Pilot Operation Plans Guidelines & Instructions

Naider & the European Network of Living Labs

BACKGROUND: ABOUT THE SCORE PROJECT

SCORE is a four-year EU-funded project aiming to increase climate resilience in European coastal cities.

The intensification of extreme weather events, coastal erosion and sea-level rise are major challenges to be urgently addressed by European coastal cities. The science behind these disruptive phenomena is complex, and advancing climate resilience requires progress in data acquisition, forecasting, and understanding of the potential risks and impacts for real-scenario interventions. The Ecosystem-Based Approach (EBA) supported by smart technologies has potential to increase climate resilience of European coastal cities; however, it is not yet adequately understood and coordinated at European level.

SCORE outlines a co-creation strategy, developed via a network of 10 Coastal City 'Living Labs' (CCLLs), to rapidly, equitably and sustainably enhance coastal city climate resilience through EBAs and sophisticated digital technologies.

The 10 Coastal City Living Labs involved in the project are: Sligo and Dublin, Ireland; Barcelona/Vilanova i la Geltrú, Benidorm and Basque Country, Spain; Oeiras, Portugal; Massa, Italy; Piran, Slovenia; Gdansk, Poland; Samsun, Turkey.

SCORE will establish an integrated coastal zone management framework for strengthening EBA and smart coastal city policies, creating European leadership in coastal city climate change adaptation in line with The Paris Agreement. It will provide innovative platforms to empower stakeholders' deployment of EBAs to increase climate resilience, business opportunities and financial sustainability of coastal cities.

The SCORE interdisciplinary team consists of 28 world-leading organisations from academia, local authorities, RPOs, and SMEs encompassing a wide range of skills including environmental science and policy, climate modelling, citizen and social science, data management, coastal management and engineering, security and technological aspects of smart sensing research.

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1.INTRODUCTION

What is a Living Lab?

A Living Lab (LL) is an open innovation ecosystem operating in real-life environments, employing iterative feedback processes throughout the lifecycle of an innovation. LLs aim to generate sustainable impact across economic, societal, environmental, and regulatory dimensions by serving as intermediaries or orchestrators among citizens, research organisations, companies, and government agencies. This collaborative model, known as the quadruple helix model, emphasises the participation of these four key types of stakeholders. LLs primarily focus on co-creation, rapid prototyping and testing, and scaling up innovations and businesses, delivering various co-created values to involved stakeholders.

A Coastal City Living Lab (CCLL) is a type of LL first introduced during the Horizon 2020 SCORE project and are specifically tailored to coastal cities adapting to climate change. Like other LLs, CCLLs are characterised by their emphasis on co-creation, experimentation, and multi-stakeholder engagement. CCLLs actively involve users, including citizens and local communities, in the development and testing of strategies to enhance climate resilience in the face of water and climate-related hazards.

Pilot Operational Plan (POP)

Within the SCORE project, the SCORE CCLLs utilised a Pilot Operational Plan (POP) as their strategic guide to develop and implement their LLs. The POP is a structured guide that ensures the development and establishment of a LL over a fixed period, focusing specifically on stakeholder engagement and panel management. The POP provides LLs with a structured approach and framework to setting up and running a LL project, while taking steps to ensure the sustainability of the LL.

The POP was adapted into this template to be used broadly by any Living Lab. This document will walk you through how to use this resource in the development and implementation of your own LL.

Creating the POP

The Living Lab Integrative Process (LLIP) and the Panel Management Methodology are both essential components of LL practices, but they serve distinct purposes and operate at different levels of the innovation process. The Panel Management Methodology and the LLIP were essential in inspiring the development of the POP because they offer structured frameworks for managing stakeholder collaboration and innovation processes.

The LLIP is the macro-level framework guiding the entire lifecycle of LL initiatives and the overall innovation process (Figure 1). It emphasises stakeholder collaboration, user-centred design, and systemic thinking to create sustainable and impactful innovations in real-life contexts.
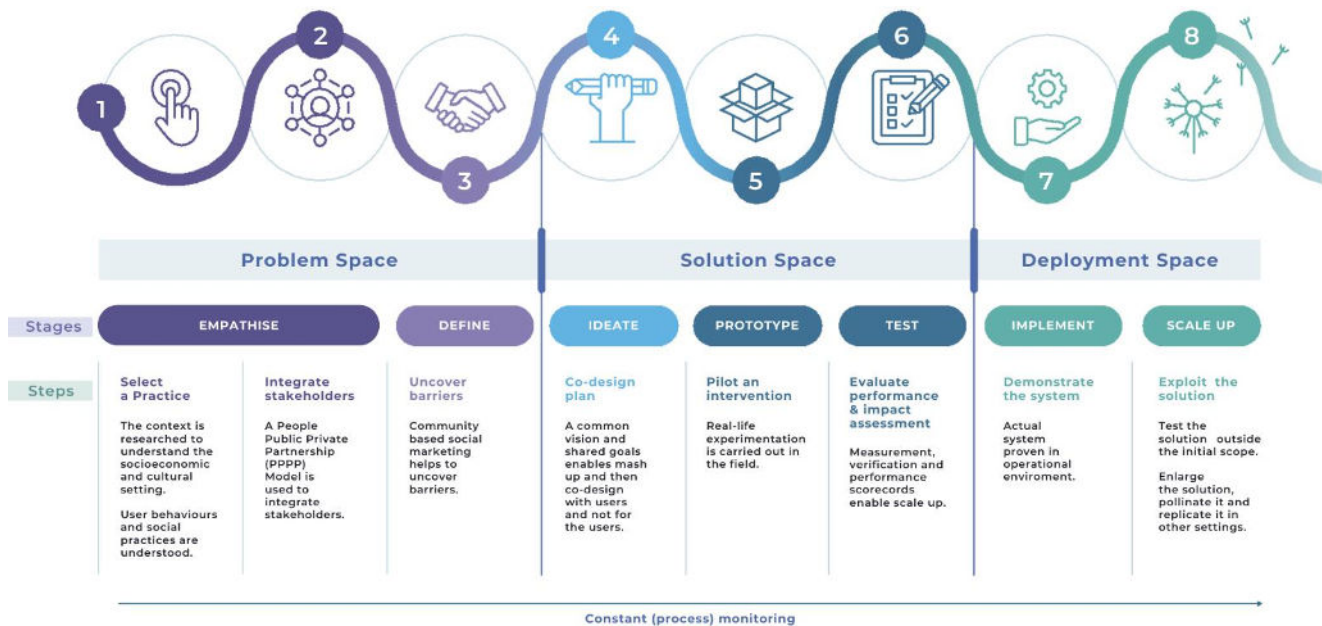
Figure 1. The Living Lab Integrative Process (LLIP) adapted from Mastelic, 2019. Copyright European Network of Living Labs, 2022.

