

# INVEST FOR EXCELLENCE IN REGIONAL SUSTAINABILITY

## INVEST4EXCELLENCE



### STAKEHOLDER INVOLVEMENT TOOL

Deliverable D4.2

**Main author:** Karelia University of Applied Sciences  
**Date:** 30/09/2022  
**Dissemination level:** Public

**Disclaimer excluding Agency responsibility:**  
Responsibility for the information and views set out in this document lies entirely with the authors.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035815.



### Document factsheet

<b>Project duration</b>	01.10.2021 – 30.09.2024
<b>Project website</b>	<a href="https://www.invest4excellence.eu/">https://www.invest4excellence.eu/</a>
<b>Document title</b>	Deliverable D4.2
<b>Work Package</b>	WP4
<b>Task</b>	Task 4.2 Stakeholder Involvement Tool
<b>Version</b>	1.1
<b>Version date</b>	09/11/2022
<b>Main Authors</b>	Kristiina Väänänen and Tiina Muhonen, Karelia UAS
<b>Type of deliverable</b>	R (Report)
<b>Dissemination level</b>	Public

### Document history

Version	Date	Main modification	Partner
Draft 1	02/09/2022	The first draft of the literature review	Karelia UAS
Draft 2	26/09/2022	Stakeholder Involvement Tool for comments	Karelia UAS, commented by partners
Final 1.0	30/09/2022	The final version of the deliverable to be submitted	Karelia UAS
Final 1.1	09/11/2022	Chapter 2.5 and the corresponding content to the form added	Karelia UAS

### ABBREVIATIONS

<b>CRM</b>	Customer Relationship Management
<b>CSR</b>	Corporate Social Responsibility
<b>CSRD</b>	Corporate Sustainable Responsibility Directive
<b>HEI</b>	Higher Education Institution
<b>I4E</b>	INVEST4EXCELLENCE project
<b>NDA</b>	Non-disclosure Agreement
<b>QHM</b>	Quadruple Helix Model
<b>RDI</b>	Research, Development and Innovation
<b>R&amp;I</b>	Research and Innovation
<b>SDGs</b>	Sustainable Development Goals (United Nations)
<b>SMEs</b>	Small and Medium-sized Enterprises

## PROJECT PARTNERS

<b>SUA</b>	Slovak University of Agriculture in Nitra (Project Coordinator)
<b>UARD</b>	University of Agribusiness and Rural Development
<b>UTH</b>	University of Thessaly
<b>KARELIA UAS</b>	Karelia University of Applied Sciences
<b>VHL</b>	Van Hall Larenstein University of Applied Sciences

## PUBLISHABLE SUMMARY

### Abstract

This work is part of the INVEST4EXCELLENCE in the regional development -project, funded by Horizon2020, a joint effort of five European higher education institutions. It is a part of the Work Package four: Capacity Building Tools, aiming to enhance the research competences and skills of the INVEST EU-Alliance staff, especially the staff and Ph.D. students working with research, development and innovation.

This work aims to help INVEST4EXCELLENCE partners to utilize the maximum potential of the INVEST Living Labs through stakeholder involvement. With this paper, we are creating a stakeholder involvement tool with reasoned guidance to our partners on evaluating the current situation, setting measurable goals, and benchmarking the best practices from other partners. The key goals of this task are to ensure that Quadruple Helix Model (QHM), research-to-business approach and promotion of innovation are established in each INVEST Living Lab. With this paper, we also increase the knowledge of the competences of our staff, and search for needs and opportunities for additional training. Besides I4E partners, this paper could be utilized by other consortiums, who are looking for ways to improve their stakeholder involvement in a situation, where there are not only shared goals and values, but also several partner- or region-specific agendas.

The methodology consists of four parts; 1.) a literature review to search for the best practices on how to conduct and develop stakeholder involvement in Living Labs, 2.) a questionnaire to partners to find out the current situation, possible challenges, and the goals of the partners, 3.) the practical Stakeholder Involvement Tool itself, and 4.) the template for annual evaluation and development of the process. The tool is based on the goals of our project, the goals set by each partner, and suggestions from the scientific literature. All the partners will develop their work not only by following the commonly agreed goals (e.g. Quadruple Helix Model), but also by emphasising the needs of their regions and Living Labs.

**Keywords** Stakeholder involvement, stakeholder engagement, Living Lab, Quadruple Helix

### Acknowledgements

The INVEST FOR EXCELLENCE IN REGIONAL SUSTAINABILITY (INVEST4EXCELLENCE) project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035815. Responsibility for the information and views set out in this document lies entirely with the authors.

## TABLE OF CONTENTS

1 INTRODUCTION .....	6
PART 1: STAKEHOLDER INVOLVEMENT TOOL FOR INVEST LIVING LABS .....	8
Structure of the tool.....	8
1.1 Designing principles for INVEST Living Labs, and the commonly agreed goals for stakeholder involvement.....	8
1.2 The Stakeholder Involvement Tool – a practical guide for implementation.....	9
1.3 Existing best practices in stakeholder involvement from partner institutions .....	16
1.3.1 Best practice from Karelia University of Applied Sciences.....	16
1.3.2 Best practice from Slovak University of Agriculture in Nitra.....	17
1.3.3 Best practice from University of Agribusiness and Rural Development .....	18
1.3.4 Best practice from Van Hall Larenstein University of Applied Sciences.....	19
PART 2 SUPPORTING INFORMATION FOR CREATING THE STAKEHOLDER INVOLVEMENT TOOL.....	21
2 LITERATURE REVIEW.....	21
2.1 Scope of the literature review.....	21
2.2 Development of stakeholder involvement in Living Labs .....	21
2.2.1 Stakeholder involvement .....	21
2.2.2 Living Labs.....	22
2.3 Analysing the stakeholder involvement and innovation in INVEST Living Labs .....	24
2.4 Research-to-business approach in Living Labs .....	27
2.5 Sustainability and Responsibility of RDI actions in Living Labs .....	28
3 QUESTIONNAIRE TO I4E PARTNERS.....	31
4 RESULTS .....	31
4.1 Stakeholder involvement in partner institutions .....	31
4.2 Competences relevant for stakeholder involvement.....	32
4.3 Utilization of the Quadruple Helix Model in stakeholder involvement relevant to INVEST Living Labs.....	34
4.4 Enhancing innovation and research-to-business approach in stakeholder involvement .....	34
4.5 Goals for improving stakeholder involvement.....	34
4.6 Challenges and threats in stakeholder involvement.....	35
5 CONCLUSIONS .....	36
REFERENCES .....	37
APPENDICES.....	39
Appendix 1 Study protocol .....	39
1 Introduction.....	39
2 Methodology .....	41

---

3 Research report and deliverable .....	43
References .....	44
Appendix 2 Questionnaire to partner institutions .....	45

## 1 INTRODUCTION

The aim of the INVEST4EXCELLENCE Work Package 4: INVEST4EXCELLENCE Capacity Building tools is to strengthen the human capital enabling brain circulation and gender balance by developing research competences and skills of the INVEST RDI staff and PhD students.

The specific aim of Deliverable D4.2 Stakeholder Involvement Tool is to determine how the INVEST Living Labs are in on-going and productive dialogue with the surrounding society. The main focus is to elaborate explicitly on how the research-to-business approach can be effectively and systematically applied, to analyse what kinds of involvement tools are available and, based on those, to elaborate relevant tool for the INVEST learning community.

The stakeholder involvement tool describes the process and suggested methods of dialogue and promotion of innovations in INVEST Living Labs. It also provides a scheme for regular evaluation. The Stakeholder Involvement Tool aims to find the best practices in stakeholder involvement relevant to Living Labs to achieve the INVEST strategic priorities of a) strengthening the links between education and research and/or innovation, and b) strengthening engagement with key stakeholders. In addition, it is closely tied to the aims of the Horizon2020: Involvement of citizens, civil society and public/city authorities in research and innovation. As an output, the stakeholder involvement tool is planned to be a conceptualised tool, where all partners contribute to the tool development, impact assessment and establishment of the results into RDI practices.

The task leader Karelia UAS is responsible for the development process and conceptualisation of the tool. All partners contribute to the tool development, impact assessment and establishment of the results into RDI practises. The quality of the tool will be guaranteed by a systematic and reasoned development and evaluation process, which is described below.

The following methods have been used to create the Deliverable 4.2:

1. Literature review on peer-reviewed, scientific publications on stakeholder involvement in Living Labs
2. Questionnaire for all the partners focused on processes, methods and goals for stakeholder involvement relevant to Living Labs
3. Data analysis
4. Publishing the Stakeholder Involvement Tool
5. Establishment of the tool into RDI practices, and regular evaluation

The study protocol is described in detail in **Appendix 1**, Study protocol.

**Notion to the readers:** Parts 1 and 2 of the stakeholder involvement tool can be read separately. Part 1 consists of a short practical guide that helps I4E partners to enhance their stakeholder involvement. Part 2 consists of the reasoning behind the chosen methods and processes, and a more detailed overview on the results we received from the study conducted in all the I4E partner institutions.

**PART 1**

**Stakeholder  
Involvement Tool**  
for  
**INVEST Living Labs**



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035815



## PART 1: STAKEHOLDER INVOLVEMENT TOOL FOR INVEST LIVING LABS

### Structure of the tool

The stakeholder involvement tool for INVEST Living Labs is a practical tool for I4E partners to help us fully utilize all the potential of our regional living labs, by a) improving our stakeholder involvement and b) fostering all the aspects of Quadruple Helix Model. Part 1 of the tool is the practical handbook consisting of the following sections:

1. Designing principles of INVEST Living Labs and commonly agreed goals for stakeholder involvement.
2. A practical tool to guide partner HEIs in their stakeholder involvement, which comprises of:
  - a. Evaluating the current situation
  - b. Setting up the goals, and the means to achieve the set goals for the year 2023
  - c. Setting up an annual evaluation process to improve our work and further develop the tool.
3. Presentation of the already-existing best practices in Stakeholder Involvement from I4E partner institutions, that others may adopt as a part of their development.

The definition of Living Labs by Westerlund and Leminen (2011) has been already used in the context of INVEST Living Labs (INVEST Deliverable 3.19. Knowledge Agenda's Regional Living Labs): *“Physical regions or virtual realities where stakeholders from public-private-people partnerships (4Ps) of firms, public agencies, universities, institutes, and users all collaborating for creation, prototyping, validating, and testing of new technologies, services, products and systems in real-life contexts”*. Since the composition and the purpose of the Living Labs were already discussed in detail in the previous deliverables in I4E and INVEST, this deliverable will focus on the stakeholder involvement in Living Labs.

Part 2 presents the supporting materials and reasoning behind the tool, including a description of the study protocol, a short literature review, and the results from the questionnaire answered by all the I4E partners. The details of the study are as appendices at the end of this document.

### 1.1 Designing principles for INVEST Living Labs, and the commonly agreed goals for stakeholder involvement

The designing principles for INVEST Living Labs are presented in I4E Deliverable 3.1 The Transition Towards Regional Sustainable Futures: A Position Paper on Exploring a Transdisciplinary View on the Invest Living Lab Approach, as follows:

1. Fostering inclusive quadruple helix' participation
2. Creating authentic learning environments that focus on sustainable future
3. Stimulating reflexivity in learning and innovation for sustainability
4. Facilitating interaction, knowledge sharing and open system management

In the I4E proposal, we have stated the following aims for this deliverable 4.2: explicit elaboration on how the research-to-business approach can be effectively and systematically applied, analysis on what kinds of stakeholder involvement tools are available and, based on those, elaboration on relevant tools for the INVEST learning community.

