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INTEGER

INTERCONNECTING 4 HELIX INNOVATION ECOSYSTEMS IN EUROPEAN REGIONS

D4.1 FIRST DRAFT OF COMPREHENSIVE 3H AND 4H INTEGRATION INNOVATION ECOSYSTEMS MODEL

Call and Topic: HORIZON-EIE-2022-CONNECT-01-02

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EXECUTIVE SUMMARY

The aim of this document is to describe the process of defining a comprehensive quadruple helix model within the new generation of living labs that the INTEGER project is piloting and experimenting with active & relevant actors from the quadruple helix spectrum from the three European regions (Catalonia, Krakow and Hamburg) from INTEGER project .

The basic principles, structure, modules and content of the model have gone through a process of co-creation that started with the project partners and was extended early in the project to key actors from the quadruple helix spectrum, identified by the partners from the three European regions, mentioned above. The engagement of these stakeholders resulted into a deeper involvement from some as they volunteered to actively participate and offer their systemic approach, their in-depth knowledge, background and expertise in the field of health and wellbeing and in their experience working in co-creation processes with actors from the different helices.

The model went through an iterative procedure of co-creation, re-defining, contrasting and experimentation in real settings from the model event, to the Col·laborathons at each of the regions. It is being tested with on-site and on-line interventions so that this model can best serve its stakeholders and ecosystem beneficiaries.

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SYMBOLS, ABBREVIATIONS AND ACRONYMS

4H	Quadruple Helix (Academia, Business, Civil Society and Public Administration)
D	Deliverable
EU	European Union
INTEGER	Interconnecting 4 Helix Innovation Ecosystems in European Regions
NGO	Non-Governmental Organisation
SDGs	Sustainable Development Goals
T	Task
UN	United Nations
WP	Work-Package

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1 INTRODUCTION

1.1 Structure of the deliverable

The INTEGER model is being developed under the auspices of a 2-year Horizon Europe project titled: **Interconnecting 4 Helix Innovation Ecosystems in European Regions** and funded under the Call for Proposal: HORIZON-EIE-2022-CONNECT-01.

It is based on the implementation of a quadruple helix community approach that involves existing knowledge, emerging initiatives and ongoing projects, all of which are focused on the field of health and well-being.

Through the actions carried out during the project, INTEGER seeks to establish a systemic process that facilitates the co-creation of solutions among the agents of the quadruple helix, in response to the challenges identified at the regional level. The model is characterised by being scalable, flexible and adaptable.

The need to create an Innovative ecosystems model arises from the situation in Europe that is pushing a lot of initiatives to innovate, however the issue is that innovation is not reaching the market. In this sense, users are being involved but with no success. Following years of different project implementations, the need of a model to create a new generation of living labs (Collaboratories, 2018) arised. Currently there are many different types of labs innovating however they are missing the links/network and the capacity to generate any impact. The creation of this model is expected to change this situation by providing a model that can serve the ecosystem beyond the 2 years duration of the project

Henceforth, this document pursues two aims and therefore it is structured to reflect those aims:

- To explain the strategies and actions that we are following to understand how a quadruple helix model can be developed, co-designed, tested and refined. This process is explained in Part 1 of the document.
- To extract the lessons learned and apply it to the structure and content of the INTEGER model (transversal and concrete modules). This is reflected in Part 2.

1.2 Synergies with other tasks and deliverables

This deliverable is linked with the D3.1. Comprehensive plan for capacity building activities and training pills delivery, as the central module of the model is precisely the capacity building of the facilitators or col·labers. The two processes have been developed in an encompassing way. Connections with WP2 (*Learning for 4H*[1] *Collaboratory co-creation*) and WP3 (*Regional Innovation Ecosystems as Collaboratory Testbeds*) for the study visits and the Col·laborathons, with WP4 (*INTEGER 4H Model & EU Healthy Living Collaboratory Deployment*) for the definition of the model and with WP5 (*Engagement, outreach and impact maximisation*) for the

[1] Quadruple Helix (Academia, Business, Civil Society and Public Administration)

dissemination and communication activities related with the co-creation and engagement actions during the process.

1.3 Grounding principles of the model

INTEGER is grounded on the urgent need to speed up a third social transition, in addition to the green and digital transitions more widely recognised by the international community. Innovation, or a European industry-led twin transition aiming for climate neutrality and digital leadership, cannot be supported without a firm, responsive, responsible social and environmental engagement. Neither is it possible to tackle a JUST triple transition which is not firmly rooted in worthwhile human development, underpinned by the Sustainable Development Goals (SDGs). And none of these transitions can go separately and/or isolated; they all need to intertwine around the notion of (more, firmer, and determined) just transition(Caro-Gonzalez, 2023).

> 'European society is presented as a huge "co-laboratory" for this "all for one, one for all" boundaryless triple transition to respond to the urgent radical changes demanded by humanity and by the planet. The chapter proposes a radically new vision to pursue a non-explored transformative way to ideate, design, develop, and deliver science, innovation, and collaboration through experimentation and learning, and throughout multi-stakeholder engagement from the n-helix spectrum.' (Caro-Gonzalez, 2023)

2 PROCESS FOLLOWED TO DESIGN AND DEFINE THE INTEGER 4H MODEL

The process developed to define the model had the following steps:

2.1 Initial vision of the project

INTEGER aims to harness innovation by providing a tested model to expedite the integration of social innovation actors and digital business entrepreneurial hubs across three EU regions (Catalonia, Krakow and Hamburg) from the INTEGER project. Additionally, it serves as a testbed for assessing scalability and replicability in diverse regions and sectors, contributing to the implementation of effective policy actions, unveiling the genuine interest of the participating actors from the 4H and the definition of joining endeavours, further development of ideas, Minimum Viable products and Services and possible joint future projects. Physical and digital spaces have been tailored-designed to generate collaborative spaces based on trust, transparency and shared long–term visions.

2.2 Exchange of what exists in the regions

2.2.1 Study visit in Catalonia (13 and 14 February, 2023)

These workshops served as platforms for collaborative responses to the challenges posed by these critical issues. The Catalonian study visit not only provided a platform for collaboration but also exemplified the principles of innovation ecosystems and the 4 Helix model. By identifying common objectives, listening and understanding each other and clarifying collaboration outputs to address common needs and challenges, stakeholders could collectively address the intricate common challenges of ageing. The focus extends beyond immediate results, stressing the importance of long-term societal collaboration and impacts. As stakeholders across academia, industry, government and society come together, the quadruple helix approach can drive innovative solutions, foster adaptability and secure the resources necessary to enhance active and healthy ageing. The ultimate aim is to break the direct link between ageing and fragility, promoting early disease detection and effective treatment and fostering integrated care that bridges health and social aspects— a confirmation to the power of the 4 Helix collaboration in addressing the complexities of ageing.

