Blueprint on Building Research and Innovation Loops

R&I LOOP

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Summary

1 Assessment and reassessment results of the Inception and Outgrowing Toolkit

1.1 UPM

1. **By using the assessment tool to identify the starting point of your HEI before implementing the toolkit, what were your core conclusions? (state 3-4)**
   Following the R&ILOOP Inception and Outgrowing Toolkit the first step is the strategic diagnosis using the TOWS matrix. The corresponding template filed during the exercise, compile all the strategies generates as outcome of the exercise, but here we reflect the WT Mini-Mini Strategy: How can you minimise your weaknesses and avoid threats?
   - WT1. Simplify and eliminated overly rigid research procedures and improve the recognition systems to attract and retain talented researchers and teachers.
   - WT2. Changing the researchers' approach towards innovation and sustainability and develop shared ambitions and roadmaps to create transformational dynamics and generate a different leadership and management
   - WT3. Promote instructional management of innovation projects and teams to avoid no continuity of the dialogues.
   - WT4. Scale up small innovation from local and specific problems to avoid loss of effectiveness of Innovation trajectories only oriented by the market.
   - WT5. Promote multi-stakeholder collaboration, especially in vulnerable contexts to eliminate silos and gasp in collaborations

2. **What were the most important outcomes and reactions received in your pilot-testing of the toolkit?**
   After finalising all activities in the pilot testing, the members of the working group have performed their own evaluation about pilot-testing results and the short-term impact of the toolkit, using the corresponding template. Scanned templates are kept internally at UPM.
   In general R&ILOOP Inception and Outgrowing Toolkit was perceived as useful, well designed, and feet for purpose (figure 1). Training activities and flash courses were considered enough to get to grips with the R&ILOOP Inception and Outgrowing Toolkit (figure 2) and most of the participant though that the Toolkit will help my organization become a more civic university (figure 3). 80% of the participant will strongly recommend the toolkit to other universities (figure 4).
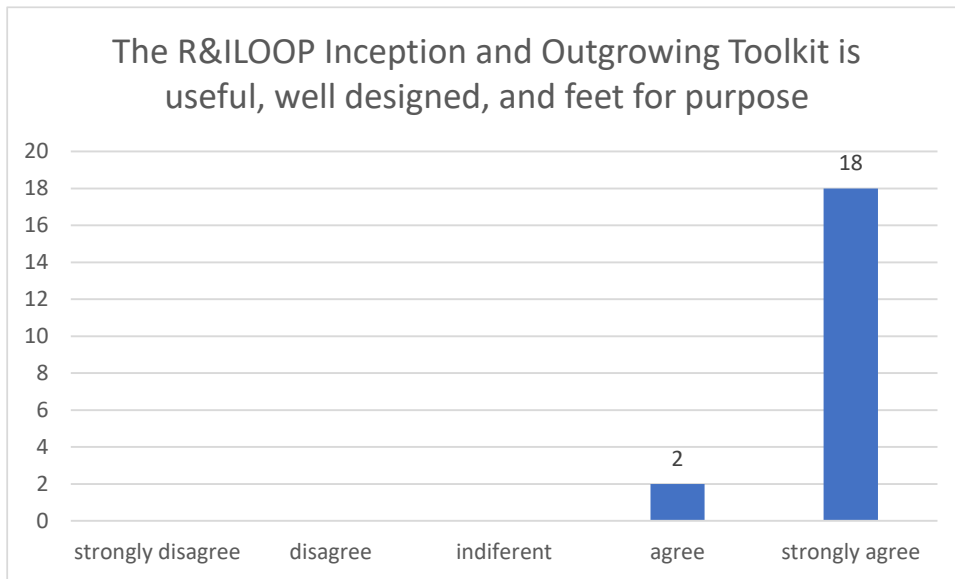
The R&ILOOP Inception and Outgrowing Toolkit is useful, well designed, and feet for purpose

