

Deliverable 5.2: MEL Framework

Deep Demonstration of a Circular, Regenerative and Low-Carbon Economy in Slovenia: Implementation of Phase 2

Work Package 2: Sensemaking and Actionable Intelligence

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1. Introduction

This document presents the MEL framework and plan for the Slovenia Deep Demonstration (DD). The MEL framework describes the processes by which the results and outcomes of the DD will be monitored, the methods to collect evaluative evidence of the key changes at the local and system levels that the DD is enabling, and the mechanisms by which this information and insights will be communicated and discussed with relevant stakeholders, in order to enable an agile project adaptation.

This MEL framework has been designed acknowledging the complexity of the DD project, as one of many initiatives working towards improving circularity and enabling the green transition in Slovenia. It is based on the principles of collaboration, complexity thinking and adaptability. Hence, the framework is composed of three levels (system, programme, and portfolio) at which the monitoring and evaluation activities will take place, and six evaluation questions that address both process and impact dimensions of the programme.

This document is structured as follow:

- Section 2 describes the purpose, expectations, goals, and stakeholders involved in the implementation of this MEL framework.
- Section 3 defines the context of the DD for which this framework was developed.
- Section 4 describes the MEL framework and plan in detail, including implementation plan.
- Section 5 describes the Data Management requirements needed for the implementation of the framework.

2. Purpose of the MEL Framework

2.1. MEL design principles

The goal of the Slovenia Deep Demonstration (DD) is to [contribute to] transforming the Slovenian economy and society into a circular one, building towards a green transition. The characteristics of the DD present specific challenges to the development of a MEL framework as the DD is one of many initiatives that will contribute to this transformation; it is a complex process that not only depends on developing the right activities but will also be influenced by external factors and internal changes of the many stakeholders involved.

Some of the specific characteristics of the DD that define the requirements of its MEL framework are:

- **It is a collaborative process that is implemented in partnership with local stakeholders.** The implication is that there is a need to assess how the Deep Demonstration has affected the capacity of partners to introduce changes in their specific areas of work.
- **It focuses on systemic changes, as opposed to single point interventions.** Hence, the MEL activities need to focus on early and mid-term signals of change, such as how behaviour, structure and dynamics in the target sectors have changed as a result of the DD activities – including weak and early signals of change - not only system level KPIs and targets. It is this granularity that will provide us insights into whether the DD goals are being achieved, and whether the assumptions of the programme and stakeholders involved hold true.
- **It seeks to influence complex interactions, with stakeholders and institutions within and outside the programme.** It is very difficult to directly attribute changes in the circularity system to the Slovenia DD, and our MEL framework might need to evolve as we learn more about the project. However, it is important to develop the capacity to rapidly respond and adapt to new opportunities that emerge during the timeline of the project.
- **It focuses on learning as a key driver of change.** As the pathways of change that will unfold as a result of the DD work are unknown, the capacity to make the most effective use of the resources and opportunities of the programme will depend on our ability to learn and adapt. The implication for MEL is that instead of looking at average effects and summary statements of how much change has resulted from the DD, the monitoring and evaluation efforts should pay attention to the outliers, leaving space for emergent changes to become visible.

These characteristics helped us determine some design principles for the MEL framework that are outlined below:

- **Align monitoring and evaluation to be able to use regular measures of performance in learning, and as an input for decision-making.** Monitoring, evaluation, and learning are structured as a continuous process, with efforts to monitor activities feeding into quick evaluation and providing insights and learning opportunities. While there will be formal evaluation “periods” during the project, evaluation and learning should be considered as a continuous process that builds up from every activity developed.
- **Use the Slovenia DD Theory of change (TOC) as a strategic framework for MEL.** The Theory of change describes the assumptions on processes by which the DD seeks to achieve changes at the system level. Hence, it describes intervention strategies in four different domains. This TOC provides a mental framework for evaluating the changes that occur at the system and

programme level and needs to be revised constantly to check on the validity of our assumptions and capture learnings about the mechanisms of change in different systems.