In contrast, the Panel Management Methodology is a micro-level targeted, operational tool within the LL ecosystem. It focuses on the recruitment, engagement, and management of user panels, which are essential for collecting feedback, validating ideas, and refining solutions. In essence, the LLIP provides the overarching strategy for collaborative innovation, while the Panel Management Methodology delivers the practical mechanics for involving users and stakeholders effectively. Together, they ensure that LL projects at the meso-level (e.g. the SCORE project) are both systemic and user-driven, balancing high-level goals with operational precision.

The POP's four phases—Empathise and define, Ideate and co-design, Prototype and pilot, and Test and evaluate— align with the iterative and user-centred approaches of the Panel Management Methodology and LLIP, ensuring a clear progression from planning to implementation and evaluation. These methodologies emphasise stakeholder engagement, customisation for local socio-economic and cultural contexts, and iterative innovation, all of which are reflected in the POP's activities, such as scoping, planning, monitoring, and learning lessons. Additionally, the Panel Management Methodology's focus on ongoing learning and LLIP's emphasis on local adaptation guided the POP's strategy to develop sustainable and context-sensitive Coastal City Living Labs (CCLLs) in SCORE. Together, these methodologies ensure that the POP provides a practical, adaptable, and collaborative roadmap for addressing climate resilience in coastal cities.

2. PILOT OPERATIONAL PLAN OVERVIEW

Using this document

The Pilot Operational Plan (POP) is a structured guide designed to direct the development and implementation of a LL within a defined timeframe. It emphasises stakeholder engagement and panel management, providing a systematic approach to establishing and managing a LL project while ensuring its long-term sustainability. The POP is defined at a strategic level, allowing any community/organisation interested in building a LL to develop their own POP, and then utilise it during the implementation of their LL.

This guidance document provides an overview of how to use the Pilot Operational Plan template and the required instructions for LL teams to establish the framework for their unique LL properly. This template includes examples of a POP for "Model City," showing where elements can be adjusted for your own LL's context. The Annex of the document also includes some of the proposed tools and templates for use during the LL process. For more support on setting up a LL, take a look at SCORE's Online Courses.

When developing the Pilot Operational Plan (POP), relevant variables such as WHEN, WHY, with WHO and HOW will be explored. This plan provides a strategic overview of the definition and implementation process of your LL, including specifically tailored activities (Figure 2). As such, the POP is structured in four consecutive phases; (1) Empathise and define, (2) Ideate and co-design, (3) Prototype and pilot and (4) Test and evaluate. Under the phases, various specific activities are defined, these activities are; *Scoping, Planning, Supporting/Protecting/Rewarding, Launching, Monitoring and Learning Lessons*, and correspond to specific phases. It is important to mention that these activities combine tasks related with the overall management of the LL, as well as the management of the panel of stakeholders that are engaged in the project.
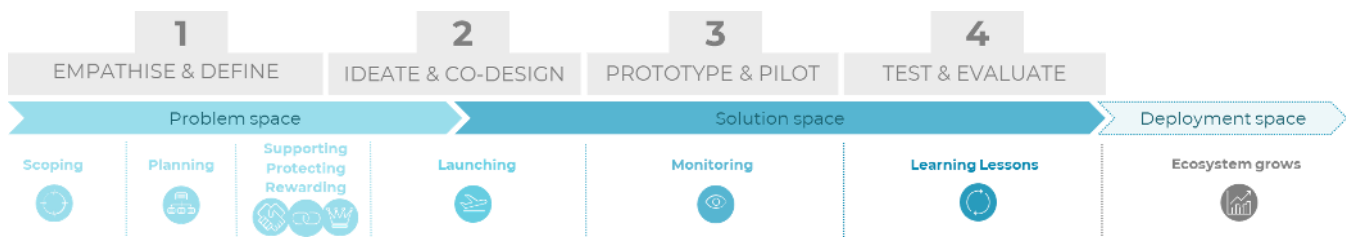

Figure 2. Main structure of the Pilot Operational Plan

In the subsequent sub-sections, each activity will be described, along with a list of actions and relevant KPIs for the panel managers to complete. The POP is a supportive document for panel managers of LLs to carry them through the entire process. Follow along in the subsequent sections to develop and implement a POP in your local context.

2.1. Phase 1: Empathise and Define

Key Focus: Diagnosis of the situation of the city/urban area.

The principal objective of this initial phase is to analyse the context of the city, and based on this assessment, define the structure of the LL to improve the current situation of the city. The three main focuses here are the identification of the LL's identified issue or topic, key stakeholders and their main needs and barriers.