Furthermore, the session highlighted the pivotal roles of government, universities and educational programmes in fostering more innovative and vibrant ecosystems. As we navigate the complex landscape of nutrition and healthy living, these insights will serve as guiding principles in our journey towards improved well-being for all.

The five out of the many initiatives generated in Catalonia were explained during the 4 helix co-creation session that showcased our col·laboratory model. Many other interesting initiatives came up showing the pathway for social-business-technology-driven innovations to create minimum viable products and services to respond to real social needs and challenges.

2.2.2 Study visit in Krakow (28 and 29 March, 2023)

The main aim of the study visit in Krakow was to put in contact key social and digital business innovators who play a significant role and are vital actors in healthy living, active ageing policy and social exclusion areas in Krakow. The study visit to the Malopolska region was a learning opportunity, namely through the inspirational cases, the co-creation sessions, and the answer to ‘cross the bridge’: from Social Innovation to reach more sustainable business models and from the business side to understand the added value of social innovation.

The first need and main message after the workshop was that a common definition of 'social innovation' is needed before partners from different institutions/innovation areas can start working together. Because each separate partner/stakeholder has a different interpretation of the concept, therefore it is difficult to look for solutions if we do not have a common language. This is one of the learnings that has been later taken into consideration when drafting the INTEGER model.

Each partner looks at 'social innovation' from a different perspective, and it is important to understand the context, including opportunities, but also the obstacles of dealing with transfer of social innovations further.

From the perspective of the partners, 'social innovation' is understood at a different level - the successive stages of:

1. finding solutions;
2. Implementing the solutions in real practice, with piloting, testing and evaluation;

3. Promoting new solutions and sharing solutions beyond the group involved in the process.

E.g. innovators think about solving implementation problems - one group has developed a 'good practice guide' for reaching decision makers and being heard.

Institutions are responsible for implementation and solving the problems/challenges which innovators face – the institutions look for sources of funding, but also sustainability of solutions in the future (further funding for implementation, not just as one-off start-up grants).

One of the raised questions was the copyright issues. As social innovations are usually free – by default in many cases it should be offered for free– and if they are replicable it is not clear how the legal aspects of copying them from one region to the other will be working. Hence, a conclusion is the importance of paying attention to the process of open access and open innovation.

There is a need to gather needs, expectations and which ones are important and how the cooperation could be developed in the same common fields/domains. There are always lessons to be learnt from each partner (good practices, but also failures shared for others to be avoided), either regional or per area. Although the innovations are different, those involved in this process need to establish together a joint platform of what and how they understand social innovation itself and the whole process before starting discussions and collaborations, otherwise, it will not work effectively.

Looking for joint synergies in 4H - building bridges between the target and the partners, it is also necessary to look for common threads of agreement, common needs, common problems and this is also a topic for discussion on the level of this same understanding under the term 'social innovation'.

By bringing together people working, developing and implementing social innovation, the different perspectives allow overcoming the silo thinking and acting by bringing in collaboration with all interested stakeholders.

2.2.3 Study visit in Hamburg (30 and 31 March, 2023)

In the rapidly evolving landscape of health innovation, startups play a pivotal role in shaping the future of healthcare and wellbeing. Initiatives like the Health Innovation Port (HIP) demonstrate the power of collaboration and the support necessary to nurture innovative solutions in the field.

Integrated regional care models such as *Optimedis*, through its notion of an "INTEGRATOR," exemplify how co-creation and the establishment of 4 Helix innovation ecosystems can drive meaningful change in healthcare. Their value-based business models, focusing on long-term benefits, underscore the potential for sustainable and impactful transformations in the healthcare sector. Similarly, the Sustainable Health Working Group showcases the importance of proactive engagement in public health and the necessity for interdisciplinary discussions in creating solutions that address the specific health needs of local communities. These efforts underscore the value of community-driven health solutions.

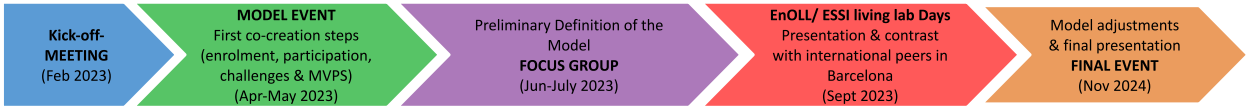
Moreover, UKE, Phillips and their involvement in research and innovative healthcare technology underlines the importance of research and technological advancements in healthcare. The utilisation of 3D printing and wearable technology in personalised medicine represents a forward-looking approach that can significantly improve patient care and treatment efficacy.

INTEGER, as a connecting force, has already demonstrated its ability to foster collaboration and amplify the impact of various health-focused organisations. By promoting inclusivity and the integration of social elements. INTEGER's role in designing workshops for European conferences can further advance the cause of health innovation, building on the principles of co-creation and interconnected, 4 Helix innovation ecosystems.

Collectively, these initiatives and organisations embody the essence of health innovation, illustrating the potential for transformative change in healthcare and providing a glimpse into a future where cutting-edge technology, collaboration and community engagement are central to promoting health and wellbeing.

The INTEGER deliverable D3.3 Report on main features of the 3 regional Innovation Ecosystem Models (URV) collects the main features of the 3 regional ecosystems, as an initial starting point of analysis of the model and the ecosystem.

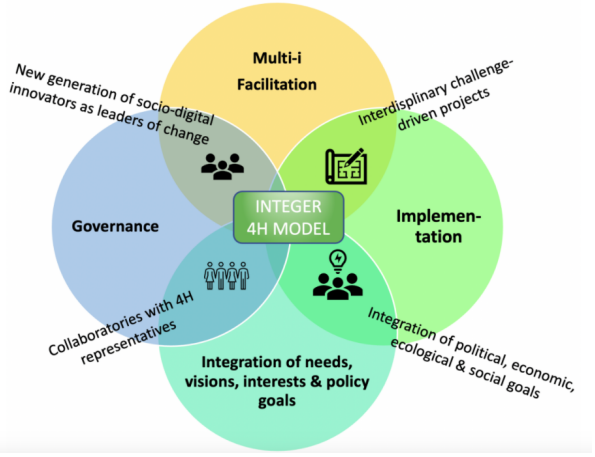
REPRESENTATION OF THE PROCESS OVER TIME



3 FIRST INTEGER 4H COMPREHENSIVE MODEL

3.1 Model description

The Quadruple Helix (4H) model of innovation dynamics and development is based on the Triple (3H) Helix model. This suggests that innovation occurs within three main helixes: Government, Academia and Industry, which includes both individuals and groups. However, the 4H model also adds a few elements:



First, the main novelty of the quadruple helix is that it includes a fourth group of actors (the fourth helix), which is conformed by the social actors (NGOs, foundations, citizens' associations, citizens at individual level).

