areas, the joint research undertaken at all T4ERI universities as well as to identify potential collaboration opportunities in Research and Innovation to nurture this Joint Agenda. Moreover, the information has also been used by the UA IT team for the development of the T4ERI Partnering and Infrastructure-sharing tool. Having the defined list of Key Research Areas aimed at facilitating the user-friendliness of the tool.

Following, the **Individual Research and Innovation Agendas** from each University of the Alliance were collected and analysed:

- For **USAAR** (Saarland University): The “USAAR University Development Plan – UEP 2030”
- For **UA** (University of Alicante): The “University of Alicante Strategic Plan 2022-2024”
- For **EKA** (Estonian Academy of Arts): “The Estonian Academy of Arts research, development and creativity (RDC)” strategy which articulates EKA’s RDC priorities and objectives for 2021–2025. The EKA RDC strategy for 2021–2025 proceeds from the “EKA development plan for 2021–2025” and the “Estonian research, development, innovation and entrepreneurship strategy for 2021–2035”.
- For **USIL** (University of Silesia in Katowice): The “Development Strategy of the University of Silesia in Katowice for 2020–2025”
- For **US** (Sofia University): The “Strategy for Commercialisation of Scientific Results” and the “Human Resources Strategy for Researchers (HRS4R) at Sofia University”
- For **UNITS** (University of Trieste): “The University of Trieste Strategic Plan 2019–2023”
- For **VMU** (Vytautas Magnus University): “Vytautas Magnus University Strategic Plan for 2021–2027 and measures and indicators”

Incorporating the most relevant information from all the above-mentioned inputs and documents, the consortium has developed a Joint Agenda for Research and Innovation in the T4E focus areas: digital and environmental transformation for smart, sustainable and inclusive regions that will guide the next steps of the Alliance regarding joint collaboration in Research and Innovation until the year 2030.

Having identified the key Research Areas for the Transform4Europe Alliance and therefore for all T4ERI partners allowed the T4ERI consortium knowing which are the

most significant areas and the ones with more regional impact for all partners since they represent the areas where researchers from different universities could collaborate with their peers from other universities of the Alliance, doing multi-disciplinary, cross-disciplinary research, in research areas that are crucial for them.

Background and opportunities for joint Research and Innovation collaboration

Previous and current research cooperation between members of the Alliance

The Transform4Europe Alliance has been very active and successful in terms of research cooperation. Three large European funded projects involve all members of the Alliance: Transform4Europe and T4EU, funded by Erasmus+ and T4ERI, funded by H2O20.

T4EU also brings officially together the 3 new members of the Transform4Europe Alliance.

Moreover, as it can be seen in the table below, there are other regional or European funded projects that involve at least 2 partners of the Alliance:

Table 1: Previous and current EU or Regional funded joint research and cooperation projects between members of the Alliance

	Projects / Initiatives	Universities involved
1	TRANSFORM4EUROPE	☒USAAR ☒UA ☒EKA ☒USIL ☒UNISOFIA ☒UNITS ☒VMU
2	T4ERI – Transform4European Research & Innovation	☒USAAR ☒UA ☒EKA ☒USIL ☒UNISOFIA ☒UNITS ☒VMU
3	T4EU	☒USAAR ☒UA ☒EKA ☒USIL ☒UNISOFIA ☒UNITS ☒VMU ☒UJM* ☒UCP* ☒UP*
4	International Deans' Course Latin America	☒USAAR ☒UA
5	Activating Students in Online Classes	☒USAAR ☒EKA
6	Enhancing language education in cross-border vocational education	☒USAAR ☒USIL ☒VMU
7	CROCODILE – Cross-disciplinary Academic Offer under the Erasmus+ programme	☒UA ☒USIL ☒UNISOFIA ☒VMU

Opportunities for collaboration within the Alliance

The results of the survey carried out in Task 2.1 showed the map of the Research Areas within the Transform4Europe Alliance where the main common research areas with **medium/high impact and advanced/expert** competence level for at least 4-5 partner Universities were:

- 1) **Mathematics** (Statistics)
- 2) **Computer Science** (Computer Science)
- 3) **Physics** (Fluids, Mechanics, Theoretical)
- 4) **Economic Sciences** (Economic Theory, General Economics, Economic Theory, General Economics)
- 5) **Chemistry** (Organic, Inorganic, Biomolecular)
- 6) **Life Sciences** (Animal Biology/Zoology, Biochemistry, Biophysics, Cell Biology, Genetics, Microbiology, Molecular Biology, Plant Biology/Botany)
- 7) **Earth and Space Sciences** (Geography)
- 8) **Technological Sciences** (Environmental Technology, Materials Technology, Mechanical Engineering)
- 9) **History** (General History, History of countries, History of Epochs, Specialized Histories)
- 10) **Juridical Sciences and Law** (General Theory and Methods, National law and legislation)
- 11) **Linguistics** (Applied Linguistics, Linguistic Theory)
- 12) **Pedagogy** (Educational Theory and Methods, Organisation and Planning of Education, Teacher Training and Employment)
- 13) **Political Science** (International Relations)
- 14) **Psychology** (General Psychology, Social Psychology)
- 15) **Science of Arts and Letters** (Literary theory, analysis and criticism, Fine Arts theory, analysis and criticism)
- 16) **Media and Communication** (Media, Communication)
- 17) **Agricultural Sciences** (did not comply with the criteria of the number of universities but it has been included due to its relevance in terms of Food Security and Climate Action).

The Key Research Areas and Opportunity map, apart from serving to identify common-grounds among the T4ERI members for future joint Research and Innovation, **offers an infinite number of interdisciplinary and cross-disciplinary joint research possibilities across the Alliance.**

Thus, the multidisciplinary approaches will be fostered in view of the many potential synergies that may excerpt from the complementarities between research areas within the Alliance.

Opportunities for collaboration with the stakeholders

Apart from the joint research collaboration opportunities identified within the Alliance, during the months of August and September 2022 a survey was conducted among key Stakeholders of the T4ERI Network to study the potential for joint R&I activities with key regional stakeholders.

The analysis of the responses received showed a very diverse level of experience in European projects but a common interest in participating in future joint research initiatives.

In general, all stakeholders approached were also prone to carry out interdisciplinary and trans-disciplinary projects in the future with the members of the Transform4Europe Alliance. Some of these institutions had extensive networks of partner institutions that the Alliance can capitalize on by linking to these stakeholders.

A mapping of the most strategic research areas for the stakeholders showed plenty of overlapping with the key research areas of the Alliance:

- Health and Medical Science
- Smart Health & Digital Health
- Human Machine Interaction: haptics, printed & flexible electronics, and wearables
- Biomedical Materials
- Digitalization
- Materials in the digital environment
- Innovative materials
- Manufacturing related to industry 4.0, engineering, consultancy for technology or digitization
- Machinery, plant and industrial equipment
- Logistics
- Intelligent Factory and Sustainable Development of Made in Italy supply chains
- Mechatronics
- Life sciences
- Agriculture, Agri-food
- Forestry and rural areas
- Biotechnology with applications for agriculture and food (Green Biotechnology) and Health
- Energy
- The next generation of advanced materials for energy applications
- Renewable's integration into national grid
- Hydrogen Energy Technologies for industry, energy and transportation.
- Environment
- Adaptation to climate change
- Circular economy
- Sustainability
- Sustainable mobility
- Transport
- Security
- Social sciences and humanities
- DRR and Resilience
- Participatory democracy
- (Good) governance, including enhancing capacities at local authority's level
- Border studies and cross-border cooperation
- Widening activities
- Creative & Cultural Industries.
- Development and promotion of Cultural Heritage
- Digitization of Cultural Heritage
- Privacy and ethics
- ICT
- Artificial intelligence

The consortium can leverage on these synergies to develop joint research and innovation projects that incorporate not only members of the Alliance, but also members of the Stakeholders Network, maximizing the impact in the regions and contributing to delivering a more digitalised, sustainable, inclusive and smart Europe.