This identification could be conducted using several methodologies, including stakeholder mapping, SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, baseline risk analysis, or regional and local projections. In this phase, WHY should the LL be built and WHO should be involved in the process are answered. The first phase is organised into three consecutive activities (see Figure 3):

1. Scoping

2. Planning

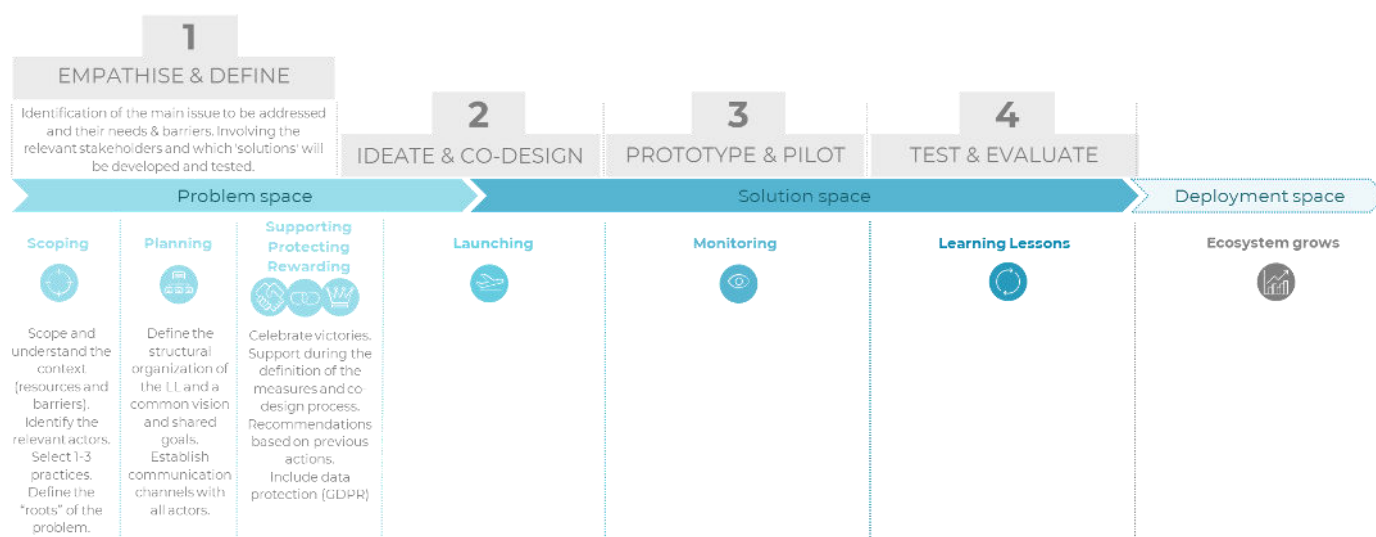3. Supporting, Protecting and Rewarding

Figure 3. Pilot Operational Plan, Phase 1: Empathise and Define.

Activity: Scoping

Scoping is the identification of the city's characteristics and context, including main problems, resources and barriers. Based on this identification, the structural organisation of the LL, the stakeholders' common vision, and their goals will be articulated. The main actions for SCOPING are described as follows:

• Identify the key challenges being faced and define the roots of the identified problems, not just the symptoms.

• Study the available data on the ecosystem surrounding the LL, scope and understand the context.

• Define the main goals of the LL considering the inputs from key stakeholders.

• Identify the available resources (i.e., financial, human, time) for proper implementation of the LL.

• Select 1-3 practices, also known as challenges, to be addressed by the LL in the upcoming years.

• Identify the practices related to the relevant actors, those with a large impact (positive or negative) on the ecosystem.

• Decide the operational structure of the LL. Who will be part of the team, what are their roles and responsibilities?

To implement these actions, various tools can be utilised. Remember, that not all the tools should be used at the same time or are suitable for the implementation of all actions. Table 1 below summarises the repository of tools that were used in SCORE for Scoping activities.

Table 1: Tools for the Scoping Activity in Phase 1 of the POP

Name	Description	Application in SCORE
SWOT analysis	SWOT Analysis is a strategic planning tool used to identify an organisation's internal strengths and weaknesses, as well as external opportunities and threats.	In SCORE, SWOT Analysis was used to delineate the context of each CCLL, identifying also the specific problem they want to address during the project, considering its context. You can access the SWOT in the Co-creation Toolkit here.

Fishbone Diagram	Fishbone Diagram, also known as the Ishikawa, is a visual tool that identifies possible causes of a problem by categorising them.	In SCORE, Fishbone Diagram was used after selecting and prioritising a problem identified in the SWOT to delve deeper into it, identifying its roots causes and effects. You can access the Fishbone Diagram tool in the Co-creation Toolkit here.
Additional Tools	Additional tools can be found in the Annex of the POP template that could be utilised at this stage.	

Activity: Planning

Once the current reality of the city is understood, the Planning activities can commence. This second action refers to the identification of the relevant stakeholders that should be part of the LL, to ensure all perspectives are considered. During this activity, the most relevant stakeholders that the LL team intends to engage with must be identified. For this action to be successful, clear and solid communication channels with all actors must be established. The main actions related to this activity are described as follows:

• Define a common vision and shared goals among the relevant stakeholders.

• Establish the structural organisation of the LL; who will need which support?

• Evaluate the need for different plans depending on the select problem and the involved stakeholders.

• Stakeholder mapping with actions planned to establish communication channels with all stakeholders.

• Define the main indicators to measure the impact of the chosen actions.

Table 2 outlines the potential tools to complete these above requirements. Be mindful when selecting the tools, as not all will be appropriate for your LL's needs/activities.

