

E³UDRES²

Engaged and Entrepreneurial European University as
Driver for European Smart and Sustainable Regions

4.10 I-R&DI Network methodology

Work Package 4

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Overview

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Brief summary

In this deliverable we reflect on the methodology followed to establish and growth of the I-R&Di networks of E³UDRES². Based on the reflection, a set of recommendations for improving the current networks and creating new ones is provided.

Acronyms and abbreviations

BoR: Bank of Researchers

CE: Group of research experts representing the six Institutions of the Consortium in the Circular Economy focus area (Circular Economy I-R&Di)

G3: It refers to the general meetings that everyone involved in WP4 should attend (researchers from all the 3 I-R&Di plus the WP4 coordination team)

HcAI: Group of research experts representing the six Institutions of the Consortium in the Human Contribution to Artificial Intelligence focus area (Human Contribution to Artificial Intelligence I-R&Di)

I-R&Di networks: international, intercultural, interdisciplinary, innovative and intense research networks (groups of researchers)

WB&A: Group of research experts representing the six Institutions of the Consortium in the Well Being and Ageing focus area (Well Being and Ageing I-R&Di)

1. Introduction

E³UDRES², the Engaged and Entrepreneurial European University as Driver for European Smart and Sustainable Regions, an European University alliance, promotes the development of small and medium-sized cities and their rural environments into smart and sustainable European regions and shapes a prosperous future with the best possible quality of life for self-determined people in a progressive European society.

Work Package 4 (WP4) of E³UDRES² is dedicated to developing the research dimension of the alliance.

Under WP4, three international, intercultural, interdisciplinary, innovative and intense research networks, the so called **I-R&Di networks**, in Circular Economy, (CE), Well-Being and Ageing (WB&A) and Human Contribution to Artificial Intelligence (HCtAI) were formed.

These networks are constituted mainly of researchers from all the partners, with some contribution of external entities (companies or other types of organisations, citizens) and aim at developing applied research, with focus on regional challenges, and involving citizens as much as possible.

This report describes the methodology used during the three years of the project for the development of the networks (Sections 2, 3 and 4) and proposes a set of recommendations for improvement in order to guide creation of other networks in new thematic areas that may arise in the further development of the alliance (Section 5).

2. Inception and growth of the networks

The I-R&Di networks were created following the guidelines produced at the beginning of the project and according to several guidelines and procedures described in the (i) Project Proposal, (ii) Grant Agreement and (iii) Consortium Agreement.

Each network was originally composed of six researchers, one from each partner institution, appointed by the partners' E³UDRES² local coordinators (18 researchers in total).

Simultaneously, the researchers from all the partners received an invitation, by email, to show their interest in joining an E³UDRES² Bank of Researchers (BoR), providing a short description of their expertise and the network(s) they would be willing to join. For those who have not promptly replied to that call, it was always possible to join through the E³UDRES² website¹ (see Figure 1). This bank served as a pool for selection of new researchers to be added to the network, although not in exclusivity as some partner institutions nominated new researchers even though they were not already part of the BoR.

¹ At <https://eudres.eu/researchers#join-as-researcher>

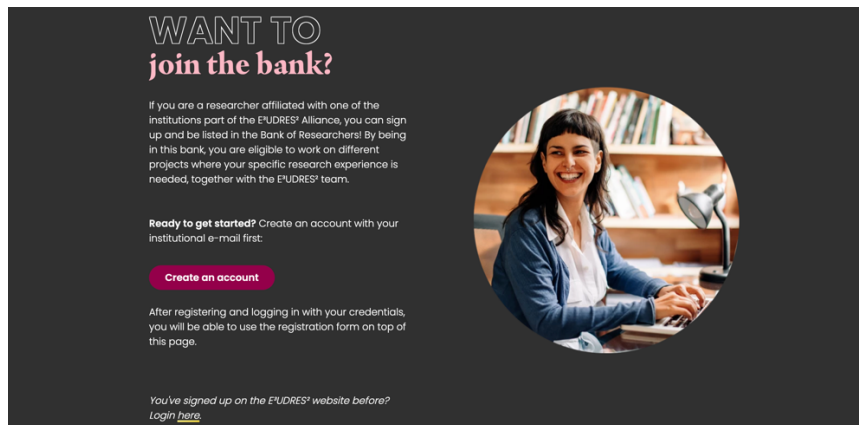


Figure 1 - Screenshot of webpage for enrolment of new researchers in the Bank of Researchers

Both the WP4 lead and the I-R&Di networks' coordinators are updated monthly on new researchers that register in the BoR. However, the data is shared in a timesheet which is not friendly to navigate and search. In the public website, the researchers from the BoR are showcased² (see Figure 2) but it is even harder to quickly find a researcher that matches any specific criteria as one can only search by name and filter by institution. The need for a digital platform that can bring together all the researchers from the alliance and easily find the expertise that a group may be lacking, find areas of excellence, etc, is felt from the beginning of the project. However, with the resources available for the project, no other solution was made available so far, which is something that should be in the top list of priorities for the next phase.