Figure 1. UPM self-assessment: Usefulness, design and feet for purpose

Training activities and flash courses were enough to get to grips with the R&ILOOP Inception and Outgrowing Toolkit
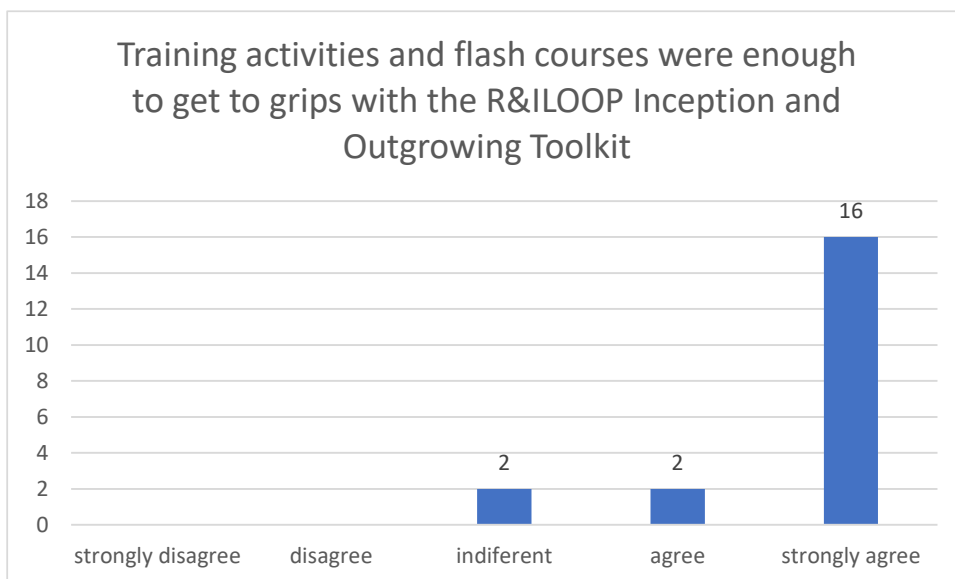
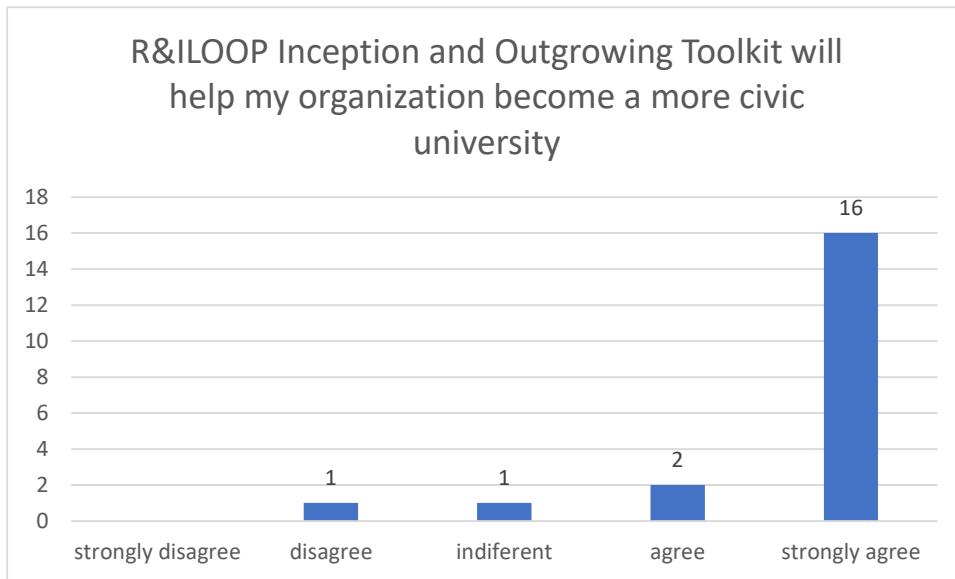*Figure 2. UPM self-assessment: Sufficiency of the training activities and flash courses.*

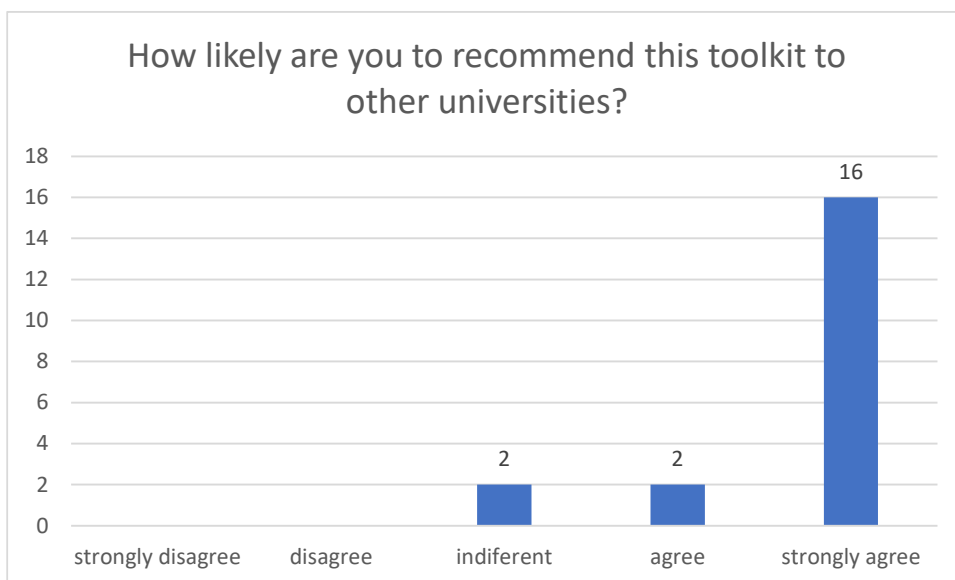*Figure 3. UPM self-assessment: Toolkit help for a civic organisation.*

Figure 3.. UPM self-assessment: Willingness to recommend the toolkit to other universities

3. **To what extent is your HEI integrating smart specialisation directives into its internal policies?**

    The Smart specialization' approach combines industrial, educational and innovation policies to suggest that countries or regions identify and select a limited number of priority areas for knowledge-based investments, focusing on their strengths and comparative advantages. In general, the university is fully aligned with these strategies and directives.

    The university has evolved from priority selection to strategy implementation; it makes a priority of good governance; translate priorities into projects through proper selection criteria and selection process; implements Transnational cooperation and value chains as well a sound monitoring process.

    However, sometimes these policy does not properly permeate into lower and operational levels on the institutions, such as specific schools, departments or research groups. At these levels further training and practical implementation of the policies en strategies es still necessary.

    It was found that the set of tools provided by R&ILOOP can help to solve this gap and elevate the level of knowledge and practical mastering of operational units at the university and can help to align the strategies of those units with the overall strategies of the university.

4. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates and users' manual with guidelines on how to use and implement the inception and Outgrowing toolkit? (state 3-4)**

    The participant pointed out the following as main short-term impact of the R&ILOOP Inception and Outgrowing Toolkit in UPM organisation:

    - Increase cohesion among the department members.
    - Sharing a common vision and priorities.
    - Better distribution of resources.
    - Improve communication and sense of pertinence.

