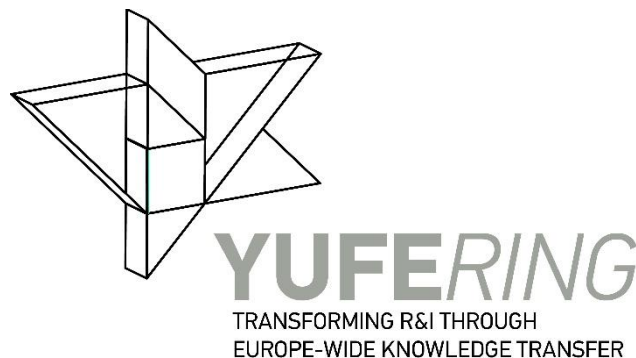


# **YUFERING Project**

## **YUFE TRANSFORMING R&I THROUGH EUROPE-WIDE KNOWLEDGE TRANSFER**



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### **D 2.3: Report on the YUFE community- engagement based R&I pilot**

**February 2024**



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## List of Abbreviations and Definitions

CERI	Community-engagement based research & innovation
EC	European Commission
EoI	Expression of interest
EuroSciVoc	European Science Vocabulary
HE	Horizon Europe
MSCA	Marie Skłodowska-Curie
PI	Principal Investigator
R&I	Research & Innovation
RSO	Research support office
WOS	Web of Science

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# REPORT ON YUFE COMMUNITY - ENGAGEMENT BASED R&I PILOT

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## Executive Summary

As part of the YUFE model towards a community engagement-based research & innovation agenda, an approach was developed to foster research collaboration between the YUFE partners, venturing towards defining strategic research strengths, and underneath the emergence of so-called research nodes. This objective was tackled by two flight paths:

1. In order to identify potential future YUFE R&I nodes, an extensive analysis was carried out, focusing on acquired EU project funding by the YUFE universities and on their publication output. Potential research strengths (clusters) were identified, and strategic options mapped. This effort resulted in datasets that can be used for future strategic guidance and decision making on alliance level. In addition to this top-down analysis, a bottom-up initiative was supported and used as a testcase to develop a YUFE R&I node (YUFERING pilot BioYUFE on 'Biodiversity'). This pilot focused on education, research collaboration and innovation and the continuum between these three aspects, which was considered to emphasize the strength of a community engaged (CERI) research & innovation node pilot. This pilot was then used to extract and test a methodology and to define lessons to inspire the development of future R&I nodes within the YUFE alliance.
2. A Horizon Europe (HE) Marie Skłodowska-Curie (MSCA) COFUND proposal was written and submitted with an explicit objective to foster research collaboration within the alliance, triggered by postdocs. Initiated and steered by the University of Antwerp, it was developed in collaboration with a dedicated Project Group of (R&I support staff) of the YUFE partners. At the heart of this project lies an overarching training programme focusing on stakeholder interaction and community engagement, fuelling a CERI approach across the partner universities. This project started on 1<sup>st</sup> of January 2023.

## Conclusions

The quantitative analysis of acquired Horizon funding and publication output reveals an **extensive potential for research collaboration within the YUFE alliance**. A future overall data supported YUFE R&I policy could monitor research performance in a dedicated YUFE R&I Dashboard and can assist in the detection of research strengths and actions towards the emergence of R&I nodes.

The YUFE universities need to provide **top-down incentives that instigate or facilitate bottom-up approaches**. The BioYUFE pilot reveals that bottom-up platform initiatives with an objective to foster research collaboration require incentives and commitment from the partner universities (or provided at the level of the alliance) to remain viable and become sustainable. These incentives may be diverse: financial (e.g. seed-funding, mobility funding, ...), dedicated support of Research Support Offices (RSO), support of knowledge transfer specialists, or other.



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The **YUFE4Postdocs** project demonstrates that top-down conceived initiatives can be designed as a potentially **powerful instigator of bottom-up research collaborations** and the creation of R&I nodes. Overarching (institutional level based) projects like YUFE4Postdocs strengthen collaboration and mutual trust between the RSO and other support staff of the YUFE partners and develop common work practises. The experiences in YUFE4Postdocs can be exploited for further collaborative efforts in inducing or furthering research collaboration either at the level of academics or at institutional level. Future institutional level projects of the kind may be developed at the level of the alliance and/or at the level of its constituent YUFE universities in a variable geometry.

## 1. Introduction

The YUFE (Young Universities for the Future of Europe) alliance aims at establishing cooperation between the YUFE partners in terms of education, innovation and societal outreach and the YUFERING project complements these activities by developing a joint R&I agenda for the participating universities. The objective is to define and implement a YUFE community-engaged R&I (CERI) agenda for an excellent and inclusive European University, to function as a catalyst of flipped knowledge transfer and deployment in society, to create and enhance shared research support structures, mechanisms and infrastructures amongst YUFERING partners and to achieve a broader impact on the R&I community and the society through a horizontal focus on community-engaged R&I.

At the start of the YUFERING project (overlapping) research strengths within the alliance were undefined and there was no indication on potential for joint research collaboration. In addition, each of the universities holds its own research agenda and priorities, there are institutional hurdles for collaboration and the perceived overall interest at the level of the academics to collaborate for R&I and to align with YUFE's vision and endeavours was and still is challenging. It was expected that analysis of the CERI potential, based on existing research efforts and outcomes would potentially be an onset for YUFE collaboration, but definitely not a certainty. The assessment approach did not only take into account the potential but also identified possible incentives, opportunities and best practices that can be taken into account in a future systemic objective to trigger the emergence of future R&I nodes (Under Pillar III: YUFE Academic Research and Innovation, of the YUFE project).

A dual strategy was employed to address the objective of Task 2.3. YUFE community-engagement based R&I pilot.

1. First, we analysed YUFE's overall R&I potential to test and develop a methodology towards fostering research collaboration, based on a specific pilot case. Initially, an analysis was performed top-down to indicate YUFE's overall research potential and to identify on a meta-level, research themes, which could potentially be regarded as current/future research nodes in itself or could feed into the emergence of future research nodes within. Analysis was based on H2020 & Horizon Europe granted projects and publication output. In parallel, in 2021 a bottom-up initiative was taken by academics in a number of YUFE universities wanting to investigate 'Life/Bio Sciences' opportunities under YUFE. It started as a reaction on emerging elective courses which were set-up in the framework of the YUFE virtual campus. The initiative thus started from



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an educational perspective, and then broadened to research and innovation within a specific framework: **BioYUFE with 'biodiversity' as a (first) core common ground** for action. Further research potential analysis was done on a meta-level, using granted Horizon projects and publication output indices from a general perspective. This meta-level analysis allowed an assessment of the BioYUFE initiative's potential to become a 'YUFE research node' and indicated that the pilot needed to broaden its scope to 'biodiversity & sustainability' or 'biodiversity et al.' thus opening up this core topic to other interdisciplinary fields (such as environment, energy, climate, space and health). However, although from a meta-level perspective the potential now is evident, more is needed to push the involved researchers - and those not yet involved - in unfolding the full potential.