- **Identify systemic change in the sectors selected by the Slovenia DD** (forest-wood, built environment, food, mobility, and manufacturing). The impacts on the circularity system that this programme seeks to achieve will take a long time and are most likely to be achieved beyond its lifespan. Hence, for each sector, we should also identify and focus on early and intermediate changes that point us in the long-term direction we want the system to move towards, as well as spotting signs that constellations of enabling conditions are being achieved (such as changes in organisational structures, behaviours, and visions).
- **Measure changes from both the perspective of the portfolio and its initiatives (bottom – up) as well as system level (top down).** The most direct way to understand the impact of the DD is through the outcomes of the interventions that compose each of the five portfolios. Each intervention will lead to concrete results, and the portfolio process is expected to create synergistic effects that will bring about deeper, more complex changes in each sector. This is the “bottom-up” approach of the MEL framework. However, we also need to pay attention to the broader picture and look for signals of change at the system level. To do so, we have selected a set of indicators that will help us monitor the weak and early signals of change that we can observe at the system level, tracking changes in the sectors and work relevant to the DD.

Based on these principles, we have designed a three-level MEL framework, that will allow us to capture both complex changes at the level of systems and more concrete results and outcomes at the level of portfolio and programme. The following table describes the advantages and disadvantages of each level, illustrating why the three are needed to have a full picture of the Slovenia DD.

Table 1. Three levels of MEL framework

Level	Advantages	Disadvantages
System level (top down)	<ul style="list-style-type: none"> • Focuses on how things are tentatively changing (early and weak signals) or have changed at the outcome and impact level. • Consider contributory factors to these changes, including activities other than the DD 	<ul style="list-style-type: none"> • Specific attribution of system level outcomes to the DD is difficult and costly if attempted. • Only possible to explore contribution of the DD
Portfolio level (bottom up)	<ul style="list-style-type: none"> • Shows direct results of the portfolio work. • Clear link with portfolio activities • Able to spot early and actionable signals of change at smaller scale than the system level, enabling a timely adaptive response 	<ul style="list-style-type: none"> • Difficult to aggregate effects at the system level
Programme (meso-level)	<ul style="list-style-type: none"> • Allows to understand how effective the delivery of key activities of the programme with respect is to intended outcomes. 	<ul style="list-style-type: none"> • Focuses on short and mid term results but overlooks longer term outcomes

	<ul style="list-style-type: none"> • Quick check on the quality of the process • Can identify quick wins to share with stakeholders 	
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This three-tier approach will help us to ask the following generic questions to support evaluation:

- What have been the key changes – early and established – at the system level?
- What have been the main determinants of these changes?
- To what extent were those determinants influenced by the programme’s intervention?
- What worked, what didn’t work? For whom it worked, how and why?

These generic questions translate into specific Evaluation Questions, described in section 4.1.

2.2. Stakeholders involved

The Slovenia DD is a collaborative process; hence a variety of stakeholders are involved in the implementation of this MEL framework and its learning process. There are three types of stakeholders.

- **Deep Demonstration Management team:** corresponds to the main decision-making entity for the DD responsible for project delivery oversight, risk and change management, quality control and stakeholder activation. Orchestrated by EIT Climate-KIC, it involves multiple Ministries and Slovenian entities (see table below)
- **Implementation team:** corresponds to the EIT Climate-KIC team - co-responsible with MJU- for the effective delivery and coordination of planned activities according to the workplan.
- **Data provider:** actor or organisation that is involved in providing (new) data for the Deep Demonstration.

These different stakeholders have the following expectations regarding the MEL framework:

- (1) **Monitor progress of the Deep Demonstration according to the objectives agreed on the programme.** Check whether the activities planned for the DD are delivered as intended and are leading to the desired outcomes. Develop the ability to revise activities and programme in response to monitoring results, to maximize their impact.
- (2) **Evaluate the system-level impact related to the Deep Demonstration in the context of the circularity system in Slovenia.** Be able to capture and understand what the key observable changes in the activation areas of the DD have been, and its larger effects on the circularity system in the country.
- (3) **Understand the contribution the Deep Demonstration, and other related activities, have made to these impacts.** Understand and co-relate to evidence what has been the contribution of the DD activities to the changes observed at different levels of the system, and what other activities and/or factors might have contributed to these changes.
- (4) **Participate in the learning process driven by the Deep Demonstration that can improve actions and decisions.** Collectively reflect on the results of the monitoring and evaluation results to draw learnings and insights about the DD process, as well as broader dynamics regarding policy innovation and transformation of different sectors towards circularity, that can be used to inform and promote changes in organisations and institutions.