    The R&ILOOP Inception and Outgrowing Toolkit more useful elements identified by the participants were the whole process itself, its flexibility and the wide variety of tools that can be used.

    Conversely the les useful elements were the lack of specific examples on how other universities have applied the tools.

5. **What are the benefits that your HEI and region can reap by using this systemic approach (through the 2 loops proposed)?**

    - Perform a comprehensive self-assessment and follow up with a series of activities to reshape the way that they are doing research and innovation by integrating smart specialization civic universities strategies in the design of their priorities and actions and promote open intervention of society in the research activities, framed in three main pillars: (I) Innovation; (II) Governance; and (III) Sustainability.
    - Considering that the whole purpose of HEIs becoming more civically engaged is deeply connected to their capacity of involving various other stakeholders, this systematic approach will ultimately benefit other stakeholders of the quadruple/quintuple helix.

- Boost smart specialization and civic universities methodologies that identify the needs and interests of regions, companies, and citizens.
- Foster public engagement and enhance the outreach and impact of research activities and results at different levels.

1.2 UBI

1. By using the assessment tool to identify the starting point of your HEI before implementing the toolkit, what were your core conclusions? (state 3-4)
- UBI is paving the way to reach its value proposition that is achieve high quality teaching and researching, with impact on regional development;
- UBI wants to achieve such value, by having a sustainable behaviour, that is, reducing energy, gas, plastic and water consumption, as well as a social beneficial positioning improving students and families lives, providing guidance and tools for the development of their personal professional future;
- UBI wants to it by embracing externals stakeholders, investing on high quality research and business creation, focused on the needs of society and the surrounding community, working to improve the region's and country's cultural development, entrepreneurial mindset and individual development and capacitation

2. What were the most important outcomes and reactions received in your pilot-testing of the toolkit?
- The attendants of the pilot testing reacted very proactively to the pilot stating their interest in the topic, the tools and the methodologies to analyse the strategic smart and civic positioning of the university and research units. It was mentioned the high importance of assessing the institution in her civic mindset and behaviour, planning strategically where we want to go and design pathways, using the methodologies and tools provided;
- They stressed as very positive the opportunity to cooperate in the exercises with new people. Connecting with new people, as well as the practical experience of the trainers was very important to reach the objectives of the training;
- Also important for participants was to know a new way to use canvas, not only from a economic perspective, but also from an environmental and social perspective;
- The focusing of the approach, and the materials that were given were very interesting and important in order to better understand and follow. Moreover, the contents and their applicability to the participants' day to day work flow were also of major importance;
- The attendants mentioned that the activities/exercises, practical applications of the tools, which are of easy and intuitive use;
- They intend to include sustainability and social perspective, in a deep way in strategic plan from the 3XL canvas;
- Some attendants mentioned the intention to implement the tools in the process of strategic planning of R&D units;
- The participants stated they retained with a perspective of strategic diagnosis, and creation of growth solutions for the identified problems.

3. **To what extent is your HEI integrating smart specialisation directives into its internal policies?**

    One important axe of integration is the boost of Entrepreneurial spirit and innovation among students and the academic community, which is a crucial contribution to S3 in the region and country. UBI is dedicated to increase entrepreneurship and the initiative mindset in student and researchers' communities.

    UBI has a set of specific capacitation programmes, included in the curricula of the different under- and post-graduate courses, funding and infrastructural supports. Starting new companies is worked at UBI not only as a form of creating job opportunities for the students, but also for senior researchers and professors.

    UBI current curricular offer is well aligned with the S3 priorities, at least for health priority, circularity, digital, and renewable energy and resources.

    Also, the contents taught in universities are not always aligned with the immediate needs of companies, and, therefore, an in-house training is needed for the graduates after leaving universities, being this the role of the UBI Business School, to adjust specific training to companies and organization's needs.

    Some of the research units and facilities act as interface units with the external environment, not only providing services and collaborations with companies, municipalities, schools, among others, but also providing applied research focused on the needs of citizens. Examples of these are some of the laboratories working in the health area that guide their actions centred in the patients, the UBIair laboratory or the Genomic Group are good practical cases where patient centric approaches are in use. Moreover, the creation of structures like the clinical trials centre or the association for the interface with companies AIFABI are also perfect mechanisms targeted at the civic oriented mission of the university.

4. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates and users' manual with guidelines on how to use and implement the inception and Outgrowing toolkit? (state 3-4)**

    The participants revealed very positive feedback on the supporting materials used, nonetheless we can summarize some of the aspects that can be improved:
    - A collective practical exercise could be introduced, so that all participants could broaden their perspectives, with the opinions of the other participants;
    - Amplification of the time to complete the exercises;
    - Duration of the training with longer duration, as a way to accommodate the reflection on the instruments.

