PROJECT H2020

LIVERUR

Living Lab Research Concept in Rural Areas

EXECUTIVE SUMMARY

DELIVERABLE 5.2:

Testing Pilot Regions orientations for the Toolbox

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WEBSITE	www.liverur.eu

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1 INTRODUCTION

LIVERUR is a pioneering H2020 project addressing Living Lab concepts, circular economy, and the creation of new business models for rural enterprises in Europe and beyond.

LIVERUR project aims to introduce the Rural Living Lab research methodology in SMAEs framework, to identify and analyze various business model approaches and, to that, create benefit, social cohesion, jobs, stakeholders' integration, actors' inclusiveness, and business resilience through the development of an innovative business model for rural enterprises based on the concept of Rural Living Labs (RAIN).

This concept will be integrated into an online platform (RAIN platform) to ensure accessibility and sustainability.

Task 5.2 of the project aimed at the implementation of the guideline developed in task 4.4 and testing of the newly created Regional Circular Living Lab technique in the Pilot Regions. The starting point for this task was the framework of guidelines for the implementation of the Regional Circular Living Lab approach developed in task 4.4. This task was devoted to test the newly developed concept of Circular Living Lab, with the objective of boosting competitiveness and innovation in rural businesses on the main 4 pillars of **LIVERUR**: Environment and Resilience; Competitiveness of SMAEs: Resource Protection and Management and New Markets.

A Circular Living Lab Toolbox has been developed to help all the Pilot Regions implement the framework in their regions and includes guidelines on how to manage a Living Lab, a special RACI-like matrix with the results from the stakeholder's analysis done in task 5.1., and material for their involvement and active participation, having as orientation the action catalogue (http://actioncatalogue.eu/search). The Toolbox includes a complementary programme dedicated to capacity building with activities addressed to Start Ups and SMAEs with New Business Model Ideas. It consists of a set of training and mentoring programmes on New Business Models, with the objective to support and help in the development of new business ideas for the companies in partner regions.

The Circular Living Lab Toolbox has the steps to be carried out during the pilot implementation process:

(i) Toolbox Overview.
(ii) RAIN Business Model.
(iii) Purpose.
(iv) User Involvement.
(v) Service Creation.
(vi) Infrastructure.
(vii) Governance.
(viii) Innovation Outcomes.
(ix) Setting up a Pilot Project

Due to the nature of the pilot projects and to the complex essence of the Living Lab concept (to which are added other complex concepts, like Open Innovation, Circular Economy, Digitalization of SMEs, and Rural Development), there was the need to adjust the projected contents of the Toolbox along the process. For this reason, additional resources have been developed and are part of the final package, to facilitate the implementation. The resources include explanatory videos and a step-by-step guide that includes a specific program for project's development, a stakeholders' engagement program and a communication program.

2 OBJECTIVES AND METHODOLOGY

2.1 Objectives of Deliverable 5.2

2.1.1 Introduction

Living Labs are open innovation ecosystems based on a user-centered approach, co-creation, applied research, and pilot-testing. The **LIVERUR** project's short-term objective is to improve knowledge of business models that grow in rural areas, including the understanding of their potential. In the long term, the project will increase the potential for rural economic diversification. To achieve these goals, a new business model concept for Circular Rural Living Labs (RAIN) was developed, aiming to be tested in 13 Pilot Regions, with their own specificities and cultural contexts. A Toolbox has been created to assist in this process and aid each Pilot Region to adapt that business model to its local environment.

2.1.2 General objectives

The Toolbox was designed with an action-oriented mindset, privileging an objective approach to the unique features of Living Labs. Its fundamental goals are to support the creation of Living Labs that will be testing the RAIN business model.

2.1.3 Specific objectives

The Toolbox has been created with specific goals in mind, aiming to answer objectively and efficiently to **LIVERUR's** demands. The objectives are:

1. To introduce tools to help setting up Circular Rural Living Labs (and pilot projects).
2. To identify tools to help users of the Living Labs.
3. To have flexible tools, adjustable case-by-case.
4. To compile easy and ready to use tools.
5. To learn good practices (from other contexts and living labs).
6. To import tools from other (already tested) Toolboxes.