In relation to Horizon2020 work programme 2018–2020, we have promised to involve the citizens, civil society and public/city authorities in research and innovation by being in permanent contact with their stakeholder groups. This Stakeholder Involvement Tool will help in reaching this goal by describing the

process and methods of dialogue and promotion of innovations. An important notion is that the stakeholders will be regularly asked to provide their feedback on relevant issues.

The work in the D4.2 will support reaching the following KPIs set for I4E: KPI 3.2 (Having partners in INVEST establishment in a form of a joint venture (number of partners) with at least a 10 % increase on the total number of starting partners), KPI 4.1 (Increased entrepreneurial activity in each region of consortium universities by at least 2 new attempts) and KPI 4.3 (Evidence of increased productivity at industry or regional/rural development due to research and innovations (at least two paradigms by each partner)).

The shared goals in the Stakeholder Involvement Tool are extracted from the I4E proposal, Living Lab deliverables in INVEST and I4E, and the commonly shared views of the I4E partners.

## 1.2 The Stakeholder Involvement Tool – a practical guide for implementation

For detailed information on the reasoning behind the chosen approaches in this section, please read Part 2 of the deliverable.

**The stakeholder involvement tool is being built following the process of:**

1. Analysing the current situation in each I4E partner institution
2. Setting shared goals and objectives (broad goal, and the first measurable steps for the next 12 months), including:
  - Fostering Quadruple Helix Model (1<sup>st</sup> design principle of INVEST Living Labs)
  - Enhancing research-to-business approach (goal of the deliverable)
  - Promoting innovation (goal of the deliverable)
  - Developing the stakeholder involvement competence of our staff, as a part of the RDI online training tool (building towards the deliverable D4.4)
  - Benchmarking the best practices from other I4E partners (goal of the deliverable)
3. Setting partner/region-specific goals and objectives (broad goal, and the first measurable steps for the next 12 months)
4. Identifying the key stakeholders (already conducted within the INVEST project)
5. Defining the level of the key stakeholders (already at least partly conducted within the INVEST project)
6. Finding possibilities for new ways of working, based on the experiences of other partners
7. Evaluating possible risks and threats, and taking actions to prevent them from happening
8. Annual progress evaluation and sharing the success stories, and setting new goals
9. Annual feedback collecting from the stakeholders

**The practical process** of establishing, conducting, and evaluating the tool, following the protocol:

1. The task leader, **Karelia UAS** will annually prepare questionnaires and templates for all the partners to:
  - a. Analyse the current situation
  - b. collect feedback from the stakeholders
  - c. set the goals for the upcoming year

2. Based on the previous documents, **Karelia UAS** will present the current state of the work in stakeholder involvement to the I4E Steering Group and to INVEST Research and Innovation Board
3. **All the partners** will choose a representative to implement these actions, and prepare the previously mentioned documents in a timely manner

The form for setting the goals and determining the measurable outcomes and responsibilities is found below. A separate working Microsoft Word document, pre-filled by Karelia UAS form, will be shared with the partners in I4E Basecamp environment. In the form, we have added references to key documents. And based on the questionnaire to all partners, and the ongoing work with I4E D5.1 Dissemination Activities Plan and Framework, we have made suggestions on possible factors to be considered and included in the individual stakeholder involvement tools of the partners.

**STAKEHOLDER INVOLVEMENT TOOL**

A form to support the development of stakeholder involvement

This form is used as a tool that supports INVEST4EXCELLENCE partners in the development and evaluation of stakeholder involvement in INVEST Living Labs. It is divided into two sections; **SECTION A** which includes the content relevant to all partners, and **SECTION B**, where partners will indicate the most important goals for them, and state the actions that will be conducted to meet the goals.

The rationale behind this form is found on the Invest4EXCELLENCE Deliverable 4.2 Stakeholder Involvement Tool, which also contains the full list of references.

Each partner is required to create their institutional plan based on this template. All documents will be saved in a relevant Basecamp folder. The initial plan and the annual evaluations will be presented to the INVEST4EXCELLENCE Steering Group, to Living Labs coordinators, and to the INVEST R&I Board meetings.

**Note!** The task leader Karelia UAS will provide you with a pre-filled version of this form that is based on the answers you have already delivered in a questionnaire on September 2022.

**SECTION A. Setting and evaluating the shared goals and objectives**

**Deadline 31.12.2022**

Please note that the Task 4.2 leader Karelia UAS will pre-fill this section for you based on your earlier responses, and shares the pre-filled form with you by 1.12.2022.

Partner institution		Person filling the form	
Date		E-mail address	

**Quadruple Helix Model<sup>1,2</sup>**

**Goal:** If the partner did not give themselves a full score (5) in stakeholder involvement (questionnaire 9/2022), they will improve the situation by setting at least one goal for the year 2023.

1. What is the current level of involving stakeholders in your INVEST Living Labs, based on the Quadruple Helix Model <sup>1,2</sup> (score 1–5)?	1 = we don't have any stakeholders in our Living Labs at the moment, 5 = We are fully operating with the Quadruple Helix Model, and with committed, active partners	
2. What is your measurable goal for improving the QHM for the year 2023, and the actions to meet the goal?		
3. Who is responsible for that?		
4. How will the successful delivery of goals be evaluated?		

<sup>1</sup> Carayannes and Campbell 2009.

<sup>2</sup> If partners have not yet identified and evaluated their stakeholders, please look into the references: Ståhlbörst et al. 2015, Mitchell et al. 1997, IAP2 2014, and the examples from other partners (section 3.1). **Quadruple Helix Model** (Carayannes and Campbell, 2009): includes the dimensions of university, industry, government and public sector.

<p><b>Enhancing research-to-business approach</b> (commonly agreed goal in the I4E proposal)  <b>Goal:</b> If the partners regard this as an area they would need to improve on, they are asked to set at least one goal for this section. If a partner regards their performance is excellent in this area, they are asked to share their practices with others in detail.</p>	
5. How are you fostering research-to-business approach in your Living Labs? <sup>3</sup>	
6. What are the measurable goals and concrete actions for attaining them for the year 2023?	
7. Who is responsible for taking the action?	
8. How will the successful delivery of goals be evaluated?	
<p><b>Promotion of innovations</b> (commonly agreed goal in the I4E proposal)<sup>4,5,6</sup>  <b>Goal:</b> If the partners feel this as an area they would need to improve on, they are asked to set at least one goal for this section. If their performance is excellent in this area on this, they are asked to share their practices with others in detail.</p>	
9. How are you promoting innovation in your Living Labs? <sup>2,3</sup>	
10. What are the measurable goals and concrete actions for attaining them for the year 2023?	
11. Who is responsible for taking the action?	
12. How will the successful delivery of goals be evaluated?	

<sup>3</sup> Fleaca et al. 2017: Detailed suggestion for a process to enhance research-to-business approach.

<sup>4</sup> Compagnucci et al. 2021.

### Ten methods and tools to foster user engagement in innovation processes.

Workshops	Focus groups	Open discussion forums	Collaboration platforms	Idea submission systems
Conference calls	Online questionnaires	Face-to-face questionnaires	Laboratories on entrepreneurship and innovation	Business idea contests

Source: Compagnucci et al. (2021)

<sup>5</sup>Leminen & Westerlud 2017. Framework for categorizing living labs based on innovation process

<sup>6</sup> Leminen et al. 2012. Characteristics of different types of living labs

<b>Staff competences</b> (building towards the D4.4) <b>Goal:</b> The evaluation of competences of your staff that are relevant in stakeholder involvement and to set the goals for competence development in the upcoming years. This information can be used for building the RDI Online Training Tool (D4.4).		
13. What are the key competences relevant in the area of stakeholder involvement that your staff already has? <sup>7</sup>		
13. What are the most important competences that you wish I4E could help your staff to develop? <sup>7</sup>	1.	
	2.	
	3.	
14. Is there a competence or a group of competences on which you could train the staff of other I4E partners?		
15. If yes, who could be contacted on the matter?	Name	
	Email	

7

## Staff competences needed for Stakeholder Involvement in Living Labs

<p><b>Social interactions</b></p> <ul style="list-style-type: none"> <li>• Communication skills</li> <li>• Relationship-building capabilities</li> <li>• Social skills (e.g., the ability to understand the perspective of others)</li> <li>• Project management skills (e.g., the ability to motivate and encourage others)</li> <li>• Networking competences of the teachers (i.e., co-creation of innovations and case studies with stakeholders)</li> <li>• Knowledge of working in interdisciplinary teams</li> </ul>	<p><b>Entrepreneurship and business</b></p> <ul style="list-style-type: none"> <li>• Commercialization and marketing skills</li> <li>• Interdisciplinary teamwork (i.e. in industrial business administration)</li> <li>• Solid business acumen</li> <li>• Continuous education training possibilities for companies</li> <li>• Academic entrepreneurship skills</li> </ul>
<p><b>Research, development and Innovation</b></p> <ul style="list-style-type: none"> <li>• Knowledge of multi-disciplinary approaches</li> <li>• Attitude towards learning and development</li> <li>• Self-oriented and solution-focused thinking</li> <li>• Ability to work autonomously and acquire knowledge independently</li> <li>• New HEI-based funding models (i.e. scholarships) for students' practical training periods in companies</li> <li>• Co-creation skills</li> <li>• Piloting skills</li> <li>• Research skills</li> <li>• Open-mindedness</li> <li>• Boldness</li> </ul>	
<p><b>Sustainability</b></p> <ul style="list-style-type: none"> <li>• Knowledge of sustainability goals</li> <li>• Collaboration skills in sustainability development networks</li> <li>• Skills in sustainability practices in small and medium enterprises (SMEs)</li> <li>• Risk and crisis management skills</li> <li>• Understanding the models of sustainability supplier assessment</li> <li>• Understanding the Higher Education for Sustainable Development (HESD) practices</li> </ul>	<p><b>Technical or other specific competences</b></p> <ul style="list-style-type: none"> <li>• IT and technological skills</li> <li>• Digital skills and tools</li> <li>• Data analysis and processing skills</li> <li>• Knowledge of extended reality (XR), cyber security and data protection</li> </ul>

Source: INVEST4EXCELLENCE partners

<b>Sustainability and responsibility of your actions related to INVEST Living Labs</b>	
<b>Goal:</b> In the first year (2023): to evaluate, how sustainability and responsibility are implemented in the existing Living Labs actions. In the upcoming years: more detailed questionnaire and guidance is given, based on the results from the first year.	
16. Please describe, if and, how sustainability and responsibility is incorporated into your work with stakeholders in INVEST Living Labs <sup>8</sup>	

<sup>8</sup> Some examples on how to approach this question:

- Sepasi et al. (2019): Have you set social responsibility practices in your institution? Are you openly communicating them towards your stakeholders? How?
- I4E (2022, D4.1): Are you already evaluating or developing the sustainability-related competences of your RDI staff?
- Is the work of your INVEST Living Labs connected to UN Sustainable Development goals? If yes, to which goals, and how this is operated in practice? See below and from: <https://sdgs.un.org/goals>

## SUSTAINABLE DEVELOPMENT GOALS



<b>Benchmarking the best practices from other I4E partners (goal of the deliverable)</b>		
17. Could one of the best practices from other partners be utilized in your institution? <sup>9</sup>		
18. If yes, which one?		
19. If another partner would like to learn more about your practices, who would be the contact person?	Name	
	Email	

<sup>9</sup> Please see the full text of the deliverable D4.2 (Section 1.3) for detailed information on the best practices of the other I4E partners.