5. **What are the benefits that your HEI and region can reap by using this systemic approach (through the 2 loops proposed)?**

    A set of benefits can be reaped from this approach, namely:
    - Investing on Research market oriented
    - Increase collaboration with the influence region
    - Increase seed/risk funding of technology-based ventures and joint ventures with large companies
    - Improve communication mechanisms of SC&T
    - Implementing transdisciplinary collaboration programs, including faculties, departments and research units
    - Reinforcement of the stakeholders' participation in the design of the educational programmes
    - Make an intensive use of smart and learning technologies

- Use of SDG's for institutional evaluation proposals
- Need for creating a Vice-Rectorship for sustainability
- Need for implementing formal education programs devoted to sustainability
- Need for fostering the university's impact on regional sustainability
- Design metrics concerning ecological footprint and sustainability governance report
- Need for creating an institutional sustainability/circular program and stimulus regarding sustainable consumption, investing such costs savings in social grants for students
- Creation of a Research Hub on sustainability
- Need for additional digitalization of processes
- Invest in high quality teaching and researching, with impact on regional development
- Improvement of students and families' lives, providing guidance and tools for the development of their personal and professional future
- Invest in high quality research and business creation, focused on the needs of society and the surrounding community
- Need for creating hosting and inclusion program for foreign researchers, students and families
- Need for creating social answers for the university's community (ex. kindergarden, senior residency in campus,.. Etc..)

1.3 UNIVPM

1. **By using the assessment tool to identify the starting point of your HEI before implementing the toolkit, what were your core conclusions? (state 3-4)**

   UNIVPM, being a High Education Institution, has teaching and researching as main objectives of its mission. This implies a focus at different levels:
   - Being an attractive institution for local student, as a pool of the Adriatic region teenagers
   - Keeping the teaching level high, thanks to specialized Professors and cutting-edge laboratories
   - It wasn't perfectly clear the meaning of the expression "civic university", in term of how an HEI can be focus in becoming more citizen oriented.

2. **What were the most important outcomes and reactions received in your pilot-testing of the toolkit?**

   The most relevant aspect of the Pilot testing was that the tools selected could be used by each Professor during the courses; in fact, the toolkit adapts very easily to different contexts, not only in didactical/educational offer, but also with production scenarios.
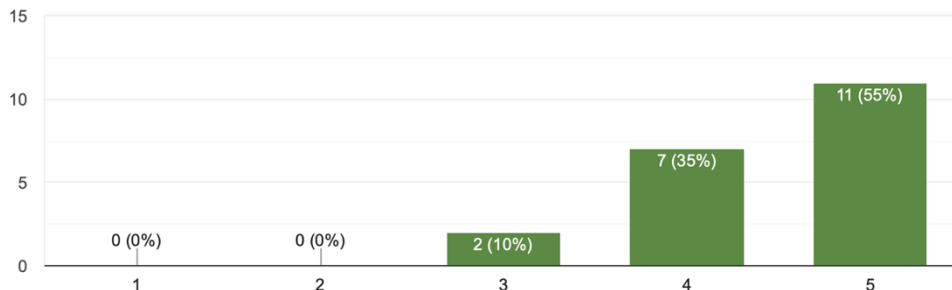
   Below are reported the graphs of evaluations form, filled by the people who have taken part in the project:

The R&ILOOP Inception and Outgrowing Toolkit is useful, well designed, and feet for purpose
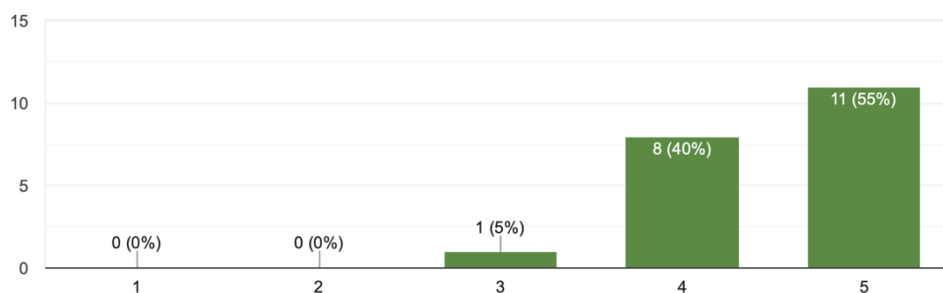20 risposte
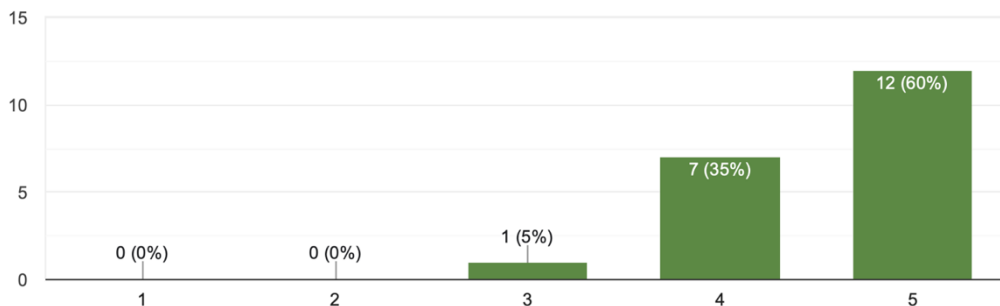
Training activities and flash courses were enough to get to grips with the R&ILOOP Inception and Outgrowing Toolkit.
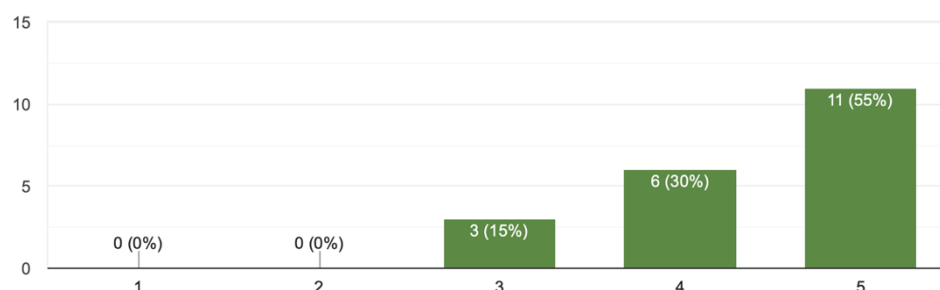20 risposte

R&ILOOP Inception and Outgrowing Toolkit will help my organization become a more civic university

20 risposte

How likely are you to recommend this toolkit to other universities?