- (5) **Contribute to the MEL activities by providing (new) data, developing new processes, and improving actions together.** Take part in periodic monitoring and evaluation activities, contribute with new and/or existing data to improve processes of data collection, monitoring and evaluation frameworks, or indicators frameworks for related activities outside the scope of the DD. Use the DD as an opportunity to test new indicators and promote changes in monitoring and reporting practices that could better reflect a transition towards circularity.

Table 2. Stakeholders and their roles and expectations regarding the MEL framework

Stakeholder	Expectations	Type of stakeholder
Ministry of Public Administration (MJU)	(1), (2), (3), (4), (5)	DD Management team, Implementer, Data provider
Ministry of Environment (MOP)	(1), (2), (3), (4)	DD Management team Funder, implementer
Ministry of economy and Technological Development (MGRT)	(1), (2), (3), (4)	DD Management team, implementer
Ministry of Education (MIZS)	(1), (2), (3), (4)	DD Management team, implementer
SPS	(1), (2), (3), (4)	DD Management team, implementer
Spirit	(1), (2), (3), (4), (5)	DD Management team, implementer, data provider (TBC)
EIT Climate-KIC	(1), (2), (3), (4)	DD Management team, Implementer
Statistical Office of the Republic of Slovenia	(5)	Data provider
Environment agency of the Republic of Slovenia (ARSO)	(5)	Data provider
Institute of Macroeconomic Analysis and Development (IMAD)	(5)	Data provider
Care4Climate	(5)	Data provider
OECD	(5)	Data provider
Eurostat	(5)	Data provider
Municipality of Ljubljana	(5)	Data provider
Municipality of Kranj	(5)	Data provider
Municipality of Maribor	(5)	Data provider
Municipality of Velenja	(5)	Data provider
NAKVIS (TBC)	(5)	Data provider
University of Maribor (TBC)	(5)	Data provider
University of Primorska (TBC)	(5)	Data provider
University of Ljubljana (TBC)	(5)	Data provider

3. Context

3.1. Goals & Objectives of the DD

The Slovenia Deep Demonstration is a multi-year collaboration contract signed between the Ministry of Environment and Spatial Planning (MOP) of Slovenia and EIT Climate-KIC. The main goal of the Deep Demonstration is to support Slovenia transitioning its national economy to a circular one in order to achieve its decarbonisation targets as well as deliver on its vision to transform its society by promoting local value creation and resilient transformation of all communities nationally, based on local needs, opportunities, and resources.

The contract was signed in November 2021 and is in place until June 2025. The design of a MEL framework is part of the second phase of the Deep Demonstration that focuses on systems innovation orchestration that started in July 2022 after the pre-implementation design phase that took place between November 2021 and June 2022.

While the aim of the Deep Demonstration is to facilitate a larger scale transformation towards circularity in Slovenia, it does so by focusing on specific value chains: Built environment, Food, Mobility, Forest-Wood and Manufacturing. Each of these areas will define a portfolio of interventions, using the DD systems innovation approach, that will support the transformation of each system and these five activation areas will be underpinned by three transformation pillars: Education, Policy and Entrepreneurship, which are used as key dimensions and enablers to construct each portfolio.

The specific objectives of the Deep Demonstration are therefore the following:

- Help with the decarbonisation of identified value chains built environment, food, mobility, forest-wood, manufacturing;
- Integrate climate/circularity in the horizontal areas of entrepreneurship, education, policy, finance.
- Increase the capacity and capability of all relevant stakeholders, especially public sector to be able to design, support and implement climate and circularity-related measures that go beyond silo solutions.

3.2. Where does the MEL framework sit?

The Slovenia DD is divided into 7 Work Packages with the MEL framework being part of WP2 Sensemaking and Actionable Intelligence. The aim is to define key criteria and indicators to monitor and evaluate impact over time and is therefore closely linked to the activation of portfolios of innovation actions that are part of WP1 Portfolio design, composition, and dynamic management.