Table 2: Set of Tools for the Planning Activities in Phase 1 of the POP

Name	Description	Application in SCORE
Stakeholder Mapping	Stakeholder Mapping is a visual representation tool used to map out and categorise stakeholders, ensuring that all parts of society are included in the process, facilitating comprehensive engagement.	In SCORE, Stakeholder Mapping was used in this activity to identify the main actors from the Quadruple Helix Model involved in each CCLL, ensuring that all relevant perspectives are considered. This was completed through a Brainstorming process, which you can access in the Co-creation Toolkit here.
Power Vs Interest Matrix	Power Vs Interest Matrix is a tool that helps analyse the identified stakeholders based on their level of power (influence) and interest regarding a project, guiding engagement strategies and indicating effective communication methods with each of them.	In SCORE, Power Vs Interest Matrix was used after the Stakeholder Mapping, to focus more on the dynamics of the identified stakeholders. This led to the identification of tailored communication and engagement strategies, based on their level of influence and interest in the CCLLs' vision and focus. You can find this tool in the Co-creation Toolkit here.
Brainstorming	Brainstorming is a collaborative technique that encourages participants to discuss and exchange a wide range of ideas and solutions, allowing everyone to freely and openly express their ideas.	In SCORE, Brainstorming was used in this activity for multiple planning activities, including the definition of the structural organisation of each CCLL, and the outline of their vision and strategic goals. You can find this tool in the Co-creation Toolkit here.

Stakeholder Journey	This tool can help you map the steps that will be taken with a specific stakeholder or group of stakeholders within the quadruple helix and, at the same time, identify the needs and gaps of the stakeholders that you will be closing with the proposed activity.	This process was completed with all CCLLs through online workshops. You can find this tool in the Co-creation Toolkit here.
Additional Tools	Additional tools can be found in the Annex of the POP template that could be utilised at this stage.	

Activity: Supporting, Protecting, Rewarding

Once the main structure of the LL is defined, Phase 1 ends with a group of three actions: Supporting, Protecting and Rewarding. These final components of Phase 1 cover the administrative component and the LL operational strategy. This includes the required legal and protection activities, communication and participation protocols that need to be set in place to promote a continued engagement of the different stakeholders. The main actions related to this activity are described as follows:

• Implement all the legal and protection actions, particularly as related to data protection & GDPR.

• Check whether insurance is necessary for the foreseen activities.

• Act under the common vision and shared goals.

• Celebrate victories.

• Define a continuous process of support during the definition of measures, as well as the co-design process. The support process will expand through the entire project.

The following diagram provides a visual representation of the main structure to consider when establishing a CCLL, considering the operational distribution of the actions related to this activity, which facilitates and distributes responsibilities among the people who make up the LL by type of activity or need (legal, communication, etc).

Considering that a CCLL will be co-creating with users during the entire innovation cycle, a support structure needs to be set in place to provide the users with answers to questions that may arise. Ideally, the support structure, or helpdesk, should have a unique entry point, or single point of contact (SPOC) that will be in charge or redirecting the questions to specific people within the CCLL. The contacts for each thematic area (e.g., legal, communications, etc) may be part of the CCLL, or from a partner institution. The common areas in which users may have questions are shown in Figure 4.
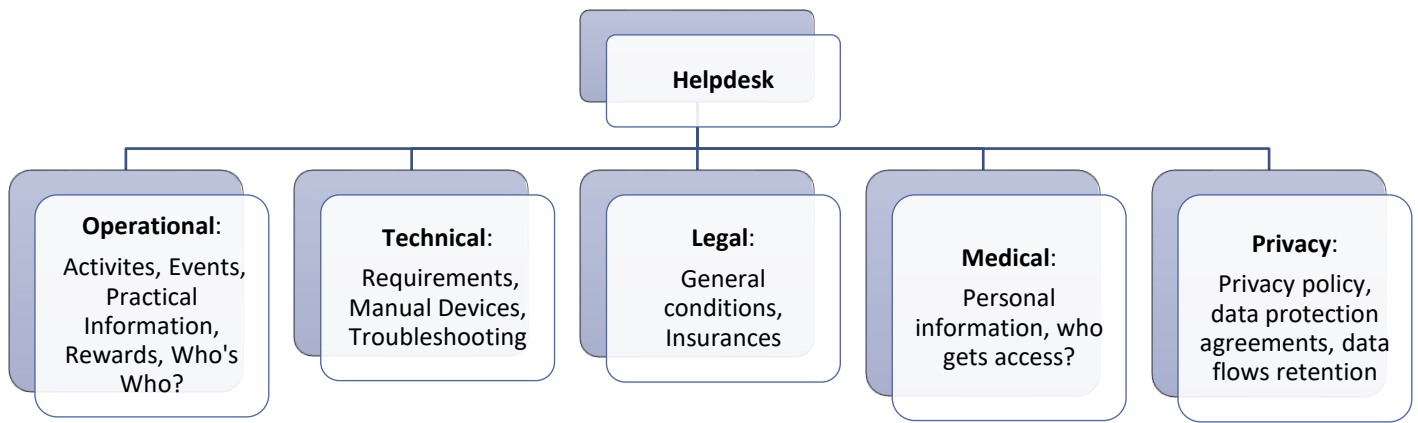
Figure 4. Phase 1: Helpdesk's main structure to consider.

2.2. Phase 2: Ideate and Co-Design

Key Focus: Definition & design of solutions to the Phase 1 problems.

The main aim of this second phase is to co-create and co-design the most appropriate solutions to the selected problems. During this phase, stakeholders are brought together to co-create feasible solutions. This is an interactive process where all stakeholders should be content with the initial solutions; however, solutions should also have the potential to be adapted to future needs.