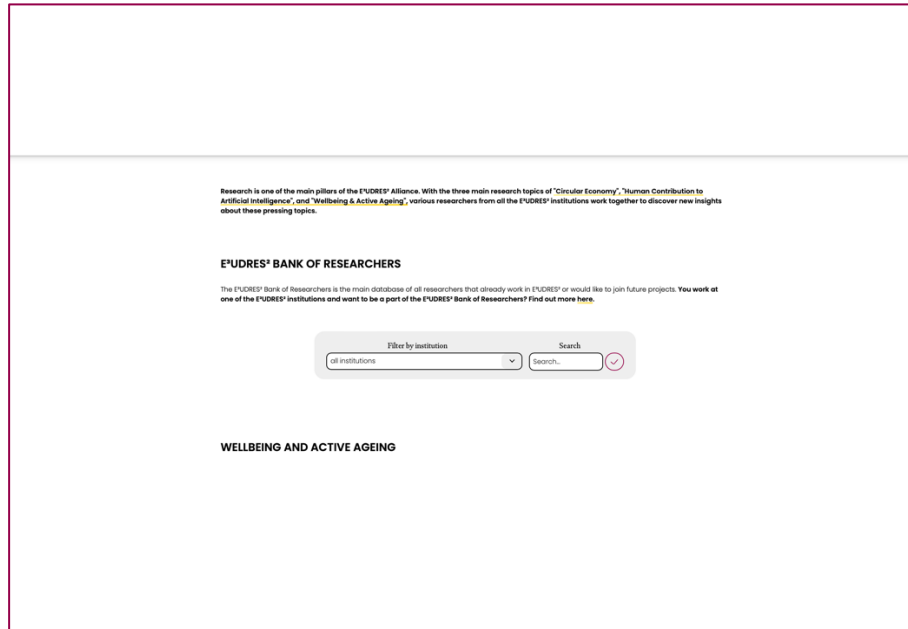


Figure 2 - Screenshot of the public webpage <https://eudres.eu/researchers> where the Bank of Researchers is displayed

In month 36, the last of the first funding phase, there is a total of 32 researchers more actively participating in the networks' regular activities whereas the total of researchs in the BoR is 168. It is worth mentioning that some of the researchers from the BoR, although not involved in all the regular

² <https://eudres.eu/researchers>

activities of the networks, were invited to participate in some proposals' preparation and/or other WP4 activities such as the Research Living Labs, Markets of Researchers, the International Conference on Citizen Science, etc.

The integration of new researchers was, in some cases, challenging. Especially when they could not find a way to add their knowledge and experience to the on-going activities and this is an aspect that should be improved in the next phase of development of the alliance.

Strategies for growing the networks and increase cohesion

E³UDRES² funded one first internal project per network, to ensure that the researchers had already an initial goal to start working together. The project had to be submitted as a proposal for internal evaluation (by researchers of the alliance not directly involved in WP4) and according to typical rules used in European calls. This strategy served also the purpose of further preparing the researchers in proposal writing and project technical and financial management and foster cooperation of researchers inside networks. The projects started in the second year and had a duration of 24 months. For these internal projects, the groups felt the need of recruiting other colleagues to collaborate, which was used as an opportunity to increase critical mass within the networks.

One of the tasks of WP4 is the submission of proposals to external funding. This served also as a basis for collaboration within each network and even cross-collaboration between networks. The project promoted matchmaking of researchers from all beneficiaries in the related thematic areas, supported the joint generation of ideas and relevant research questions and enabled the building of mutual trust and the joint creation of a common research agenda for the research networks. Moreover, IPS hired a consultant to assist the research networks in preparing implementation and further development of on-going internally funded research activities that were developed during that period. *However, the EU Grant for the E³UDRES² alliance did not provide support for drafting funding call proposals.*

Each network came up with their own additional measures to ensure cohesion and foster the involvement of other researchers as well as the involvement of students, citizens and other stakeholders.

3. I-R&Di networks management structure

The management structure used was the following:

WP4 coordination:

Appointed by the partner leading WP4 (IPS)

I-R&Di Coordinators:

Each i-R&Di network nominated one of its researchers to represent the group.