20 risposte

3. **To what extent is your HEI integrating smart specialisation directives into its internal policies?**

   The smart specialisation approach offers a reinforced environment for increasing the interaction and cooperation among the different innovation ecosystems stakeholders, both at local, regional, national and international levels. UNIVPM is definitely aligned with these strategies and directives, trying to combine industrial, educational and innovation policies to identify the appropriate areas for knowledge-based investments, focusing on their strengths and comparative advantages.

4. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates and users' manual with guidelines on how to use and implement the inception and Outgrowing toolkit? (state 3-4)**

   The participants reported positive feedback about all the supporting materials; above all, the users' manual was very clear and easy to follow, due to the explanation of the appropriate path and strategy

   Anyway, is reported below a list of some aspects that can be improved:

   - the meetings were useful and well planned, but sometimes a little repetitive, treating the same aspects more times

   - reporting a practical example can be useful for a better understanding and realization of the tasks

   - despite the large number of meetings, some of them could have been longer, in order to have more time for practical tasks, for example in the toolkit exercises.

5. **What are the benefits that your HEI and region can reap by using this systemic approach (through the 2 loops proposed)?**

- Being able to provide an objective self-assessment and a path forward through a series of activities to renew the way research and innovation are being done, placing the concept of civic universities at the centre of the design of their priorities and actions, and promoting the open intervention of society in research activities, framed in three main pillars: (I) Innovation; (II) Governance; and (III) Sustainability.

- Increase the collaboration between university and the local companies, by undertaking stage/internships to give students a different perception of a productive content

- Implementing transdisciplinary collaboration programs, including faculties, departments and research units

- Reinforcement of the stakeholders' participation in the design of the educational programmes

- Development of soft skills attitude, not only with front courses but also seminars or collective/collaborative activities

- Increase the level of high-tech components and professionals in the university, thanks to laboratories, machines and specialized courses

- Implementing a formal digitalization program to keep the university modern and aligned with the new generations' interests

- Need for creating an institutional sustainability/circular program and stimulus regarding sustainable consumption, investing such costs savings in social grants for students

- Need to create an effective social campaign to stimulate the incoming students looking at the university like a place to live instead of an anxiety creator, using their medias and tools for being closer to them

- Develop or increase the didactical offer for foreign students

1.4 JGU

1. **By using the assessment tool to identify the starting point of your HEI before implementing the toolkit, what were your core conclusions? (state 3-4)**

   a. There already exist a variety of activities at our HEI in the area of civic and societal engagement, which are connected to each other.
   b. It is difficult to identify and allocate all the previous and ongoing activities and projects, since we are a very large university with several departments, bodies and stakeholders.
   c. It was unclear, to what extent the focus of a "civic university" is embedded or even partly covered by other currently relevant strategical topics of our university leadership administration; i.e., the topic of digitalization, internationalization, well-being, flexibilization of study structures etc.
   d. From the historical perspective of the UK, civic universities ought to deliver a monetary benefit to society, which is perceived critically in Germany. Therefore, there also exists no public funding of studies in humanities. This cultural perspective needs to be considered as well.

2. **What were the most important outcomes and reactions received in your pilot-testing of the toolkit?**
   a. There are already a lot of existing activities at our HEI in the area of civic and societal engagement that we were not aware of before.
   b. There are several aspirations to fulfil a so called "service to society" and enhance the civic and societal engagement of our HEI, especially as part of becoming a "European University".
   c. (New) contacts and networks were being established between relevant stakeholders of our HEI.
   d. It would be necessary to implement the toolkit within the already existing activities and eventually combine and strategically align the respective processes and outcomes.

3. **To what extent is your HEI integrating smart specialisation directives into its internal policies?**
   a. Our HEI integrated smart specialisation directives into its internal policies, e. g., by the department for technology transfer (including its transfer strategy) and the start-up centre, by projects such as FORTHEM, FIT-FORTHEM.
   b. Furthermore, there are many other projects that have been initiated decentrally at the level of the individual faculties, institutes, and departments.

4. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates and users' manual with guidelines on how to use and implement the inception and Outgrowing toolkit? (state 3-4)**
   a. Tools:
      i. The attendees who participated at the workshops find the tools and methodologies interesting and user-friendly.
      ii. The limited research validation was criticized by most of the participants.
      iii. Most participants viewed the tools and methodologies simply as "management concepts" without a sufficient theoretical and methodological foundation.

    iv. The adaptivity of such tools for a HEI (pursuing other goals, having other standards and a different self-conception than economical businesses) was critically questioned.

    v. The tools lead to several ideas and provide a starting-point for interesting brainstorming.

    vi. The participants criticized that it remains unclear how a practical strategy could be derived.

  b. Templates and users' manual with guidelines:

    i. The templates were evaluated as clear and user-friendly.

    ii. The participants criticized that that there were still too many templates and some of them, e.g., the fishbone diagram as well as the triple layer canvas, were too detailed and shallow.

    iii. The users' manual with guidelines was evaluated as too detailed and long.

    iv. A management summary outlining the most important aspects would have been beneficial.

    v. The main concern of the provided material is that it provides several ideas, however the further steps remained unclear.

    vi. Participants were wondering about the impact the material would have on future practical decisions.