2.2 Methodology applied in Deliverable

2.2.1 Core Principles

As explained, the Toolbox has been designed with an action-oriented mindset, privileging an objective approach to the unique features of Living Labs. It is solidly based on core principles, both from a theoretical nature and a practical essence, with the aim to increase its applicability and functionality. The main concern behind this "mindset" was supported by the need to facilitate the actual implementation of Circular Rural Living Labs, based on the new business model concept concept (RAIN), as well as pilot projects in rural regions with limited understanding about the concepts of open innovation, Living Labs, circular economy, and digitalization.

The research process that initiated the Toolbox construction was mostly based on desktop research and on the analysis of secondary sources, including some of the deliverables produced in previous stages of the **LIVERUR's** project. After that, a co-creation process was carried out. Beyond the team working on this document, a noticeably big set of external resources were brought to the process to identify the best tools for the job. When the Toolbox got to a solid structure and content, a draft was presented to all the project's partners in the 3rd consortium meeting. Some specific issues were discussed, and important feedback was collected. The Toolbox was, then, improved based on that feedback, and later complemented with a step-by-step guide, guidelines to co-create the RAIN Business model concept developed in D 4.4. and support videos.

From a theoretical perspective, the Toolbox development has been based on research regarding Living Labs and open innovation ecosystems. For that reason, the underlying construct that supports the structure of the Toolbox is the "Harmonization Cube" proposed by Mulder et al. (2008). This is further explained in the next subheading. The same paper also brings to light the "most relevant aspects to consider" when setting up Living Labs. That was seriously taken into consideration and included in the Toolbox. Additionally, with the aim of leveraging the existent knowledge and best practices in what regards Living Labs in Europe, several resources from the European Network of Living Labs (ENoLL) were studied and analyzed thoroughly. This provided insights about the "common elements on Living Labs," which also guided the construction of the Toolbox.

Finally, the work developed on the previous stages of the **LIVERUR** project was critically important to the approach taken to the Toolbox. On the one hand, it was vital to answer to the project's philosophy and keep a consistent articulation between different concepts, namely Living Labs, circular economy, and rural development. The new business model concept concept, RAIN, was an important piece in this equation, as it provided the main guidelines and touchpoints to that goal.

2.2.2 Structure

The Toolbox's structure has been inspired by the Harmonization Cube, presented by Mulder et al. (2008) and adopted in **LIVERUR**. It comprises an introductory chapter and six technical chapters regarding structural issues, with tools to assist in their planning and implementation. The Toolbox is an ordered collection of tools to help setting Pilot Living Labs, but it can also be useful to help the users of the Living Labs when developing their projects. Like any other Toolbox, there are many tools that users can choose from according to their needs and goals.

The Toolbox was inspired by good practices from other contexts. It comprises ready to use tools that can be easily put into practice. Most of these tools is not original and has been imported from other Toolboxes. They have all been widely tried and tested, proving their usefulness and simplicity.

This was a critical concern when choosing which tools to include, as the fundamental goal was to facilitate implementation and daily operations.

All the technical chapters have the same subheadings, namely the most relevant aspects to consider, a quick reminder of the theoretical constructs around the Harmonization Cube, a critical task list, and a toolkit to help users perform these tasks. Additionally, each chapter was structured as a "toolkit" inside the Toolbox, having specific tools to answer the technical issues of that chapter. Consequently, even though advanced users may use the same tool for different purposes, beginners will understand that some tools are more appropriate to tackle specific tasks. All the tools in each toolkit are presented in the same way. There is a brief description and a link (where more information can be consulted), as well as a brief step-by-step guide on how to use the tool. There is also one practical hint and a visual demonstration of the tool, so users can see how it looks.

In what regards the content, the concept of Circular Rural Living Labs is briefly explained in the introductory chapter, which also comprises a very superficial approach to the Harmonization Cube and an overview of the RAIN business model concept. This chapter sets the tone for the other components of the Toolbox and summarizes how it should be used.