Roles and Responsibilities:

The WP4 coordinator is responsible for the detailed coordination, planning, monitoring and reporting of WP4. The three networks meet periodically (what was called the "G3 meetings") and these meetings are organized and chaired by the WP4 coordinator. The WP4 coordinator is responsible for forwarding the WP4 deliverables and periodic reports to the Project Coordinator.

Internal Communication Flows & Tools:

The members of the networks communicate with each other through emails and MS Teams. The communications with the WP4 coordination is preferentially made through the networks' coordinators.

The G3 meetings occurred approximately monthly, and each network organised their own meeting pattern according to the needs.

4. Outreach

WP4 promotes annual digital and/or physical research living labs aiming to set the ground to create sustainable impact and allow to connect with stakeholders and the general public, and facilitate networking. The community and consortium members are encouraged to participate in external events, including scientific conferences, and use their participation as an additional opportunity to establish synergies with other initiatives with similar scope.

The results generated by the networks are presented using several channels, such as the E³UDRES² website and social media platforms. The participating universities disseminate information on their homepages, local social networks, and other mass communication channels.

5. Recommendations for the future

From the experience of the past three years of work, some recommendations can be made to improve the development of other I-R&Di networks that may be formed in new thematic areas:

5.1. Digital platform to bring together researchers from E³UDRES²

The need for an improved digital tool that can bring together researchers from all the partners is already justified in Section 2.

A new digital platform should be designed and implemented to bring researchers with specific skills, previous experience and knowledge together to work together on a challenge coming from industry, local community or, simply, to conduct fundamental research under one of Horizon Europe or other research grant calls. It should be more than just a database, but a tool that uses machine learning algorithms to automatically link researchers to registered challenges, and, if technologically possible, it could even search for the upcoming project calls which corresponds to E³UDRES² research missions to offer them to researchers. The most important thing of the upcoming tool is that it doesn't take boxes where researchers have previously registered or existing hierarchy under groups of researchers but scans all the profiles to bring the most suitable researchers together to contribute to interdisciplinarity. To not separate researchers from other activities, there might be a link between this tool and other digital solutions used by other workpackages that involve students and stakeholders in their activities to ensure that most appropriate researchers as supervisors are linked with teams of students dealing with challenges coming from stakeholders.

Ideally, the database underlying the digital platform would automatically retrieve data from other sources where researchers already have their digital CV, such as Orcid³, for example, and/or online

³ <https://orcid.org>

bibliographic repositories such as Google Scholar⁴, for instance. Data from these repositories can usually be retrieved through public Application Programming Interfaces (API) that allow machine-to-machine communications and in this way we would make sure information is updated continuously without any other burden of manual updates from the researchers in multiple platforms.

5.2. Improve structure of the networks and governance

At the moment, too much relies on one person leading the group of researchers, which puts too much weight on a single researcher and rest of researchers sometimes have to face a limited freedom of action. More flexible and organic formats should be explored as, for instance, the creation of sub-networks/task forces/research groups so that every researcher more actively engaged in the network's development feels more committed and accountable.

The networks should focus more on lines of research and less on project proposal directly. That is, priority should be given in finding topics for research, taking also into account societal challenges, that will later drive the proposals.

Meetings between the coordinators of the networks should be considered as a more agile format to plan joint activities and seek synergies when compared to the current format which is having G3 meetings for which all researchers are invited and that results in a too large group. Nonetheless, there should be opportunities to bring everyone together, perhaps more in a dissemination format, so all researchers know what is going on in the other networks. If something looks like an opportunity for collaboration, that opportunity should be sought later, in a more proper setting.

5.3. Increase opportunities for in person meetings

Due to Covid-19 pandemic, the researchers only had the chance to meet in person in month 20 of the project (May 2022, during the 2nd Research Living Labs hosted by IPS). This moment was perceived by all researchers that met at that time as a game changer. Afterwards, there were other opportunities to meet, and it is noticeable the change of pace in the development of ideas, proposals and outputs of current research. Therefore, the number of opportunities for in person meetings should be increased. At the same time, much attention should be paid to a programme of in-person meetings to mix researchers already working together and bring them together with new stakeholders, so that they wouldn't spend too much time on the projects or ideas they have been working on for some time, but rather concentrate on the new ideas and concepts. More different methods that can help in generation of new project ideas, such as hackathons and bootcamps, should be used, tested and adapted to research field.

External funding opportunities for travelling should also be sought.

5.4. Increase time allocation for researchers more directly engaged in the development of the networks

It is up to each partner institution to allocate their resources. WP4 coordination team perceived differences across the various partners in terms of the incentives each one conceded to their researchers and observed some correlation between those incentives and the level of engagement. This is something that should be revised in the next phase.