5. **What are the benefits that your HEI and region can reap by using this systemic approach (through the 2 loops proposed)?**

  a. As a starting point, it is useful to think about the implementation of a self-assessment to identify already existing projects and activities with regard to specific topics; not only the topic of civic and societal engagement, but also other topics relevant for development of HEIs.

  b. To follow-up on the self-assessment, it is beneficial to set a benchmark as well as analysing strengths and weaknesses, opportunities and threats at a later stage with the purpose of stating where our HEI is located in comparison to other HEIs; the results can also be used as an inspirational basis for adapting best-practices of other HEIs in this area.

  c. In the next step, to further analyse the "quality" of those existing activities and potentials for development, even though we would suggest using other methods, e.g., by using quality models, impact frameworks and (quasi-)experimental evaluation designs to validly measure the impact of such activities.

  d. Through the workshops HEIs are able to connect with relevant internal and external stakeholder to sensibilize HEIs stakeholder as well as stakeholder outside HEIs to the issue and to initiate a process of change.

2 Assessment and reassessment results of the Nurturing Toolkit

2.1 UPM

1. **How would you describe your HEI in the way you are communicating research results?**

   Science communication is the practice of informing, educating, raising awareness of science-related topics, and increasing the sense of wonder about scientific discoveries and arguments.

   The field of science communication has grown over the past 30 years. The narrow focus on science literacy has widened to encompass all kinds of popularisation, social contexts, cultural contexts, values, and meanings.

   Different theoretical frameworks that are usually explained in science communication courses include:

   - Knowledge transfer. (Wynne 2005, Irwin 2006, Trench 2008, Pouliot 2009)
   - Knowledge sharing. (Jackson, Barbagello & Haste, 2006 Benneworth 2009)
   - Knowledge building. (Joly & Kaufman 2008, Williams 2010)
   - Models of expert-public interaction in science and technology communication: the dissemination model (deficit model), the dialogue model, and the participation model.

   In general, all this models are known and applied by the different units of the university. However, there is no a single research communication police applied homogenously by all the university

2. **How are students being prepared to be societal focused researchers and able of promoting social engagement in their future work, by your HEI?**

   Here below we describe what is being done in our organization to foster science communication

   - Scientific Culture Unit (UCC+i): The UPM has a scientific culture unit whose objective is to bring citizens closer to the scientific and technological knowledge that it generates, as well as the work of its researchers and the science and technology heritage that some of its Centers keep. In this way, the aim is to improve the scientific culture of society in general, as well as the visibility of the UPM as a generator of knowledge. https://www.upm.es/Investigacion/innovacion/OTRI/UnidadCulturaCientifica
   - Program of activities: The program of activities includes actions of scientific communication -dissemination of news about research results-, dissemination of science -organization and evaluation of events such as the European Night of Researchers or Science Week-, as well as training activities and promotion of communication and dissemination of science for the UPM community. It also includes the development of specific actions to promote citizen science at the UPM. Citizen science projects are those in which there are avenues of participation open to individuals or social groups not professionally related to the scientific field, thus promoting researcher-society interaction.

- Institutionally, the Polytechnic University of Madrid has been participating for years in the Scientific Culture/Science and Society programs, publicizing the main lines of research it develops, as well as the spaces where its results are generated. The UPM is part of the Regional Network of Scientific Information Offices of the Community of Madrid and the National Network of Scientific Culture Units coordinated by FECYT.
- UPM organizes annual courses on science communication and divulgation.
- UPM has implemented a blog channel for science and project communication : https://blogs.upm.es/cienciaciudadana/
- The UPM produces, collects and distributes documentation of interest on communication and popularization of science. In this section of the website it make available to researchers a repository of guides and documents related to the communication and dissemination of science, both UPM's own and those generated by other agents of the R&D&i dissemination system.
  https://www.upm.es/Investigacion/innovacion/OTRI/UnidadCulturaCientifica/documentacion
- It produce also informative research videos. https://www.upm.es/Investigacion/innovacion/OTRI/UnidadCulturaCientifica/VideosDivulgacionUPM

2.2 UBI

1. **How would you describe your HEI in the way you are communicating research results?**

UBI is communicating research results in different and complementary modes. Firstly, in some departments, and mainly related with specific capacities of professors, there is a mode of research informed teaching (RIT) which consists of offering students the possibility to carry out or participate in research processes.

In these processes, students apply methodologies to check the veracity, or lack thereof, of hypotheses with the goal of providing a response to a problem or question. In this mode, students are involved in science since the very beginning. Other professors follow the mode where students are frequently an audience, being some more exposed to research content and some more exposed to research processes and problems.

Secondly, the research at UBI is also being transferred by means of having researchers acting as public experts in specific fields in mediatic channels, such as television, radio or newspapers.

Thirdly, UBI is Communicating its own research, by means of using specific channels, such as: project websites, workshops with journalists and/or political actors, taking part in public events, press Releases/press Conferences/public study presentations, aggregators of science news and social media channels.

Fourthly, when targeting specific publics, such as the scientific community, by means of communicating research through articles, books or other educational resources.