Second, the Quadruple Helix treats new ideas as a combination or blending of existing ones derived from previous research and/or collaborative/competitive endeavours. Thirdly, The Quadruple Helix focuses on how knowledge is transferred from one generation to another in order for new ideas to emerge. Finally, we must understand that this model does not suggest

that convergence happens spontaneously, but rather it results from an intense collaboration between these three spheres and with the involvement of four or more types of actors via intense interdependent activities such as cooperative learning or exchange programmes between academia and industry (Aggarwal and Sindakis 2022).

3.2 First Model Components

After the preliminary results from the 3 study visits a first approach of the model was designed, composed of 7 Modules, the last one being transversal, as it would be developed throughout the whole process:

- Module 0: Basic Model Features
- Module 1: Co-creation Process
- Module 2: Facilitation
- Module 3: Structure, Governance and Leadership
- Module 4: Socio-digital Design for Change
- Module 5: Financing Schemes
- Module 6: Impact
- Module 7: Sustainability

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MODULE 0: BASIC MODEL FEATURES

- **Socio-digital design for change** → Paradigm shift to build bi-directional social-business understanding and collaboration
- **Creativity and co-creation**

TIMELINE OF THE INITIATIVE (Level of maturity, duration and long-term vision)

MODULE 7. SUSTAINABILITY

Facilitator

Financing
Co-creation of new projects

MODULE 1: CO-CREATION PROCESS

- Enrolment and selection of stakeholders
- Participation
- Building trust
- Identification of needs and interests

MODULE 2: FACILITATION

- Capacity building
- Training pills
- Training social innovators and entrepreneurs on business models
- How all this is governed
- How different types of finance are sought for different needs

MODULE 3: STRUCTURE, GOVERNANCE AND LEADERSHIP

- Need of a new profile of active coordinators (the Col·labers)
- Need of a new profile of active coordinators (the Col·labers) to build bridges
- Tools and platforms to meet and collaborate

MODULE 6. IMPACT

- Monitoring and evaluation indicators
- Long term vision, anticipation

MODULE 4: SOCIO-DIGITAL DESIGN FOR CHANGE

- Innovations
- MVPS
- Knowledge exchange and transfer: Paradigm shift to build the bi-directional understanding and collaboration

MODULE 5: FINANCING SCHEMES

- Identification of different public and private financing schemes aligned with the identified needs and interests

MODULE 7. Sustainability

3.3 Module 0: Basic Model Features

The foundational features of a co-creative model are rooted in fostering collaborative innovation and inclusive problem-solving. This model places a premium on active and equal participation from diverse stakeholders, incorporating their perspectives and expertise. Open communication channels, transparent information-sharing, and a culture of mutual respect are fundamental elements. The model often embraces interactive processes, encouraging continuous feedback loops and adjustments. Facilitation techniques that promote creativity and collective ideation are integral, ensuring a dynamic exchange of ideas and a collection of information that can benefit the co-creation of the model. Furthermore, the co-creative model typically prioritises flexibility and adaptability, acknowledging the evolving nature of projects and the need for responsiveness. Overall, the basic features of a co-creative model revolve around promoting and creating an environment where diverse voices converge harmoniously to generate innovative and collectively endorsed solutions and do it in a way that the stakeholders acknowledge the added value of this process.

3.4 Module 1: Co-creation Process

For the successful development of a process of co-creation, the first step is the identification and enrollment of the agents selected. After that, welcoming is key so that the sense of community begins to emerge, where people feel that they are beginning to be part of a rewarding community that supports and recognizes each other's value in the ecosystem.

After the enrollment and welcoming process, participation is one of the essential points for co-creation promoting dialogue and exchange of ideas. Thus, facilitators must be in a continuous search for agents to attract the community to add more dynamic and be as more inclusive as possible. Once we have a good number of representative and engaged stakeholders, we can activate the dynamisation and creation of content.

Trust is essential in terms of building the work of the Col·laber,. He or she must be a person who is very close to the stakeholders and who knows well their interests, actions and potential areas of action. In addition, he/she must be able to communicate at all times and show the benefits of generating dynamics, as a win-win principle that makes all parties benefit from the process. In fact, in Deliverable *3.1 Comprehensive plan for capacity building activities and training pills delivery* the curriculum of the Col·laber is established, where these aspects that are key to the whole facilitation process are emphasised[2].

It is the task of the Col·laber to determine the interests and needs of the agent so that the co-creation process tackles a win-win strategy.

3.5 Module 2: Facilitation

As in any collaborative model, the figure of the facilitator is essential. The role of the facilitator is to facilitate and promote the collaboration and active participation of the different actors, having as its objective to guide the co-creation process, stimulate the generation of synergies and collaborations and ensure that the established goals are achieved. His ability to facilitate interaction, manage conflicts and promote creativity is essential for the birth of new projects.

[2] The Deliverable 3.1 will available at: https://integercollab.eu/resources/

Therefore, the capacity building part is one of the areas in which we are placing the greatest emphasis, due to the importance of training the Col·labers, as these actions will add an extra layer of interest that will contribute to the dynamization of the whole process. Thus, the facilitators must be dynamic and engage the community, as well as know well the points where they can be of help to maximise the potential of both the platform and the stakeholders for the co-creation process.

Regarding co-creation elements that foster facilitation, we can highlight inspirational materials, follow-ups on discussions, definition of new groups and initiatives, or the creation of the right atmosphere for people to exchange and trust each other, offering tools to move forward together in a better understanding of concepts and vision (roadmap, ideas sharing).

Moreover, the training pills tailored-made for Col·labers can be really helpful so they can transfer this knowledge to focus groups and other activities or workshops among the community. In fact, a facilitator's corner on the platform where the co-creation is happening can be a good resource so Col·labers can check new ways of fostering synergies when needed.