**Note!** This is the end of Section A. In Section B from the next page onwards, you will be asked to create goals that are most important for your institution

<b>SECTION B. Setting partner-specific goals and objectives</b>	
Please set 1–3 goals to improve the stakeholder involvement in your INVEST Living Labs, and describe the actions that you will conduct to meet those (preferably measurable) goals. <sup>10</sup>	
<b>Note!</b> Karelia UAS will send each partner a form with pre-filled information you added to the questionnaire on 9/2022. You may choose to keep those goals, or you may edit them as you consider fit.	
20. Your <b>first goal</b> and the actions to meet the goal? <sup>11</sup>	
21. Who is responsible for that?	
22. How will the successful delivery of the goal be evaluated?	
23. Your <b>second goal</b> and the actions to meet the goal?	
24. Who is responsible for that?	
25. How will the successful delivery of the goal be evaluated?	
26. Your <b>third goal</b> and the actions to meet the goal?	
27. Who is responsible for that?	
28. How will the successful delivery of the goal be evaluated?	

<sup>10</sup> Mahmoud et al. 2021. Stating the need to build the requirements case by case to fit to the needs of a specific Living Lab, or a region.

<sup>11</sup> For your inspiration, here is a list of goals that I4E partners have given for improving their stakeholder involvement to: reach the project objectives, improve cooperation, improve the motivation of stakeholders to work with students, create value for society, contribute to Sustainable Development goals, create real-life learning environments, keep up with the newest development, create clear process for working with stakeholders, support with the branding of INVEST Living Labs, and attract staff members to work in INVEST Living Labs.

### 1.3 Existing best practices in stakeholder involvement from partner institutions

All the I4E partners have been asked to provide an already existing stakeholder involvement process or protocol, that could be used for benchmarking. All the partners are asked to review these examples carefully to see if there are practices that could be adopted to their work as well. When and if suitable benchmarking cases are found, the task leader Karelia UAS will set up a **workshop** to introduce the practices in more detail.

#### 1.3.1 Best practice from Karelia University of Applied Sciences

In Karelia UAS, partnership management is considered as one of our organizational success factors. We have built a partnership model based on our strategy, and the partnerships are defined as bilateral and value-adding relationships. The partnerships of Karelia UAS are divided into strategic, key and operational work partnerships. We have determined goals, responsible actors, and systematic tools and practices of partnership management.

Partnerships associated most strongly with Living Labs in Karelia UAD are **operational work partnerships**. Operational work partnerships comprise an important network of both working life partners and educational organizations. They involve both national and international collaborators in Quadruple-Helix manner. Responsible personnel includes heads of education, supervising lecturers, research and development director and head of international affairs (international partners).

The modes of cooperation are e.g., providing internships and professional mobility opportunities as well as cooperation in the form of theses, training or RDI activities. Operational work partnerships have a narrower scope than key partnerships and are limited to a narrow sector of activity with an individual centre, training programme or project. Through INVEST Living Labs, we can make Karelia UAS better known especially among small businesses. The operational partners are not essential for the implementation of Karelia UAS strategy, but they strengthen the basic operations and add the regional impact of Karelia UAS. The partnership can be a short-term but mutually beneficial activity. Partners make a cooperation agreement. Examples of these agreements are practical training agreements, mobility agreements, or project agreements, with non-disclosure agreements included. Communication with operational work partnerships is often direct communication, but we also utilize our CRM and institutional newsletters in our contacts with the partners.

An example of a Living Labs partnership in Karelia UAS is a living lab case in INVEST CD9 specialisation studies. Principal lecturer, Dr. Lasse Okkonen launched a partnership with Pyhäselän Oma Osuuskunta building project (<https://www.omaon.fi/fi/pyhaselan-oma-kiinteisto-oy/>), where our Energy and environmental technology engineering students may participate in a real-life building project that aims for ecological living. These kinds of practical partnerships have also been created in other fields of studies, such as creating a Karelia Tarmo Living Lab involving both nursery and social science students, local health care organization Siun Sote, several local NGOs and the general public in its activities and research initiatives (e.g. groups related to memory problems).

For the use in Living Labs, we see it important that we have a clear process for determining the goals of the partnership, the means for cooperation and communication, the people responsible for cooperation and the way to evaluate cooperation regularly. This also helps us to build permanent connections with our stakeholders; with pre-set ways of working, we can reduce the risks related to personnel changes in one of the organizations, or the risks related to a situation, where the partners cannot see the value of the partnership for all the partners.

### **1.3.2 Best practice from Slovak University of Agriculture in Nitra**

Nitra region belongs to economically advanced regions and it is the most important region in agricultural production due to its landscape and water resources. It has a good scientific background with three universities and public and private research centres and organizations. The living lab is therefore focused on partnerships in agriculture and food production. Part of the university is an agricultural enterprise that provides a basic ground for cooperation with students in terms of agricultural production, support, and promotion. Furthermore, there is another part of the Living Lab developed in cooperation with beverage companies from the region and local municipalities. This part is focused on the production and promotion of local high-quality products with a focus on territorial identity, food security and impact on local connection, local economy, social interaction, cultural identity and heritage. The living lab is being developed within the Quadruple helix framework connected to sustainability issues as follows:

- Water, Energy Food and Environment Nexus
  - Support of sustainable agrobiodiversity and renewal of landscape architecture
  - Use of renewable energy (e.g. geothermal energy, biowaste energy)
  - Sustainable food systems (support of self-sufficiency in the food supply, support of local farmers, and food producers)
- Quality of Life and Entrepreneurship
  - Support of local employment through promoting local businesses (particular attention to the young generation)
  - Enhancement of territorial identity (traditional agricultural cultivation, local food, traditions, tourism)

The stakeholder involvement process started with defining common interests with partners on all levels of the quadruple helix. The focus was mainly on partners with previous research cooperation with SUA and its faculties. The various faculties can participate in different focus areas. Therefore we identified these possible partnerships:

- Municipalities can cooperate with the university in the area of conducting analyses, assessing regional development strategies or promoting agrotourism activities which can be boosted by local producers.
- Producers can cooperate with the university in research via practical assignments for students, analyses done in the university AgroBiotech research centre, and market research.
- The university provides the theoretical background for students. Some departments already have cooperation activities with municipalities. AgroBiotech can be further used to deepen the cooperation between academic and private environments.
- The university agricultural enterprise (VPP) can provide practical activities for students in areas of marketing, communication, promotion, production, etc.
- Other partners e.g., agencies, and regional label holders can cooperate in the area of regional development and promotion of regional products. The university already has some experience due to conducting case studies in the past.

To be able to evaluate the living lab there is a need in identifying measurable indicators. These can be e.g. the number of participating students, working hours per student or the number of carried out analyses. However, several challenges need to be overcome:

- Increasing the motivation of stakeholders.
- Defining the benefits in university-stakeholder agreements.

### **1.3.3 Best practice from University of Agribusiness and Rural Development**

The processes and protocols are very specific for UARD (tailor-made) and according to the national legislation in the field of higher education. They are also targeted towards the fulfilment of the accreditation requirements according to ESG - curricula development, guest-lecturing, needs analyses, etc. Special attention is paid to work on projects and stakeholders' involvement in them.

Stakeholder life-cycle management plan has the following steps:

#### 1. The first step is to set the motivation behind engagement:

- Setting and clarifying the specific objectives and priorities in engaging stakeholders
- Setting recognition criteria for stakeholders
- Setting boundaries
- Where does engagement fit in our organization? Setting the unit, department, activity, etc.

#### 2. Stakeholder identification:

- Initiating a stakeholder identification – Including everyone who has an interest in our objectives today and who may have one tomorrow
- identifying stakeholders' focus areas

#### 3. Stakeholder analysis (stakeholder's interests, influence, expertise, capacity, trust):

- What are stakeholders' interests?
- How will they be affected, and to what degree?
- What influence they could have?
- Does the stakeholder have information or expertise on the issue that could be helpful to the institution?
- To what degree is the stakeholder able to meet the commitments required for the entire engagement?
- What is the degree of mutual trust between the institution and the stakeholder?
- Relevance to the institution's strategy and priorities
- Any other information for a better understanding of stakeholders' priorities, needs and issues

#### 4. Strategy and priority

- What are the strategic reasons to engage with stakeholders?
- Which approaches to use to engage the stakeholders?
- What are our priority stakeholders?
- How can we further understand and qualify these stakeholders?

#### 5. Preparation and communication

- What are the appropriate formats for engaging specific stakeholders or stakeholder groups?
- Determine appropriate facilitation
- Communication and negotiations

#### 6. Signing a document of the engagement

#### 7. Action plan

#### 8. Monitoring and reporting

#### **1.3.4 Best practice from Van Hall Larenstein University of Applied Sciences**

Our process for stakeholder involvement follows the pattern below, and it always starts with a stakeholder analysis, including the interests and influence diagram.

Our approach is based on the ABCD Roadmap: <https://naturalstep.ca/abcd>:

- A. Based on in-depth interviews with stakeholders and developing a common vision of the future (methodology: storytelling),
- B. analysis of the present situation (Based on the approach by Elinor Ostrom)
- C. develop innovations together with stakeholders; decide on what to develop, what to change, what to stop (transition theory Geels et al.)
- D. cost/benefit analysis and scenario development with stakeholders.

# PART 2

Supporting information  
for creating the

# Stakeholder Involvement Tool



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035815



## **PART 2 SUPPORTING INFORMATION FOR CREATING THE STAKEHOLDER INVOLVEMENT TOOL**

### **2 LITERATURE REVIEW**

#### **2.1 Scope of the literature review**

This literature review is conducted to a) ensure that all the INVEST4EXCELLENCE (I4E) partners share the same knowledge on the stakeholder involvement relevant for developing the INVEST Living Labs, and b) to gather sufficient and focused information for analysing and developing stakeholder involvement. This is crucial for us to ensure the quality and the expedience of the questions that the partners are asked within this task and deliverable. In addition, the data gathered from the literature review will be used for analysing the researched data.

In this compact review, we have studied recent scientific, peer-reviewed articles focusing on a) the development of stakeholder involvement relevant to Living Labs and b) how to enhance innovation through the Living Labs. In addition to scientific publications, the previous I4E and INVEST deliverables have been used as background material.