The key dates for MEL are consequently aligned with portfolio composition as implementing a MEL practice and framework will support portfolio decision-making. A more detailed plan for MEL activities in can be found in section 4.3.

4. MEL Framework & Plan

4.1. Evaluation questions

A MEL framework is guided by a set of evaluation questions that define the type of activities, methodologies and learning and insights that are expected to take part of the process. Following the three-level structure of this MEL framework, we have developed six evaluation questions (two per level) that define the key aspects to be monitored in each area. While we expect to be able to answer each evaluation question on its own, it is important to keep in mind that they are all interrelated, and answering questions at the portfolio level will help us have a better understanding at the system level, and vice versa (Figure 1). Each question will be addressed using a different set of methods, always striving to be efficient in terms of use of resources and maximizing synergies between different efforts. The methodologies suggested are only indicative and can be revised during the MEL framework implementation.

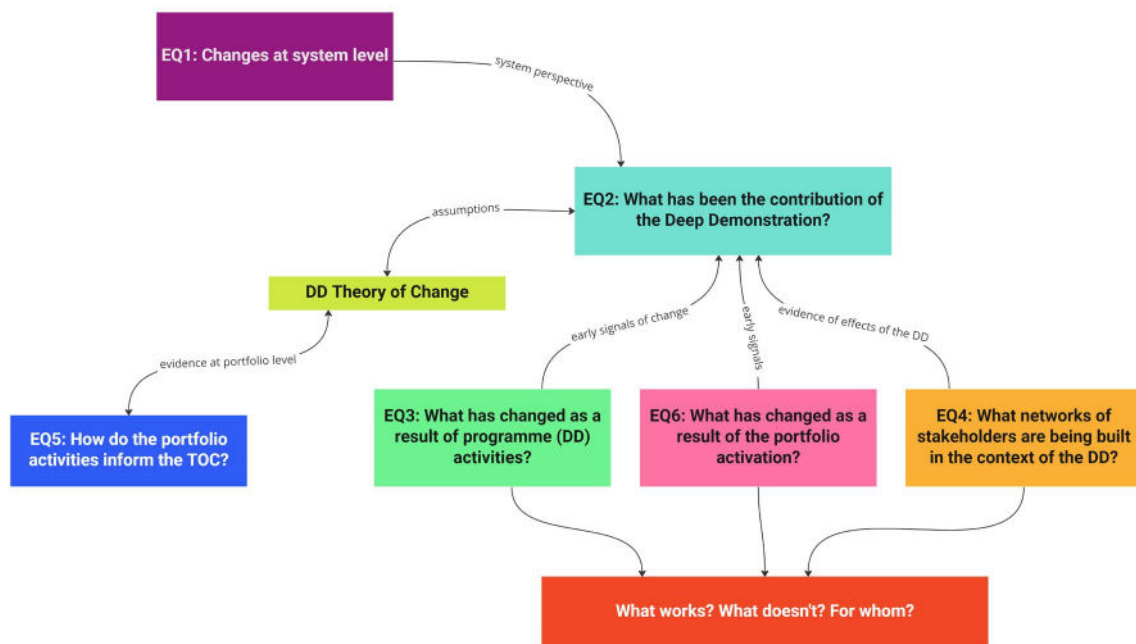


Figure 1. Connections between Evaluation Questions

System Level

Evaluation Question 1: What have been the key changes in the circularity system related to the Deep Demonstration, as understood in its Theory of Change?

This question seeks to map the key changes at the system level, in relation to the four pathways of the Theory of Change and the five activation areas, using a set of existing and new qualitative and quantitative indicators. The full list of indicators can be found in **Annex 1: System Level indicators**. In

addition, addressing this question will seek to identify early and weak signals of change at various levels of the system, that could be indicative of other changes relevant to the goals of the DD.

Evaluation Question 2: To what extent and in which ways have the Deep Demonstration activities contributed to the observed outcomes and changes? What other factors have contributed to these outcomes and changes?