It was unclear how to define 'YUFE research nodes', what is needed to initiate their creation and how to match this with YUFE(RING)'s vision and rationale. As a result of the step-by-step testing approach in the BioYUFE pilot, we gradually identified steps that can be taken and conditions that need to be set in order for other community engaged research & innovation (CERI) pilots to emerge and to induce R&I nodes within the YUFE alliance. We thus carefully studied the process in formation of a single YUFE CERI pilot case and identified specific hurdles and leverages needed for its consolidation.

2. Furthermore, we initiated an attempt to secure financial support to foster the emergence of research nodes by applying for (competitive) funding. **YUFE4Postdocs** is developed as an **open scheme** with opportunities under an overarching theme of urban challenges & opportunities, anchored within the focus areas of the YUFE alliance: **Sustainability; Digital societies; Citizens' Wellbeing; and European identity**. It has the explicit objective to spur the **creation of bilateral 'research nodes' over YUFE universities**. The project offers (potential) tangible benefits to potentially large groups of academics, and allows them to start (or further) collaboration from a bottom-up perspective. As such, the project intended to win their hearts as regards the alliance and what it has to offer.

In this report, the overall approach in testing a CERI pilot is elaborated and conclusions and recommendations on future YUFE CERI activities are proposed.

## 2. Piloting an approach to define community inspired strategic research lines and creation of research nodes: a methodological journey

### 2.1 Start: a bottom-up initiative named BioYUFE

A seed initiative, 'YUFE Life Sciences', started in September 2021 bottom-up with a team of academics from seven YUFE universities: Nicholas Bradshaw (University of Rijeka), Ronny Blust (University of Antwerp), Roy Erkens (University of Maastricht), Werner Ulrich (Nicolaus Copernicus University), Soerge Kelm & Marko Rohlf (University of Bremen), Elina Oksanen (University of East Finland), Spyros Sfenthourakis (University of Cyprus). They wanted to explore the opportunities YUFE offered. The team members had little familiarity with the YUFE activities and the YUFERING project and started collaboration from scratch. The first meeting in Torun,



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Poland (13-15 September 2021) was exploratory and related to YUFE's educational agenda. It was clear that academics needed to be better informed about the alliance, its vision and ambitions in order for them to consider aligning their academic activities. In addition, there was lack of focus within the group, even from educational perspective. Each participating university introduced itself and its academic agenda (overall institutional or faculty R&I policy related to Life Sciences). Emphasis during the meeting was on how YUFE elective courses were planned and how each university organised their courses. But overall, there seemed to exist lack of knowledge about the alliance's cross-university set-up including those within the YUFERING project.

Outcomes and conclusions after this step:

- *Academics wanting to start collaborating under the YUFE flag will experience similar challenges & opportunities in setting up collaboration and will require similar support and framework conditions.*
- *Academics wanting to start a bottom-up pilot need to be better informed about YUFE, its vision and expectations.*
- *Initial steps were taken when academics wanted to reflect on YUFE education in some way, as a first step in creating common ground.*
- *A YUFE Life Sciences Team was set up, made up by a number of academics and complemented by non-academic facilitators, including Dr. Bruno Hoste (University of Antwerp, Dept. Research, Innovation and Valorization) who took the lead in the data analysis, the methodology development, the pilot testing and the conclusions related to the data analysis.*

## 2.2 Alignment with YUFERING Work Package 2

The first YUFE Life Sciences (later renamed BioYUFE) meeting indicated the need for an overall analysis of research strengths and capacity within YUFE, which matched the needs of YUFERING's Task 2.3. With YUFERING's objective to venture into the development of a selected number of YUFERING research nodes, the BioYUFE initiative was considered as an ideal pilot case.

Analysis would not only be done at the overall level (YUFE) but would also be related to BioYUFE specifically as a pilot, restricting the range and focusing on 'Biodiversity' (core) and later on broadening to 'Biodiversity and Sustainability'. In a second phase, BioYUFE's aim was to gradually develop cooperation in education, research (& funding) and stakeholders' involvement (including community engagement and/or societal impact features). With respect to research the plan was to initiate the development of a middle term perspective, focusing on research connections within a YUFE context, including mobility options and exploration of funding opportunities. It should fit within a longer-term perspective which would integrate educational, research and innovation targeted efforts in a community (engagement) driven context.

### Approach

Research potential: In order to identify potential collaboration topics, the participation of YUFE universities in Horizon 2020 was analysed (for the first time). The purpose was to uncover areas in which the universities are strong (research strengths), (potential) common research fields that may emerge, in which framework programme funding schemes there is evidence of experience and success, ... . In addition, the publication output of the YUFE universities was mapped (period: 01.01.2012 - current), and, using bibliographical analysis, the areas in which common and non-common (and



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thus future potential) publication/collaboration is possible were identified. The results of the analysis (YUFE & BioYUFE level, on project funding and publication output) were shared at the second BioYUFE meeting in Bremen (5<sup>th</sup> – 7<sup>th</sup> September 2022), as explained below.

**Community Engagement:** The third BioYUFE meeting (Rijeka 4<sup>th</sup>–6<sup>th</sup> September 2023) allowed the BioYUFE team to tackle and identify common research interests and collaboration options, including framing these efforts into a broader CERI context. In a final step, alignment with YUFERING WP3 was envisioned, in order to connect to the ongoing work on Flipped Knowledge Transfer and on how the BioYUFE pilot can be connected to YUFE's Innovation ecosystem.

**A methodological approach:** In relation to the efforts planned under YUFERING (fostering R&I collaboration, by defining research strengths and potential research nodes) it is important to position the YUFE Life Sciences initiative in a broader perspective. The conceived outcome of the pilot on 'Biodiversity' was not a fully mapped plan with an onset of concrete academic collaborations of the academic involved. It was essentially aimed at **defining an approach/methodology to set up and test future YUFE R&I nodes as platforms** to foster research collaboration within YUFE. As such no prior definition was defined of a research node or a research and innovation node (R&I node). The 'Biodiversity' pilot as such is a case to develop and test this methodology and to assess the delimitation of a node. In a next phase of this pilot, further actions and incentives should be identified, maybe with a definition of criteria to measure the outcomes. On the level of the alliance it has yet to be decided if further action will be taken with respect to prioritizing research areas for joint investment, beyond the identification of the YUFE Focus areas. There is also no intention yet for the set-up of a coordinated incentive scheme (e.g. dedicated R&I support staff and plan, dedicated funding allowing bottom-up implementation of specific incentives and matching opportunities). Potential future investments with respect to R&I collaboration in the alliance are currently being considered in the context of the YUFE 2030 project (WP5 Task 5.3). Beside that there is the cofunding of the universities for the YUFE4Postdocs project.