Finally, the survey showed that the stakeholder network offers **a number of potential synergies and collaboration opportunities for the Universities in the Alliance also in terms of training and capacity building as they can provide both know-how and hands-on experience**, but they can also be recipients of the training activities offered by members of the Alliance.

Internal and External factors for joint Research and Innovation

The consortium identified INTERNAL and EXTERNAL FACTORS relevant for potential Research and Innovation collaboration that could impact the collaborative research approach at each institution level and instrumental in supporting collaborative research and partners engagement in joint actions.

Internal Factors

1. Allocating Time and Resources

- Time to build and maintain trusting relationships, support ongoing and inclusive engagement, and mediate conflicts
- Funding and planning to support activities such as relationship-building (e.g., face-to-face meetings, travel, and knowledge translation and exchange).
- Funds required to cover the long timeframe necessary to reach these goals
- Distribution of funds among partners, which can be a source of conflict

2. Addressing Disciplinary and Sectoral Issues

- Participation of representatives from different disciplines, with diverse expertise and experiences
- Diversity of personnel involved in collaborative research projects (e.g., support staff, community organizers, and activists)
- Facilitation of interdisciplinarity (integration of differences in cultures, ideas, goals, priorities, languages (e.g., terminologies), and communication styles)
- Learning from each other, conducting the ongoing research, mediating assumptions and views, and integrating different concepts of research
- Disciplinary control (i.e., domination of one discipline over other disciplines), traditionally focused disciplinary training, and the lack of experience and guidance on working with other disciplines/sectors and perspectives
- Discipline legitimacy, scientific independence, credibility, and the ability to demonstrate value and impact
- Encouraged the willingness to challenge norms, take in new ideas, adopting a holistic understanding of environmental issues
- Promoting understanding of interdisciplinary expectations (i.e., how the research will be conducted), and accepting different disciplinary cultures,

languages, and methods

- Training opportunities in interdisciplinary and transdisciplinary research

3. Building Relationships

- Development of strong and trustworthy relationships within research teams to support the collaborative process
- Partner engagement to build research capacity / competences
- Interest and prior relationships
- Focus on knowledge co-production
- Developing and maintaining strong, trusting, and respectful relationships were a challenge that demanded teams to learn how to communicate effectively
- Building and maintaining relationships considering human constraints (e.g., availability, personality, etc.), power imbalances within the team, and personnel turnover were other obstacles identified

4. Ensuring Representation

- Representation of different sectors
- Difficulty in identifying and obtaining adequate disciplinary or sectoral/community representation to create a diverse team
- Accessibility of different stakeholders

5. Embedding Participation in the Research

- Identifying and involving partners early
- Ensuring their participation throughout all research phases
- Framing the research questions
- Responding to user needs in the publication process
- Building on previous mutual experiences to support the collaborative process
- Performing a needs analysis in a thorough preliminary background work including contextual factors and policy processes

6. Supporting On-going Collaboration

- Having continuous dialogue, two-way communication, meetings in person, and providing multiple opportunities for collaboration
- Providing learning opportunities (context, languages, and methods)
- Maintaining the ongoing collaboration including mediating conflicts and debates, involving partners in all research phases, creating an equal working environment, defining the level of partners' commitment, keeping an iterative and collaborative process, and balancing research and action
- Partners identify and clarify early on the common and different goals, strategies, limitations, and model of participation
- Inclusion of social scientists who could support effective collaboration and formative evaluation of the collaborative process, governance, and decision making
- The collaborative process should build on feedback and critical reflection, partners' joint development of operating norms, obtaining consensus or agreement during and at the end of the project, allowing the process to be creative and flexible for changes in the research protocol

7. Developing Knowledge Translation and Exchange

- Research design should involve knowledge translation and exchange from an early stage of the research process
- Negotiating knowledge translation strategies as well as assessing knowledge user needs should be maintained throughout the research project.
- Keeping clear communication strategies about the knowledge translation plans
- Committing to implementation, delivering tangible outcomes to users early in the project, as well as sharing findings in an accessible and relevant format for different audiences.
- Ethics approval process involved in sharing findings with participants and time between knowledge exchange and outcomes
- Differing views of the research products, ownership of the data and results, and the dissemination of results
- Early agreement on data sharing with participants
- Using knowledge brokers whose role as intermediators would be to support the dissemination process and activities that could mitigate conflicts
- Joint personal interest in the matter (passion, commitment, motivation, respect, and shared values/goals in positively contributing to and facilitating the collaborative process and helping to overcome some of the barriers and challenges

External Factors

1. Institutional

- Available funding to support interdisciplinary and collaborative research
- Acknowledgments and reward systems (e.g., performance reviews)
- Adequate training on collaborative and interdisciplinary research to those participating in collaborative research
- Institutional priority and support services for collaborative research (e.g., ethics review boards that advocate sharing results with participants, and/or policies that promote hiring community members for research purposes)

2. Socio-Political

- Political climate (specific research collaboration policies, instruments...)
- Social and cultural structures, especially engagement structures to facilitate consultation with stakeholders

European context for Research and Innovation

At a European level, sustainable growth is increasingly related to the capacity of regional economies to innovate and transform, adapting to an ever changing and more competitive environment. This means that a much greater effort is needed to create the ecosystems that encourage innovation, research and development (R&D), and entrepreneurship.

Innovation is thus key to a range of Commission priorities, in particular the **European Green Deal**, an economy that works for people, and making Europe fit for the digital age.

The promotion of innovation is a central feature in the **Cohesion Policy programmes for 2021–2027**, where at least €56.6 billion goes towards innovation and research. Smart Specialisation Strategies mobilise the innovation potential of all EU regions

The diffusion of top R&D results across economic sectors and EU borders, and their transformation into innovative and marketable products and services is key for the EU economy. The EU needs to be able to compete with other more advanced and emerging economies in a fast changing economic and social environment.

The **EU is a global leader in research** in many fields. Well performing innovation systems are, however, found only in a few EU regions, while many others lag behind in terms of their R&I investments, capacity and performance. Europe's highest performing regions are up to nine times more innovative than the least performing ones.

The improvement of Member States and regions innovation capacity is done through **Smart Specialisation Strategies (S3)**, that set priorities at national and/or regional level (depending on the characteristics and needs of the territory) to increase their **competitive advantage** by developing and matching research and innovation strengths with business needs and necessary skills through an **Entrepreneurial Discovery Process (EDP)**.

Innovation 2021–2027 programming period

In the current programming period, investments under the European Regional Development Fund (ERDF) seek to make Europe and its regions:

- More competitive and smarter
- Greener
- More connected
- More social
- Closer to citizens

Based on their prosperity, all regions and Member States will concentrate the support on a **more competitive and smarter Europe** (policy objective – PO1), as well as **greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe** (PO2), through the mechanism of “thematic concentration”.

The support for research and innovation will build on **smart specialisation strategies (S3)** that reflect the strengths and assets of the regions concerned through a **place-based approach**. So far, the ERDF investments in innovation have supported over **185 smart specialisation strategies** for a greater and more sustainable impact on jobs and growth in different regions.

In the 2021–2027 programming period, stronger emphasis is put on **market orientation of research and innovation activities** to support industrial transition to higher value added, future-oriented activities, including services and primary production as well as value chains. Therefore, the focus of support is on **applied**

research and the uptake of new technologies by firms, public administrations and citizens, particularly in relation to societal challenges such as climate change, digitalisation, or health.

The Transform4Europe Alliance (bringing together Member States and regions under S3) is in a unique position to align its Research and Innovation priorities and policy objectives to those of the European Commission thus, contributing to delivering a smarter and more competitive, inclusive and sustainable Europe.

Finally, regarding Research Assessment some members of the Transform4Europe Alliance are also signatories of the **Coalition for Advancing Research Assessment – Agreement (COARA)** on reforming research assessment which was initiated in January 2022. More than 350 organisations from over 40 countries were involved. Organisations involved included public and private research funders, universities, research centres, institutes and infrastructures, associations and alliances thereof, national and regional authorities, accreditation and evaluation agencies, learned societies and associations of researchers, and other relevant organisations, representing a broad diversity of views and perspectives.