3.6 Module 3: Structure, Governance and Leadership

Although we have well defined the figure of Col·laber in the *3.1 Comprehensive plan for capacity building activities and training pills delivery*, the model follows a structure where the facilitator is in charge of dynamisation, but there is no fixed leadership, since in order for co-creation to generate interesting dynamics, it is important that there are different roles within a group and that these vary, so that everyone can step up and adapts to the different situations that arise throughout the process in the best interest of the expected outcomes

In this way, it is important to ensure that there is always the conscience that this is a win-win relationship, where the users of the community see and feel the benefits of belonging to a partnership and exchanging inputs at all times. The interest in participating must always be mutual, so that everyone wins, promoting more engagement and attracting new stakeholders..

3.7 Module 4: Socio-digital Design for Change

Socio-digital design for change signifies a transformative shift, fostering collaboration between social and business innovations. Anchored in a Theory of Change, it prioritises a negotiated shared vision, integrating needs and impact from the project's start. The approach emphasises a 'learning by doing' process, allowing for an interactive, flexible, and adaptable methodology. Recognizing the dynamic nature of our world, it provides room for manoeuvring and adjustments throughout the project, ensuring responsiveness to evolving contexts and to the feedback and inputs from its stakeholders..

3.8 Module 5: Financing Schemes

Ways to explain the added value of social innovations and the need to finance them: how to make investors interested in funding ‘not so profitable projects in monetary terms’ —>Social Return on Investment / by getting business driven innovation actors aware of the existence and importance of social innovations and the other way around.

Once the model is validated with the help of public financing from the European Union, it will be essential that it can survive independently. Two phases are proposed:

- **Consolidation stage**: as a first stage that could be solved with regional public aid;
- **Growth stage**: as a second stage in wish income must come from the users themselves.

The valuable contribution that the INTEGER 4 H platform will bring to the agents will be the key for them to choose to give consideration. Therefore, the business model of the platform will consist of an annual subscription model.

3.9 Module 6: Impact

Impact is a key factor for the development of Horizon Europe proposals, that goes hand in hand with innovation, science, decision making, outcomes and results. In addition, the inclusion of impact has evolved in recent years, so that now we focus on real impact based on return of investment and linked to the UN global agenda and the Social Development Goals (SDG's). In fact, as the European Commission states, impact is understood as the degree in which a project can be beneficial for society (Caro González, 2022).

Therefore, impact is directly linked to long-term vision, as our project has to, apart from bringing a social benefit, be replicable, have scalability and durability in the future for the benefit of other regions. Thus, there is a clear relationship with sustainability, since for a project to last over time there has to be sustainability behind it, as the Module 7 will explain in further detail.

3.10 Module 7: Sustainability

The INTEGER model is being developed based on the implementation of a community approach that is based on gathering existing knowledge, emerging initiatives and ongoing projects, all of which are focused on social well-being, to be put into light and deploy from here synergies and exchanges between stakeholders. This model is characterised by being scalable, flexible and adaptable. Through the actions carried out during the project, we seek to establish a systemic process that facilitates the co-creation of solutions among the agents of the quadruple helix, in response to the challenges identified at the regional level.

In order to ensure its continuity, work is being done on the selection of three individuals for each region (Catalonia, Hamburg and Krakow), known as "col·labers". These col·labers will be part of one or more of the ecosystem helices and will play expert roles in the model, acting as prescribers and facilitators to ensure that the model can work in the long term.

We believe that the figure of "collaborators" is essential to safeguard the continuity of the model. However, we have also identified other essential aspects that will contribute to nurture and maintain the model over time, allowing it to function independently and sustainably.In this context, as sustainability will be transversal in the process, we find some topics to be dealt with while the co-creation is taking place, and some others that will take place after the process:

- While the co-creation is taking place
    - Political willingness and alignment
    - Financing
    - Long-term
    - Committed participants
    - Perseverance

    - Time and resources
    - Alignment of interests, visions and search for solutions to specific challenges
- After the co-creation process
    - Financing long term
    - Scalability, adaptability to different contexts and topics
    - Resources

The true success of the project is translated into the creation of new projects. In order to favour the creation of these projects, it is essential, first of all, to establish a meeting place between the different stakeholders. This step is already created with the INTEGER 4 H platform. In order for the platform to fulfil the established purpose, it must have the following characteristics:

- **Accessibility and ease of use**

The platform must be accessible to all participants and have an intuitive interface that makes it easy to access and use. It should be easy to navigate and have clear tools and functionality to encourage interaction and collaboration.

- **Effective communication**

The platform must facilitate effective communication between the several participants. It integrates messaging functions, discussion forums, chats, virtual meetings and other communication tools in real time that allow participants to exchange ideas, opinions and knowledge in a fluid and frequent manner.

- **Sharing information and resources**

The platform has the possibility of sharing information, documents, data and resources relevant to co-creation. It must allow collaboration in real time in the creation and edition of content, facilitating access and shared management of resources.

- **Project and task management**

It allows the creation and assignment of tasks, the monitoring of progress, the definition of milestones and the visualisation of the results obtained. This helps maintain a clear and organised focus on achieving set goals.

- **Fostering creativity and innovation**

The platform includes tools and methodologies that encourage the generation of creative and innovative ideas. You can offer lateral thinking techniques, brainstorming, surveys or spaces for collaboration in the design and development of joint solutions

- **Data collection and proposal of solutions through artificial intelligence**

The platform is able to collect data from different platform players and regions to identify patterns and trends regarding the issues they are facing. Using AI, the platform is able to provide recommendations and solutions based on experience. These recommendations can be available in several forms, namely as practical guides, case studies, reports or resources.

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- **Security and privacy**

The platform ensures and guarantees the security and privacy of the data shared by the participants.

- **Monitoring and evaluation**

The facilitator carries out evaluation techniques of the process and the results obtained. It should allow collecting feedback from the participants, performing data analysis and generating reports that allow evaluating the impact and effectiveness of the projects generated. The constant verifications of the process allows the project to recalibrate the platform, as well as the process, activities and any other issue that may impact on the foreseen results and goals.