### Analysis YUFE research potential

Analysis was carried out using the Horizon Dashboard database tool (provided by EU-Cordis). All the projects of YUFE universities<sup>1</sup> under the EU Framework Programme (FP) Horizon 2020 were mapped (dd. 24/10/2022). We identified 1.083 participations under H2020, with a total EU net contribution of 528M€. In addition, the YUFE collaborations network was mapped, which included all partnership collaborations (full network YUFE and beyond). In total, more than 15.000 participations, with a net contribution of 5.7B€. This YUFE project database of 1.083 projects was manually updated. General research domains (Social Sciences & Humanities, Biomedical Sciences, Exact & Applied Sciences) were defined and projects were generally and thematically labelled (Alliance, Art, Biomaterials, Brain, Cardio, Care, Climate, Communication, Data, Diagnostics, Economy, Education, Energy, Environment, Genetics, History, ICT Data, Infra, Law, Materials, Oncology, Physics, Security, Social, Space, and Therapy), based on the database information (project titles, thematic priority or pillar information is available).

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<sup>1</sup> Including the Università degli Studi di Roma Tor Vergata, that left the alliance in July 2022, but without the Université de Sorbonne Nouvelle Paris 3, that joined in 2023.



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Some general findings:

- 1.083 YUFE H2020 participations, 118 are recorded as common (majority limited to two YUFE partners in 1 project); in funding, 528M€ of total YUFE H2020 contribution, of which 39M€ in common projects (these include YUFE related projects).
- 79 ERC grants in total, with a net contribution of 141M€.
- 345 MSCA participations, of which 157 MSCA-IF and 132 MSCA-ITN's, with a net contribution of 105M€.

Looking at the participations from a research domain perspective, we found following main distributions:

- Human & Social Sciences: 123M€: 82 participations on 'Social' projects, total 34M€; 65 participations on 'Economy' projects, total 35M€.
- Biomedical Sciences: 207M€: 41 participations on 'Diagnostics', total 30M€; 39 participations on 'Brain' and 44 on 'Care', total 22M€ and 16M€ respectively; 37 participations on 'Therapy', total 28M€; 36 participations 'Cardiology' and 29 participations on 'Oncology'.
- Exact Sciences: 157M€: 85 participations on 'Materials', total 34M€; 74 participations on 'Environment', total 27M€; 42 participations on 'Energy'; 'ICT Data' & 'Data': 33 & 29 participations, 14M€ & 16M€ respectively; 'Physics': 25 participations.
- A cloud map of most imminent topics coming out of the full analysis was made, uncovering possible pilot topics to be considered.



**Figure 1 Cloud map of H2020 topics funded in the YUFE alliance**

YUFE H2020 & Horizon Europe project funding on Biodiversity

Initially two approaches were followed for the EU project analysis using the Horizon Dashboard to assess:

- How many projects are carried out on 'Biodiversity' (in general)?
- How many project-related connections are there with YUFE universities in this EU 'Biodiversity' network? Who are the strong-holders in this field?



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- How many participations do YUFE universities have on 'Biodiversity'? What is the potential within YUFE?

As selection criteria, either the general term "*Biodiversity conservation*" was used following the *EuroSciVoc*<sup>2</sup> concept, or "27 keywords"<sup>3</sup> out of the Dashboard keyword list were used, that match and cover the 'Biodiversity' topic best.

The following results were obtained after analysis of the datasets recovered:

*In general, on YUFE universities:*

- The total number of participations under H2020 (and Horizon Europe) on "Biodiversity" is 3.280, with a net contribution of 1.2B€, of which 83 Principal Investigator ERC grants and 1161 MSCA action participations.
- Of these participations, 2.795 are linked (through at least one joint participation in a European project) to a principal investigator/academic of a YUFE university for a total of 937M€. Most of the funding relates to thematic priorities EU3.2. (Societal challenge: Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy) and EU3.5. (Climate action, environment, resource efficiency and raw materials), 317M and 290M respectively.
- We identified top participants, top coordinators in the Cordis data map and top funded projects in H2020 on Biodiversity. The following entities emerged as entities with which YUFE universities collaborate most often in European projects: Agencia Estatal Consejo Superior De Investigaciones Cientificas; Centre national de la recherche scientifique (CNRS); l'Institut national de recherche pour l'agriculture, l'alimentation et l'environnement; Consiglio Nazionale delle Ricerche; Stichting Wageningen Research; Danmarks Tekniske Universitet.

*On Biodiversity:*

- Using both YUFE "EuroSciVoc" or "27 keywords" specifically, we were able to retrieve 18 project participations for a budget of approx. 7M€, it included 1 ERC grant and 11 MSCA participations.
- 2M€, the largest part, was granted within the societal challenge EU 3.5

### YUFE publications output on Biodiversity

In parallel to the European project output analysis, the publications output was assessed using the *Web of Science* query. All research publications, related to Biodiversity, were retrieved covering a specific time period (2015 - current). The start of the time frame coincides with the starting dates of the initial projects under Horizon

<sup>2</sup> EuroSciVoc: is a multilingual taxonomy that represents all the main fields of science that were discovered from CORDIS content and organized through a semi-automatic process based on NLP techniques. It contains more than 1000 categories in 6 languages (English, French, German, Italian, Polish and Spanish) and each category is enriched with relevant keywords extracted from the textual description of CORDIS projects. EuroSciVoc is managed by the Publications Office of the EU, and is currently used by the CORDIS website. It is specifically developed as a reference vocabulary for the Open Science community and is aligned with Linked Open Data standards

<sup>3</sup> 27 keywords list: Benthic ecosystems, Biodiversity comparative or conservation biology, conservation indicators monitoring, Coastal ecosystems, Conservation biology, ecology genetics, deep sea ecosystems, Ecology, Ecosystem management, Environmental Control, Life Support systems, Environmental toxicology, Forest biodiversity, Forest ecosystem services, Fresh water ecosystems, Habitat species restoration, Marine biodiversity conservation monitoring, ecosystem management, ecosystems and processes, nature conservation, pelagic ecosystems, species interactions zoonosis.