COARA vision is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research. This requires basing assessment primarily on qualitative judgement, for which peer review is central, supported by responsible use of quantitative indicators.

Challenges for Joint Research and Innovation

Current situation and needs analysis

A needs analysis combining the results from WP3 and WP4 and an in-depth revision of the Strategic Agendas –or equivalent documents– of all partner universities, showed that, the main challenges for realising an effective Collaboration in Research and Innovation at T4ERI Alliance level were related to the following overarching topics:

- HUMAN CAPITAL AND RESEARCH POTENTIAL
- INEXISTING JOINT PHD PROGRAMMES
- INSUFFICIENT RESEARCH SUPPORT SERVICES
- SCANT COLLABORATION WITH THE SOCIO-ECONOMIC SECTOR AND LACK OF PUBLIC ENGAGEMENT

Additionally, partners detected that the implementation of a R&I Joint Agenda would also require an agreement in terms of Governance, Implementation, Monitoring and

Sustainability in order to be able to implement successfully the Action Plan foreseen in the Joint Agenda.

Common GAPS in the area of R&I Human Capital that have been considered in Pillar I on the alliance level are as follows:

- Some universities in the alliance, such as EKA, do not have a holistic strategy for the staff development of the R&I supporting staff
- For UNISOFIA is particularly difficult to attract talents and young researchers in the STEM
- UNITS and UA stressed legal limitations to exchange personnel between the EU universities
- USAAR stresses the need to improve networking opportunities across disciplines in terms of information on career opportunities outside the academia
- USIL noticed the high risk of brain drain and very limited resources, or allocating the resources in the wrong way
- VMU recommended establishing and consolidating research units to focus on the research capacity and the research infrastructure, as well as on the more efficient funding of the research activities in the priority fields
- For most universities in the Alliance it is necessary to improving the balance between teaching and research as well as to find adequate incentive mechanisms for scientists

The technical, legal and administrative matters challenging the development of joint PhD programs have been considered in the development of the new project, T4EU and this Joint Agenda, in Pillar II seeks to pave the way for the preparation of such Joint PhD programs.

The resources dedicated to research support vary extensively from one university to another within the Alliance. However, the need for improving the research support services is a constant across the Alliance and a need that has been addressed by Pillar III.

Regarding the scant collaboration with the socio-economic sector and lack of public engagement, addressed in Pillar IV, identifies the challenges associated with unlocking the University's research and innovation potential which are:

- Difficulties in building bridges between research and the socio-economic sector.
- Lack of specific activities to engage stakeholders in Research and Innovation activities.
- The market for products that can be produced depends on interactive dialogue and contract-oriented collaboration with business partners who have an interest in research results and technologies developed by the University.

Links to the results of other Work Packages

The Joint Agenda for R&I 2030 from Work Package 2 is intrinsically linked to the other core Work Packages of the T4ERI project:

➤ **Links to WP 3:** Based on the idea that outstanding minds are the prerequisite for outstanding research, as leaders of **WP3**, the colleagues at the University of Silesia in Katowice with support of WP3 partners and a multi-stage approach, conducted a collection of analyses to create substantial and feasible standards for building scientific careers in the T4EU alliance. By reflecting on the data, seven independent standards, in the form of goals to be achieved, were articulated: financial resources to secure the development of the academic staff and the PhD students, emphasis on the mentees, emphasis on mentors and their experience, visible presence of the stakeholders, measurable efficacy of the mentoring process, increased visibility of research, and competences of the open science.

These joint standards were incorporated to **D3.2 Joint strategy for all initiatives in the WP3** and they were also reflected in the actions proposed in **D3.3 Action Plan for all Initiatives in WP3**. Both deliverables have been considered for the definition of Pillars I and II of this Joint Agenda for R&I 2030. Since the scope of the implementation of the Action Plan in D3.3 is until 2024, the actions proposed in the Joint Agenda for R&I 2030 have been conceived to capitalise on the best results and maximize the impact until 2030.

➤ **Links to WP4:** As a result of the work carried out in the framework of **WP4** in T4ERI project and after a thorough analysis of the current situation at national and institutional level, Vytautas Magnus University, as leaders of WP4, have been able to develop a comprehensive **Joint Strategy “Science4All” (D4.2) and the corresponding Action Plans** to address the social importance of **Public Engagement in Research and Innovation**, relevance **Science Communication** and timeliness of **Open Science**. Pillar IV of this Joint Agenda for R&I 2030 has considered **T4EU Joint Strategy “Science4all”** as a whole and will leverage on the most successful actions beyond 2024 (when the proposed WP4 Action Plans conclude).

➤ Regarding **WP5**, the progress and lessons learnt during the implementation of the Joint Agenda for R&I 2030 will help the T4ERI consortium to elaborate the **White paper on collaboration in R&I for the Alliance** which will be one of the most relevant outputs of the Alliance since it aims at contributing to relevant decision-making processes.

The way forward (Implementation of the Joint Agenda)

The Action Plan to Implement the Joint Agenda has been divided into 4 main pillars and 1 cross-cutting pillar. This structure has been selected taking into consideration the main challenges for realising an effective Collaboration in Research and

Innovation at T4ERI Alliance identified above: i) Human capital and research potential, ii) Inexistent joint PhD programmes, iii) Insufficient research support services and, iv) Scant collaboration with the socio-economic sector and lack of public engagement.

In this spirit, the Action Plan for implementation of the Joint Agenda is structured as follows:

- PILLAR I: STRENGTHENING HUMAN CAPITAL & RESEARCH POTENTIAL
- PILLAR II: BOOSTING JOINT PhD “LINES”
- PILLAR III: STRENGTHENING RESEARCH SUPPORT SERVICES
- PILLAR IV: COLLABORATION WITH THE SOCIO-ECONOMIC SECTOR / PUBLIC ENGAGEMENT
- CROSS-CUTTING PILLAR: GOVERNANCE, IMPLEMENTATION, MONITORING & SUSTAINABILITY

Finally, as it can be seen in the Action Plan, the pillars and the corresponding Actions have also been designed to contribute to the achievement of the T4ERI objectives of Work Packages 2-5.

Pillars I and III are more directly connected to the objectives of WP2 and WP3 which were to:

- **O2.1** Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas
- **O2.2** Create a joint agenda for research and innovation in the T4E focus area of digital and environmental transformation for smart, sustainable and inclusive regions
- **O2.3** Develop innovative and collaborative cross-alliance research centres
- **O2.4** Enable access to partners’ key research infrastructures
- **O3.1** Increase the attractiveness of the T4E partner universities to excellent researchers by developing joint innovative standards for scientific careers at all experience levels
- **O3.2** Recruit and retain the brightest early-career researchers at the T4E universities by developing a targeted joint strategy to promote young talent
- **O3.3** Promote academic leadership in science to the benefit of the institutional culture of the T4E universities and the careers of their leading researchers and research managers
- **O3.4** Boost research quality by improving professional research support

Pillars II and IV also address some objectives in WP2 and WP3, however, they are more closely linked to WP4 and WP5 Objectives:

- **O4.1** Create and harness a T4E network for public engagement in research and innovation
- **O4.2** Develop a training program for T4E scientists to improve the skills in Science Communication

- **O4.3** Develop a joint strategy and common standards to be at the forefront of Open Science
- **O5.1** Create external visibility for T4ERI and encourage project outreach.
- **O5.2** Create internal visibility for T4ERI in order to enhance acceptance and participation (change management)
- **O5.3** Disseminate results to academic communities and science policy-makers Europe-wide
- **O5.4** Share best practices among the European University Alliances
- **O5.5** Involve stakeholders from the Regional Innovation Ecosystems across the T4E regions in the development of the joint T4E strategy for research and innovation

PILLAR I: STRENGTHENING HUMAN CAPITAL & RESEARCH POTENTIAL

The aims of PILLAR I are the following:

- *AIM 1.1 Promoting new approaches to interdisciplinarity and excellence in research and innovation at alliance level*
- *AIM 1.2 To position the T4EU/T4ERI Alliance as a European University Alliance of excellence and reference in R&I with a solid joint R&I potential*
- *AIM 1.3 To develop a long-standing collaboration and to facilitate the engagement of researchers across the alliance in joint R&I activities*