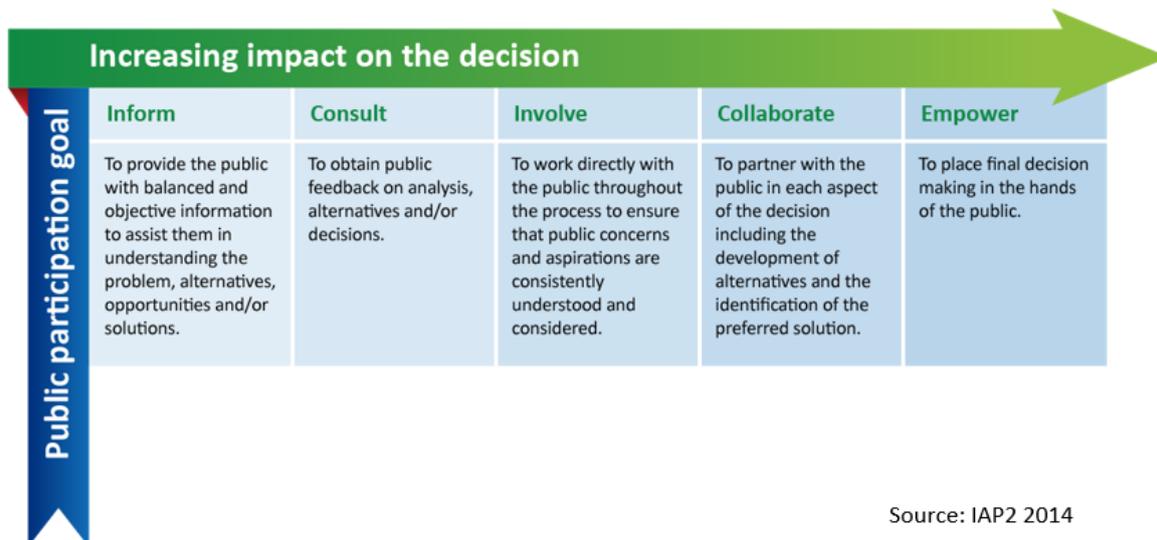
#### **2.2 Development of stakeholder involvement in Living Labs**

##### ***2.2.1 Stakeholder involvement***

The importance of relationships between HEIs and different stakeholders is something that has been discussed already for decades. But in recent years, there has been an increased opening of HEIs to society, and an increased need for HEIs to develop innovation, entrepreneurship, and business models (Langrafe et al. 2020). Therefore, the need for stakeholder involvement and/or engagement has increased, and well-functioning relationships will not only support universities in their functions but also enhance regional innovation capacity and competitiveness.

Neglecting the stakeholder relationships may even lead to limited success and insufficient quality assurance of HEIs (Kettunen 2015). Kettunen introduced two ways for increasing quality in stakeholder relations: the stakeholder map, and the stakeholder process descriptions. The most important Living Labs stakeholders have already been identified in INVEST WP3, Deliverable 3.19 (Knowledge Agenda's Regional Living Labs). In this I4E D4.2, we will increase the knowledge by gathering the already existing protocols and processes in stakeholder involvement that our partners are utilizing. We aim to find the best practices and use them as a building block for the Stakeholder Involvement Tool.

There are several ways to evaluate different types of stakeholders and to build processes supporting stakeholder involvement in different life cycles. One commonly seen way to differentiate different stakeholder groups comes from IAP2 (2014, Figure 1). In their spectrum, the impact of a certain stakeholder group is connected to the level of participation, going from informing, to consulting, involving, collaborating, and empowering.



Source: IAP2 2014

**Figure 1.** A spectrum to help define the public’s role in any public participation process (IAP2 2014).

The position and role of stakeholders is, however, not a static situation. The participation and power of the stakeholders will change with time and, therefore, stakeholder identification is an ongoing process (Alkhafaji 1989, Mitchell et al. 1997). When focusing on sustainability, there is a need for more holistic stakeholder involvement frameworks. Kua (2016) suggested such a framework with the following key steps: “...stakeholder identification, understanding of the identified stakeholders, using the knowledge of these stakeholders to customize the ways in which they are engaged and, finally, managing their roles in the engagement process to maximize the chance of success”.

**Practical implications to D4.2:**

1. Introduce methods for stakeholder involvement and identifications, in case some of the partners have not yet identified their key stakeholders in INVEST Living Labs
2. Modify the stakeholder involvement framework by Kua (2016) to the needs of I4E

**2.2.2 Living Labs**

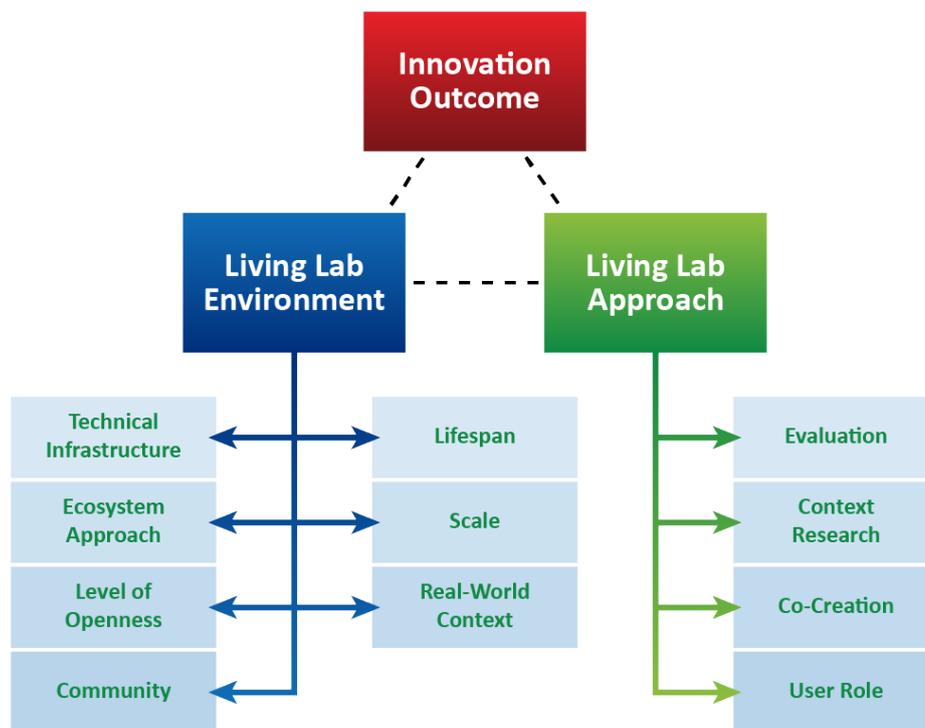
Living Labs are one of the tools that HEIs can utilize in promoting innovation, and they have been selected as one of the main activities for INVEST/I4E projects. Besides fostering innovation, Living Labs have been seen to promote sustainability (Compagnucci et al. 2021), which is the cornerstone of all the actions in INVEST and INVEST4EXCELLENCE. When these new methods and tools are introduced in organizations, there is a need for continuous feedback and evaluation to make sure that the set goals will be met. Continuous development is also a key aspect of designing solutions appropriate for different geographical locations and cultures. This view is also supported by Langrafe et al. (2020) who stated that successful stakeholder engagement requires that participation and feedback from the stakeholders need to be long-lasting, permanent and monitored. One aspect of our Stakeholder Involvement Tool will be the annual monitoring of our stakeholder engagement relevant to INVEST Living Labs.

Mahmoud et al. (2021) highlight several important aspects of stakeholder involvement in Living Labs. First of all, embedding co-creation principles for stakeholder involvement is crucial to tying the gaps between theoretical frameworks and practical experience. The main factors for developing co-creation

are; to base the collaboration between all relevant stakeholders, to enhance open communication with different stakeholders, to launch shared ownership of the process and ensure long-term commitment, and to support evidence-based policies to promote long-term, often radical, strategies with innovation potential. They also highlight that there is no “one solution that fits all” in stakeholder involvement, but the practices need to be built based on case-by-case requirements.

Veeckman et al. (2013) have developed one model for evaluating or predicting the successful outcome of Living Labs, The Living Lab Triangle (Figure 2). The three corners of the triangle are the Living Lab Environment, the Living Lab Approach, and the Innovation Outcome. Based on their studies on Living Labs, they recommend the practitioners to establish: 1. A clear strategic intention, 2. A minimum of shared value and sharing among all stakeholders, 3. A minimum level of openness, 4. A minimum set of users and establishment of a strong connection, and 5. A mixed set of living lab tools to discover new opportunities.

## The Living Lab Triangle



Source: Veeckman et al. (2013)

**Figure 2.** The Living Lab Triangle, analysing the link between the building blocks of living labs and their effect on the living lab outcomes (Veeckman et al. 2013).

From the Living Labs Triangle, the sections “tools for living labs” and the “sharing plus openness” belong to the work in I4E WP3. In the D4.2, we can supplement that knowledge by taking into consideration the Living Lab Approach, and by evaluating the level of connection and commitment the different I4E partners have with their stakeholders. Besides the level of commitment and the role of

the users/stakeholders, we study if the set strategic intention of utilizing Quadruple Helix Model has been implemented.

Quadruple Helix Model (Carayannes and Campbell 2009) is a commonly used framework for analyzing stakeholder involvement in Living Labs. This approach has been adopted by the INVEST and the I4E projects. The Quadruple Helix Model includes the dimensions of university, industry, government and public (or science, policy, industry and society). The model has been especially useful for trying to improve innovation and sustainable development through Living Labs (Compagnucci et al. 2021).

#### **Practical implications to D4.2:**

1. We will aim to create a tool that is divided into two parts: 1) Section A relevant for everyone, and 2) Section B will be modified to the needs and goals of each partner
2. Include a question on the best practices of current stakeholder involvement processes in the questionnaire for partners
3. Include regular evaluation as a part of the Stakeholder Involvement Tool
4. Include an evaluation of the use of Quadruple Helix model in the study

### **2.3 Analysing the stakeholder involvement and innovation in INVEST Living Labs**

We will suggest our partners choose a method most suitable for their needs. Two suggestions for the methods are a) a gap analysis for analyzing the gap between the current situation and the goals in stakeholder involvement, or b) a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats). Besides these general methods, we suggest applying frameworks that are used specifically for the purpose of innovation in Living Labs, since the promotion of innovation is one of the key goals of this task.

Over the past two decades, open innovation (OI) has evolved into a new evidence-based innovation paradigm for businesses and their stakeholders. It was firstly introduced by Chesbrough (2003) as an innovation model that challenged the old models that were based on closed processes of using the internal knowledge of a company to spark innovation. As opposed to closed innovation, open innovation underlines the cooperation and exchange of information between business partners. (Chesbrough 2017)

West, Salter, Vanhaverbeke and Chesbrough (2014) add that, since the early days, the concept of open innovation has evolved in its meaning and scope to act as a hypernym for a variety of modern innovation models. As recently defined by Chesbrough (2017), open innovation entails processes in which "innovation is generated by accessing, harnessing and absorbing flows of knowledge across firm's boundaries".

The importance of Living Labs in creating new innovations is highlighted by Torma (2020), who sees the (urban) Living Labs as platforms for creating, evaluating, and developing in real-time and real-life environments. Leminen, Westerlund and Nyström (2012) state that Living labs are self-organising networks of actors and tend to serve the interests of a particular member that leads the innovation work. Leminen et al. (2012) present four categories for innovation-leading actors: 1) utilizer-driven 2) enabler-driven 3) provider-driven and 4) user-driven (see Table 1).

Table 1. Characteristics of different types of living labs (Leminen et al. 2012).

Characteristic	Type of Living Labs			
	<i>Utilizer-driven</i>	<i>Enabler-driven</i>	<i>Provider-driven</i>	<i>User-driven</i>
<b>Purpose</b>	Strategic R&D activity with preset objectives	Strategy development through action	Operations development through increased knowledge	Problem-solving by collaborative accomplishments
<b>Organization</b>	Network forms around a utilizer, who organizes action for rapid knowledge results	Network forms around a region (regional development) or a funded project (e.g. public funding)	Network forms around a provider organization(s).	Network initiated by users lacks formal coordination mechanisms
<b>Action</b>	Utilizer guides information collection from the users and promotes knowledge creation that supports the achievement of preset goals	Information is collected and used together and knowledge is co-created in the network	Information is collected for immediate or postponed use; new knowledge is based on the information that provider gets from the others	Information is not collected formally and builds upon users' interests; knowledge is utilized in the network to help the user community
<b>Outcomes</b>	New knowledge for product and business development	Guided strategy into a preferred direction	New knowledge supporting operations development	Solutions to users' everyday-life problems
<b>Lifespan</b>	Short	Short/medium/long	Short/medium/long	Long

Source: Leminen et al. (2012)

Overall, the typology of Leminen *et al.* (2012) describes the specific features of each leading actor type in terms of purpose, organization, action, expected outcomes and typical duration. For example, in utilizer-driven innovation process, the living lab is harnessed as a strategic instrument to create direct and quick value (e.g. product development) for a company. In contrast, enabler-driven innovation processes are longer in duration and involve typically larger-scale regional actors. They intend to use living labs as platforms for co-creating common strategies that serve the needs of the larger public. Leminen et al. (2012) acknowledge that, in a living lab, the innovation-leading roles are not permanent and may also change from one actor to another during the co-creation process. The typology offers a scheme for framing and evaluating the form and objectives of a living lab based on the leading actor

roles. Identifying the innovation-leading actor can help the members of the network to select the living lab that suits their needs and situate themselves in the process in a favourable way.