⁴ <https://scholar.google.com>

5.5. Increase student's involvement in E³UDRES² research

The involvement of students in E³UDRES² was a goal from the beginning, but we consider that it was not completely fulfilled. A few BSc and MSc students were collaborating and funded by scholarships made available through the E³UDRES² funding for human resources, but the overall number is modest. The number of PhD students collaborating is even lower.

According to the proposal, one way to involve the students was through the Bank of Classes, which, in practice, did not produce the expected outcomes. One idea that deserves further thought would be to create a bank of topics for MSc. and PhD theses instead of classes.

Some new strategies should be designed, along with the other packages that develop activities that involve students, to guarantee higher engagement from them. A set of incentives should also be considered, such as ideas competition or project rewards.

External funding opportunities for students should also be sought (as, for example, Marie Skłodowska-Curie Actions).

5.6. Get continuous support for the networks' activities

During phase 1 of the project, researchers received some training on how to prepare project proposals for European funding (during the 2nd Research Living Labs) and received support for preparing proposals from a consultant that was hired from March 2023 for that purpose. This type of initiatives is something that should be kept in further development of the alliance.

In the initial plans for WP4, there was the idea of hiring a postdoctoral fellow per network to help researchers with the writing of the proposals. This was something that was not possible to achieve (mainly because the 3 year frame of the project was short for developing the hiring procedure given the bureaucratic load associated with it) but it is an idea worth revisiting in the next phase. Nonetheless, PhD students could be allocated to assist teams of researchers working on proposals (feasibility study, literature review, data collection etc.), but in the case of proposal approval they would be reallocated to the specific project they helped to prepare, thus leaving a place for other PhD students to join the project.

The R&D support units in each partner should be involved in the development of the networks. These units are usually very much in tune with funding opportunities, stakeholders looking for partners, etc., and can make suggestions for funding opportunities, trainings available and organisations looking for partners.

5.7. Create more opportunities to bring together new researchers

To bring researchers together, one of the main preconditions is to break the barrier between groups of researchers. To do so, the research Focus Areas under E³UDRES² should be considered more as missions, rather than "boxes" of researchers as it has been so far. Since Focus Areas are not directly related to specific research fields or subfields, but are interdisciplinary by their nature, one researcher might find different interesting topics to work on in different Focus Areas. To support interdisciplinarity, Focus Areas must be kept open and flexible, to allow researchers to move freely between groups of researchers and research topics.

Another opportunity to foster cooperation is to involve other researchers as co-advisers of MSc. or PhD theses.

5.8. Improve internal and external communication

Even though an effort has been made to disseminate the research conducted under WP4, there is still room for improvement as it is not yet very visible throughout the alliance. Therefore, we suggest a list of activities that can be taken under consideration during the next phase of development of the alliance, as that would benefit also the growth of the networks and foster new collaborations with stakeholders:

- Creation of physical spaces in each partner university where information can be displayed;
- Creation of promotional videos;
- Production and distribution of communication printed materials (e.g., factsheets, brochures, publications);
- Production of infographics;
- Production of press releases;
- Production of news and information for the website and social media networks;
- Assessment of communication and dissemination activities;
- Re-adjustment of the communication and dissemination strategy.

Some of the referred activities may involve students from the partner universities through different types of incentives, such as ideas competition or project rewards.

The WP dedicated to the dissemination and impact of the alliance's activities (currently, WP6) should work closely together with the researchers in the implementation.

5.9. Monitoring quality and impact

During the current phase of development of the alliance, a lot of weight was given to the number of submitted proposals for funding, the number of presentations in conferences and the number of publications. Even though those are interesting key performance indicators, for the next phase we encourage to monitor and reflect on the engagement of students and stakeholders, cross-network interactions, engagement with the E³UDRES² Open Innovation-Hubs and any other indicators that may be indicators of the performance of the networks.

We suggest that the networks agree on a set of indicators in the beginning of the next phase and report on them annually. This procedure aided by the E³UDRES² team dedicated to quality and impact.

Provided that an E³UDRES² Scientific Body is created, the progress should be assessed by that Scientific Body that can provide a list of recommendations for improvement.

6. Conclusions

We presented the methodology followed to establish and growth of the I-R&Di networks of E³UDRES² and reflected upon it given the past three years of experience. One of the main barriers identified was the lack of a good tool to facilitate creating new links within the alliance to reinforce the networks and emphasis was given to it by putting it on the top of the list for improvement in the next phase.

Some adjustments to the governance of the networks were also suggested as well as on how to increase engagement of all relevant stakeholders across the alliance and how to better communicate the achievements of the networks. The ideas presented should be helpful in both strengthening the existing networks and creating new ones around new focus areas that may emerge in the future.