For each aim, specific Tasks have been identified and each task has been broken down in concrete actions:

AIM 1.1 Promoting new approaches to interdisciplinarity and excellence in research and innovation at alliance level

- **Task 1.1.1** To foster capitalization of existing research synergies, clusters and results from the T-lab to maximize collaboration between different research disciplines and research strands
 - **Action 1.1.1.1** To select at T4ERI Management Board level key outcomes, results, initiatives and tools from the T4ERI project to be promoted within and beyond the members of the alliance
 - **Action 1.1.1.2** To organise bi-annual online sessions to present to researchers of the Alliance and key stakeholders in the Research community, the main outcomes, results, initiatives and tools from the T4ERI project
- **Task 1.1.2** To give visibility to joint research works across the alliance
 - **Action 1.1.2.1** To organise annual online sessions to showcase the best research results within the alliance to boost its attractiveness and to spark interest among talented researchers at all career stages

- **Action 1.1.2.2** To organise annual online networking and matchmaking events for researchers to identify peers from similar or complementary disciplines in the alliance to foster the preparation of joint proposals

AIM 1.2 To position the T4EU/T4ERI Alliance as a European University Alliance of excellence and reference in R&I with a solid joint R&I potential

- **Task 1.2.1** Capture funding for R&I with strong focus on strategic interdisciplinary projects
 - **Action 1.2.1.1** To organise 6-monthly online seminars about how to write competitive R&I proposals for European calls provided by high-level experts
- **Task 1.2.2** Fundraising for research focusing on key societal issues related to the focus areas of the alliance
 - **Action 1.2.2.1** To organise an annual online workshop to select key societal challenges to update the key research areas and priorities at alliance level to target in European calls

AIM 1.3 To develop a long-standing collaboration and to facilitate the engagement of researchers across the alliance in joint R&I activities

- **Task 1.3.1** To present the impact, and best results of the project at each University and Alliance level
 - **Action 1.3.1.1** To organise an onsite information session about the alliance at each university to present the best results and outcomes
- **Task 1.3.2** To boost the use of T4ERI partnering and infrastructure-sharing tool
 - **Action 1.3.2.1** To organise yearly online info sessions about the T4ERI partnering and infrastructure-sharing tool to encourage researchers to use it and benefit from it
- **Task 1.3.3** To organise an annual T4ERI Alliance Online Science Café to present the best success stories from all partners in the alliance
 - **Action 1.3.3.1** To organise annual T4ERI Alliance Online Café to present first-hand, inspiring success stories from all partners in the alliance
- **Task 1.3.4** To organise onsite annual meetings of researchers that serve as long-lasting cooperation and team building experiences
 - **Action 1.3.4.1** To organise face-to-face annual R&I proposals co-design workshops address to researchers with common interest that serve as long-lasting team building experiences

PILLAR II: BOOSTING JOINT PhD “LINES”

The aims of PILLAR II are the following:

- *AIM 2.1 To pave the way for the establishment of the Joint Doctoral Programme in the new project T4EU*

- *AIM 2.2 To support the creation of the Joint Doctoral School for the new project T4EU*
- *AIM 2.3 To co-create a European and innovative first concept for the Joint PhD tracks*

For each aim, specific Tasks have been identified and each task has been broken down in concrete actions:

AIM 2.1 To pave the way for the establishment of the Joint Doctoral Programme in the new project T4EU

- **Task 2.1.1** To identify most pressing societal needs and environmental challenges at EU level and analyse the alignment of current PhD programs at each partner university with those needs and challenges
 - **Action 2.1.1.1** To discuss at T4ERI MB meeting the main challenges to be addressed by the future Joint Doctoral Programmes based on the strategic priorities of the members of the alliance
 - **Action 2.1.1.2** To elaborate a list of potential Joint Doctoral Programmes based on the findings of 2.1.1.1 to be shared with the T4EU MB

AIM 2.2 To support the creation of the Joint Doctoral School for the new project T4EU

- **Task 2.2.1** To share best practice related to R&I at PhD level of each Doctoral School
 - **Action 2.2.1.1** To prepare an online survey to collect the best practice at each university level to analyse the potential for scaling-up at alliance level
- **Task 2.2.2** To draft the R&I-related mission, vision and objectives of the joint Doctoral School
 - **Action 2.2.2.2** To organise a co-creation session with Doctoral School Directors and PhD students to draft an R&I-focused draft version of the mission, vision and objectives of the Joint Doctoral School

AIM 2.3 To co-create a European and innovative first concept for the Joint PhD tracks

- **Task 2.3.1** To capitalize on the EU dimension of the Alliance for designing interdisciplinary PhD tracks that address societal and environmental challenges
 - **Action 2.3.1.1** To organise a co-creation seminar to develop a first concept for the Joint PhD tracks including researchers at all career stages, MSc and PhD students and Research Vice-Rectors
 - **Action 2.3.1.2** To submit the first concept for the Joint PhD tracks to the T4ERI Steering Committee

PILLAR III: STRENGTHENING RESEARCH SUPPORT SERVICES

The aims of PILLAR III are the following:

- *AIM 3.1 To optimize the process of fundraising for R&I*

- *AIM 3.2 To increase transparency, simplify research management complexities and reduce administrative burden to Researchers*
- *AIM 3.3 To enhance R&I proposals preparation skills among the researchers of the Alliance*
- *AIM 3.4 To improve R&I projects management competences of research managers and researchers*
- *AIM 3.5 To facilitate the access to top-quality Research infrastructure*

For each aim, specific Tasks have been identified and each task has been broken down in concrete actions:

AIM 3.1 To optimize the process of fundraising for R&I

- **Task 3.1.1** To optimize the process of identifying funding opportunities and calls of interest
 - **Action 3.1.1.1** To organise an online seminar for research support offices on the latest tools and advances for identifying funding opportunities
 - **Action 3.1.1.2** To organise a case study back-to-back to the online seminar in 3.1.1.1 to identify topics of interest for specific research areas of common interest
- **Task 3.1.2** To transfer the know-how at each University level
 - **Action 3.1.2.1** To organise the replication of the online seminar about fundraising and case study within each University
 - **Action 3.1.2.2** To organise a satisfaction survey to follow-up on the efficacy of the course

AIM 3.2 To increase transparency, simplify research management complexities and reduce administrative burden to Researchers

- **Task 3.2.1** To establish a T4ERI one-stop shop at each University for all matters related to joint European projects and funding
 - **Action 3.2.1.1** To provide researchers with advice and support on funding and opportunities available for trainings on publishing of literature, translations, mobility, artistic residencies, key research areas and including guidance on good scientific practice and ethics in research
 - **Action 3.2.1.2** To design and circulate a survey to verify the improvements in research management procedures

AIM 3.3 To enhance R&I proposals preparation skills among the researchers of the Alliance

- **Task 3.3.1** To facilitate an integrated training program for researchers to improve their proposals preparation skills

- **Action 3.3.1.1** To benchmark the best training offers within the alliance and with external providers to select the most appropriate option
- **Action 3.3.1.2** To organise annual training courses on latest advancements and tools for R&I proposals writing and consortia building (Responsible Research and Innovation, Open Science, Funding and Tenders Portal, CORDIS, H2020 Dashboard, Kaila, Kanban, Venngage...)