Gould (2012), however, points out that, for business partners, the utilization of open innovation practices generates considerable business benefits but involves also substantial risks, such as knowledge leakage, that need to be managed properly. Gould (2012) underlines especially the importance of stakeholder engagement in the execution of successful open innovation projects.

Compagnucci et al. (2021), on the other hand, have determined ten types of methods and tools that can be used to foster user engagement in innovation processes (Figure 3)

## Ten methods and tools to foster user engagement in innovation processes.

Workshops	Focus groups	Open discussion forums	Collaboration platforms	Idea submission systems
Conference calls	Online questionnaires	Face-to-face questionnaires	Laboratories on entrepreneurship and innovation	Business idea contests

*Source: Compagnucci et al. (2021)*

**Figure 3.** Ten methods and tools to foster user engagement in innovation processes (Compagnucci et al. 2021).

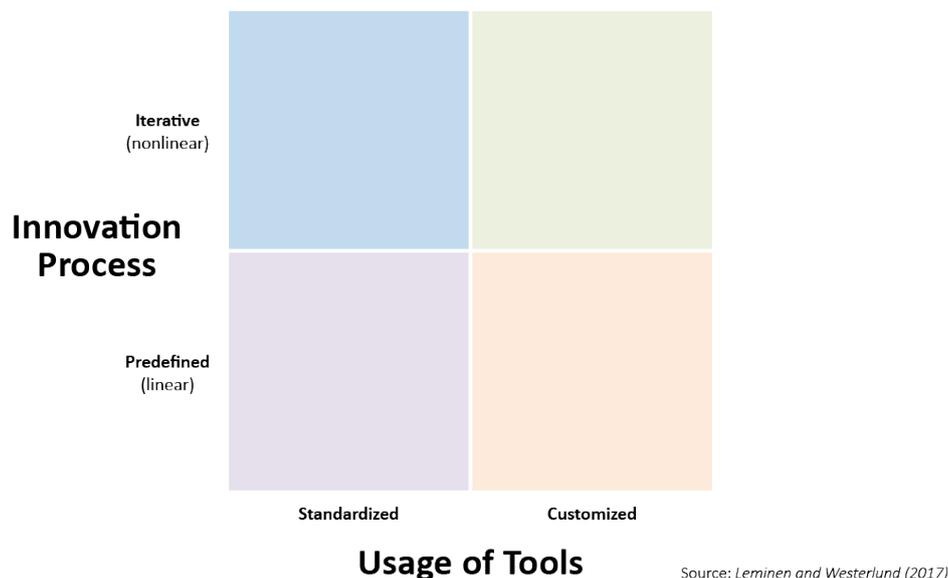
These methods are well aligned with the scope and the design principle of INVEST Living Labs;

- fostering inclusive quadruple helix' participation
- creating authentic learning environments that focus on a sustainable future
- stimulating reflexivity in learning and innovation for Sustainability
- facilitating interaction, knowledge sharing and open system management

Hence, the items on the previous list will be used when evaluating the results from the I4E partners – especially from the open question where we ask, how the partners are enhancing innovation, entrepreneurship and/or multi-disciplinary in their Living Labs, and from the questions, where they are asked to evaluate the Quadruple Helix Model in their Living Labs.

When evaluating the data on stakeholder involvement from the I4E partners, the conceptualization from Leminen and Westerlund (2017) will also be used, whenever applicable. They have built a conceptual framework for categorizing living labs, based on the innovation process (linear or non-linear) and the usage of different tools (standardized or customized) (Figure 4).

## A conceptual framework for categorizing living labs based on their innovation process and tools.



**Figure 4.** A conceptual framework for categorizing living labs based on their innovation process and tools (Leminen and Westerlund 2017).

The framework does not show correlations or causal links, but rather explains innovation outcomes and outcomes of the Living Labs. We will analyze the open questions from the questionnaire to see if we can identify different usages of tools, and/or different types of innovation processes. In the questionnaire, we decided to leave plenty of room for open answers to observe, what aspects of innovation our partners stress, and what kind of processes they have.

### Practical implications to D4.2:

1. Evaluate the current situation on stakeholder involvement from all the partners
2. Utilize the concept of the Living Lab Triangle in Data analysis
3. Utilize the aspects from Compagnucci et al. (2021) when evaluating the stakeholder involvement in innovation processes
4. Guide the partners to utilize the Leminen and Westerlund (2017) diagram in their work if they see that it would support them in reaching the goals
5. Leave enough flexibility for the data analysis to reach the best possible outcome

## 2.4 Research-to-business approach in Living Labs

Research-to-business approach is closely connected to the innovation and innovation potential of Living Labs and is an important factor in developing Living Labs that are profitable to business partners – which is a crucial stakeholder group for successful Living Labs. There is a high variation between

countries and HEIs in how the research-to-business actions are operated and funded. Quite often, the HEIs need external funding or other resources for developing the research into new businesses, and cooperation with business partners is one clever way to find synergies and mutual benefits.

Besides direct research-to-business solutions, there are several diverse paths to support the collaboration between research and business partners. These are proposing models for industrial modernization, systematic access to research models, including interregional innovation partnerships for individual businesses, and conducting cluster management (Bridges 2018).

There is a need for HEIs to adapt to new ways of working to facilitate successful communication between higher education and business. This includes for example encouragement of entrepreneurial behavior among staff or increasing the capacity of the students to develop new ideas and skills (Fleaca et al. 2017). One key notion from Fleaca et al. (2017) is to include several types of engagement strategies for the operations with academia and business:

1. Engagement strategy for the academic component
2. Engagement strategy for the scientific research component
3. Engagement strategy for the business & society component

#### **Practical implications to D4.2:**

1. If the I4E partners are having challenges in the cooperation with business partners, they are suggested to check the recommendations from Fleaca et al. (2017), if that could be of help
2. The partners are asked about their plans for enhancing research-to-business approach to find out if we could do some benchmarking on this section

## **2.5 Sustainability and Responsibility of RDI actions in Living Labs**

The INVEST alliance aims to foster sustainable development by involving and engaging the main stakeholders of each region in common research, development and innovation activities. The INVEST sustainability agenda is based on the sustainable development goals (SDGs, Figure 5) (United Nations 2022) and the Green Deal (European Commission 2022). The focal sustainability and responsibility areas of the INVEST alliance include 1) water, energy, food and environment nexus 2) quality of Life and 3) entrepreneurship. Due to differences in regional sustainability challenges between INVEST partners, the stakeholder involvement of each living lab is focused on solving specific regional challenges.

## SUSTAINABLE DEVELOPMENT GOALS



**Figure 5.** The Sustainable Development Goals (SDGs) set by United Nations (United Nations 2022).

Higher education institutions are crucial change agents towards sustainability. Zalieniene and Pereira (2012) highlight the importance of involving sustainability and responsibility principles into the operational culture. Knuuttila et al. (2022) specify that integrating sustainability and responsibility into research, development and innovation (RDI) processes is regionally important because it enables the knowledge transfer that supports the renewal of the regional economic structure and work life. Knuuttila et al. (2022) point out the importance of integrating sustainability goals into project-based stakeholder collaboration because it encourages stakeholders to develop their decision-making and strategic processes in a more sustainable and responsible direction. In general, sustainable and responsible RDI involves the assessment of ecological, financial, social and cultural impacts of RDI operations (Knuuttila et al. 2022).

In terms of stakeholder involvement, the integration of sustainability and responsibility into the operational culture can be realized by sustainability-driven competence development. Deliverable 4.1 introduced a set of RDI competences relevant in sustainable supply chains within the INVEST consortium. The relevant RDI collaborative competences that foster the collaboration between higher education and their stakeholders include a wide variety of both organisational and individual competences, skills and knowledge (see Table 2).

Table 2. Competence matrix for interactions between higher education and stakeholders (INVEST4EXCELLENCE, WP4, D4.1)

Higher Education and stakeholder interaction		
Scoping review (based on literature)	External interviews (industry and public sector stakeholders)	Internal interviews (higher educational institute representatives)
Understanding the concept and practices of smart specialisation ICT and technology skills; Participatory approaches and partnerships; Interdisciplinary knowledge and skills; Learning environments; Knowledge of sustainable development; Creating project-based initiatives for sustainability; Competence management; Innovation-related competencies; Social innovation understanding; Sustainable organisational change; Entrepreneurship skills; Intellectual property management; Commercialisation and marketing knowledge and skills; Thinking skills	Commercialisation and marketing skills; Producer-consumer relations development; Qualification and requalification (life-long learning); Multidisciplinary /interdisciplinary /transdisciplinary approaches and knowledge; Identification of digitalisation opportunities; Attitude towards RDI work; Self-leadership skills; Project management skills; Knowledge exchange in bilateral collaboration; Understanding of (public) stakeholders' role in the	Cooperation in specialist networks; Knowledge of communities and groups; Co-creation skills; Knowledge of sustainability regulations and standards; Continuing education and lifelong learning skills; Digital skills and tools; Competencies in curriculum development; Knowledge of the shortage of workforce in different fields of work; Attitude towards learning and development; Self-leadership skills; Business-driven development skills; Integration of technical knowledge and eco-social approach; Innovation skills; Project management skills; Organisational change management; Eco-design; Stakeholder (i.e. advocate) organisations as sustainability information providers; Forms of industry-HEI cooperation; Future research competencies; Sustainable management skills; Globalisation and glocalisation processes; Flexible implementation of curriculum; Innovative forms of travel services; Pedagogical approaches; Ethical thinking skills; Marketing approach in business and co-operation; Cooperatives development; Geography; Finances and investing in RDI

Source: INVEST4EXCELLENCE, WP4, D4.1 (Muhonen, Puhakka-Tarvainen & Timonen 2022)

In the future, capacity-building actions of research, development and innovation regarding stakeholder involvement need to be aligned with the sustainability reporting standards in the EU. From 2024 on, the EU Commission will be gradually introducing a set of new and more comprehensive reporting standards for large companies and certain types of SMEs. The aim of this Corporate Sustainability Reporting Directive (CSRD) is to make companies more transparent about their operations and their actual social and ecological impact by requiring reliable and quality reporting. The reporting responsibility also covers the state of responsibility and sustainability along their value chains, which thereby increases the reporting responsibility from the suppliers' side. (Council of the EU 2022)

Some recent studies (Sepasi et al. 2018 & Nicolò et al. 2021) indicate that, in higher education institutions, the adoption of corporate social responsibility practices and reporting into their agendas is still in an emerging state. Sepasi et al. (2019) point out that higher education institutions can develop their stakeholder engagement processes by developing and communicating as holistically as possible about their Corporate Social Responsibility (CSR) practices. The mapping of sustainability-related RDI competences in Deliverable 4.1 revealed that the relevant sustainability competences for higher education institutions include principles and practices of social responsibility. With respect to the INVEST consortium, developing the capacity in (corporate) social responsibility (CSR) and integrating sustainability and responsibility acts more holistically into stakeholder involvement processes in the living labs may thus potentially enhance, on one hand, 1) stakeholder engagement and, on the other hand, 2) the capacity of different stakeholders to develop their processes to meet the sustainability standards in the future.