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2020. Biodiversity related keywords<sup>4</sup> were used as ‘topic’, all universities were entered under ‘affiliation’. In a first approach, VOSviewer<sup>5</sup> analysis was pursued to construct and visualize bibliometric networks. This analysis allowed us to map bibliographic coupling, based on organizations. We also monitored co-authorship coupling, also based on organisations. In essence, the outcomes on VOSviewer illustrate which organisations are built upon the same knowledge base, meaning how many publication references they have in common. The more common references, the higher the chance that they are working on the same topic or field. In this way, cluster analysis is possible. The larger the cluster, the more references in the field of expertise (compared to all information of publication referencing in this field). The thicker the connection between two organizations, the more common references they have. VOSviewer unfortunately does not allow identification of common ground and collaboration. Clusters with different colours represent different subjects, they are working on different research themes that do not have common references. In a second approach, Top2Vec<sup>6</sup> was used to first determine the main topics on research. Per topic, we wanted to investigate which YUFE partners are currently active in this topic and also which partners are already collaborating. In addition, we estimated which YUFE partners have potential to collaborate in the future. Two organizations are coupled when they both are authors on the same publication indicating visible collaboration between institutions. In detail, the Top2Vec system uses a text-based approach, which is applied to all titles and abstracts in our WoS database. Many semantically similar documents are indicative of underlying topic, the total number of topics cannot be directly controlled, but closely related topics can be grouped. Finally, we decided to combine Top2Vec and VOSviewer subsequently in this order to 1) first identify ‘topic’ in the Biodiversity publication list and 2) then look into the connection network within each topic.

The publication analysis resulted in 3.285 publications found on ‘Biodiversity’. In comparison, WoS retrieved >160.000 recordings/publications in total for all YUFE universities within this timeframe. For our Top2Vec analysis within the ‘Biodiversity’ database, we found 39 topics, these were regrouped in six broad topics of which 4 were content wise clearly linked to ‘Biodiversity’ research. Per topic, we visualized the related keywords using cloud mapping, identified the YUFE universities involved and indicated whether they already published together. We believe this approach can be used to detect potential for future research collaborations, as there is common ground and potential of overlapping interests. In our YUFE Life Sciences ‘Biodiversity’ pilot experiment, these were available to determine potential research collaborations.

Outcomes and general conclusions after these steps:

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<sup>4</sup> Keywords used for Biodiversity publications analysis: Species diversity OR Genetic diversity OR Ecosystem structure OR Ecosystem functions OR Ecosystem restoration OR Biological conservation OR Ecological habitat OR Environmental pollution OR Habitat fragmentation OR Habitat loss OR Invasive species OR Zoonotic diseases

<sup>5</sup> VOSviewer is a software tool for constructing and visualizing bibliometric networks. These networks may for instance include journals, researchers, or individual publications, and they can be constructed based on citation, bibliographic coupling, co-citation, or co-authorship relations. VOSviewer also offers text mining functionality that can be used to construct and visualize co-occurrence networks of important terms extracted from a body of scientific literature.

<sup>6</sup> Top2Vec is an algorithm that detects topics present in the text and generates jointly embedded topic, document, and word vectors. At a high level, the algorithm performs the following steps to discover topics in a list of documents (here publication abstracts).



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- *Multiple analytical tools are available to map research potential of the YUFE universities.*
- *Specific theme-based analysis (on project funding and publications) is possible and has been documented.*
- *Analysis of this sort can assist the YUFE leadership in its R&I policy, in detecting areas of joint interest and in fostering research lines across the YUFE universities.*
- *Additional expert support is needed for carrying out these types of analysis and more capacity is needed for translating the results into further action, including the communication to academics or external stakeholders.*
- *Potential for research nodes can be analytically identified but if there is no interest bottom-up and/or without any incentives there is little chance that they will come to further activities.*

### Refocus: towards BioYUFE pilot / research node potential

The results of the funding and publication analysis indicated that a narrow framed specific topic 'Biodiversity' is not sufficiently strong enough to become a 'YUFE research node' in itself. Only 18 out of 1083 H2020 participations involving YUFE universities are directly linked to 'Biodiversity', or 1.6%, and 17M€ out 528M€ in funding, or 3%. This reopened the discussion on how the potential for a research node (and thus Pilot initiative) can be determined and measured. Of the 1083 analysed participations, 118 are common projects, and apart from the YUFE institutional level projects<sup>7</sup>) they only involve 2 YUFE universities in each case. Of these common projects, 17 (+7M€) were topically related to biodiversity. As for the publications, Biodiversity specifically covers 3.285/>160.000 publications, or 2%. Only 18 of the 3.285 publications are common publications, or less than 1%, with only 2 YUFE universities are involved each time. However, the Top2Vec on the 3.285 publications on Biodiversity did render **some interesting 'topic clusters'** to look at by the YUFE Life Science workgroup and might be a basis to start from in finding common research lines. After reconciliation, it was suggested to broaden the Pilot 'Biodiversity' under a more general approach as 'Biodiversity and Sustainability', where the core/common ground remains biodiversity knowledge, which is linked to other thematic priorities covered within the alliance.

In summary:

- We produced a YUFE H2020 database where all thematic priorities and areas are identified, which allows to broaden the scope of the pilot;
- Analysing specific publications database, beyond the limited 'Biodiversity' keywords, would allow to detect new collaboration potential for (interdisciplinary) research collaboration.

### Effect on project analysis:

This insight led to reshuffling of the YUFE H2020 projects, where we started from the YUFE H2020 projects database (*and not a keyword selection on Biodiversity*) and listed all thematic areas that have a possible link with Biodiversity, such as 'Climate', 'Energy', 'Environment', 'Social' and 'Space'. The outcome was listed representing the

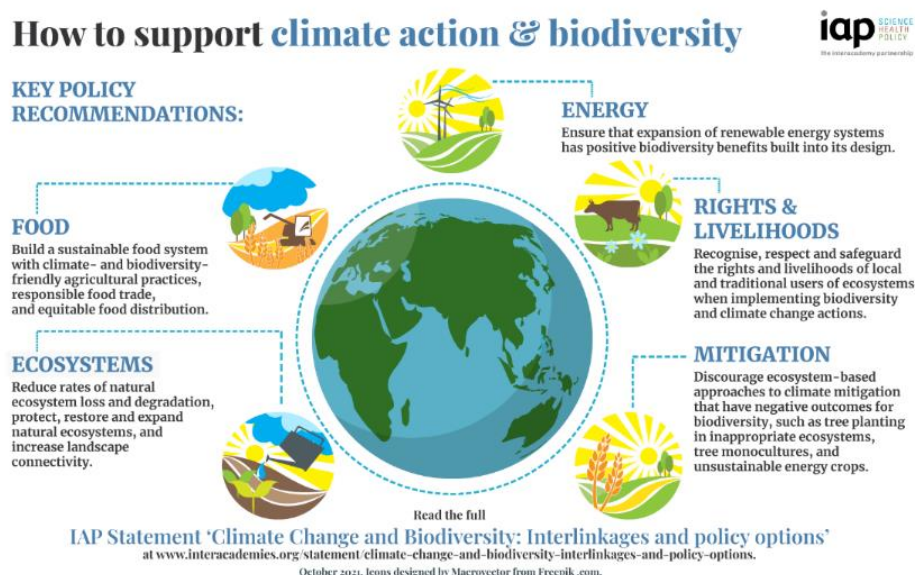
<sup>7</sup> YUFE Erasmus projects, YUFERING and YUFE4Postdocs