AIM 3.4 To improve R&I projects management competences of research managers and researchers

- **Task 3.4.1** To facilitate an integrated high-level training program for managers in the Alliance
 - **Action 3.4.1.1** To benchmark the best training offers within the alliance and with external providers to select the most appropriate option
 - **Action 3.4.1.2** To organise annual training courses on latest advancements on R&I proposals writing and consortia building
- **Task 3.4.2** To facilitate job-shadowing
 - **Action 3.4.2.1** To inform research management staff in the alliance about job-shadowing opportunities

AIM 3.5 To facilitate the access to top-quality Research infrastructure

- **Task 3.5.1** To facilitate the access to top-quality Research infrastructure
 - **Action 3.5.1.1** To organise an information session about the T4ERI partnering and infrastructure-sharing tool to all partners of the alliance

PILLAR IV: COLLABORATION WITH THE SOCIO-ECONOMIC SECTOR / PUBLIC ENGAGEMENT

The aims of PILLAR IV are the following:

- *AIM 4.1 To promote strategic collaboration with key regional and European R&I stakeholders*
- *AIM 4.2 To maximize the impact and transfer of R&I results from most promising research conducted at alliance level to the regions*

For each aim, specific Tasks have been identified and each task has been broken down in concrete actions:

AIM 4.1 To promote strategic collaboration with key regional and European R&I stakeholders

- **Task 4.1.1** To develop strategic collaboration with key business where they can provide highly specialised know-how to researchers, technical staff, laboratories and facilities to help conduct industry-specific research and overcoming challenges in testing and product development

- **Action 4.1.1.1** In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, to update and collect the main areas of research from the business organisations within the T4E/RI Stakeholder Network
- **Action 4.1.1.2** In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, to update and collect the main areas of research from: NGOs, civil society organisations and decision-makers within the T4E/RI Stakeholder Network
- **Task 4.1.2** To forge a solid engagement in socially responsible Research and Innovation activities in the regions of the T4ERI partner countries
 - **Action 4.1.2.1** In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, engage key regional R&I stakeholders and decision-makers in an annual networking brunch to discuss key regional priorities and how to address them from the point of view of Socially Responsible Research and Innovation
- **Task 4.1.3** To open up participation in some training activities to key stakeholders
 - **Action 4.1.3.1** To invite stakeholders to participate in training courses, workshops or seminars organised in Actions 3.3.1.2 and 4.2.1.1

AIM 4.2 To maximize the impact and transfer of R&I results from most promising research conducted at alliance level to the regions

- **Task 4.2.1** To support the integration of R&I results from most promising research conducted at the University.
 - **Action 4.2.1.1** In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, to organise an annual online seminar about strategic entrepreneurial, digital and green competences (creation of spin-offs, IPR Management, etc) based on the European framework (EntreComp, DigiComp, GreenComp) with the support of key industry actors
- **Task 4.2.2** To advice on the potential commercialization of products and technologies developed in the T4ERI alliance
 - **Action 4.2.2.1** To liaise with regional and EU Business Angels, open innovation platforms, venture capital funds and the public sector in order to commercialize innovative products and technologies developed in the alliance

CROSS-CUTTING PILLAR: GOVERNANCE, IMPLEMENTATION, MONITORING AND SUSTAINABILITY

The aims of the CROSS-CUTTING PILLAR are the following:

- *AIM 5.1 To monitor the implementation of the Joint Agenda for each of the Pillars*
- *AIM 5.2 To align the progress of all T4ERI Strategies*

For each aim, specific Tasks have been identified and each task has been broken down in concrete actions:

AIM 5.1 To monitor the implementation of the Joint Agenda for each of the Pillars

- **Task 5.1.1** To guarantee the governance of the Joint Agenda
 - **Action 5.1.1.1** Appointment of the members of a Joint Agenda Initiative Group (JA-IG) and definition of roles
- **Task 5.1.2** To monitor implementation of the T4ERI Joint Agenda
 - **Action 5.1.2.1** Organisation of the JA-IG progress meetings including definition of topics to be discussed

AIM 5.2 To align the progress of all T4ERI Strategies

- **Task 5.2.1** To monitor the progress of the T4ERI Strategies to extract the best synergies and maximize impact
 - **Action 5.2.1.1** To present every 6 months, in the MB meetings the progress made in the main T4ERI Strategies
 - **Action 5.2.1.2** To adapt the Strategies according to any potential deviation

AIM 5.3 To guarantee the sustainability of the Alliance

- **Task 5.3.1** To monitor the publication of calls of interest for potential new joint European / International projects
 - **Action 5.3.1.1** To present every 6 months, in the MB meetings the opportunities for funding identified
 - **Action 5.3.1.2** To select calls of interest to submit joint proposals at Alliance-level or at least involving multiple partners from the Alliance

Strategic Action Plan for Implementation of the Joint Agenda 2030

The following section represents the Action Plan for the implementation of the **Joint Agenda for Research and Innovation in the T4E focus area of Digital and Environmental Transformation for Smart, Sustainable and Inclusive Regions (2030)**.

The table 2 -below- summarizes, for each of the above-mentioned Pillars of the Joint Agenda:

- the aims
- the tasks
- the actions

- and the actors involved in the implementation of the T4ERI Joint Agenda 2030.

Moreover, all actions have been related to the corresponding focus area of the Transform4Europe Alliance, as well as to the T4ERI project objectives.

The potential resources to cover the cost of the actions planned have been listed although it will be up to the **Joint Agenda Initiative Group (JA-IG) foreseen in Task 5.1.1 to decide upon which will be the eventual the funding sources** for each of the actions foreseen.

Besides, in order to monitor the progress in the implementation, a series of Key Performance Indicators (KPIs) have been described as the means of verification. Their specific value for each KPI to monitor the success in the implementation of the corresponding action will be defined by the Joint Agenda Initiative Group.

The achievement of the KPIs will be the evidence of the successful implementation of this Joint Agenda for Research and Innovation.

Moreover, potential barriers have been identified in view of proposing the necessary mitigation measures should the need arise.

Furthermore, an estimated timeframe for the implementation of each action is given so as to offer a clear overview of the duration of the proposed Strategic Action Plan.

PILLAR I: STRENGTHENING HUMAN CAPITAL & RESEARCH POTENTIAL

AIM	Task	Actions	Actors involved	Focus Area	T4ERI Related Project Objectives	Deadline	Resources	Potential Barriers	Key Performance Indicators	
1.1 Promoting new approaches to interdisciplinarity and excellence in research and innovation at alliance level	1.1.1. To foster capitalization of existing research synergies, clusters and results from the T-lab to maximize collaboration between different research disciplines and research strands	1.1.1.1 To select at T4ERI Management Board level key outcomes, results, initiatives and tools from the T4ERI project to be promoted within and beyond the members of the alliance	T4ERI MB Members	Digital and environmental transformation for smart and inclusive regions	O2.1 Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas	Yearly from 2024 onwards	Funding from T4ERI, T4EU, additional funding from upcoming European and regional calls, use of partnering and infrastructure-sharing tool	Lack of knowledge about the work carried out in T-labs, clusters, etc	List of key project results to be promoted and upscaled at alliance level	
		1.1.1.2 To organise bi-annual online sessions to present to researchers of the Alliance and key stakeholders in the Research community, the main outcomes, results, initiatives and tools from the T4ERI project	ALL T4ERI Partners (Research community and key stakeholders)	Digital and environmental transformation for smart and inclusive regions	O2.2 Create a joint agenda for research and innovation in the T4E focus area of digital and environmental transformation for smart, sustainable and inclusive regions	Six-monthly from 2024 onwards	Funding from T4EU, T4ERI, additional funding from upcoming European and regional calls	Scant interest in joint research among the researchers of the alliance	Number of participants in the bi-annual online session	
	1.1.2 To give visibility to joint research works across the alliance	1.1.2.1 To organise annual online sessions to showcase the best research results within the alliance to boost its attractiveness and to spark interest among talented researchers at all career stages	ALL T4ERI Partners (Research Community, Project Management Units, Communication Departments)	Digital transformation for smart and inclusive regions	O3.1 Increase the attractiveness of the T4E partner universities to excellent researchers by developing joint innovative standards for scientific careers at all experience levels	Yearly from 2024 onwards	Funding from T4EU, T4ERI, additional funding from upcoming European and regional calls	Lack of participation in the online sessions	Number of participants in the annual online session	
		1.1.2.2 To organise annual online networking and matchmaking events for researchers to identify peers from similar or complementary disciplines in the alliance to foster the preparation of joint proposals	ALL T4ERI Partners (Vice-Rectorate for R&I, Research Management V-R for	Digital and environmental transformation for smart and inclusive regions	O2.1 Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas	2024-2028	Funding from T4EU, T4ERI, additional funding from upcoming European and regional calls. Funding from other sources/funding agents	Lack of participation in the matchmaking events	Number of participants in the annual online networking session	
		1.2 To position the T4EU/T4ERI Alliance as a European University	1.2.1 Capture funding for R&I with strong focus on strategic interdisciplinary projects	1.2.1.1 To organise 6-monthly online seminars about how to write competitive R&I proposals for European calls provided by high-level experts	ALL T4ERI Partners (Vice-Rectorate for R&I, Research Management V-R for	Digital and environmental transformation for smart and inclusive regions	O2.1 Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas	Six-monthly from 2024 onwards	Funding from T4EU, T4ERI, additional funding from upcoming European and regional calls	Reduced number of European calls of interest