3.11 Work Plan and key events when building the INTEGER 4H Comprehensive Model

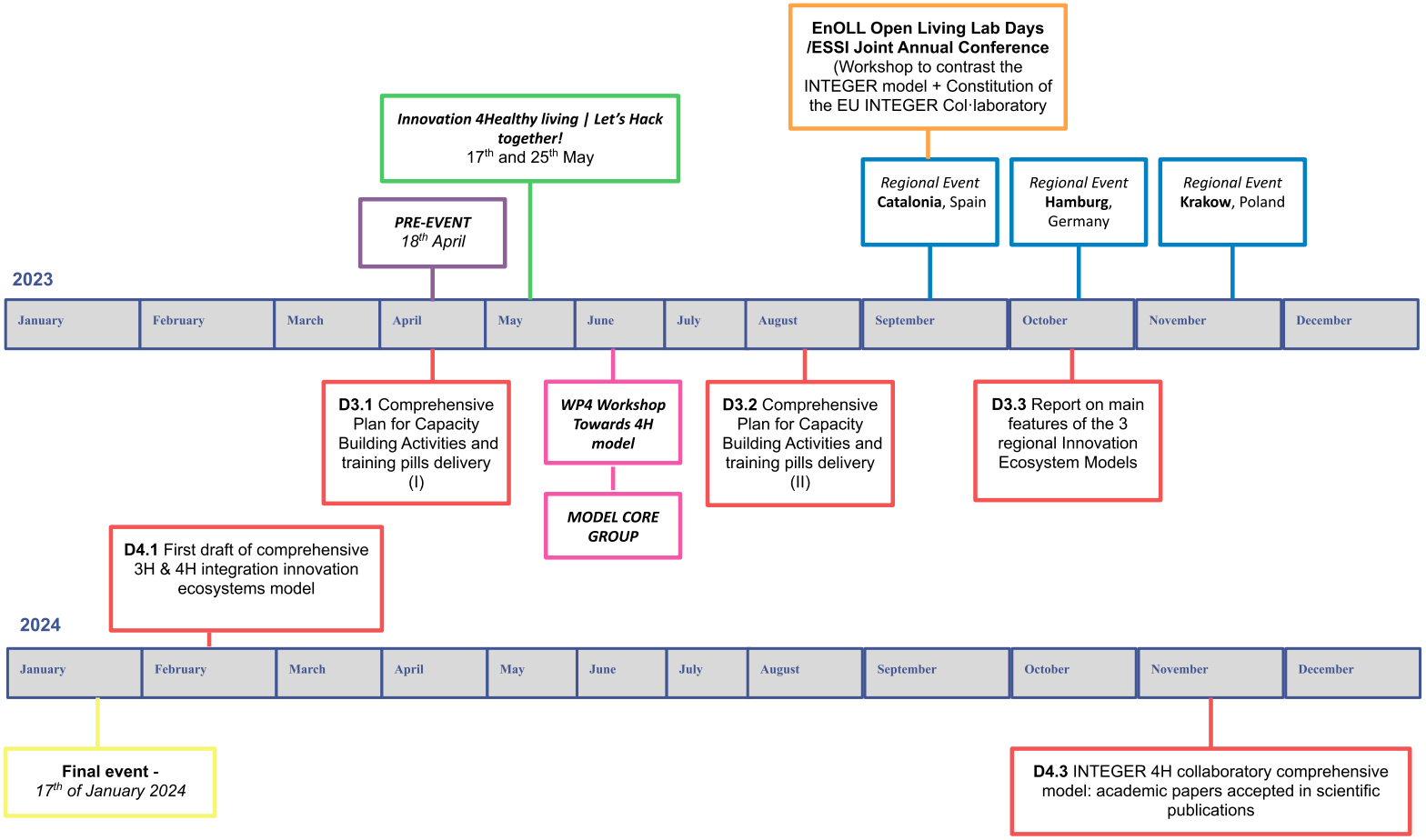


Figure 1. Workplan of main events and Deliverables related to the definition of the INTEGER 4H Comprehensive Model

4 EVENTS ON TheGlocal.network

The EU-INTEGER Col·laboratory on Health and Wellbeing has a digital space (https://theglocal.network/company/smart-integer) to co-create solutions by combining busi-techno-social innovations that respond to health and wellbeing challenges and needs identified by communities, regions, sectors on a European or global scale. The power of this EU-INTEGER Col·laboratory is to have the capacity to unite commitments, needs, capacities and interests of different actors to solve the problems identified and that cannot be solved by an organisation, a helix, a sector... alone, given their complexity.

Within Theglocal.network platform, a dedicated section, the Facilitator's corner, was established for Col·labers to ease access and collaboration among them and use various training materials. The initial training, Training pill 1: The Col·laber and its role as facilitator elucidates the indispensable role of facilitators in collaborative models. The primary objective is to facilitate and encourage active participation, guiding co-creation, fostering synergies, managing conflicts, and ensuring the attainment of established objectives. The facilitator's prowess in promoting interaction, conflict resolution, and creativity proves pivotal in the initiation of novel projects.The main aim is to facilitate and promote the collaboration and active participation of the different actors.

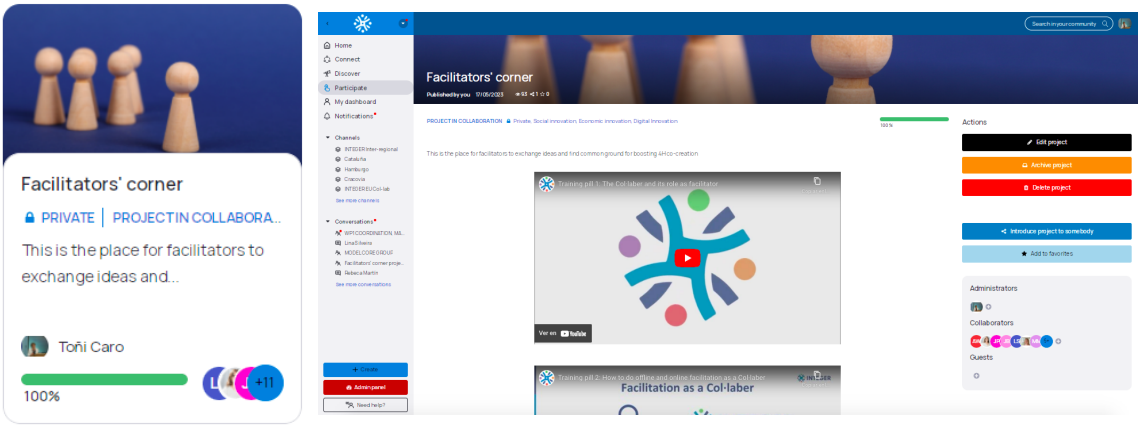


Figure 2. The Facilitator's corner on Theglocal.network platform.