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total net contribution for each thematic priority per H2020 pillar. In adding up these topics, a total of 112M€ on project contribution is recorded (or 21% of total YUFE H2020 funding). This type of approach obviously only indicates past achievements and does not identify on what research YUFE partners could work together. But it indicates the YUFE partners' performance, their experience in a leading capacity (as coordinators) with specific funding schemes, their involvement in excellence related projects (Pillar 1), their potential for collaborative R&I with industry and the non-profit sector (Pillar 2), their link with thematic priorities in Europe (Pillar 3) and how this is distributed over different thematic areas. Analysing the YUFE H2020 project database is thus a mean to identify possible research node potential, based on past achievements. Looking further into the granted projects by the researchers themselves lead to further insights and possibilities. Therefore, dedicated researchers looked at the database and verified matching possibilities of projects in other areas with core Biodiversity topics or looked at other combinations.



**Figure 2 Example of link between climate change and biodiversity, with detailed further interlinkages towards Food, Energy, Law/Social, Environment**

### Effect on publications analysis:

In addition to the project analysis, we also looked at broadening of the publications in WoS. First, all YUFE universities were listed in the abbreviation search engine. Second, only articles, proceeding papers or reviews were retrieved, leading to 163k hits. Next, only those *WoS categories*<sup>8</sup> that are somehow linked to 'Biodiversity and Sustainability' were selected, leading to 17.000 hits (or 10% of YUFE publications). A similar analysis using the Top2Vec analysis previously on the 'Biodiversity' but now on the 'Biodiversity and Sustainability' publications database gave following results: we

<sup>8</sup> 'Biodiversity and sustainability' WoS categories: Environmental Sciences, Physiology, Ecology, Microbiology, Plant Sciences, Biotechnology Applied Microbiology, Toxicology, Biology, Zoology, Marine Freshwater Biology, Behavioral Sciences, Environmental Studies, Reproductive Biology, Forestry, Engineering Environmental, Evolutionary Biology, Water Resources, Biodiversity Conservation, Developmental Biology, Agronomy, Remote Sensing, Soil Science, Entomology, Fisheries



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found >250 topics, these were regrouped in 40 broad and 160 detailed topics, of which most were clearly linked to 'Biodiversity and Sustainability' research. Unexpectedly, quite a number of clouds were not related to biodiversity but could actually be interesting from an 'interdisciplinary' perspective, as they appeared in our analysis starting from clear 'biodiversity related' research publications. As the outcome of number of topics was unexpectedly large, we did not visualise the related keywords using cloud mapping, nor identified the YUFE universities involved and indicated if they published together or not. These mappings were additionally used at the BioYUFE Bremen meeting 2022 to discuss new potential for additional research collaborations.

### Further detection of potential

In order to allow detection of further interest for collaboration within a YUFE context an Expression-of-Interest (EoI) template was developed (in Attachment). Identified purposes are:

- to gather relevant information in a coordinated way into one information carrier, fit for distribution;
- to capture expression of interest to work on a specific research topic in a tangible way;
- to identify and map contact persons (PI/Researchers) with whom collaboration is sought;
- to invite researchers to define community engagement approaches;
- to allow Research Support Offices to follow up on interest and to give additional support and advice.

An alliance wide exercise to assemble EoI, possibly by means of the virtual campus environment, would allow bottom up identification of research potential within a certain field of expertise and may lead to identify potential pilots (pre-trajectory) or research & innovation nodes. The approach was discussed with the BioYUFE Team members and a delegation of researchers (5 academics in the biology department at the University of Antwerp) active in the field of Biodiversity, but not having taken part in any of the activities of the BioYUFE pilot. Feedback was gathered on an EoI template and on the feasibility of this type of call-for-partnership, as part of an approach/methodology to set up future community engaged pilots to emerge and grow as future R&I nodes within the YUFE alliance. As far as we are aware, this was the first time that an approach towards the creation of R&I nodes was discussed with a specific group of researchers.

In addition, the BioYUFE team mapped research funding possibilities at national level (funding instruments that allow cross-border collaboration) and funding instruments on EU level (for multipartner projects) and transnational calls (e.g Biodiversa+).

- The most important findings and feedback:
- Although the YUFE alliance is perceived as an interesting platform to develop collaboration, the consulted researchers stress the importance of free choice of their partners for R&I collaboration, starting from a research idea and preferably building on previous/existing collaborations and people they know;
- the consulted researchers acknowledge the potential of analytical tools (including WoS) to detect potential partnerships and related information (funding links). Assistance for analytical work should be offered broadly, within the YUFE context and beyond;



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- The consulted researchers indicate that they (if needed, with the help of suggested tools and information databases) prefer to approach potential YUFE partners directly and question the added value of intermediate support of the RSO here;
- The consulted researchers indicate that in order to instigate them to proactively look for YUFE partnerships and to set up collaborations, specific incentives are needed, primarily seed funding.

Outcomes and general conclusions after these steps:

- *Without primarily financial incentives, bottom-up R&I initiatives are expected to be limited.*
- *Possible types of incentives should be mapped including specifying the perceived added value of for researchers.*
- *Active buy-in from researchers in a bottom-up setting is essential in order to set up platform pilots.*

### Integrating the ‘Community Engagement’ aspect

In a next step, the BioYUFE pilot team broadened further beyond research interests towards the ‘community engagement’ focus and reflected on how this could be tackled within the context of the Pilot. This was addressed in the BioYUFE meeting in September 2023 (4<sup>th</sup> – 6<sup>th</sup>) in Rijeka. A ‘Biodiversity Research Morning’ was organised with nine researchers, bringing an overview of biodiversity research at their university and/or in their research group. The aims were to 1) scope out biodiversity research opportunities across YUFE partners; 2) start building networks of established- and Early-Career Researchers for future research collaboration and collaborative applications (e.g. YUFE4postdocs – see further); 3) build new research activity based on success with delivery of BioYUFE education; and finally 4) establishing a YUFE Community Engaged Research & Innovation (CERI) node. Participants gave presentations which included: 1) Overview of ongoing biodiversity research at their university/institution/lab; 2) Examples on how their activities link with non-academic stakeholders (government, industry, citizens and communities); 3) Possible direction of their future biodiversity research, including information on possible current and future national and/or international funding opportunities; 4) Potential partnerships envisaged across the YUFE Alliance (scan websites of other institutions and suggest collaboration opportunities) and 5) Suggestions for future activities to build BioYUFE research momentum.