The main goal is to develop a Minimal Viable Product (MVP), in which the initial solution is defined with enough characteristics to trigger the interest of early-adopter customers and get them involved in the solution development process cycle and iteratively improve the solution until a best-fit version is designed. Examples of activities that could be conducted are co-creation activities, socio-economic assessments, or prioritisation activities of the identified solutions. The LLs should question HOW their LL will address their previously identified problem. The main activity related to this phase is Launching (see Figure 5).
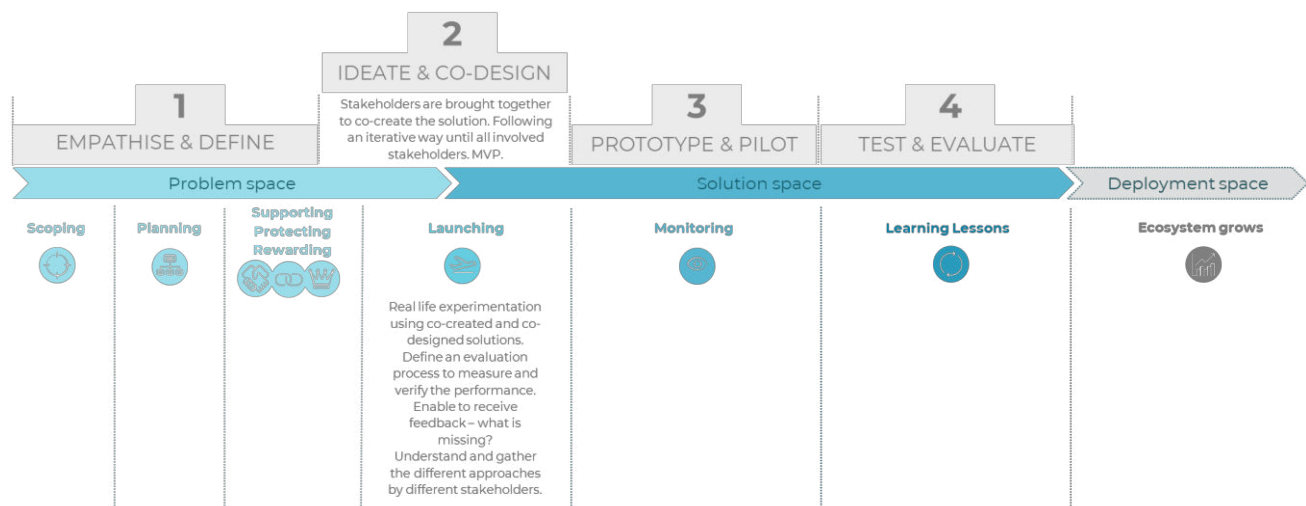

Figure 5. Pilot Operational Plan, Phase 2: Ideate and Co-design.

Activity: Launching

Launching uses real-life experimentation to co-create and co-design solutions with the relevant stakeholders to creatively identify the most suitable solution for the identified topic/issue. Launching activities

are based on the decisions made in Phase 1 – Empathise & Define, so it is essential that those activities were conducted robustly, and the decisions were made comprehensively. Tips for Launching:

1. The communication channels and continuous process of support (defined in Phase 1) are key at this point to ensure the commitment and engagement of all the stakeholders taking part in the LL.

2. Ensure your LL can receive proper feedback; a wide variety of perspectives and approaches is necessary to co-create effectively.

The main actions related to this activity are the following:

• Ideate what can be needed to co-create and co-design possible solutions. Ideally, a proof of concept or mock-up should be done.

• Conduct a socioeconomic assessment of the ideated solution, for example, a multi-criteria analysis.

• Establish a methodology to evaluate performance. Measurement, verification, and performance scorecards enable scale-up and impact assessment, for example the evaluation questionnaire.

• Establish channels to facilitate receiving feedback. Understand that different stakeholders will approach situations and problems differently: faces to face periodic meetings, emails, workshops, calls, etc.

Table 3 lists the possible actions to fulfil the Launching activity.

Table 3: Set of Tools for the Launching Activity in Phase 2 of the POP.

Name	Descriptions
Scoring matrix/ MCA	This activity looks at assessment criteria, feasibility, and effectiveness. This scoring matrix helps to choose between strategies, it stimulates discussion on the shorter and longer-term impacts of the projects in economic, social, political, environmental, and cultural terms. Rating these impacts makes perceptions during the discussion explicit and is effective in communicating these perceptions with the decision-makers. In SCORE, we utilised an MCA process for selecting EBAs in the CCLLs. You can access this methodological framework here.
Gantt chart	This tool defines the tasks (activities) necessary to carry out the selected strategies in terms of responsibility, people involved, time required, timing and resources needed.
Brainstorming techniques	There are two main forms of brainstorming: oral and written. They are similar, except that the written form starts with individuals first writing ideas down, which encourages more areas of thought and is typically more productive. An example of this exercise is available in the Annex of the POP.
Communication plan	Communication involves transferring messages/ideas to other people, and the communication plan aims to develop a simple communication strategy related to the audience. An example of this exercise is available in the Annex of the POP.
Sustainability Planning	To ensure long-term viability of your LL, this exercise requires your team to provide a brief recap of the vision-mission and strategic goals; results of the analyses of the strengths, weaknesses, opportunities, and threats; and key stakeholders of the CCLL. From there, you can develop a strategy for the operation of the CCLL beyond a specific time of the project. An example of this exercise is available in the Annex of the POP.

2.3. Phase 3: Prototype and Pilot

Key Focus: Implementation of the ideated & co-created solutions.