Changes in large and complex systems, such as those that are being addressed by the Deep Demonstration, are the result of multiple interrelated processes. In this context, it is important to be able to assess in which ways and to what extent the DD activities have contributed to these changes. The methodological approach we propose to use is called “contribution analysis”. This methodology seeks to understand what the main contributing factors to an outcome have been, assessing to what extent the intervention(s) have made a difference [see the textbox below].

Contribution Analysis

Contribution analysis is composed of the following steps.

1. Identify key outcomes and changes to be discussed at a given point of time. These outcomes will be collected through the duration of the programme by interviewing and documenting stories of change and insights from stakeholders.
2. Set the contribution questions: Has the programme influenced the observed results? What role did the interventions play? Is it reasonable to conclude that the programme made a difference?
3. Revise the TOC considering the observed outcomes and changes, revising and/or deepening association between activities, results, and outcomes when they are not sufficiently specific, so that they can be used to hypothesize causal mechanisms.
4. Gather the existing evidence on the theory of change, including past evaluations or existing research.
5. Assemble the contribution story and challenges to it, from past and current evidence. The story describes why it is reasonable to believe that the actions of the programme have contributed to the observed outcomes.
6. Assess whether the contribution story is credible and challenge it. In a participatory workshop setting, discuss with key stakeholders: How credible is the story? Do reasonable people agree with it? Does the pattern of results observed validate the results chain? What is the main weakness of the stories (where additional evidence or data is needed)? What alternative explanations or factors could have contributed to this outcome?
7. Collect additional evidence when possible and strengthen or challenge the contribution story.
8. Collectively identify which contribution stories have more credible/solid evidence, and what lessons can be learned regarding the conditions required to achieve a certain outcome.

Programme Level

Evaluation Question 3: What else is changing as a result of our activities?

- ...In the capacities regarding systems innovation and circularity of stakeholders?
- ...In visions, behaviours and practices of stakeholders involved?
- ...In practices, structures and policies of the organisations involved?
- Unforeseen changes (positive and negative)

This evaluation question seeks to understand to what extent the activities planned are contributing to determinants of systems change, that could potentially unlock deeper changes at the system level. These are, for instance, changes in visions, beliefs, practices but also structures and norms, that can unlock deeper changes in the system. Mapping these changes can give us early insights of the influence the programme activities are having or not having on stakeholders and organisations involved, indicating early lessons learned and enabling adaptation of programmes when not delivered.

The methodology used to answer this question will be Most Significant Change (MSC). This qualitative and participatory methodology seeks to identify key changes resulting from activities – both positive and negative – from the perspective of the stakeholders involved, explaining why these changes are important, and drawing lessons on what works, what doesn't and in which circumstances. See more details in the textbox below.

Most Significant Change (MSC)

The Most Significant Change methodology is composed of the following steps:

1. Gather stories of change from stakeholders involved in the process, responding to the question: What has been the most significant change (positive or negative) that you have observed or witnessed in relation to the Deep Demonstration activities? Stakeholders involved in all types of activities will be asked to contribute to these stories. For each change, the story should describe:
 - a. What was the state before the change happened?
 - b. What were the activities that took place and who was involved?
 - c. What was the result?
 - d. A reflection on why it is important.
2. Analyse and curate these stories using the guiding evaluation questions listed in Question 3, selecting the stories that most clearly show the influence of the programme activities.
3. In a participatory workshop, discuss a subset of these stories, curated by the MEL team. Ideally, the authors of the story will be there to present them, but there can be other presenters if not possible.
4. Discuss - during the workshop - what aspects of change each story reflects, and as a group, define which one is most significant. Significant can mean different things, so it is important, as a group, to define what is valuable at a given point of the project.

Evaluation Question 4: What type of networks are these activities producing and how can they contribute to circularity?

- Are we involving the right stakeholders in these activities?
- Is the network of public and private stakeholders emerging from the DD capable of leading changes towards circularity?
- Have we opened new channels among stakeholders and institutions involved in the DD, broken previously existing silos?

One of the key premises of the Deep Demonstration approach is that by building connections and networks that create new collaborations, this would enhance the capacity of system actors to promote transformational change in the desired directions. This evaluation question seeks to understand whether and how this network is being built, their collaboration practices and capacities to mobilize financial, human and knowledge resources.