2. **How are students being prepared to be societal focused researchers and able of promoting social engagement in their future work, by your HEI?**

Some faculties at UBI probably do this preparation, of making students more focused and able to promote social engagement in their future careers, better than others, but nonetheless our university, being a regional one, has as mission being an engine of the territory. This mission is very much implemented in the way the preparation of students to be civic oriented professionals. This is the case of the Health Faculty which undertakes since first year a learning approach integrated with practical work on hospitals and health family units. This is also the case in social sciences learning mode, as students perform engagement activities since the beginning with external stakeholders, namely companies, banking system, associations, municipalities and others. The same process is followed in several departments at the Faculty of Engineering.

Other initiatives that make part of the third mission of UBI are the entrepreneurial mechanisms, that support and boost the entrepreneurial mindset of academy, and specifically of students, making them active in designing solutions targeted at societal problems, and thus on creating companies, generating wealth for the region and creating qualified employment.

The work done by the Provider of the Student at the UBI is also crucial for this preparation of students to have a social engagement and a civic minded approach, as they act in the scope of easing a set of initiatives that will allow the student to be a participant in and for society.

3. **What were the most important outcomes and reactions received in your pilot-testing of the toolkit?**

The most important reactions received from our pilot regarding C2, were connected with the set of science communication mechanisms that must be decided and strategically applied to specific audiences, that is, the need of adjusting communication methods, messages and channels to the specific publics.

Moreover, our public also mentioned that the exercises and the discussions, as well as the transmission of content was of great utility knowledge. The toolkit was appraised as being very practical. In fact, some of the participants stated that the thing they loved most was the fact that they could put into practice the tips that were given for a better science communication. The practical exercises were a great tool to better understand and envision future science communication tasks.

The networking and feedback, and the clear explanation and scientific approach were highlighted as a strong aspect of the workshop. The concerns to select the target people to perform a precise science communication is of utmost importance, and was shared by the attendants as a strong point of the workshop also. Another positive aspect was the opportunity to work in teams, with people that they did not know beforehand.

4. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates, etc?**

Participants highlighted as extremely interesting the set of exercises and supporting materials that were provided.

Nevertheless, for some of the attendants having more training oriented to public speaking techniques, besides training related to new communication platforms could be interesting in order to better communicate science. In addition, they also mentioned the importance of continuing to prepare and deliver more trainings related to available tools to communicate science and how to use them. As so, the attendants mentioned that this

workshop opened the scene for delivering more science communication related trainings with more practical exercises, extending the time of the workshops for more days.

5. **To what extent is your HEI integrating these tools on how to communicate research and research results? Is your HEI committed and developing the redesign of new lessons for their students on the topic?**

UBI is integrating some of these tools on how to communicate research and research results and is very interested in integrating more instruments. That was why this workshop was co-organized with UBI Coordinator Institute for Research (UBI ICI), and the Vice-Rector for Research denoting the full commitment and interest in design the mode we communicate our science results, also for designing lessons for students integrating science communication, in a way it makes the university more civic and sustainable.

The participants final comments on how they will integrate this workshop learning in the way they communicate research is also important to stress this effort and commitment. The majority stated they intend to communicate their science more effectively, as well as their work. They understand that the communication of science must e done in a different manner, depending on the audiences and goals, for instance they declared that by learning some tips on how to produce a video podcast, as well as other new communication vehicles, can have value added in their mode of communication.

The attendants also made some reflections around the needed support and investment from the university, stressing the need to have more expertise people in this subject working for all the research units at UBI.

Some attendants mentioned that this workshop made them more conscious about the target groups of their communications, and the need for planning. Some mentioned the need to be more detail oriented when doing science communication, framing their speech to the specific audience for whom they are communicating with.

The audience of the workshop also stressed that this session was of extreme value to make them able and alert to better communicate their projects, and R&D results.

6. **What were the most important outcomes and reactions received in your pilot-testing of the toolkit?**

Participant were provided with a set of practical and interactive collaborative tools, with small pieces of theoretical concepts in the form of brief knowledge pills (video animation or small presentations).

Additionally , participants had the opportunity to focus on design principles for stakeholder engagement, namely organisational, values and practices.

• The organisational principles are to clarify the objectives of stakeholder engagement; embed stakeholder engagement in a framework or model of research use; identify the necessary resources for stakeholder engagement; put in place plans for organisational learning and rewarding of effective stakeholder engagement; and to recognise that some stakeholders have the potential to play a key role.

• The principles relating to values are to foster shared commitment to the values and objectives of stakeholder engagement in the project team; share understanding that stakeholder engagement is often about more than individuals; encourage individual stakeholders and their organisations to value engagement; recognise potential tension between productivity and inclusion; and to generate a shared commitment to sustained and continuous stakeholder engagement.

- The principles relating to practices, the principles suggest that it is important to plan stakeholder engagement activity as part of the research programme of work; build flexibility within the research process to accommodate engagement and the outcomes of engagement; consider how input from stakeholders can be gathered systematically to meet objectives; consider how input from stakeholders can be collated, analysed and used; and to recognise that identification and involvement of stakeholders is an iterative and ongoing process.

7. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates, etc?**

Reactions were very good and positive, with a high involvement of the participants in the practical exercise.

8. **To what extent is your HEI integrating these tools on how to communicate research and research results? Is your HEI committed and developing the redesign of new lessons for their students on the topic?**

A bottom up approach will be follow in this case. Implementation of the tools will start at the level of specific departments and research group. They have received proper training, will apply the tools in their activities in the coming months, will gain practical experience and will evolve to tools and practices develop in a continuous improvement process.