#### **Practical implications to D4.2:**

- During the year 2023, all the partners are asked to survey and report, how sustainability and responsibility are incorporated in their stakeholder activities within INVEST Living Labs.
- Based on the results from 2023, more detailed evaluation and guidance for development is conducted as a part of INVEST Stakeholder Involvement Tool.

### **3 QUESTIONNAIRE TO I4E PARTNERS**

The online questionnaire to the partners was built based on the goals for INVEST Living Labs, the content for improving stakeholder involvement, sharing of best practices, and the topics that came out from the literature review (especially the practical implications withdrawn from 2.2 and 2.3) consisted of four sections:

0. Info sheet to guide on filling the questionnaire
1. General questions
2. Evaluation of the current status of stakeholder involvement relevant to INVEST Living Labs
3. Giving an example of 1–2 institutional best practices on stakeholder involvement (that could be used for building the INVEST Stakeholder Involvement Tool)
4. Reaching the goals for stakeholder involvement in relation to developing RDI

The responses to the questionnaire from each partner were collected in September 2022, in English. The full list of the questions asked from the partners is presented in Appendix 2.

## **4 RESULTS**

### **4.1 Stakeholder involvement in partner institutions**

We received answers to the electronic questionnaire from all the I4E partners (n=5). There was a high variation in how the partners evaluated the current state of stakeholders in their INVEST Living Labs. With scoring of 1–5 (1 being the lowest and 5 being the highest score), the average score was 3.6 and the median answer was 4. Only one of the partners stated that they are fully operating with the Quadruple Helix Model, and that their partners are committed and active. All the partners describe that they have created methods and tools to foster stakeholder involvement in their work

with INVEST Living Labs. In general, 60% of the partner institutions have a specific unit dedicated to stakeholder involvement. However, these units are rather small, consisting of few full-time employees or less than ten part-time employers. A specific process for life-cycle management of stakeholder involvement is also found in 60% of the partner institutions.

One aim of this deliverable was to search if already existing processes or protocols in stakeholder involvement could be used in INVEST/I4E context, to support the creation of the Stakeholder Involvement Tool. 60% of the partners stated that at least one process or protocol in their institution could be used for that purpose.

## **4.2 Competences relevant for stakeholder involvement**

Based on the responses from the partners, the required competences relevant for stakeholder involvement in INVEST Living Labs can be divided into five categories; 1. Social interactions, 2. Entrepreneurship and business, 3. RDI and Innovation, 4. Sustainability, and 5. Technical competences (Figure 5). Most of the required competences were relevant for RDI and Innovation (10 competences). From the list of required competences, the majority were either interdisciplinary competences or soft skills. What is notable is that only one partner presented a set of competences that were specifically connected to sustainability – the key focus area of I4E.

## Staff competences needed for Stakeholder Involvement in Living Labs

<p><b>Social interactions</b></p> <ul style="list-style-type: none"> <li>• Communication skills</li> <li>• Relationship-building capabilities</li> <li>• Social skills (e.g., the ability to understand the perspective of others)</li> <li>• Project management skills (e.g., the ability to motivate and encourage others)</li> <li>• Networking competences of the teachers (i.e., co-creation of innovations and case studies with stakeholders)</li> <li>• Knowledge of working in interdisciplinary teams</li> </ul>	<p><b>Entrepreneurship and business</b></p> <ul style="list-style-type: none"> <li>• Commercialization and marketing skills</li> <li>• Interdisciplinary teamwork (i.e. in industrial business administration)</li> <li>• Solid business acumen</li> <li>• Continuous education training possibilities for companies</li> <li>• Academic entrepreneurship skills</li> </ul>
<p><b>Research, development and Innovation</b></p> <ul style="list-style-type: none"> <li>• Knowledge of multi-disciplinary approaches</li> <li>• Attitude towards learning and development</li> <li>• Self-oriented and solution-focused thinking</li> <li>• Ability to work autonomously and acquire knowledge independently</li> <li>• New HEI-based funding models (i.e. <i>scholarships</i>) for students' practical training periods in companies</li> <li>• Co-creation skills</li> <li>• Piloting skills</li> <li>• Research skills</li> <li>• Open-mindedness</li> <li>• Boldness</li> </ul>	
<p><b>Sustainability</b></p> <ul style="list-style-type: none"> <li>• Knowledge of sustainability goals</li> <li>• Collaboration skills in sustainability development networks</li> <li>• Skills in sustainability practices in small and medium enterprises (SMEs)</li> <li>• Risk and crisis management skills</li> <li>• Understanding the models of sustainability supplier assessment</li> <li>• Understanding the Higher Education for Sustainable Development (HESD) practices</li> </ul>	<p><b>Technical or other specific competences</b></p> <ul style="list-style-type: none"> <li>• IT and technological skills</li> <li>• Digital skills and tools</li> <li>• Data analysis and processing skills</li> <li>• Knowledge of extended reality (XR), cyber security and data protection</li> </ul>

Source: INVEST4EXCELLENCE partners

**Figure 5.** Competences of the staff needed for stakeholder involvement in INVEST Living Labs, grouped thematically. The information is gathered from all the I4E partners.

This set of competences will be used as an example when I4E partners are evaluating the competences and the possible training needs of their staff – as a part of the development within the Stakeholder Involvement Tool. These results may also be utilized, when creating the I4E RDI Online Training Tool (D4.4) that offers opportunities for continuous re- and up-scaling of our staff members in RDI competences and skills. The general required competences for RDI have already been studied in the Deliverable 4.1 RDI Competence Matrix and, therefore, in this deliverable 4.2, focus on the information especially relevant to stakeholder involvement in INVEST Living Labs.

There is a process for evaluating and developing the competences in 60% of the I4E institutions. These already existing good practices include an annual work programme for staff training, planning the competence needs and training at department level, and evaluation of these results according to certification. One of the partners also brought up that they have good practices for developing the competences of the students, but similar process for all the relevant competences is not developed for research staff and lecturers.

### **4.3 Utilization of the Quadruple Helix Model in stakeholder involvement relevant to INVEST Living Labs**

Most of the partners (80%) stated that they have reached the Quadruple Helix Model (QHM) in their INVEST Living Labs. However, not all the INVEST Living Labs are fully operating with Quadruple Helix Model – it may be that the model has been created, but it is not yet fully functioning in practice. Another notion from the answers was that all the stakeholder groups are necessary and relevant in all types of the INVEST Living Labs.

Between the partner regions, there was a high variation between the most relevant stakeholder groups of QHM. One of the partners could not name one specifically important stakeholder group. One named challenge for establishing stakeholder involvement was the temporary nature of (external) financing. One of the partners came up with an alternative solution for that – operating through student projects whenever there is no project funding available. Then the partner can ensure the continuity of the cooperation with established personal connections with the external stakeholders.

### **4.4 Enhancing innovation and research-to-business approach in stakeholder involvement**

All the partners have already established some tools to promote innovation through interactions between stakeholders and HEIs. The most popular way to enhance innovation are different types of challenges, hackathons, workshops and case studies, where students can work together with stakeholders to solve problems, and create new products or innovations.

It was too early for the partners to evaluate the fostering of entrepreneurship in the Living Labs, since the work with the INVEST Living Labs has just launched in many of the partner institutions. But the partners are moving towards that direction by either applying external funding for the purpose or combining the Living Lab activities with already existing opportunities, e.g. DRAFT-programme by Karelia UAS, that helps and funds the students, staff members and alumni of Karelia UAS in launching new businesses (<https://draftprogram.com/en/front-page/>).

Practices for enhancing the multidisciplinary or interdisciplinary nature of the INVEST Living Labs were identified in 60% of the partner institutions. They could be organized as multi-disciplinary minor groups, multidisciplinary nature of the Living Labs themselves, or by working within a larger multi-disciplinary department (e.g. multi-disciplinary RDI team). One of the partners has a specific Regional Living Labs Knowledge Agenda (UARD) to promote innovation.

### **4.5 Goals for improving stakeholder involvement**

Since the main goal of the questionnaire is to build the baseline for creating the Stakeholder Involvement Tool, we wanted to search, what are the main goals of the I4E partners in stakeholder involvement in Living Labs. Some of the goals were very practical and connected to the I4E project – to reach the set objectives. But most of the stated goals aimed for making an impact to the surrounding society, in adding value to our work by creating real-life learning environments for our students and researchers, or by keeping us up to date with the newest developments and innovations. One of the partners hoped more clear branding for their local Living Labs, and clear processes for stakeholder involvement to make sure that we will have active and committed partners for our works with the INVEST Living Labs.

The different goals for stakeholder involvement that our partners brought up include: reaching the project objectives, improving cooperation, improving the motivation of stakeholders to work with students, creating value for society, contributing to Sustainable Development goals, creating real-life learning environments, keeping up with the newest development, creating a clear process for working with stakeholders, obtaining support with the branding of INVEST Living Labs, and attracting staff members to work in INVEST Living Labs. **Since there was a high variation in the goals between the partners, we will focus on the suggestions and practices in the development work of stakeholder involvement tool that can be modified to local needs.**

#### **4.6 Challenges and threats in stakeholder involvement**

The lack of adequate resources was the main factor hampering the stakeholder involvement in INVEST Living Labs. The staff does not always have enough time to develop the activities and foster relationships, due to other priorities in their work. The work of Living Labs is usually in the hands of one or few people, which poses some challenges and risks; internal communication may not be sufficient, and if the person moves to another job, important information may be lost. Internal communication also came up when thinking about our students; at the moment, they don't necessarily have enough information on INVEST Living Labs, and the possibilities they could have.

Besides restrictions in human resources, several partners also stated the lack of funding. It is common for partners that they need to apply external funding for all the new actions, and all the costs for the INVEST Living Labs cannot be covered by the basic funding of the partner institutions.

The other mentioned challenges are connected to the different needs of different stakeholders. Sometimes the local external stakeholders do not see the benefit of joining the INVEST Living Labs, which makes it difficult to create permanent structures and relationships. The time scale of the different stakeholders also varies; research, or research-based development takes a lot of time, and the local companies are keen to see quick results. One suggested solution for that was to take extra care on managing the expectations of different stakeholders from the beginning. There were similarities in the answers related to challenges and threats, including the financial restrains, the lack of motivation from the local stakeholders, and possible language barriers between local organizations and international students. Some partners also brought up the possible threats that are 1) ineffective work due to the lack of proper branding of INVEST Living Labs, which also influences the internal and external communication and recruiting of the students, 2) the interdisciplinary nature of INVEST Living Labs, which is not yet a normal practice in all our departments and faculties, 3) traditional education structures that may hamper the flexible and interdisciplinary work, and 4) the lack of publicity about INVEST Living Labs.

## 5 CONCLUSIONS

As a result of this task, we have built a practical tool that can help I4E partners to develop their work with stakeholder involvement in INVEST Living Labs. We offer support based on the experiences and benchmarking of the other partners and a set of practical methodologies extracted from scientific research studies. The evidence from this process showed, that we need to create a system that is flexible enough to fit the needs of different partners and stakeholders. On the other hand, we found it important to include a section that is common for everyone, to support us in working together towards INVEST mission. To combine these points of view, it is crucial to start with creating common goals for the operations. When that is thoroughly conducted, the results can be used as a backbone for further plans and activities.