Research planning sessions were held on several occasions, and focused on the initiatives that the BioYUFE Pilot members should engage in over the next 5 years, as well as necessary changes required with BioYUFE platform that would be required to make it sustainable. This consisted mostly of small group conversations and planning, interspersed with whole group conversations. A number of initiatives were settled upon and these are detailed in “Research planning” and “Future Initiatives”.

In both its educational and research efforts, the BioYUFE Team emphasizes the importance of interdisciplinarity. Challenges related to areas such as climate change, energy, sustainability with a biodiversity context (and ‘core’) require connections to other disciplines, and benefit moreover of connection to societal engagement and citizens science. The alliance and its universities, with platform initiatives like BioYUFE as motor can be a valuable ‘playground’ for (biology-based) interdisciplinary research



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challenges and community engagement. Research talks at this BioYUFE meeting also indicated additional 'common grounds' for CERI based research: biodiversity and climate change, global change management, landscape and use planning, monitoring/apps and data(base) analytics, human wellbeing & environment, mobile labs & sharing methodologies, wetlands, invasive species & drones, or university campus ecosystems. In addition, a number of citizen science projects were presented that could be deployed across the YUFE universities or their ecosystems, thus on a larger YUFE/European scale. In this respect new networks (e.g. a YUFE urban biodiversity observation network (UrBON) could be set-up. Scientific webinars can be organized around these themes, allowing further involvement.

There is desire for support for matching funding possibilities on university-, national and/or EU level, and for dedicated (communication) assistance to make the BioYUFE platform (and similar inter university platforms) more visible within the YUFE universities and beyond the alliance.

### Future initiatives

The following future initiatives were proposed by the BioYUFE Team, a number of which have been initiated, and a number with a fairly long and ambitious perspective. Two groups were appointed who will reporting back to the BioYUFE Team, and will explore the following:

- Design and development of a **Master programme in Biodiversity**. A dedicated workgroup will be responsible for identifying learning objectives, designing the syllabus, and coordinate with the work with the YUFE work package team members (Student Journey)
- Expanding the portfolio of **elective modules**. Effective communication with students and staff is considered critical, as well as evaluating completed courses and feeding this back into course design. One or two multi-institution courses will be introduced as pilot projects.
- Establishing a series of **BioYUFE summer schools**, with the initial aim of organizing at least 1 per year (summer/winter). These summer schools can target final master year and/or PhD and postdocs with involvement of non-academic stakeholders; and are considered as a potential step-up towards job opportunities and cross sectoral (international) mobility. These will initially be developed by expanding existing summer schools at individual YUFE universities.
- The organization of regular (intended quarterly) **BioYUFE webinars**. These will generally be thematic and can serve to kickstart cooperation in (community-engaged) research.
- Establishing a **young scientist/student forum** with a focus on building up research initiatives and facilitating the mobility of young researchers between universities, for short or longer term. A connected BioYUFE network could also increase incoming (doctoral) student participation. The option to initiate BioYUFE student and/or young scientist conference(s) organized by and for them was proposed.
- Building up the **brand and communication** of BioYUFE including establishing a dedicated web section.



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- A **(new) MSCA application** (either or not under the cofund scheme) on a topical basis – e.g. on one or more identified research strengths. An underlying platform approach like in BioYUFE is a valuable starting point.

### 3. YUFE4Postdocs: tool to foster the creation of community engaged research nodes across the YUFE universities

The preparative work towards the development of a proposal for a MSCA Cofund project started in April 2021. The initiative was taken by the University of Antwerp, as part of its lead of this Task 2.3. The project was designed with a double objective: to develop a novel training programme with a focus on stakeholder interaction; and to attract new researchers that would act as vectors to either initiate or further develop bilateral research collaboration between YUFE universities, thus creating bilateral research nodes. As such, the YUFE postdocs would become co-constructors of a European research university. The development of the project in cocreation with a Project Group with representatives of the (then) 9 other YUFE universities required a substantial effort of (especially) the coordinating Antwerp team, initially towards the submission of the project in February and even more after its granting in July 2022.

YUFE4Postdocs follows a CERl approach:

The programme is developed with a community engaged approach under the overarching theme '**Urban opportunities and challenges**' through the lens of the **YUFE Focus Areas: Sustainability; Digital societies; Citizens' well-being; and European identity**'. Facilitated by this open overarching theme, the project calls for postdocs and research projects in a broad range of disciplines and caters for interdisciplinary approaches. As components of 'community engagement' interaction with (urban) stakeholders, Open Science (OS) and Open Innovation run as a red thread through the programme. The variety of potential stakeholders is wide, including cities, companies, business organisations, schools, citizen organizations, NGOs. Candidates define their own research subject and are expected to explicitly identify potential stakeholders within their application and to interact throughout the project execution. Stakeholders are involved in the evaluation & selection process and take part in the interdisciplinary selection committees that ultimately select the postdocs, following a thorough peer-review phase. Finally, non-academic stakeholders will be engaged in the CERl inspired training courses. YUFE4Postdocs moreover connects to other activities developed within the alliance, most importantly postdocs and their supervisors can be supported in the knowledge valorisation of the results of their projects, including through the Knowledge Transfer Experts Network, with anchor points for support and training in all the YUFE universities (WP3 YUFERING).

YUFE4Postdocs fosters the bottom-up creation of R&I nodes

The YUFE universities announced two calls for junior postdoctoral research positions. Candidates define their own research subject under the overarching theme and direct their application to one of the two (call related) Focus domains. They define a Supervisor in one university and connect to a co-Supervisor in a second YUFE university. Supervisors and co-Supervisors are tenured staff members. The project can either start or further develop (ongoing) research collaboration, both valued equally in the evaluation process. In order to ensure linkage, the co-Supervisor is a member of



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the supervision team, and the appointed postdocs must spend a period of 6 months (either one or more stays) in the co-host team (intra-YUFE mobility).

The first call resulted in the appointment of 25 postdocs. Applications for the second call are currently in evaluation. If all positions are assigned (by July 2024), a total of 51 bilateral R&I nodes will be established. These will be supported by research support offices (RSO) and other staff, including on acquisition of funding. The longer-term duration of the postdoc appointments (36 months) intends to incentivise longer term collaboration within the research node. The postdocs will also be approached and trained as part of a community, to imbue these researchers with the vision and activities of the YUFE alliance and prevent disintegration of the initiative.

#### 4. Lesson learned for future CERl based methodology in developing R&I collaboration

The following outlines a methodology for the creation of CERl based R&I nodes, assembling best practices.