While the Harmonization Cube has six critical elements (corresponding to the six faces of the cube), the Toolbox's technical chapters do not follow exactly that structure. Following the introductory chapter, the spotlight is on "Purpose." This is not an element of the Harmonization Cube, but it was deemed as a necessary component of the Toolbox to help Pilot Regions (and future Living Lab initiatives) make an introspective assessment to understand why they are really implementing Living Labs and what they want to achieve overall. In fact, the initial feedback received from project partners and Pilot Regions was that it was hard to some of them to understand what are Living Labs in practical terms and how to make them become real. This first chapter was, then, structured to answer those concerns. Therefore, to facilitate the identification of Living Labs' purposes, 6 tools were included in the toolkit, namely Mind Map, Problem-Solution Fit, SWOT Analysis, Theory of Change, and Living Lab Worksheet.

The remaining 5 technical chapters include "User Involvement", "Service Creation", "Infrastructure", "Governance", and "Innovation Outcomes". Comparing with the Harmonization Cube, the face that is missing is "Tools & Methods," but this is a feature that is present in all the other chapters and, in a way, represents the practical application of the theoretical construct.

The "User Involvement" chapter is focused on identifying and mobilizing users and stakeholders. It comprises 10 tools, including Stakeholder Database, Stakeholder Matrix, Target Group, People Shadowing, Interview, Questionnaire, People & Connections Map, Personas, Brainstorming, and Workshops.

The "Service Creation" chapter includes 6 tools aimed at helping in the setting a portfolio of solutions that help the Living Labs' users in developing their projects. These tools are Business model concept Canvas, Value Proposition Canvas, Lean Model Canvas, Service Blueprint, Users & Offerings Map, and RAIN Concept.

Five tools are proposed to help planning and organizing the "Infrastructure" of the Pilot Living Labs. These tools comprise Physical Infrastructure Model, Testing Spaces, Online Collaboration Tools, Action Catalogue, and Web Analytics.

Issues regarding the daily management of the Living Labs are detailed in the chapter about "Governance." For that purpose, 6 tools are presented, namely Learning Loop, Causes Diagram, Marketing-Mix, Critical Task List, Scaling Plan, and Spider Web.

Finally, in what regards the actual results that are expected from the Livings Labs' operations and how to focus on their achievement, the chapter about "Innovation Outcomes" has some guidelines. This chapter highlights 5 tools, including Design Thinking, Evidence Planning, Gap Analysis, Life Cycle Assessment, Technology Readiness Level, and **LIVERUR** Project Evaluation Tool.

2.2.3 The Step-by-Step Guide

The concept of Living Lab is, sometimes, hard do understand, let alone to implement. For this reason, the Toolbox has been complemented with a step-by-step guide on how to implement a Living Lab to help **LIVERUR** partners setting up pilot projects in their regions. It is based on a step-by- step diagram, that will guide the team responsible for setting up the pilot, through a logical sequence of steps. Additional tools (three) to the ones presented previously were included, although in a different format. The aim is to facilitate the pilots' preparation and the start-up, according to **LIVERUR's** goals. It includes specific programs for projects' development, stakeholders, and communication. The step-by-step guide is also complemented with an Excel file that includes a) each of these programs' structure; b) a detailed planning of the process (based on an action agenda and on a structural agenda), and c) a seven-month implementation schedule.

2.2.4 Support Videos

Finally, to complement all this documentation and going a step further in facilitating its comprehension and application, 9 explanatory videos were created. These videos are available in the RAIN platform website and address the specific content of each chapter of the Toolbox, as well as the step-by-step implementation process. The closing section in each video highlights the Azores pilot living lab case study, settled in TERINOV – Science and Technology Park. It shows how to use the Toolbox to structure and implement this type of initiative, as a practical demonstration of the application of the proposed tools.