To answer this question, we will conduct a “light-touch” social network analysis, based on a survey, targeted to the various stakeholders involved in the Deep Demonstration. The survey will aim to map which (new) connections have been created, strengthened, collaboration mechanisms that have been built, and examples of activities that have resulted from this collaboration.

Portfolio Level

Evaluation Question 5: To what extent and in which ways are portfolio activities and interventions aligned to and informing the TOC?

- What do we learn about the positions, levers, and Theory of Change from each of the activities of the portfolio, as reflected in their local impact?
- Which initiatives, aspects or elements of the portfolio work are enabling circularity innovation, and which ones don't and why?

Portfolio Activation is one of the key mechanisms by which innovation activities are used as a driver for change at the system level, enhancing collaboration, learning through experimentation, and creating synergistic effects between different initiatives of the portfolio.

This evaluation question seeks to map and understand the relationship between portfolio activities and the TOC. It is important to note that the TOC is not meant to “guide” the portfolio activation process. However, the portfolio itself can inform some of the impact pathways and assumptions at the TOC level with experiences at the local level. It is important to note that the initiatives in the portfolio are often small scale and localized, hence they will not target the whole Slovenian system. Nevertheless, these localized changes can provide learnings that are relevant at the system level and could be scaled up given the right conditions and resources.

To assess this evaluation question, we will include short reflections on the portfolio learning and insights from the perspective of the TOC, to be included in each portfolio activation and sensemaking activity. Questions for these reflections will be informed by the TOC pathways relevant to each

portfolio, for instance, what changes do we observe in citizens and communities? What incentives seem to work for engaging business in circularity? etc. These questions will be designed by the facilitator based on the characteristics of each portfolio exercise.

Evaluation Question 6: What is changing as a result of the portfolio activation?

- Which instances of cross learning can we observe between 2 or more initiatives of the portfolio?
- Are there any unexpected (positive or negative) changes or effects being observed, at the level of initiative and/or portfolio?
- What are some of the synergies, complementarities, and partnerships that we can observe as a result of the portfolio activation process?
- What negative relationships (competition, other) are resulting from the activation of the portfolio?
- What external factors are affecting (positively or negatively) the results and outcomes generated by the initiatives of the portfolio?

The proposition of the portfolio approach is that it is able to produce changes that would have not happened otherwise. This evaluation question seeks to map these changes through the different learnings and interactions that have occurred through the portfolio activation process, focusing on instances of collaboration, cross learnings, changes that are being observed and experienced in the portfolio, and how external factors have contributed to these. This is a broad set of questions; hence we are using an exploratory methodology that focuses on the learning process rather than a rigid reporting approach.

To answer this question, we will use the approach called “Innovation History” which is a method to record and reflect on an innovation process. Some people involved in specific innovation experiments as part of the portfolio, construct a shared “learning history” about how the innovation has taken place, based on their own recollections and available documentation.

The goal is to build up one innovation history for each portfolio that composes the DD. You can see more details in the textbox below.

Innovation (Learning) History

The Innovation History approach is composed of the following steps.

1. Define the goals and scope of innovation histories based on the learning questions to be addressed. It is important to clarify what would be the use of these histories, what is the audience, to ensure that all those that would be quoted in the stories are aligned and comfortable with sharing their versions of the story.
2. Select and define the innovation(s) that will be addressed in the history. While we tend to focus on the technical aspects of an innovation, it often encompasses multiple dimensions: changes in social and organisational practices, resource mobilization, etc. It is important to define all these dimensions of an innovation before drafting a history. The portfolio activation process might lead to many innovations, but it is important to keep the focus on those that reflect synergies between different initiatives. The selection of innovation histories to be written will be the responsibility of the portfolio activation team, supported by the portfolio champions.
3. Throughout the portfolio process and after every portfolio activation activity, collect key stories and insights from the participants regarding how the different innovations are unfolding.
4. Construct a timeline of the key events that led to that innovation, as well as the key stakeholders involved. Identify areas of inquiry that are most relevant for the stakeholders involved and for the portfolio, for example, enabling factors that led to the success of the innovation, role of partnerships, role of finance, other. Supplement this information with interviews with key stakeholders involved, when possible.
5. Write up the innovation history. The specific format is composed of “quotes” from stakeholders in one column, accompanied by a short commentary that describes why this quote is relevant. The history is written in this way to reflect the many voices of participants involved, and show that innovations are not linear but a recursive, learning process.