##### ***Step 1. Provide top-down incentives, especially (but not exclusively) to support bottom-up approaches***

Based on the analysis efforts, the pilot cases and the feedback provided by the researchers, it appears that to shape a common approach towards joint research R&I collaboration, **the YUFE alliance needs to combine top-down incentives that ideally instigate or facilitate bottom-up approaches**. Incentives should not only be provided to researchers but also YUFE facilitators or R&I support staff that can provide guidance to these pilot initiatives or assist in their innovation or valorisation initiatives (Knowledge Transfer Experts).

Incentives can take different forms. Primarily seed funding for setting up (new) research collaborations, of which some limited funding could go to support to RSO and some to support activities to foster stakeholder interaction. Seed funding could be linked to the development of joint project applications for (specific) calls and could be provided conditionally. An important additional incentive is the availability of R&I support staff: tasked with providing support for analysis, facilitating platforms (e.g. BioYUFE) and for assistance for external funding applications, driven by academics. R&I support staff can also assist in designing a strategy plan on the level of defined R&I platforms. R&I support staff can also actively attract YUFE-wide funding managed on an institutional level (like YUFE4Postdocs) or assist in YUFE-related institutional level (research) funding applications managed by YUFE academics - whether or not in a variable geometry.



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	YUFE - Top down	Researcher - Bottom up
Starting point	<ul style="list-style-type: none"> <li>• Definition of an R&amp;I node</li> <li>• Provide funding for bottom-up initiatives</li> <li>• Suggest YUFE CERI nodes themes</li> <li>• Provide support (staff) and guidance for node set-up support</li> <li>• Inform structurally about YUFE and all aligned YUFE projects (scope, vision)</li> <li>• Link with YUFE-Focus Areas, Mission, statement of YUFE-alliance</li> <li>• YUFE Vision on Knowledge Valorisation (3.1)</li> </ul>	<ul style="list-style-type: none"> <li>• Bottom up research ideas</li> <li>• Explore the potential for YUFE R&amp;I collaborations and embrace new YUFE partnerships</li> <li>• Embrace guidance, support by and collaborations with YUFE RSO teams for incentive support</li> </ul>
Support or action	<ul style="list-style-type: none"> <li>• Provide framework for YUFE CERI funding calls (e.g. based on Expression of Interest content)</li> <li>• Support the matchmaking process</li> <li>• Inform about YUFE research potential</li> <li>• Help mapping research funding possibilities (national and international) Support finding specific relevant calls for their pilot topic</li> <li>• Provide access to search engines and databases to consult</li> <li>• Providing additional support in pre-award phase</li> <li>• Providing workshops for setting up trans-/interdisciplinary research</li> <li>• Providing workshops and support on how to approach CERI (best practices, successful examples, ...)</li> </ul>	<ul style="list-style-type: none"> <li>• Identify additional funding options</li> <li>• Identify potential non-academic stakeholders,</li> <li>• Engage with non-academic stakeholders within the university's ecosystem</li> <li>• Engage with R&amp;I support staff available on institutional or decentral level to facilitate collaboration and project applications</li> <li>• Engage with the established "Knowledge Transfer Valorisation Network" (WP3) for valorisation purposes or to facilitate the outreach towards non-academic stakeholders of the universities ecosystems</li> </ul>
	Align top-down and bottom-up ideas or incentives	



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## ***Step 2. Define expectations for a R&I node and its connection to community engagement***

In order to facilitate formation of R&I nodes and deploy common incentives to foster (preferable longer term) research collaboration in the context of the alliance a definition of an R&I node could properly defined, including its related expectations. There are several aspects to be considered:

- Research capacity: does prior analysis indicate critical mass of research mass/activities ongoing as a starting point?
- Education: can the node be integrated in an education foresight (present of planned) and/or can it involve student engagement?
- Community engagement: is there potential for outreach to or involvement of communities/citizens, and other stakeholders (including businesses, non-profit and public)?
- Does it allow inter- or transdisciplinary approaches?
- Innovation/Impact: are there societal-economic challenges that can be addressed? Is there potential involvement (needed) of non-academic stakeholders?

As an example, this step applied to the BioYUFE case:

Analysis was performed on research capacity and the scope was broadened, with initially only 'biodiversity' as a core later broadened to 'sustainability', opening up to multiple disciplines and interdisciplinarity. This was backed-up by project funding and publication output numbers. In addition, when deeper assessing research opportunities, clear cases appeared linked to community engagement efforts, not only locally but translatable within or applicable at different YUFE sites or contexts. As such, setting up a CERI inspired R&I node required a multilayer approach taking into account more than only common research as a binding factor.

## ***Step 3. Provide assistance to guide CERI pilots and R&I nodes***

Both BioYUFE and the YUFE4Postdocs project were very much supported (in the case of YUFE4Postdocs entirely led) by R&I support staff. The interconnection of professional R&I support staff across the YUFE universities is essential to further harmonize support of academics, for promoting the alliance as a valuable canvas for research collaboration and for connecting researchers in R&I nodes. So far there are no structured efforts to connect R&I support staff or Research Support Offices. Following the experiences in both initiatives, it appears that such a more structured collaborative approach, in parallel to what has been achieved for knowledge valorisation under YUFERING WP3 seems indispensable to foster joint research collaboration within the alliance.

## **5. Conclusions**

### **There is extensive research potential for collaboration in YUFE**

The performed analysis reveals that research (collaborative) potential within YUFE is extensive. With approximately 528M€ of granted Horizon 2020 funding, the (timebound) analysis indicated that overall and in certain areas the research potential is promising. This is also seen in the research output, with approximately 170k publications in a 10-year span (2012-2022). These datasets can be updated regularly



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and be monitored in a dedicated Dashboard. These may serve the development **of a data supported YUFE R&I policy**, including for the detection of research strengths and actions towards the emergence of R&I nodes. In first instance, analysis allows to estimate the availability and soundness of expertise, and if there is ground to develop incentives or initiatives on the basis of detected 'critical mass'. These tools are only indicative on existing research quality: they do not take into account community engagement or potential for impact or innovation, nor the interest of researchers to work together on common areas. Stimulating research collaboration is to be tackled as part of a potential future R&I policy at alliance level, to be explored further e.g. under YUFE's WP5 Responsible, Interdisciplinary & Inclusive Research. Placing R&I policy higher on the agenda of the YUFE alliance, the instalment of a YUFE Research Steering Board and/or the availability of financial incentives to foster research collaboration in the YUFE network would help in this respect.