Video #1: Toolbox Overview
Link: https://www.youtube.com/watch?v=FCoFhHDQWhk&t=8s

Video #2: RAIN Business model concept
Link: https://www.youtube.com/watch?v=XZ635dsH-9A&t=1s

Video #3: Purpose
Link: https://www.youtube.com/watch?v=FqvJ3gFioQc

Video #4: User Involvement
Link: https://www.youtube.com/watch?v=7jZxxLgA_Qk

Video #5: Service Creation
Link: https://www.youtube.com/watch?v=lNxzS5suESg

Video#6: Infrastructure
Link: https://www.youtube.com/watch?v=xxKEpZDfQOY&list=PLqi0hPYGpiQjrXEedfIlvjaeavHIEKwjk&index=9

Video #7: Governance
Link: https://www.youtube.com/watch?v=iGa_WmXlsDw&list=PLqi0hPYGpiQjrXEedfIlvjaeavHIEKwjk&index=10

Video #8: Innovation Outcomes
Link: https://www.youtube.com/watch?v=DhxtZTalEwQ&list=PLqi0hPYGpiQjrXEedfIlvjaeavHIEKwjk&index=11

Video #9: Setting up a Pilot Project
Link: https://www.youtube.com/watch?v=5bT-0iB4It0

3 RESULTS & FINDINGS

The discussion of the results and findings of this deliverable is hindered by the fact that Pilot Regions have not yet been implemented in full scale. According to **LIVERUR's** implementation schedule, the next deliverable (D. 5.3.) will bring more data to the discussion and provide the opportunity for that assessment. At this point, however, it is only possible to evidence the outputs that have been created and highlight some considerations about some issues that have emerged throughout the process.

In what regards the outputs, the Toolbox is the main result of this part of the project. It comprises 37 tools to help setting Circular Rural Living Labs. Complementarily, a step-by-step guide includes 3 more tools, which are supported by and Excel file with the complete planning process. Nine videos were created to aid in the understanding and implementation of the Pilot Living Labs. This means a total of 50 features that were especially put together to leverage the success of **LIVERUR** WP5.

During the Toolbox development, the team faced some challenges that may be relevant to consider in the next stages of the project. First, the complex nature of some concepts - especially Living Labs - seems to cause some troubles to the project's implementation and to a generalized understanding of what needs to be done in practical terms. Secondly, some differences between researchers and practitioners have also come to the surface, causing, again, challenges in the exact definition of the practical tasks to be deployed and on their simplification. These difficulties were intensified by the fact that there are many Pilot Regions, each with its own challenges and life cycles, making it difficult to streamline the guidelines and processes. Finally, the Pilot Living Labs lack the proper understanding of open innovation ecosystems and Living Labs, which brings additional challenges for the implementation of the project and for the assumption of a clear long-term vision and objectives. All these issues will be considered during the pilot testing.

CONCLUSION

Since the results are limited at this point, aside from the outputs that have been produced and delivered, conclusions are almost non-existent. Nevertheless, considering the discussion that occurred along the development of the Toolbox, the team is ready to present some qualitative aspects that might have an influence on the success of the Toolbox usage, as well as critical considerations about the project.

One of the first conclusions of the team is that **LIVERUR** faces a huge challenge. Bringing high-end innovation and complex concepts, like Living Labs, open innovation, digitalization, and circular economy, to small and, sometimes, underdeveloped rural settings can become seriously difficult. There are several challenges that have affected the development of the Toolbox and the complementary material, including language (technical vs. scientific vs. practical), the understanding of theoretical concepts (this includes everyone involved, from research to technical elements), limitations in what regards technology and the availability of resources, education levels, and quite distinct stages of the products' life cycle, to name a few.

It will be interesting to monitor how each Pilot Region will evolve with the support of the **LIVERUR's** team, how they will be using the Toolbox, and which results will be possible to achieve. The differences that exist between the several pilots will surely bring to light many different challenges,

opportunities, and needs. This may prove quite valuable to improve the project's final outputs and structural models, but it will also bring quite different results. In fact, there is a concern in what regards the capacity to deliver what is necessary in each case. The assessment regarding the pilots' implementation will be particularly important to validate both the project's philosophy and core idea, but also the support work efforts that are being carried out.

Finally, another critical issue is the sustainability of the project outputs. If the project's core idea and the RAIN business model concept concept are easily understood, there might exist significant steps towards the increase of the potential for rural economic diversification and digitalization supported by a circular economy approach. However, if the ability to appropriately clarify and implement the concept of Circular Rural Living Labs lingers, it will be extremely hard to assure the continued performance of the pilots or the implementation of future initiatives. The creation of the best practices catalogue should have this in mind and present in a clear, objective, and pragmatic way what is this all about and what are the expected outcomes.