4.2. KPIs

In addition to the evaluation questions stated above, we have defined the following KPIs to keep track of the key objectives stated in the work plan. These KPIs hence relate to the programme level monitoring and to Evaluation Question 3.

Table 3. Proposed programme KPIs

KPI	Associated Objective and WP	KPI definition	Target	Reported
KPI1	Activation of portfolio by activation area – WP1	# Portfolios activated	Target (cumulative) <ul style="list-style-type: none"> • 2023: 2 • 2024: 4 • 2025: 5 	This KPI will be reported at the end of every programmatic year as a number.
KPI2	Unleash the power of systemic transformation, managing a portfolio of interconnected innovation activities across levers of change. – WP1	# stories about synergies and systemic effects across portfolio	This KPI does not have a specific yearly target, because it seeks to reflect not only the quantity but also the quality of the portfolio activities. That is, not prioritizing a higher number of stories, but those stories that reflect system change	This KPI will be reported at the end of every programmatic year as a number and a “report” of different stories, supported by evidence when available.
KPI3	Support decision-making to act upon possibilities for transformation by generating insights and feedback loops for continuous reflection and learning on dynamics of emergent system change - WP2	# learnings extracted leading to actions within or outside the portfolio	This KPI does not have specific target, since it reflects not only the amount but also the quality of the learnings. We expect at least 1 learning leading to action per calendar year.	This KPI will be reported at the end of every programmatic year, as a number and a short description of each of the stories collected (report).
KPI4	Build communities of practice around systems innovation – WP2	# connections made with other DDs, EIT projects	Target: at least 2 new connections during the project lifetime	This KPI will be reported at the end of each year, reflecting the number of interactions the Slovenia DD has had with other DDs, EIT projects, and other projects of similar nature.

KP5	Unlock funding opportunities from a wide range of public and private instruments and organisations interested in supporting circularity transitions – WP3	Amount (€) of additional private and public funding mobilised through the DD		This KPI will be reported at the end of each year, considering the total amount of private and public funding mobilized through the DD (cumulative through the 3 years).
KPI6	Enable policy experimentation and pilot innovation actions across activation areas by co-creating a Transition Policy Lab space to foster circularity innovation in the public sector – WP4	# and type of civil servants engaged in Policy lab who participate more than twice for a specific challenge	The engagement of stakeholders for this activity will depend on the Slovenian partners, hence there is no specific target for the moment.	This KPI will be reported at the end of each year, as the total number of participants that engage twice or more in policy lab activities per calendar year. This is not a cumulative indicator.
KPI7	Enable policy experimentation and pilot innovation actions across activation areas by co-creating a Transition Policy Lab space to foster circularity innovation in the public sector – WP4	# policies, initiatives designed or implemented as a result of Policy Lab	Target: at least 1 policy/initiative designed or implemented per activation area so 5 across the programme lifespan.	This KPI will be reported at the end of each year, as the total number of policies or initiatives designed and/or implemented as results of the Policy Lab, including a short description of each policy or initiative.
KPI8	Enable the Slovenian start-up and enterprise supporting community (accelerators, incubators etc.) to activate circular business development and business model innovation by building a strong network of partners/trainers and climate-positive entrepreneurs. – WP4	Amount of CO2 emission reduction forecasted by start-ups engaged in climate Impact forecast tool	The specific target of this KPI will depend on the companies, start-ups that participate of the DD. Hence, no specific target will be defined at this stage.	This KPI will be reported at the end of each programmatic year as a sum of all the emission reduction forecasts results from startups and companies that have been through the Climate Impact Assessment process led by Climate KIC.
KPI9	Support the transformation of all stages of national education to a circular direction - both in curriculum layer and in institutional capacity dimension. – WP4	# innovation actions from RRF pilots integrated into DD portfolio	Target: At least 1 RRF pilot integrated into DD portfolio per priority area so 5 across the programme lifespan	This KPI will be reported at the end of each programmatic year, indicating the number of RRF pilots led by Higher Education institutions integrated into the DD portfolio (ie. as a project of the portfolio)
KPI10	Build a deeper systemic way of thinking across a spectrum of stakeholders and communities to further develop capabilities and knowledge of practicing systems innovation – WP5	# trainings (or any other type of capacity building actions) and stakeholders trained (i.e., taking part in capacity building actions)	Target: we aim to deliver capacity building actions across 6 fields during the programme lifespan with about 20 people taking part of each capacity building action from at least 4 different Slovenian institutions.	This KPI will be reported at the end of each programmatic year, indicating the number of capacity building actions held, number and type of stakeholders that participated in them.