Individuals are encouraged to engage actively, extending beyond the facilitator or INTEGER responsible. Exploring emerging methods that align with the evolution and needs of the communities in the regions. Model event

This was the first event developed on the INTEGER - Theglocal.network platform, where for the first time different actors from the 4 helices shared ideas in a space of co-creation. In this event, called "Let's Hack Together", we presented 3 different challenges so that the selected stakeholders could choose the one that most identified with their objectives and challenges.

The enrollment was done manually and the stakeholders were divided into the following challenges:

1. **How to Channel the unused potential of ageing population in the regions**
2. **Improve the lack of transparency and promote a better communication among sectors and actors**

3. Health and Wellness for life. Specific but aligned actions to improve life quality

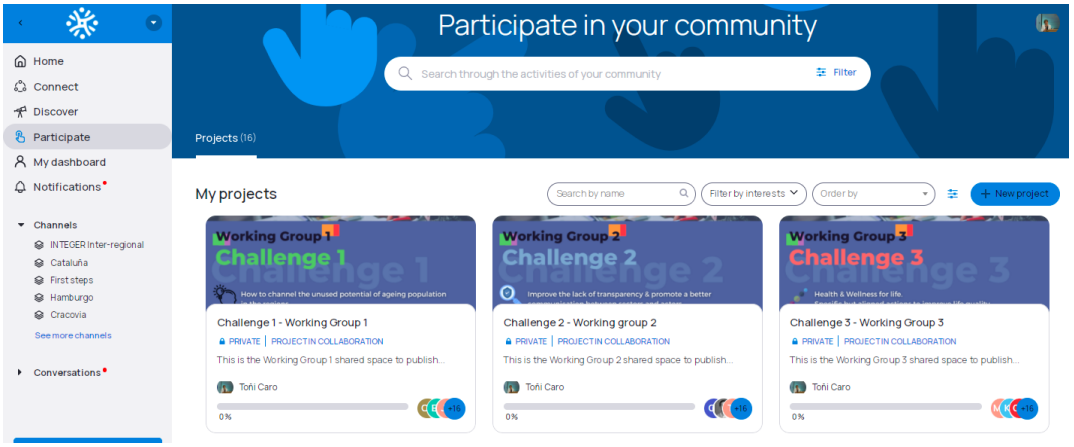


Figure 1. The 3 working groups on Theglocal.network landing page.

4.1 Focus group (Model Core group)

4.1.1 Organisation and selection of actors for the group

- Explain how we organise the focus group and how we select the people with the representation of the group of agents
- Check the minutes of the sessions
- Explain the groups in theglocal.network

For the model, a co-creation space has been specifically created on the platform, which we have named "Model Core Group". In this working group, consortium actors interested in participating were able to exchange insights on the Model with the aim of developing it together.

In this space, participants could share documents, insights and the possibility of having a conversation, so that co-creation was collected in the same place for later consultation.

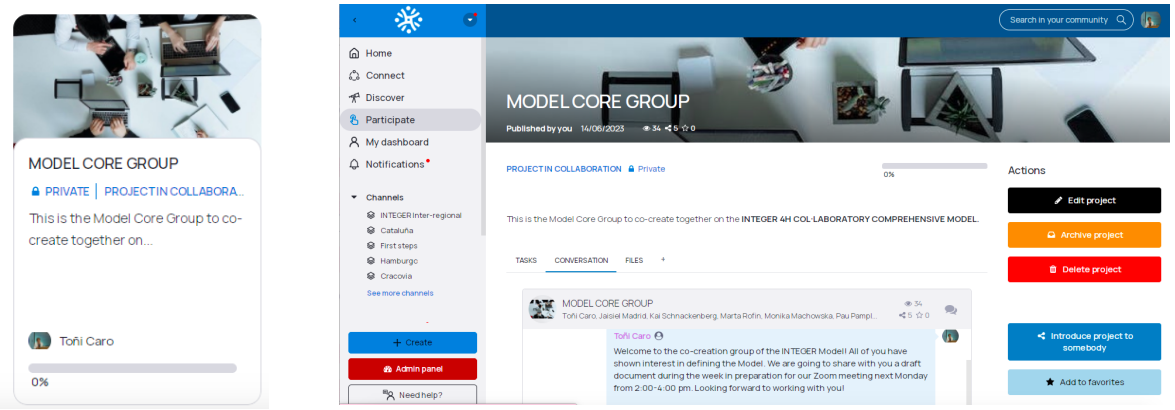


Figure 3. The Model Core group on Theglocal.network platform.

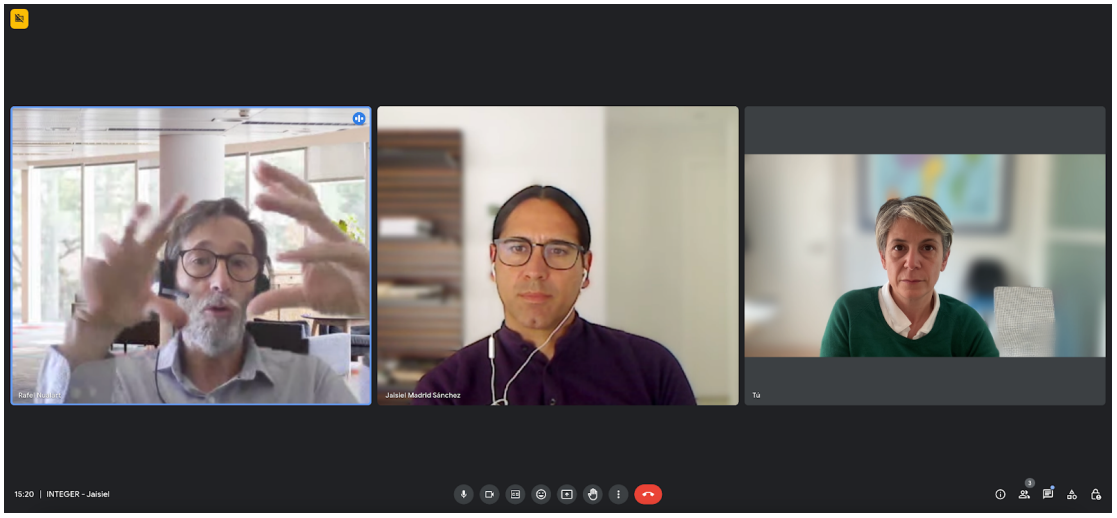


Figure 4. Co-creation in the INTEGER Focus Group

4.2 Col·laboratory model workshop

On 21st September 2023 representatives of the INTEGER project consortium organised a workshop: ***Towards a new generation of Living Labs: Contrasting the INTEGER 4 Helix Col·laborative Model*** during the European Network of Living Labs (EnOLL) Open Living Lab Days in Barcelona.