I4E partners had a great variation in their current state of stakeholder involvement, their goals for developing it, and the possible threats they saw in stakeholder involvement in INVEST Living Labs. These differences create new opportunities for the I4E community. For example, some of the partners have detailed, and well-described processes for stakeholder involvement, and this knowledge could be easily shared with the rest of the partners.

With this study, we have built a comprehensive picture of the stakeholder involvement in different partner institutions, and once the partners have conducted the first phase with the finished Stakeholder Involvement Tool, we can further improve the the annual evaluations, and the discussions between different I4E and INVEST governance bodies.

## REFERENCES

- Alkhafaji AF 1989. A Stakeholder Approach to Corporate Governance. Managing in a Dynamic Environment, Quorum: Westport, CT.
- Aversano, Natalia, Giuseppe Nicolò, Giuseppe Sannino, and Paolo Tartaglia Polcini. 2022. Corporate Social Responsibility, Stakeholder Engagement, and Universities. *Administrative Sciences* 12, no. 3: 79. <https://doi.org/10.3390/admsci12030079>
- Bridges 2018. BRIDGES project good practices capitalisation report & good practice transfer. Project deliverable. Created in 2017, updated in 2018. [https://www.interregeurope.eu/fileadmin/user\\_upload/tx\\_tevprojects/library/file\\_1546851356.pdf](https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1546851356.pdf). Accessed 27/09/2022.
- Carayannes EG & Campbell DFJ. 2009. “Mode 3” and “Quadruple Helix”: toward a 21<sup>st</sup> century fractal innovation ecosystem. *International Journal in Technology Management*. 46.
- Chesbrough H. 2017. The Future of Open Innovation, *Research-Technology Management*, 60:1, 35–38, DOI: 10.1080/08956308.2017.1255054
- Compagnucci L., Spigarelli F., Coelho J., and Duarte C. 2021. Living Labs and user engagement for innovation and sustainability. *Journal of Cleaner Production* 289.
- Council of the EU (2022) New rules on corporate sustainability reporting: provisional political agreement between the Council and the European Parliament. Press release. <https://www.consilium.europa.eu/en/press/press-releases/2022/06/21/new-rules-on-sustainability-disclosure-provisional-agreement-between-council-and-european-parliament/> Accessed 27/10/2022.
- European Commission (2022) A European Green Deal: Striving to be the first climate-neutral continent. [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en) Accessed 27/10/2022.
- Fleaca E, Fleaga B & Maiduc S. 2017. Modeling stakeholders relationships to strengthen the entrepreneurial behavior of higher education institutions. *Procedia Engineering*. 181:935–942.
- Gould R.V. 2012. Open Innovation and Stakeholder Engagement. *Journal of Technology Management & Innovation*, 7(3), 1–11. <https://doi.org/10.4067/S0718-27242012000300001>.
- IAP2. 2014. IAP2’s public participation spectrum. International Association for Public Participation. Available online at: [https://cdn.ymaws.com/www.iap2.org/resource/resmgr/foundations\\_course/IAP2\\_P2\\_Spectrum\\_FINAL.pdf](https://cdn.ymaws.com/www.iap2.org/resource/resmgr/foundations_course/IAP2_P2_Spectrum_FINAL.pdf). Accessed 23/09/2022.
- Kettunen J. 2015. Stakeholder relationships in higher education. *Tertiary Education and Management*. 21:1, 56–65.
- Knuuttila, K., Parkkola T., Ylikoski E., Helenius H., Sagne-Ollikainen E., Tyni S., Matveinen M. 2022. Kestävä ja vastuullinen tutkimus-, kehitys ja innovaatiotoiminta ammattikorkeakoulussa. Ammattikorkeakoulujen rehtorineuvosto Arene ry (the Rectors’ Conference of Finnish Universities of Applied Sciences) (in Finnish) <https://www.humak.fi/wp-content/uploads/2022/09/arene-julkaisu-2022.pdf>
- Kua HW. 2016. A New integrated framework for stakeholder involvement in sustainability policymaking – A multidisciplinary approach. *Journal of Sustainable Development* 24:281–297.
- Langrafe TF, Stocker F & Boaventura JMG. 2020. A stakeholder theory approach to creating value in higher education institutions. *Stakeholder Theory Approach* 297.
- Leminen S and Westerlund M. 2017. Categorization of innovation tools in Living Labs. *Journal of Technology Innovation Management Review*. 7(1): 15–25.

- Leminen S, Westerlund M, & Nyström AG. 2012. Living Labs as Open-Innovation Networks (September 2012). *Technology Innovation Management Review*. 2(9): 6–11.
- Mahmoud IH, Morello E, Ludlow D & Salvia G. 2021. Co-creation pathways to inform shared governance of urban living labs in practice: Lessons from three European cities. *Frontiers in Sustainable Cities*. 3:690458.
- Mitchell RK, Agle BR & Wood DJ. 1997. Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *The Academy of Management Review* (22:4), pp. 853–886.
- Muhonen, T., Puhakka-Tarvainen H. & Timonen L. 2022. INVEST4EXCELLENCE builds human capacity for more sustainable chains. *Karelia UAS journal*. (Accepted)
- The Natural Step. 2022. Applying the ABCD Method. <https://naturalstep.ca/abcd>. Accessed 23/09/2022.
- Nicolò, G., Aversano N., Sannino G., and Tartaglia Polcini P. 2021. Investigating Web-Based Sustainability Reporting in Italian Public Universities in the Era of COVID-19. *Sustainability* 13: 3468. <https://doi.org/10.3390/su13063468>
- Sepasi, S., Braendle, U. and Rahdari, A.H. 2019. Comprehensive sustainability reporting in higher education institutions. *Social Responsibility Journal*, 15 (2): 155-170. <https://doi.org/10.1108/SRJ-01-2018-0009>
- Ståhlbörst A, Bergwall-Kåreborn B & Ihlström Eriksson C. 2015. Stakeholders in Smart City Living Lab Processes. Conference: AMCIS 2015At: Puerto Rico, August 13–15.
- Torma V. 2020. Analysing stakeholder engagement: Stakeholder involvement in urban living labs and the main processes needed to establish a living laboratory. Anglia Ruskin University. PhD thesis. [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewj02pzx06r6AhVBxosKHZVGdXkQFnoECAoQAQ&url=https%3A%2F%2Farro.anglia.ac.uk%2Fid%2Fprint%2F706863%2F1%2FTorma\\_2020.pdf&usg=AOvVaw3oSfeg4ePch44uMXfITNR--](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewj02pzx06r6AhVBxosKHZVGdXkQFnoECAoQAQ&url=https%3A%2F%2Farro.anglia.ac.uk%2Fid%2Fprint%2F706863%2F1%2FTorma_2020.pdf&usg=AOvVaw3oSfeg4ePch44uMXfITNR--). Accessed 24/09/2022.
- United Nations .2022. Transforming our world: the 2030 Agenda for Sustainable Development. <https://sdgs.un.org/2030agenda> Accessed 27/10/2022.
- Veeckman C, Schuurman D, Leminen S & Westerlund M. 2013. Linking Living Lab characteristics and their outcomes: Towards a conceptual framework. *Journal of Technology Innovation Management Review*. 3(12): 6–15.
- Žaleniene, L., Pereira, P. 2022. Higher Education for Sustainability: A Global Perspective. *Geography and Sustainability*, 3 (1): 44-45. <https://doi.org/10.1016/j.geosus.2021.05.001>
- West J, Ammon S, Vanhaverbeke W & Chesbrough H. 2014. “Open innovation: The next decade,” *Research Policy* 43 (5): 805–811. DOI: 10.1016/j.respol.2014.03.001.
- Westerlund M & Leminen S. 2011. Managing the Challenges of Becoming an Open Innovation Company: Experiences from Living Labs. *Journal of Technology Innovation Management Review*. 1(1):19–25.

## APPENDICES

### Appendix 1 Study protocol

#### *1 Introduction*

The aim of the INVEST4EXCELLENCE Work Package 4: INVEST4EXCELLENCE Capacity Building tools is to strengthen the human capital enabling brain circulation and gender balance by developing research competences and skills of the INVEST RDI staff and PhD students.

The specific aim of Task 4.2 Stakeholder Involvement Tool, is to determine how the INVEST Living Labs are in on-going and productive dialogue with the surrounding society. The main focus is to elaborate explicitly on how the research-to-business approach can be effectively and systematically applied, analyse what kinds of involvement tools are available and, based on those, elaborate relevant tool for the INVEST learning community.

The stakeholder involvement tool describes the process and methods of thematic dialogue and promotion of innovations. It also provides a scheme for regular impact assessment. The Stakeholder Involvement Tool aims to find the best practices in stakeholder involvement relevant to Living Labs to achieve the INVEST strategic priorities of a) strengthening the links between education and research and/or innovation, and b) strengthening engagement with key stakeholders. In addition, it is closely tied to the aims of the Horizon 2020: Involvement of citizens, civil society and public/city authorities in research and innovation. As an output, the stakeholder involvement tool is planned to be a conceptualised tool, where all partners contribute to the tool development, impact assessment and establishment of the results into RDI practices.

The task leader Karelia UAS is responsible for the development process and conceptualisation of the tool. All partners contribute to the tool development, impact assessment and establishment of the results into RDI practises. The quality of the tool will be guaranteed by a systematic and reasoned development and evaluation process, which is described below.

The research methodology for Deliverable 4.2 (Task 4.2) will include the following stages:

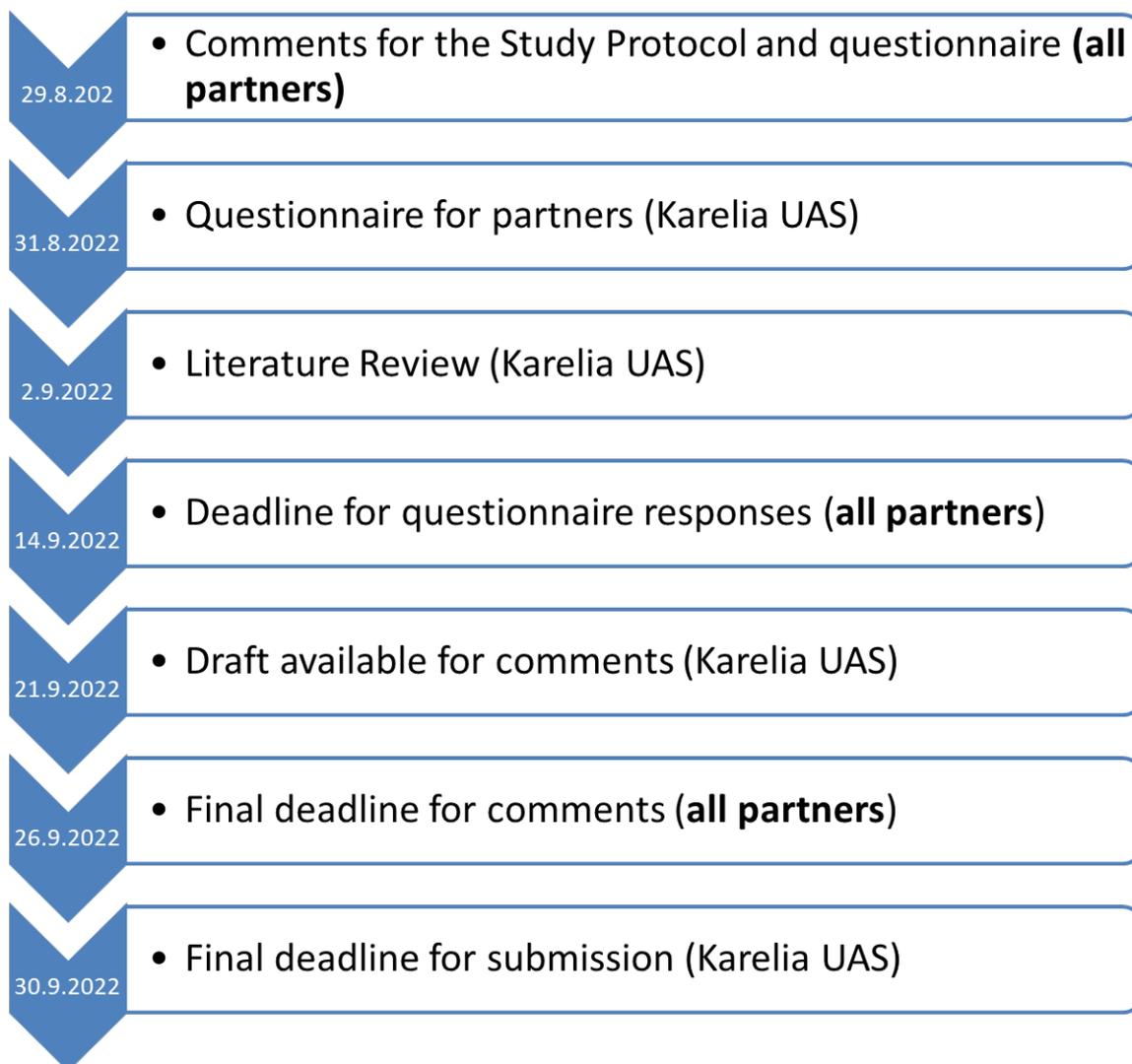
1. Literature review on peer-reviewed, scientific publications focused on stakeholder involvement processes, methods and tools, focusing on the research on HEIs and Living Labs
2. Preliminary interview with INVEST Living Lab expert(s) to ensure that the set-up and the questions for the partner questionnaires are the best possible ones to ensure good quality of the Task and Deliverable 4.2

3. Questionnaire for all partners on the stakeholder involvement processes, methods and goals in INVEST4EXCELLENCE partners, focused on the ongoing best practices that are relevant to Living Labs
4. Data analysis based on the steps 1–3
5. Publishing the Stakeholder Involvement Tool
6. Establishment of the tool into RDI practices

The Task/Deliverable 4.2 leader, Karelia UAS, will coordinate the action, conduct the literature review, prepare the materials and methodology, collect and analyse the results, and be responsible for the preparation of the Deliverable and all its appendices. The other project partners will contribute to the process in the following stages:

- Agreeing jointly on the study protocol
- Providing support in institutional data collection
  - o **Online questionnaire:** Providing information about the stakeholder involvement processes, methods and tools at each HEI, through a structured online questionnaire (Webropol).
- Commenting the data analysis, the final report and the deliverable.
- Establishing the stakeholder involvement tool in their institution.

The workflow, the time-frame and the responsibilities to complete the study within Task 4.2 are presented below. Please note the important deadlines for all the partners; 29.8.2022 Comments for the Study Protocol and questionnaire, 14.9.2022 for submitting the questionnaire responses, and 26.9.2022 for final comments on the document.



The work in Task 4.2 is and will be complemented by several other tasks and deliverables at INVEST4EXCELLENCE, including D2.1 Strategy on Research and Innovation, D2.3 Best practices handbook in the institutional transformations in research and innovation and recommendations to policy makers, D4.1 RDI Competence Matrix, and D4.5 Summarising article: INVEST4EXCELLENCE capacity building.

## **2 Methodology**

### 2.1 Literature review

The short review will present and summarize existing knowledge on research-to-business approach applied to stakeholder involvement in HEI and Living Labs contexts. The focus will be on methodology and tools for external strategic and key partnerships that INVEST partners will be utilizing in their Living Labs.

The task leader Karelia UAS will be responsible for conducting the review. The results of the review will be used for formatting the framework and the questions for the case studies.

## 2.2 Questionnaire for partners

The responses from each INVEST4EXCELLENCE partner institution will be used for analysing the current situation, methods and protocols used in stakeholder involvement. Each of the partners will have an opportunity to present one or two best practices that they already have, and that could be introduced to other partners via the Stakeholder Involvement Tool. We are also gathering information on the possible challenges and key priorities on the topic.

UAS will prepare an online questionnaire using Webropol-tool, and each partner is responsible for filling the questionnaire in English. Each partner is asked to send one answer, but is up to the partners to decide if it will be one or more key people answering to the questions. Each partner university will fill the form by **14<sup>th</sup> September 2022**. The partners are welcome to attach any relevant information, e.g., links to a public website (in English), institutional protocols or process flow charts to their answers.

The draft version of the questionnaire is presented in Appendix 1. With this draft, all the partners can already identify the key people in their institution and ensure that those people will have availability in their calendar in September to fill out the form. Please note that the form will be fine-tuned based on the a) literature review and b) a pre-interview with an INVEST Living Labs expert. The questionnaire is divided into four sections, as follows:

5. Info sheet to guide on filling the questionnaire
6. General questions
7. Evaluation of the current status of stakeholder involvement relevant to INVEST Living Labs
8. Giving an example of 1–2 institutional best practices on stakeholder involvement (that could be used for building the INVEST Stakeholder Involvement Tool)
9. Reaching the goals for stakeholder involvement in relation for developing RDI

When answering the questions, please keep in mind the design principles for INVEST Living Labs:

- fostering inclusive quadruple helix' participation
- creating authentic learning environments that focus on a sustainable future
- stimulating reflexivity in learning and innovation for Sustainability
- facilitating interaction, knowledge sharing and open system management

The results of the case studies will be analyzed and thematically grouped using content analysis. After that, the appropriate methods will be used for gap analysis/needs assessment,

depending on the results from the content analysis. The methods could include for example a SWOT analysis (strengths, weaknesses, opportunities and threats), and/or McKinsey 7S framework (Strategy, Structure, Systems, Shared Values, Style, Staff, Skills). To ensure the openness of the study, we do not pre-determine the parameters for these analyses. The parameters will be extracted from the literature review and the analysis of case studies.

### 2.3 Gap Analysis / Needs Assessment

The gap analysis / need assessment will be conducted to compare, where the HEIs are, where they want to be, and how to reach the goals of the stakeholder involvement, including the joint goals at the alliance level and the HEI-specific goals. Karelia UAS will be responsible for conducting the gap analysis based on the a) results from the case studies, b) INVEST strategy and c) the goals for the INVEST Living Labs. The gap analysis will focus on achieving reasoned, practical steps that can be taken to improve the stakeholder involvement in INVEST Living Labs, whenever needed.

The gap analysis will allow INVEST partners to determine how to best achieve its goals through a comparison of the current state and goals, highlighting shortcomings and opportunities for improvement. A special focus will be put on the synergy between INVEST partners – universities and associated organizations, and stakeholders.

The basic steps of the gap analysis consist of:

- Establishing target objectives,
- Analysing the current situation and processes (including how resources are allocated) concerning the INVEST strategy and the design principles of Living Labs, and
- Drawing up a comprehensive plan to support the creation of the INVEST Stakeholder Involvement Tool

### **3 Research report and deliverable**

The Stakeholder Involvement Tool (D4.2) will be released by the 30<sup>th</sup> of September 2022. The INVEST Stakeholder Involvement Tool will describe the process and methods of thematic dialogue and promotion of innovations and will provide a scheme for regular impact assessment.

The document and the institutional development based on the tool will be evaluated annually. The work on the deliverable will be coordinated with the work on other tasks and deliverables under the project.

The key people of the WP4 of the partner HEIs will be responsible for the implementation and annual evaluation of the Stakeholder Involvement Tool. The task leader Karelia UAS will be responsible for a) collecting the contact information of key people from each organization, and b) organizing and documenting the work related to these evaluations. The KPIs stated in the project proposal will be used to complement the annual evaluations. This will be conducted in cooperation with INVEST WP2.

### ***References***

Sammut-Bonnici, T., & Galea, D. (2014b). SWOT analysis. Wiley Encyclopedia of Management, (ed. Cary L Cooper C.L.). John Wiley & Sons, Ltd.

What Is the McKinsey 7s Model? - <https://www.lucidchart.com/blog/mckinsey-7s-model>

What Is Gap Analysis? 4 Steps and Examples to Use - <https://www.lucidchart.com/blog/what-is-gap-analysis>

## Appendix 2 Questionnaire to partner institutions

All the I4E partners responded to the following questions online (Webropol) in 9/2022.

1. I have read and will accept the personal data processing and protection notice by Karelia UAS (published at Basecamp on <https://3.basecamp.com/5284245/buckets/25881993/uploads/5281590173>)
2. What is your institution?
3. Your contact information
4. Do you have a specific unit/dedicated people in your institution for stakeholder involvement?
5. If yes, how many FTEs is dedicated for them?
6. Do you have a specific protocol for stakeholder life cycle management in your institution?
7. If yes, please describe briefly here
8. In your opinion, could one of your stakeholder involvement processes/protocols be used as a good example when building the INVEST Stakeholder Involvement Tool?
9. If yes, please describe here the method/process/protocol that your institution is already using for stakeholder involvement, and could be used as a good example in building the INVEST Stakeholder Involvement Tool. You may also attach documents to your answer in the next step.
10. Please add any documents with further information on your well-working process/protocol for stakeholder involvement.
11. In your opinion, what competences are needed for successful stakeholder involvement in regards to INVEST Living Labs? In this answer, you may refer to D4.1 Competence matrix (found in the Basecamp).
12. Do you have a process for evaluating and/or developing these competences in your institution?
13. If yes, please describe the process(es) in more detail.
14. In your institution, what is already working well in relation to stakeholder involvement relevant for INVEST Living Labs? In your answer, please consider evaluating this at least from the point of view of your students, staff and external stakeholders.
15. In your institution, what is NOT (yet) working well in stakeholder involvement relevant for INVEST Living Labs? In your answer, please consider evaluating this at least from the point of view of your students, staff and external stakeholders.
16. What type of stakeholders are the key ones for your INVEST Living Labs (e.g., companies, NGOs, student associations, public sector, researchers, staff, students)?
17. In your opinion, where is your institution in regards to reaching your goals for stakeholder involvement in INVEST Living Labs (score 1-5)? Please choose the option that is closest to your situation.
18. Have you reached the Quadruple Helix Model in your INVEST Living Labs?
19. If yes, please describe what type of stakeholders you have and how did you reach this situation.
20. If not, what stakeholders are missing, and how are you planning to improve the situation?
21. In your institution, what is your main goal for (improving) stakeholder involvement relevant to INVEST Living Labs?
22. In your opinion, what do you need to reach those goals? (from your institute/staff, from INVEST alliance/partners, or from your external partners)?
23. What kind of threats (if any), do you see that could hamper reaching your goals for stakeholder involvement in INVEST Living Labs?

24. In your institution, what kind of tools or practices do you have for promoting innovation through HEI-stakeholder interactions?
25. In your institution, how are the INVEST Living Labs fostering entrepreneurship?
26. In your institution, do you have practices for enhancing multi-disciplinary in your Living Labs?
27. If yes, please describe in here
28. What kind of funding tools or opportunities does your institution have for stakeholder involvement?