The principal objective is to pilot the developed solutions to test their applicability and utility in the field/in real life context. The evaluation of the proposed solutions should be carried out by small-scale pilots

that will determine to what extent the stakeholders' needs have been addressed by this solution. Examples of activities that should be conducted include solution implementation, citizen science approaches and testing. As with Phase 2, in Phase 3 the exploration of HOW the LL tackle their identified problem is continued. The main activity related to this phase is Monitoring (see Figure 6).
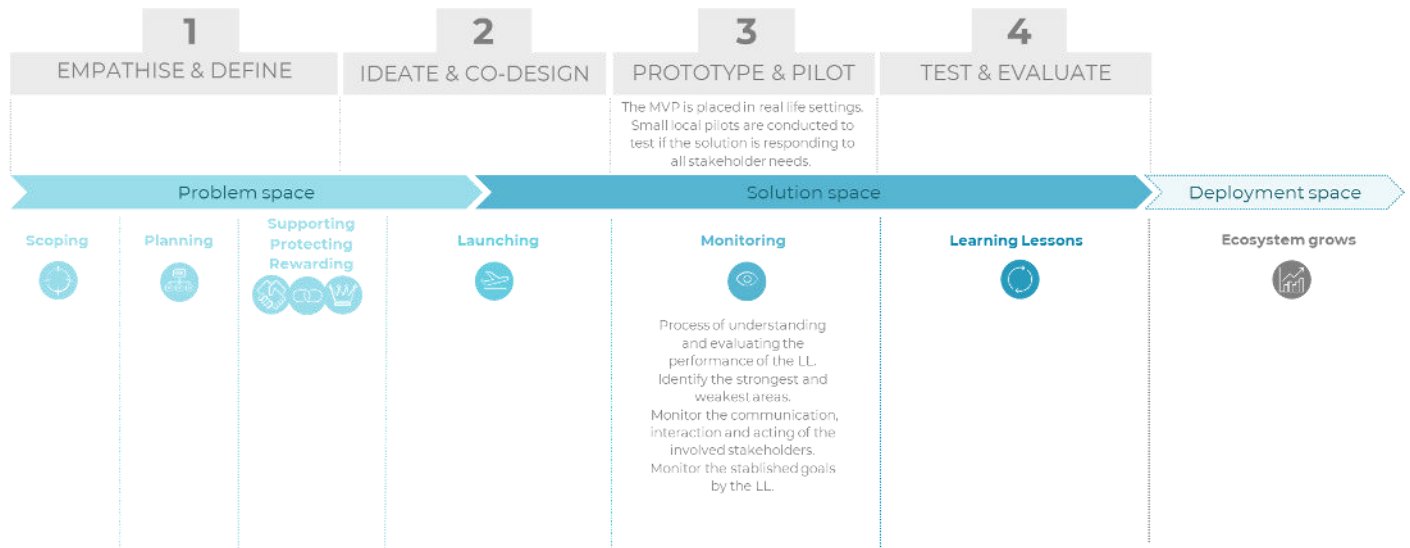

Figure 6. Pilot Operational Plan, Phase 3: Prototype and Pilot.

Activity: Monitoring

Monitoring is an activity that should be carried throughout the innovation cycle to feed information to previous and future activities. This activity seeks to understand and evaluate the suitability of the actions and decisions taken by the LL. This activity can be explained as the process of understanding and evaluating the suitability of the actions and decisions taken by the CCLL, which includes the identification of the strongest and weakest areas or locations in which a solution could be implemented, and continuously checking if we are reaching the goals proposed for the LL within the activities being developed.

The main actions related to this activity are the following:

- Prototype the technology to monitor the locations of the designed solutions and test the technology on a small scale.

- Understand and evaluate the performance of the LL.

- Identify the strongest and weakest areas of the testing to generate improvements and choose the most appropriate location for the designed solutions.

- Analyse stakeholders' participation. Knowing is growing: it's important to stay on top of how different agents are acting and performing. Evaluate the interactions with stakeholders. Which had the biggest impact? Which are less engaged? Why?

- Monitor the established goals by the LL. Which goals were being accomplished and which not? Why?

Table 4 provides a potential set of tools to achieve these Monitoring activities.

Table 4: Set of Tools for the Monitoring Activity in Phase 3 of the POP.

Name	Description

Multi-Criteria Analysis (MCA)	Multi-Criteria Analysis is a decision-making tool that provides a structured and transparent framework that enable the evaluation of multiple options (e.g., policies, measures) against various criteria, helping with their prioritisation. In SCORE, Multi-Criteria Analysis was used in this activity to help the CCLLs identify and prioritise the identified solutions. You can access the MCA methodology that SCORE utilised here.
Brainstorming	Brainstorming is a collaborative technique that encourages participants to discuss and exchange a wide range of ideas and solutions, allowing everyone to freely and openly express their ideas. n SCORE, Brainstorming was used in this activity to define the communication channels through which the CCLLs can receive feedback from the identified stakeholders. You can find this tool in the Co-creation Toolkit here.
Reviewing and Adapting Vision, Mission, and Strategic Goals	With this, you will assess whether the Living Lab's (LL) vision, mission, and strategic goals remain relevant and aligned with the current context. It's important to also identify necessary adjustments to enhance impact and effectiveness. An example of this exercise is available in the Annex of the POP.
Thematic Forums	Spotlights of the month, or thematic forums, are useful to create an online/presential space for CCLLs to share experiences, successes, and challenges in implementing strategies and actions. An example of this exercise is available in the Annex of the POP.

2.4. Phase 4: Test and Evaluate

Key Focus: Evaluate the designed and prototyped solutions at a bigger scale.