Alliance of excellence and reference in R&I with a solid joint R&I potential	1.2.2 Fundraising for research focusing on key societal issues related to the focus areas of the alliance	1.2.2.1 To organise an annual online workshop to select key societal challenges to update the key research areas and priorities at alliance level to target in European calls	institutional relations, etc)	Digital and environmental transformation for smart and inclusive regions	O3.3 Promote academic leadership in science to the benefit of the institutional culture of the T4E universities and the careers of their leading researchers and research managers	2024-2028	Funding from other sources/funding agents				
1.3 To develop a long-standing collaboration and to facilitate the engagement of researchers across the alliance in joint R&I activities	1.3.1 To present the impact, and best results of the project at each University and Alliance level	1.3.1.1. To organise an onsite information session about the alliance at each university to present the best results and outcomes	ALL T4ERI Partners (Multiple actors: HHRR, Occupational Safety, Management, Training, Career Development, etc)	Smart and inclusive regions	O3.4 Boost research quality by improving professional research support	2024-2030	Funding from T4EU, T4ERI, additional funding from upcoming calls, use of partnering and infrastructure tool	Scant use of T4ERI partnering and infrastructure-sharing tool	Number of participants in each annual online event		
	1.3.2 To boost the use of T4ERI partnering and infrastructure-sharing tool	1.3.2.1. To organise yearly online info sessions about the T4ERI partnering and infrastructure-sharing tool to encourage researchers to use it and benefit from it			O2.1 Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas	2024-2026					
	1.3.3 To organise annual T4ERI Alliance Online Café to present the best success stories from all partners in the alliance	1.3.3.1 To organise annual T4ERI Alliance Online Café to present first-hand, inspiring success stories from all partners in the alliance			O3.3 Promote academic leadership in science to the benefit of the institutional culture of the T4E universities and the careers of their leading researchers and research managers	2025-2030				Limited participation in the T4ERI Alliance Online Café	Number of participants in each onsite event
	1.3.4 To organise onsite annual meetings of researchers that serve as long-lasting cooperation and team building experiences	1.3.4. To organise face-to-face annual R&I proposals co-design workshops address to researchers with common interest that serve as long-lasting team building experiences			O3.2 Recruit and retain the brightest early-career researchers at the T4E universities by developing a targeted joint strategy to promote young talent	2024-2030				Low engagement in training or team building activities	Number of joint appointments, scientific prizes and awards

PILLAR II: BOOSTING JOINT PhD LINES

AIM	Task	Actions	Actors involved	Focus Area	T4ERI Related Project Objectives	Deadline	Resources	Potential Barriers	Key Performance Indicators
2.1 To pave the way for the establishment of the Joint Doctoral Programme in the new project T4EU	2.1.1 To identify most pressing societal needs and environmental challenges at EU level and analyse the alignment of current PhD programs at each partner university with those needs and challenges	2.1.1.1 To discuss at T4ERI MB meeting the main challenges to be addressed by the future Joint Doctoral Programmes based on the strategic priorities of the members of the alliance	ALL T4ERI Partners MB, Research Management	All focus areas of the project (emphasis on Key Research Areas related to the challenges identified)	O3.2 Recruit and retain the brightest early-career researchers at the T4E universities by developing a targeted joint strategy to promote young talent	2024	Funding from T4EU, T4ERI, additional funding from upcoming European and regional calls, partners national funds for doctoral studies management or equivalent. Any other fund available at each university	Lack of consensus on the selection of strategic priorities	Summary of main challenges available
		2.1.1.2 To elaborate a list of potential Joint Doctoral Programmes based on the findings of 2.1.1.1 to be shared with the T4EU MB	ALL T4ERI Partners MB, Research V-R and Doctoral schools		O3.2 Recruit and retain the brightest early-career researchers at the T4E universities by developing a targeted joint strategy to promote young talent	2025		List of strategic topics in Joint Doctoral Programmes becomes obsolete	List of proposed Joint Doctoral Programmes matches challenges identified
2.2 To support the creation of the Joint Doctoral School for the new project T4EU	2.2.1 To share best practice related to R&I at PhD level of each Doctoral School	2.2.1.1 To prepare an online survey to collect the best practice at each university level to analyse the potential for scaling-up at alliance level	T4ERI students' community, Research V-R and Doctoral schools		O3.3 Promote academic leadership in science to the benefit of the institutional culture of the T4E universities and the careers of their leading researchers and research managers	2025		Low participation in the survey	Survey results available with at least 7 responses received (1 per University)
	2.2.2 To draft the R&I-related mission, vision and objectives of the joint Doctoral School	2.2.2.2 To organise a co-creation session with Doctoral School Directors and PhD students to draft an R&I-focused draft version of the mission, vision and objectives of the Joint Doctoral School			O3.3 Promote academic leadership in science to the benefit of the institutional culture of the T4E universities and the careers of their leading researchers and research managers	2025			Scant involvement in the co-creation session
2.3 To co-create a European and innovative first concept for the Joint PhD tracks	2.3.1 To capitalize on the EU dimension of the Alliance for designing interdisciplinary PhD tracks that address societal and environmental challenges	2.3.1.1 To organise a co-creation seminar to develop a first concept for the Joint PhD tracks including researchers at all career stages, MSc & PhD students and Research V-R			T4ERI students' community, Research V-R and Doctoral schools	O2.2 Create a joint agenda for research and innovation in the T4E focus area of digital & environmental transformation for smart, sustainable and inclusive regions O3.1 Increase the attractiveness of the T4E partner universities to excellent researchers by developing joint innovative standards for scientific careers at all experience levels			2025
		2.3.1.2 To submit the first concept for the Joint PhD tracks to the T4ERI Steering Committee	2025						

PILLAR III: STRENGTHENING RESEARCH SUPPORT SERVICES

AIM	Task	Actions	Actors involved	Focus Area	T4ERI Related Project Objectives	Deadline	Resources	Potential Barriers	Key Performance Indicators
3.1 To optimize the process of fundraising for R&I	3.1.1 To optimize the process of identifying funding opportunities and calls of interest	3.1.1.1 To organise an online seminar for research support offices on the latest tools and advances for identifying funding opportunities	UA, ALL T4ERI Research Community and Management Offices (or equivalent)	Sustainable, Smart and inclusive regions	O3.4 Boost research quality by improving professional research support	Yearly from 2024 onwards	Funding from T4EU, T4ERI, additional funding from upcoming European and regional calls, partners national funds for doctoral studies management or equivalent. Any other fund available at each university	Low number of participants	Improvement of the fundraising skills for all partner universities according to the results of the survey
		3.1.1.2 To organise a case study back-to-back to the online seminar in 3.1.1.1 to identify topics of interest for specific research areas of common interest						Low engagement in case study for practical application	
	3.1.2 To transfer the know-how at each University level	3.1.2.1 To organise the replication of the online seminar about fundraising and case study within each University	ALL T4ERI Research Management Offices (or equivalent)					Low number of participants	
		3.1.2.2 To organise a satisfaction survey to follow-up on the efficacy of the course						Low level of responses	
3.2 To increase transparency, simplify research management complexities and reduce administrative burden to Researchers	3.2.1 To establish a T4ERI one-stop shop at each University for all matters related to joint European projects and funding	3.2.1.1 To provide researcher with advice and support on funding and opportunities available for trainings on publishing of literature, translations, mobility, artistic residencies, key research areas and including guidance on good scientific practice and ethics in research	UA, ALL T4ERI Research Community, Management Offices and T4ERI ombudsman (or equivalent)	Not applicable	O3.4 Boost research quality by improving professional research support	All year round from 2024-2030		Lack of qualified research management staff to provide guidance on all relevant matters	One-stop shop created and management simplified according to survey results
		3.2.1.2 To design and circulate a survey to verify the improvements in research management procedures						All year round from 2025 onwards	