2.3 UNIVPM

1. **How would you describe your HEI in the way you are communicating research results?**

   The leaders of the Working Group, representing UNIVPM, has communicated the results in different ways; also the communication department has applied usual channel to spread the topic. First of all, we share the same vision within the project working group, so each member can report the results to his colleagues, research fellows and PhD students; in fact, the members of the WG belong to different departments or research groups, but they also have different roles in the department, at different relevance level too.

   In addition, each professor, during his course, could inform the students of the results and let them aware of what "becoming a Civic University" means, for them and for the society itself.

2. **How are students being prepared to be societal focused researchers and able of promoting social engagement in their future work, by your HEI?**

   UNIVPM has several faculties in the whole athenaeum and each of them certainly has a different approach to prepare student for the society and their future work. Being more specific, the faculty of engineering of UNIVPM is a point of reference in that field for the Adriatic regions, so it has the goal to provide an appropriate all-around academic education, whit particular focus on the local manufacturing excellences. In fact, most of our graduated students became engineers in a local company and they need a strong background. In that sense, we've always tried to bring companies closer to the academic system, and vice versa, but, thanks to the idea developed in R&I Loop, it can be easier and more effective.

   UNIVPM is used to arrange seminars or training sessions with local companies' specialist or ex-students, once they become employed in a remarkable job; all the students are encouraged to attend, in order to develop a *civic oriented attitude*, that helps them in their first job experience.

   Other initiatives are elaborated during the courses; in fact, loads of professors has introduced some "business simulation games", which force students to develop entrepreneurial mechanisms, that support and boost the entrepreneurial mindset of academy, making them active in designing solutions targeted at societal problems, and thus on creating companies, generating wealth for the region and creating qualified employment.

   In addition, the faculty encourages students to undertake internships at some companies, sometimes with a period of time in a foreign country, thanks to the Erasmus+ program or Campus Word.

3. **To what extent is your HEI integrating these tools on how to communicate research and research results? Is your HEI committed and developing the redesign of new lessons for their students on the topic?**

   UNIVPM has been taking hybrid courses from several years, both in class and online with Teams. This didactical method is very well suited to communicate the mission of R&I Loop program and its assimilated innovations. In fact, a civic university must necessarily be high tech and aligned with the current trends.

   More specifically the tools used during the Pilot testing are very useful, although a few of them are not exactly fitting for engineering. In fact, we already knew some tools and the

professor used to take advantage of SWOT matrix or Pyramid of Purpose (e.g.). On the other way some tools have never been used before, but thanks to the explanation and the practical exercises made, we can start integrating the whole toolkit in the didactical offer. The professors are introducing collaborative games or tasks to force students in developing a solution-oriented attitude. The brainstorming sessions that they can create can provide efficient outputs with the tools given.

Moreover, also in the research activities could be very effective using the tools, to organize the projects, to plan the tasks and to reach the results.

2.4 JGU

1. **How would you describe your HEI in the way you are communicating research results?**
   a. The HEI has a separate department for research communication and a press office that prepares central messages on research and teaching for various target groups.
   b. Open Access publications are financially supported throughout the university
   c. There are also several pilot projects to promote the transparent communication of research results.
   d. JGU is represented on many research platforms and social media (i.e., Twitter, Facebook, Instagram) to publicize current research projects and results.
   e. Best practices at JGU (e.g., Mainz Research Alliance and FORTHEM) show further approaches to disseminating research results in a way that is appropriate for different target groups.

2. **How are students being prepared to be societal focused researchers and able of promoting social engagement in their future work, by your HEI?**
   a. There is a wide variety of projects in various departments and at individual institutes at JGU that are integrated into research and teaching and serve precisely this perspective.
   b. The integration of research into teaching is a central element at the JGU.

3. **What were the most important outcomes and reactions received in your pilot-testing of the toolkit?**
   a. There are already a lot of existing activities at our HEI in the area of civic and societal engagement we were not aware of before.
   b. There are several aspirations to fulfil a so called "service to society" and enhance the civic and societal engagement of our HEI, especially as part of becoming a "European University".
   c. (New) contacts and networks were being established between relevant stakeholders of our HEI.
   d. It would be necessary to implement the toolkit within the already existing activities and eventually combine and strategically align the respective processes and outcomes.

4. **What were the key reactions in your pilot testing to the supporting materials such as tools, templates, etc?**
   a. Tools:
      i. The attendees who participated at the workshops found the tools and methodologies interesting and user-friendly.
      ii. Missing scientific validation was criticized by most of the participants.
      iii. The tools and methodologies were viewed simply as "management concepts" without a sufficient theoretical and methodological foundation.
      iv. The adaptivity of such tools for a HEI (pursuing other goals, having other standards and a different self-conception than economical businesses) was questioned.
      v. The tools lead to several ideas and provide a starting-point for interesting brainstorming.
      vi. The participants criticized that it remains unclear how a practical strategy could be derived.
   b. Templates and users' manual with guidelines:
      i. The templates were evaluated as clear and user-friendly.
      ii. The participants criticized that there were still too many templates and some of them, e.g., the fishbone diagram as well as the triple layer canvas, were too detailed.
      iii. The users' manual with guidelines was evaluated as too detailed and long.
      iv. A management summary outlining the most important aspects would have been beneficial.

      v. The main concern of the provided material is that it provides several ideas, however the further steps remained unclear.
      vi. Participants were wondering about the impact the material would have on future practical decisions.

5. **To what extent is your HEI integrating these tools on how to communicate research and research results? Is your HEI committed and developing the redesign of new lessons for their students on the topic?**
   a. This issue is currently still in process, and a coordinated strategy with other ongoing activities needs to be worked out.