The main objective of this phase is to test the developed solutions in a larger feedback group to ensure its utility. Following positive feedback from Phase 3 and agreement that the solutions are considered appropriate, Phase 4 will look at testing the solutions with larger groups. Examples of activities that could be conducted are large-scale testing, full socio-economic assessment, or impact evaluation of the implemented solutions. Regarding the relation between this phase and the LL framework presented, the fourth phase refers to the last steps of the Solution Space where the performance is evaluated, and an impact assessment is conducted. The main activity related to this phase is Learning Lessons (see Figure 7).
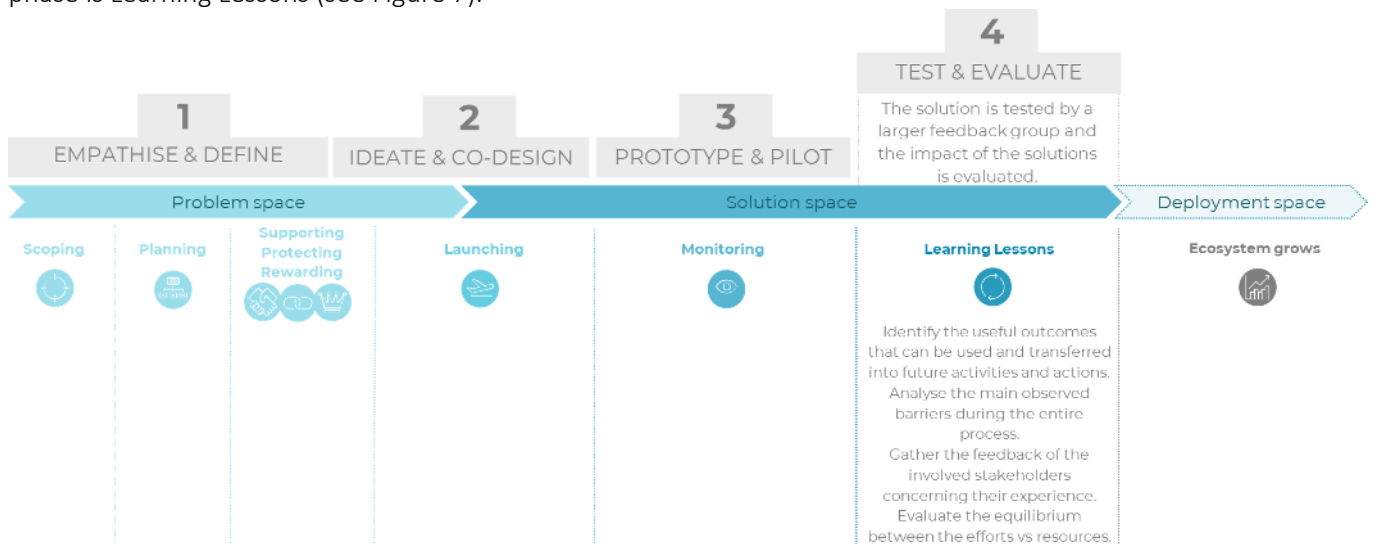

Figure 7. Pilot Operational Plan, Phase 4: Test and Evaluate

Activity: Learning Lessons

This activity is the final testing to assess the suitability of the designed solutions and their locations and gathers the main conclusions. The activity aims to identify useful outcomes, barriers, and stakeholder feedback, so they can be considered in future implementation or in other LLs. At this point, the actions taken in previous phases are key to drawing out the main lessons learned.

This activity should conclude with an evaluation of resources to impact, to ensure that not only the identified solutions are suitable, but also the effort made is sustainable over time. The main actions related to this activity are the following:

- Test the technology at a larger scale to confirm the suitability of the locations for the designed solutions.

- Gather relevant outcomes that can be used and transferred into future activities and actions.

- Identify the main observed barriers during the entire process.

- Evaluate the entire process, including effort vs resources.

- Collect the feedback from the stakeholders regarding their experience.

Table 5 provides a potential set of tools to achieve these Learning Lessons activities.

Table 5: Set of Tools for the Learning Lessons Activity in Phase 4 of the POP.

Name	Description
Survey and Feedback Forms	Survey and Feedback Forms are tools that can help to gather input from stakeholders and users about their experiences and satisfaction with developed solutions. Analysing the results reviewed for those tools can help to better understand stakeholders' and users' needs and enhance their engagement strategies for better outcomes.
I like, I wish, What if	I like, I wish, What if is a tool for collecting, in a structured way, feedback from users. With this tool, the users are invited to provide open feedback by formulating three types of statements: "I like...", "I wish...", and "What if...". You can access this tool in the Co-creation Toolkit here. A template for assessing different aspects of a project is available in the Annex of the POP.
Lessons Learned Sessions	Facilitating individual reflections on key insights, successes, and challenges experienced in the Living Lab (LL) processes, can enable continuous improvement and knowledge sharing.
Sustainability Workshops	Organising workshops centred around key aspects of sustainability within LLs is useful to facilitate knowledge sharing and ensure the CCLLs considered their sustainability beyond a project. A proposed workshop structure is available in the Annex of the POP.

2.5. Post-Phases: Deployment Space

The Deployment Space is the last phase of the LL framework and was outside of the scope of the SCORE project. The Deployment Space focuses on the demonstration of the solutions in an operational environment. At an operational level, the action here is Ecosystem Growth (see Figure 8). This action involves the testing of the solutions proposed during the scoping process, questioning if people are quitting and why, evaluating the equilibrium between expectation and reality, analysing and updating the goals considering current and past performance conditions, and finally questioning the goals of the project and the feasibility of these considering past and current outcomes.
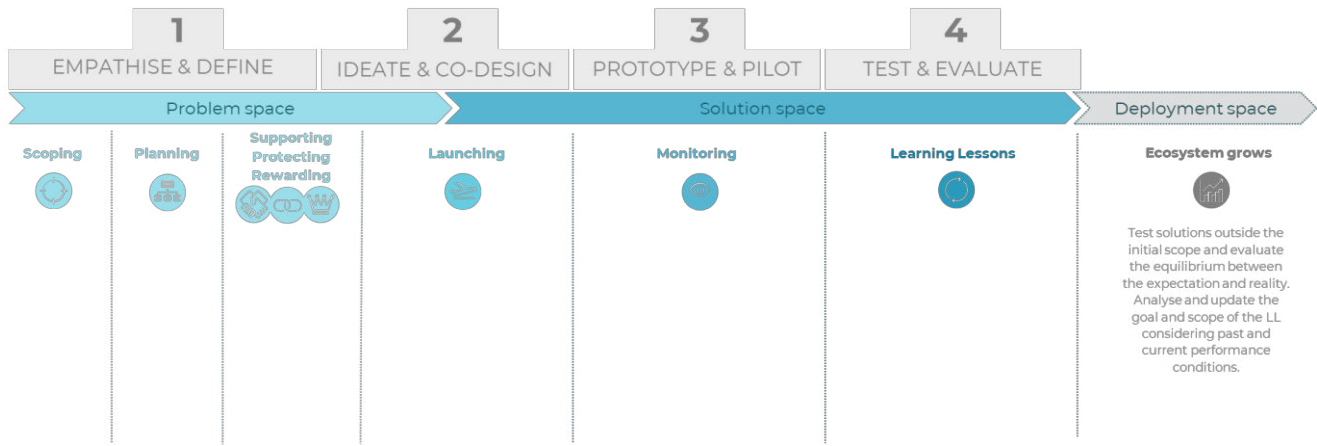
Figure 8. Pilot Operational Plan, Deployment Space