The workshop, led by Monika Machowska from Krakow Technology Park (KPT), began with an introduction to the INTEGER project. Toni Caro from i2CAT, Digital Society Technology Unit and Margherita Bacigalupo from the Joint Research Institute presented the INTEGER 4helix Col·laboratory Model and the open discovery process from the European Commission perspective. The workshop explored multi-stakeholder engagement in innovation ecosystems, followed by four best practices for building synergies among social, technology, and business innovators. It also had presentations by INTEGER project partners and Sung-eun Lim from Living Lab South Korea provided diverse perspectives.

A co-creation session, moderated by Machowska and Agnieszka Włodarczyk-Gębik gather opinions on the quadruple helix col·laboratory model's necessity and how the INTEGER's model could be beneficial. The numerous participants in the session engaged in an interesting debate that resulted in valuable feedback on the INTEGER Col·laboratory Model.



Figure 5. Toñi Caro presenting at the INTEGER Workshop

5 REGIONAL COL·LABORATHONS

As part of the process the consortium launched the EU-INTEGER Col·laboratory on Health and Wellbeing was officially launched in Barcelona during the ENoLL Open Living Lab Days. The Col·laboratory is a neologism to express the next generation of quadruple or n-helix living labs that we are co-designing within the project. Col·laboratories are cooperative instruments based on a peer-to-peer approach between social, digital-technological and entrepreneurial (busi-techno-social) innovations. An instrument was launched for signing the expression of interest to participate in the EU-INTEGER Col·laboratory: Terms of Reference.

To register on the platform and invite other agents

5 REGIONAL COL·LABORATHONS

After the submission of the deliverable D2.2 Collaborathon Report & Exploitation Plan (F6S), three Col·laborathons took place from September to November 2023, witn a final event celebrated on January 17th, 2024, all of them have been key for the definition of the INTEGER 4 H Comprehensive Model. These have been a great example of co-creation by design, by doing, by engaging actors from the different helices and the different types of soci-busi-tech innovations! towards the new generation of quadruple helix ecosystems.



Figure 6. Working groups in the INTEGER Caborathon in Catalonia

The deliverable D3.4 Three (3) Col·laborathons Final Reports (F6S) will collect the main features of the 3 regional Col·laborathons.

For the model construction, the conclusions of the lessons learned presented in the final event reflects that the model's creation has followed a dynamic and adaptive approach, fostering creativity, innovation and inclusivity across diverse regions and sectors. The creation of the INTEGER model has been marked by the recognition of diverse maturity levels across different regions. Although the project commenced with uniform goals and methodologies, the implementation of Col·laborathons underscored the need for adaptability. To efficiently guide regions through the process at various maturity stages, a high level of flexibility was deemed essential. The emphasis on diverse teams, spanning a wide age range, proved instrumental in enhancing creativity.

Methodologies such as SOAR, the Social Innovation Canvas and Design Thinking have played crucial roles. Besides, sharing the design thinking methodology facilitated a common language and better comprehension of presented visions and goals. The AHAthon's collaborative format, incorporating leisure breaks, fostered creative thinking and offered practical tools for structured idea development.

The value of expert talks, particularly insights on financing impact projects and business strategies for social impact, have enriched the events and the process.

Moreover, the Col·laborathons have created opportunities for social innovations by bringing together people from diverse sectors with diverse by aligned goals around the field of health and wellbeing. The key focus has been addressing challenges related to ageing populations, particularly in urban settings. This showcased the societal relevance of the event and opened avenues for synergies and new perspectives.

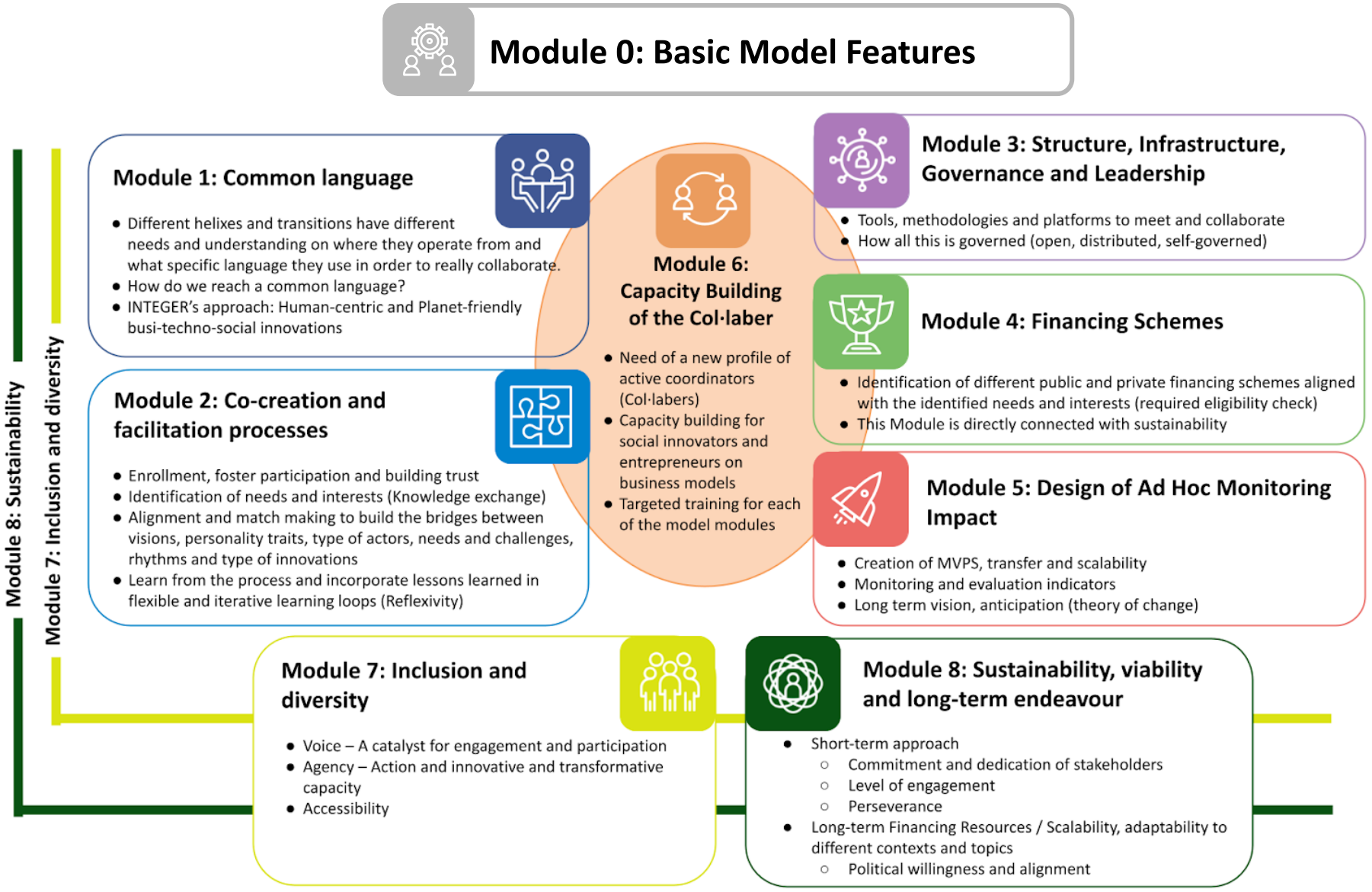
Collaborative efforts between stakeholders and INTEGER regional partners have resulted in innovative ideas, some earmarked for implementation as pilot projects and a better understanding of the maturity level of each ecosystem, as well as its needs and potentialities.