3.3 To enhance R&I proposals preparation skills among the researchers of the Alliance	3.3.1 To facilitate an integrated training program for researchers to improve their proposals preparation skills	3.3.1.1 To benchmark the best training offers within the alliance and with external providers to select the most appropriate option	UA, options to be presented to T4ERI PARTNERS						Scant offer of high-level training programs	List of courses available
		3.3.1.2 To organise annual training courses on latest advancements and tools for R&I proposals writing and consortia building (Responsible Research and Innovation, Open Science, Funding and Tenders Portal, CORDIS, H2020 Dashboard, Kaila, Kanban, Venngage, GitHub, Slack, Mentimeter, Asana, ClickUp...)	UA, USIL, UNITS, offered to ALL PARTNERS						O3.3 Promote academic leadership in science to the benefit of the institutional culture of the T4E universities and the careers of their leading researchers and research managers	Reduced number of participants
3.4 To improve R&I projects management competences of research managers and researchers	3.4.1 To facilitate an integral high-level training program for project managers in the alliance	3.4.1.1 To benchmark the best training offers within the alliance and with external providers to select the most appropriate option	UA, options to be presented to T4ERI PARTNERS	Digital and environmental transformation for smart and inclusive regions			From 2024-2030		Scant offer of high-level training programs	List of courses available
		3.4.1.2 To organise annual training courses on latest advancements on R&I proposals writing and consortia building							O3.4 Boost research quality by improving professional research support	Reduced number of participants
	3.4.2 To facilitate job-shadowing	3.4.2 To inform research management staff in the alliance about job-shadowing opportunities	USAAR, options to be presented to T4ERI PARTNERS						O2.1 Set up an online research collaboration opportunity map and partnering tool for the T4E partner institutions in all research areas	Erasmus funds for mobility of research management staff
3.5 To facilitate the access to top-quality Research infrastructure	3.5.1 To facilitate the access to top-quality Research infrastructure	3.5.1 To organise an information session about the T4ERI partnering and infrastructure-sharing tool to all partners of the alliance	UA, ALL PARTNERS as participants on the info session				2024-2025	Funding from T4EU, T4ERI, additional funding from upcoming EU and regional calls. Any other fund available at each university	Low number of participants	Participants list of the info session available

PILLAR IV: COLLABORATION WITH THE SOCIO-ECONOMIC SECTOR / PUBLIC ENGAGEMENT

AIM	Task	Actions	Actors involved	Focus Area	T4ERI Related Project Objectives	Deadline	Resources	Potential Barriers	Key Performance Indicators
4.1 To promote strategic collaboration with key regional and European R&I stakeholders	4.1.1 To develop strategic collaboration with key business where they can provide highly specialised know-how to researchers, technical staff, laboratories and facilities to help conduct industry-specific research and overcoming challenges in testing and product development	4.1.1.1 In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, to update and collect the main areas of research from the business organisations within the T4E/RI Stakeholder Network	VMU, UA, SU, UNITS, ALL T4ERI PARTNERS, national and international business and industry delegates	Digital and environmental transformation for smart and inclusive regions	O4.1 Create and harness a T4E network for public engagement in research and innovation O5.1: Create external visibility for T4ERI and encourage project outreach O5.3: Disseminate results to academic communities and science policy-makers Europe-wide	2025	Funding from T4EU, T4ERI, partners' own funds, additional funding from the stakeholders	Lack of interest from the business and industry representatives	Updated list of main areas of research
		4.1.1.2 In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, to update and collect the main areas of research from: NGOs, civil society organisations and decision-makers within the T4E/RI Stakeholder Network	VMU, UA, SU, UNITS, ALL T4ERI PARTNERS, national and international social and public sector delegates		O5.5: Involve stakeholders from the Regional Innovation Ecosystems across the T4E regions in the development of the joint T4E strategy for research and innovation	2025		Lack of interest from the NGO, CSO and decision-makers representatives	Number of European, national, regional, and EU proposals submitted by the T4/ERI alliance with at least one stakeholder involved as full partner
	4.1.2 To forge a solid engagement in socially responsible Research and Innovation activities in the regions of the T4ERI partner countries	4.1.2.1 In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, engage key regional R&I stakeholders and decision-makers in an annual networking brunch to discuss key regional priorities and how to address them from the point of view of Socially Responsible Research and Innovation	ALL T4ERI PARTNERS, national and international social and public sector delegates		O5.5: Involve stakeholders from the Regional Innovation Ecosystems across the T4E regions in the development of the joint T4E strategy for research and innovation	2024 - 2030		Little participation in the networking brunch	Number of socially responsible research collaborations (joint research works/ proposals/ publications)
		4.1.3 To open up participation in some training activities to key stakeholders	4.1.3.1 To invite stakeholders to participate in training courses, workshops or seminars organised in Actions 3.3.1.2 and 4.2.1.1		Offered to ALL PARTNERS and stakeholders	O5.5: Involve stakeholders from the Regional Innovation Ecosystems across the T4E regions in the development of the joint T4E strategy for research and innovation		From 2024-2030	Funding from T4EU, T4ERI, partners' own funds, additional funding from the stakeholders

4.2 To maximize the impact and transfer of R&I results from most promising research conducted at alliance level to the regions	4.2.1 To support the integration of R&I results from most promising research conducted at the University	4.2.1.1 In coordination with T4E Alliance Initiative Group for Public Engagement from WP4, to organise an annual online seminar about strategic entrepreneurial, digital and green competences (creation of spin-offs, IPR Management, etc) based on the European framework (EntreComp, DigiComp, GreenComp) with the support of key industry actors	ALL T4ERI Partners (Business Management, Research Management, HHRR, etc) and industry stakeholders	Digital and environmental transformation for smart and inclusive regions	O5.1: Create external visibility for T4ERI and encourage project outreach	Yearly from 2024	Funding from other sources/funding agents and if available internal funding	training courses and workshops	Number of spin offs involving more than 1 partner of the T4E/RI Alliance
	4.2.2 To advise on the potential commercialization of products and technologies developed in the T4ERI alliance	4.2.2.1 To liaise with regional and EU Business Angels, open innovation platforms, venture capital funds and the public sector in order to commercialize innovative products and technologies developed in the alliance			O5.3: Disseminate results to academic communities and science policy-makers Europe-wide				
					O5.5: Involve stakeholders from the Regional Innovation Ecosystems across the T4E regions in the development of the joint T4E strategy for research and innovation	Yearly from 2025	Funding from other sources/funding agents and if available internal funding	Low level of response to the interactions with funders and donors	Some research results transferred to the regions