A data supported policy can complement the insights gathered during the YUFERING strategy meeting (13th September 2023 in Rijeka) with a brainstorm of the leads of WP 2 and WP3 and involving members of Work Packages 7 and 8 of the YUFE 2030 project, translated in the YUFE Vision and Transformation Strategy on Flipped Knowledge Transfer D 3.1. This pointed out the necessity to develop a strategy that focuses more on those topics where we can truly make a difference as a YUFE Alliance, **emphasizing our unique "selling points" and common strengths**. The YUFE alliance defined YUFE Focus Areas, but these focus areas are (too) broad, the conclusion was that the YUFE universities need to work on **specific topics within these YUFE Focus** areas where cooperation within YUFE, beyond the local level, can make a real difference. These should be challenges and topics that cannot be solved at the local level alone but require an international (YUFE) approach to add value and to contribute to real solutions for societal challenges.

### **The BioYUFE pilot offers valuable lessons for other collaborative bottom-up initiatives**

The experience with BioYUFE reveals that bottom-up platform initiatives with an objective to foster research collaboration require institutional support and recognition to remain viable and become sustainable. Institutional incentives and commitment are required from the partner universities (or provided at the level of the alliance). These incentives may be diverse: financial (e.g. seed-funding, mobility funding, ...) dedicated support of RSOs, support of knowledge transfer specialists, or other.

Researchers that are interested in the potential of the alliance for R&I collaboration should be better assisted to align bottom-up initiatives with the higher-level activities of their university in the alliance. The BioYUFE initiative, as an example, encountered hurdles. Internal communication is vital, and continuous efforts to connect YUFE related activities in education, research, community engagement and innovation with academics in the faculties is essential to define and carry out a common R&I agenda.

The BioYUFE case also demonstrated that developing (multi partner) collaboration starting from an initial bottom-up initiative requires time and trust. The initial starting point to engage was education. This view expanded overtime to consider research opportunities. What initiated as short-term initiative, evolved to a platform with longer term perspectives, which took overall 2.5 years. Additionally, the platform/pilot efforts were positioned in an Education-Research-Innovation continuum, as these three axes were considered interdependent. Sustainability of the BioYUFE platform and the



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emergence of joint research within (creating an R&I node) is not guaranteed but there is a sound foundation and there are connected working group members and facilitators. The approach is inspirational for other initiatives of this kind.

#### **YUFE4Postdocs is a potential lever for more research collaborative efforts in the alliance**

YUFE4Postdocs demonstrates that a joint initiative involving all of the universities can be a powerful tool to initiate R&I nodes within the alliance, but most importantly because it financially incentivizes the collaboration. Without incentives, bottom-up initiatives are either unfeasible or small. YUFE4Postdocs provides a leverage for academics to engage in the alliance.

With soon 51 postdocs on track to foster research collaboration, the project has great potential for the alliance's R&I agenda. Obviously, the degree of interaction between the connected research groups across the universities - beyond the co-supervision of the postdoc and their project - will vary. We expect that not all of the research collaborations (R&I nodes) will flourish, and we do not expect all the R&I nodes to grow, extend (within the alliance) or last beyond the position of the postdoc (36 months envisaged). But the further development of bilateral R&I collaboration set up under YUFE4Postdocs will be monitored by the Project Team and lessons will be drawn for other (similar) applications.

But there is more: institutional level projects also strengthen collaboration and mutual trust between the RSOs and other support staff of the YUFE partners and develop common work practises. As such the experiences in YUFE4Postdocs can be exploited beyond the project context for further collaborative efforts in inducing or furthering research collaboration. These efforts can be unfolded either at the level of academics or at institutional level. Future institutional level projects of the kind may be developed at the level of the alliance and/or at the level of its constituent YUFE universities in a variable geometry.



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## Attachment

### Expression of Interest initiative – Towards formation of YUFE platforms

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#### General scope & situating purpose

In order to allow bottom up initiatives to align with the overall YUFE objective *to define and implement a community-engaged R&I agenda for an excellent and inclusive European University*, an *Expression-of-Interest* (Eol) form was developed to instigate potential research partnerships. A YUFE RESEARCH PARTNERSHIP SEARCH INITIATIVE can help in the bottom-up identification of research potential within a certain field of expertise. This may lead to potential R&I platforms or R&I nodes.

#### Expression-of-Interest process

In close collaboration with the Research Support Offices, researchers interested to investigate potential partnerships within a YUFE context can submit an Eol using a template. Following information needs to be mapped and steps taken or clarified:

1. Informing the researchers about the research outputs within YUFE (based on Framework program analysis and publications and/or other strategic information).
2. Informing researchers about search engines and databases to gather information, numbers, outputs, contacts, references.
3. Inform about the goal and expectations of the Eol form and content, including on the CERI objectives.
4. Inform researchers about collaborative research funding support and - opportunities.

Introduction sessions can be organized with support of the Research Support Offices. Researchers within a certain research area or topic of one YUFE university can fill in the Eol partnership request form. In a next step, the Eol is distributed – ideally through the YUFE virtual campus - to the relevant YUFE RSO who can assist in contacting researchers within their university to assess the Eol. If matchmaking is possible and there is deemed to be CERI potential, in a next step, pilot meetings can be organized (cfr. BioYUFE pilot) with support of RSO. This will allow researchers to get acquainted with the research potential of the other research groups, to understand the scope of YUFE and to work on specific initiatives on Education-Research-Innovation within their specific research area. This also can be facilitated by R&I support staff.

#### Possible criteria for excellent R&I nodes (suggestions)

- At least three, but preferably more YUFE universities with university research group(s) involved,
- Indication of past success in EU funding (or other) and experience in project applications on the level of the platform,
- Proof of excellent research output (publications, dissemination, other),
- Indication of common research ground and new (interdisciplinary) research perspectives,



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- Clear vision on common interest in efforts on Education, Research & Innovation ecosystems,
- Education: contribution to virtual YUFE campus courses + ideas around setting up common new elected courses,
- Innovation: potential to involve non-academic stakeholders (profit and non-profit organizations, companies, SME's, government, public, etc.),
- Topic specific 'community driven engagement' component(s) options at each university and (ideas for) support possibilities/actions.

Preferably:

- One or more researchers with experience with or successful in EU Horizon project applications, preferably as coordinator
- Identification of core (research) team members and partners for Pilot
- Involvement of local RSO support staff
- Support/recognition by university R&I policy leadership
- Identification of trans- and interdisciplinary research challenges or willingness to work on this
- ...

### **YUFE Pilot for R&I research node**

If the Expression-of-Interest responses prove sufficient interest from YUFE universities and research groups and the members agree to participate, the topic can trigger a potential platform. Workshops could be facilitated by the YUFE R&I support staff to assist the platform team in defining a strategy plan and an action plan, including joint external funding applications.

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1. European Commission, Research Executive Agency, 2020. Grant Agreement 101016967.



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