Inclusivity has underscored the importance of reaching all segments of the population, especially those with limited technology access and incorporating their insights and perspectives have contributed to more inclusive solutions.

6 TOWARDS THE FINAL INTEGER 4H COL·LABORATORY COMPREHENSIVE MODEL

After exhaustive analysis of all characteristics, key events and key points, we have been able to significantly refine and specify the final model. This thorough review process has allowed us not only to accurately narrow down every aspect, but also to implement substantial improvements that will strengthen the quality and effectiveness of the model. In addition, the final version, the result of this continuous improvement, will be delivered to our clients in the near future (previewed in November 2024). This achievement represents an important milestone in the development, highlighting our commitment to excellence and the delivery of a final product that meets established expectations and requirements.

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Module 0: Basic Model Features
Module 1: Common language
Different helixes and transitions have different needs and understanding on where they operate from and what specific language they use in order to really collaborate.
How do we reach a common language?
INTEGER's approach: Human-centric and Planet-friendly busi-techno-social innovations
Module 2: Co-creation and facilitation processes
Enrollment, foster participation and building trust
Identification of needs and interests (Knowledge exchange)
Alignment and match making to build the bridges between visions, personality traits, type of actors, needs and challenges, rhythms and type of innovations
Learn from the process and incorporate lessons learned in flexible and iterative learning loops (Reflexivity)
Module 6: Capacity Building of the Col·laber
Need of a new profile of active coordinators (Col·labers)
Capacity building for social innovators and entrepreneurs on business models
Targeted training for each of the model modules
Module 3: Structure, Infrastructure, Governance and Leadership
Tools, methodologies and platforms to meet and collaborate
How all this is governed (open, distributed, self-governed)
Module 4: Financing Schemes
Identification of different public and private financing schemes aligned with the identified needs and interests (required eligibility check)
This Module is directly connected with sustainability
Module 5: Design of Ad Hoc Monitoring Impact
Creation of MVPS, transfer and scalability
Monitoring and evaluation indicators
Long term vision, anticipation (theory of change)
Module 7: Inclusion and diversity
Voice – A catalyst for engagement and participation
Agency – Action and innovative and transformative capacity
Accessibility
Module 8: Sustainability, viability and long-term endeavour
Short-term approach
Commitment and dedication of stakeholders
Level of engagement
Perseverance
Long-term Financing Resources / Scalability, adaptability to different contexts and topics
Political willingness and alignment
Module 8: Sustainability
Module 7: Inclusion and diversity

7 CONCLUSIONS

The realisation of the INTEGER project highlights the importance of the co-creation process in shaping a robust and comprehensive 4-helix model for the bi-directional dynamics between social-driven and business-driven innovations. The very essence of this model's development lies in the active participation and integration of actors representing the quadruple helix of the social ecosystems, promoting and prioritising synergies between academia, social professionals, practitioners, policy-makers and citizens.

The co-creation process has become INTEGER's cornerstone, facilitating iterative feedback loops that propel a constant learning journey. The collaborative effort has not only enriched the model but has also fostered a dynamic environment where diverse perspectives are converging. Learning exchanges

The modules within the model stand as a testbed to this amalgamation of viewpoints, meticulously reflecting the collective knowledge as a result of a joint work that originated from various backgrounds working on a common ecosystem.

Academic rigour, practical insights, policy considerations and the nuanced understanding of citizens, all found expression within the model's design for a more effective implementation, a more complete perspective of the ecosystem, the design of an inclusive vision and an improved impact and sustainability.

The nature of the co-creation process has allowed for the refinement of the model, ensuring that each module encapsulates the richness of these multifaceted perspectives. This adaptive approach, informed by the continuous learning from stakeholders across the quadruple helix, has been instrumental in creating a model that is becoming robust as it reflects the real-world complexities inherent in socio-digital innovations.

In essence, the co-creation process boosted by the INTEGER project stands as a paradigm for collaborative innovation, demonstrating that the collective intelligence drawn from diverse regional contexts, backgrounds and helices leads to a more resilient, adaptable and effective model. This transformative journey evidences that the success of the INTEGER project lies in the inclusive and dynamic co-creation methodology that feeds its evolution, ensuring its relevance and applicability across different regions and sectors.

The final model is slated for submission by November 30, 2024: Deliverable 4.3, "INTEGER 4H Collaboratory Comprehensive Model: Academic Papers Accepted in Scientific Publications. The complete model is set to be compiled and submitted to an open-access scientific journal in spring 2024. Following acceptance and feedback from reviewers, the paper will undergo finalisation and be submitted for publication.

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[3] D2.2 Collaborathon Report & Exploitation Plan (F6S)
[4] D3.1. Comprehensive plan for capacity building activities and training pills delivery
[5] D3.3 Report on main features of the 3 regional Innovation Ecosystem Models (URV)