CROSS-CUTTING PILLAR: GOVERNANCE – IMPLEMENTATION – MONITORING - SUSTAINABILITY

AIM	Task	Actions	Actors involved	Focus Area	T4ERI Related Project Objectives	Deadline	Resources	Potential Barriers	Key Performance Indicators
5.1 To monitor the implementation of the Joint Agenda for each of the Pillars	5.1.1. To guarantee the governance of the Joint Agenda	5.1.1.1 Appointment of the members of a Joint Agenda Initiative Group (JA-IG) and definition of roles	UA, ALL T4ERI Partners	Digital and environmental transformation for smart and inclusive regions	O5.2: Create internal visibility for T4ERI in order to enhance acceptance and participation (change management)	2023-2024	Funding from T4EU, T4ERI, partners' own funds, additional funding from other sources/funding agents	Difficulties in the appointment and organisation of meetings of the JA-IG due to multiple commitments	At least one representative from each T4ERI University
	5.1.2. To monitor implementation of the T4ERI Joint Agenda	5.1.2.1 Organisation of the JA-IG progress meetings including definition of topics to be discussed	Appointed members of the JA-IG ALL PARTNERS		O5.4: Share best practices among the European University Alliances	2023-2030			Minutes of meetings
5.2 To align the progress of all T4ERI Strategies	5.2.1 To monitor the progress of the T4ERI Strategies to extract the best synergies and maximize impact	5.2.1.1 To present every 6 months, in the MB meetings the progress made in the main T4ERI Strategies	ALL, JA-IG, MB		O5.4: Share best practices among the European University Alliances	2023-2030		Lack of involvement of the SC in the alignment of the strategies	Minutes of meetings
		5.2.1.2 To adapt the Strategies according to any potential deviation	ALL, JA-IG, MB, SC	Digital and environmental transformation	2023-2030	Funding from other sources/funding agents	Lack of risk mitigation measures		Risk mitigation plan

				for smart and inclusive regions			and if available internal funding		
5.3 To guarantee the sustainability of the Alliance	5.3.1 To monitor the publication of calls of interest for potential new joint European / International projects	5.3.1.1 To present every 6 months, in the MB meetings the opportunities for funding identified related to the priorities identified in the Joint Agenda	ALL, JA-IG, MB		O2.2 Create a joint agenda for research and innovation in the T4E focus area of digital and environmental transformation for smart, sustainable and inclusive regions	Six-monthly from 2024	Funding from other sources/funding agents and if available internal funding	Lack of calls of interest	Minutes of meetings with list of calls of interest
		5.3.1.2 To select calls of interest to submit joint proposals at Alliance-level or at least involving multiple partners from the Alliance	ALL, JA-IG, MB, SC				Funding from other sources/funding agents and if available internal funding		List of calls of interest

Roadmap for identification of research funding opportunities

A pre-requisite for the identification of research funding opportunities will be the appointment of the members of a Joint Agenda Initiative Group (JA-IG) foreseen in the Cross-cutting pillar of the Joint Agenda.

Once the JA-IG has been nominated and, as described in the Action Plan for the implementation of the Joint Agenda, it is the responsibility of the **T4ERI Management Board, together with the Steering Committee and the Joint Agenda Initiative Group** to select calls of interest to submit joint proposals at Alliance-level or at least involving multiple partners from the Alliance.

However, it is worth mentioning that this does not preclude any member of the Transform4Europe Alliance, including the wider research community, research supporting staff, student council members, etc from identifying and presenting potential calls of interest to the Alliance for discussion.

In order to monitor the publication of calls of interest for potential new joint European / International projects, the JA-IG may use existing tools such as the **Funding and Tenders Portal** from the European Commission which is free-of-charge and available to everyone or opt for other tools available in the market (with free versions with limited functionalities or premium subscriptions with more options, i.e. Kaila, Up2Europe, EUcalls)

It will be the JA-IG in agreement with the MB who will decide upon the resources dedicating to fundraising in terms of personnel and funding among the research and innovation funding programmes, including **Horizon Europe, the Cohesion Fund, LIFE, ERDF, ESIF and RFCS**. Additionally, for Capacity Building and Mobility actions, the analysis of the calls under **Erasmus+** is also fundamental.

Provided that one of the objectives of this roadmap is to identify research funding opportunities from major external funding sources for collaborative research initiatives, one of the main focus will be to dive in the Work Programmes of the European Research and Innovation Programme, specifically, **Horizon Europe**.

Although the program is largely identified for the Individual fellowships, the **European Research Council** (ERC) also offers the possibility to support joint collaboration in research projects or mobility of researchers within the Alliance. For instance, the ERC Synergy Grants can be jointly requested by researchers from more than one member of the Alliance to carry out frontier research projects.

Moreover, the **Marie Skłodowska-Curie actions** and its Research Fellowship Programme which funds researchers and supports doctorates and training. As a preliminary exercise, a list of funding programmes that support research and innovation projects, with open and upcoming calls is presented below.

Research and innovation programme

➤ **Horizon Europe**

Horizon Europe is the EU's research and innovation programme for 2021-2027 with a budget of €95.5 billion. It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth.

The Transform4Europe Alliance has identified already potential calls of interest (i.e. European Excellence Initiative: Acceleration services in support of universities, HORIZON-WIDERA-2024-ERA-01-06, Programme level collaboration between national R&I policy-makers)

➤ **EU4Health**

The EU4Health programme, implemented by HaDEA, with a budget of €5.3 billion, is the fourth and largest of the EU health programmes since their launch in 2003.

➤ **Cohesion Fund**

The Cohesion Fund is aimed at EU countries whose gross national income (GNI) per inhabitant is less than 90% of the EU average. It aims to reduce economic and social disparities and to promote sustainable development.

➤ **LIFE Climate Change Mitigation and Adaptation**

The LIFE programme 2021–2027 is divided into four sub-programmes: “Nature and biodiversity”, “Circular economy and quality of life”, “Climate change mitigation and adaptation” and “Clean energy transition”.

➤ **European Regional Development Fund (ERDF)**

The European Regional Development Fund aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions. The ERDF focuses its investments on several key priority areas, including innovation and research.

Supply-side approaches will need to be accompanied by the **diffusion of knowledge, technologies, and innovation**. Specific focus is given to **digitalisation as innovation enabler** and on to the development of **skills** for smart specialisation. The choice of types of investment will be different in different categories of regions, depending on the maturity of their innovation ecosystems. These investments will greatly contribute to closing the innovation divide in Europe.

Driven by the internationalisation of innovation, the Commission proposed the **Interregional Innovation Investments instrument (I3)** under the ERDF, with a budget of **€570 million over seven years** to support the commercialisation and scale-up of interregional innovation projects. The instrument will encourage the **development of European value chains with a strong cohesion dimension** as at least half of its budget is dedicated to less developed regions. In synergy with other programmes at the national and European levels, like Interreg Europe, Horizon Europe and the Single Market programme, it will mobilise additional investments and enhance cooperation among partners from the different Member States.

➤ **Technical Support Instrument**

The Technical Support Instrument provides tailor-made technical expertise to EU countries to carry out reforms.

➤ **European Structural and Investment Funds (ESIF)**

Over half of EU funding is channelled through the 5 European structural and investment funds (ESIF). They are jointly managed by the European Commission and the EU countries. The purpose of all these funds is to invest in job creation and a sustainable and healthy European economy and environment.

Open calls for proposal related to research and innovation can be found on the websites of the 5 individual funding programmes:

- European regional development fund (ERDF)
- European social fund (ESF)
- Cohesion fund (CF)
- European agricultural fund for rural development (EAFRD)
- European maritime and fisheries fund (EMFF)

Fellowships and individual research grants

➤ **ERC grants for frontier research:**

These grants are awarded to researchers of any nationality working in any field of research.

➤ **Marie Skłodowska-Curie actions – Research Fellowship Programme:**

This programme funds researchers and supports doctorates and training. Researchers at all stages in their career are eligible.

Seal of Excellence

The Seal of Excellence is a quality label first introduced during Horizon 2020, the EU's research and innovation framework programme (2014–2020). It has gradually become a key instrument to create synergies.

The Seal of Excellence could be requested in the event of a joint R&I proposal submitted by the Transform4Europe Alliance as a whole or by several researchers from different Universities of the Alliance. The seal of excellence is awarded to project proposals submitted under a Horizon Europe call for proposals and ranked above a predefined quality threshold but were not funded by Horizon Europe due to budgetary constraints.

With this label the EC recognises the value of project proposals and encourage other funding organisations to take advantage of the high-quality process. The Seal of Excellence certificate indicates basic information on the proposal, the call and the applicant(s). It is unique and safe. It is digitally sealed against fraud, as is the project proposal and evaluation summary report.

Under Horizon Europe (2021–2027), improvements regarding quality and support to implementation of the Seal of Excellence are foreseen. The uptake of the Seal of Excellence in Structural Funds programmes is further promoted in the context of reinforcing synergies between the research and innovation framework programmes and European Regional Development Fund (ERDF).