3. SUPPORTING TOOLS

3.1. Stakeholder Engagement Roadmap

The POP presented above includes the guidelines regarding what each CCLL should do in order to build a successful strategy to manage stakeholders in a LL and enhance the adaptation to climate change in coastal cities. The CCLLs are defined, implemented and to be run by local stakeholders that invest their time and resources in doing so. Hence, having engaged stakeholders from all the dimensions suggested in the Quadruplex Helix is key for an effective and efficient implementation.

In this vein, the POPs have been complemented with a stakeholder participation process that aims to gather the main milestones to consider when engaging stakeholders in a LL context. Figure 9 summarises the roadmap with milestones such as "Scoping project or activity", "Defining an Operational Helpdesk" or "Sharing Results". The colours of the figure attends to the Macro (yellow), Meso (blue) and Micro (grey) levels a LL has. Following the POP structure presented, the stakeholders' engagement roadmap has been related to the consecutive phases to be followed when building a CCLL. The stakeholder engagement roadmap matches with the POP and suggests a structured step-by-step process for a more effective and efficient stakeholders' engagement process.
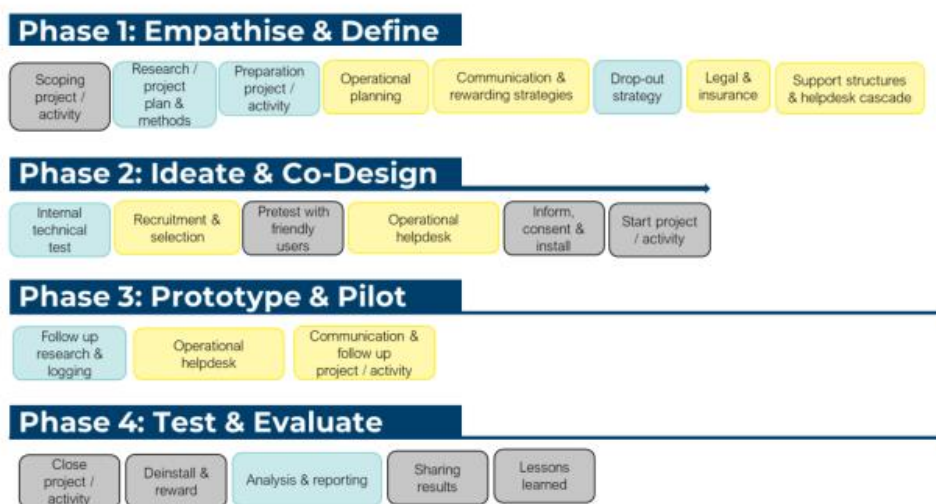

Figure 9. Relation between the POP and the stakeholder engagement roadmap in phases.

3.2. Co-Creation Toolkit

Co-Creation is one of the core concepts of the Coastal City Living Lab framework developed within the SCORE project. As such, a Co-Creation Toolkit was developed to allow SCORE's CCLLs to engage with their stakeholders and support the development of sustainable LL. It gathers a collection of tools for engaging stakeholders in co-creation in interactive, engaging, and attractive ways. This collection of co-creation tools can assist anyone in facilitating a multi-stakeholder process (including any target group across the quadruple helix) or activity related primarily to urban development. The collection of tools is somewhat generic allowing it to be adapted for other settings beyond urban development.

The toolkit is structured around five categories based on the target of the co-creation activity, namely *Needs Identification and Analysis*, *Ideation and Visioning*, *Strategy Development*, *Prototyping and Testing*, *Feedback and Evaluation*. With these categories, the Co-Creation toolkit is closely linked to the broader Living Lab Integrative Process (LLIP), providing practical tools to support each phase, from understanding user needs to developing, testing, and deploying innovative solutions. Users can select the most appropriate tool from the different categories, based on a series of criteria, including the number of persons to be involved, the time required to be allocated for facilitation, or the materials needed for it.

4. CONCLUSION

The POP allows for a Living Lab to plan strategically and at different operational levels the phases and activities to be followed for a successful LL. Solutions are co-created and co-designed to be implemented and tested in order address identified challenges, involving agents of the quadruple helix (academia, governance, industry, and civil society) throughout the process. These plans, therefore, serve to establish the steps to be followed both at the level of governance of the Living Lab itself, to ensure the participation of all interested agents and maintain their involvement throughout the process. This works to identify barriers and limitations to be solved, to implement actions that are effective, and to extract lessons learned to integrate them iteratively into the LL process. The POP further provides a LL with participatory tools for co-creation and evaluation and monitoring, to be used according to their degree of progress and maturity as LL.

For further support on creating, implementing, and sustaining Living Labs or Coastal City Living Labs, please visit the SCORE Online Learning platform.