KPI11	Communicate effectively about the DD reaching out to communities locally and internationally – WP6	# stories published in national and international media	This KPI does not have specific target, since it reflects not only the amount but also the quality and the reach of the stories.	This KPI will be reported at the end of each programmatic year, as total number and an Annex with stories in national and international media coverage to DD and related activities
KPI12	Deliver on strategic objectives and enable effective programme implementation, aligning interests and removing barriers to collaboration -WP7	Review of programme implementation results by the management team and feedback to CKIC based on yearly results	This KPI reflects the engagement of the management team with the results provided by this MEL framework. It will be considered accomplished if results are reviewed once a year by the management team.	This KPI will be reported at the end of each programmatic year. We suggest that the management team writes a short response (1-2 pages) to the MEL framework results

4.3. MEL Plan

We have developed two scenarios for the implementation of the MEL framework. Scenario 1 is the full implementation of the framework as described in this document. Scenario 2 is a partial implementation, which requires less additional effort from EIT Climate-KIC and Slovenian partners. It is important to note that the scope and ability to provide solid evaluative evidence of Scenario 2 is more limited than Scenario 1.

For each scenario we describe the components, timeline, deliverables, and resources associated.

Scenario 1: Full MEL implementation

This scenario comprises the full implementation of the MEL questions and activities described above. This approach is expected to provide sound evaluative evidence of the outcomes, changes and impacts of the Deep Demonstration, providing insights on how the approach contributes to changes at local and system level. It will also provide Slovenian stakeholders with practical knowledge on evaluation methodologies that could be used for future innovation and system-oriented projects. However, it requires to allocate resources that are currently not included in the project, both on Slovenian and EIT Climate-KIC side.

Table 4. Description of Evaluation Activities for Scenario 1: Full MEL Implementation

N	Evaluation Question	Approach & Periodicity	Responsible
1	What have been the key changes in the circularity system related to the DD, as understood in its TOC?	A set of indicators will be defined at the beginning (2023) and end (2025) of the project. Similarly, a report on early signals of change at system level will be developed. Indicators will be based on secondary sources; in case of new indicators these will depend on Slovenian partners.	Slovenian partner will be in charge of the coordination and collection of the set of indicators identified in the framework. EIT Climate-KIC will collect early signals and stories. If a dashboard is to be developed, this would be the responsibility of the Slovenian partner.
2	To what extent and in which ways have the Deep Demo activities contributed to the observed outcomes and changes?	Contribution analysis: evaluation of the contribution of the DD to the changes observed at the system level will be conducted at the end of the programme (2025). However, to complete this evaluation, continuous monitoring at the portfolio and programme level is required.	EIT Climate-KIC: methodological design, data analysis, drafting evaluation, organising workshops. Slovenian partner tbd: data collection and data analysis
3	What else is changing as a result of our activities?	Most Significant Change: Stories of change resulting from the programme activities will be collected throughout the programme implementation time. These	EIT Climate-KIC – to provide methodological framework, organise

		will be discussed in two instances: 2023 (baseline – to understand changes triggered by phase one) and end of 2024, to compile insights for the evaluation of question 2.	workshops, data analysis and synthesis. Slovenian partner - to conduct data collection and data analysis jointly with Climate KIC.
4	What type of networks are these activities producing and how can they contribute to circularity ?	Social network analysis will be conducted twice during the programme lifetime: a baseline will be developed in 2023 and a final assessment will be conducted by the end of 2024. This is with the purpose to observe any changes to the network during this period.	EIT Climate-KIC: methodological design, data analysis, visualisations. Slovenian partner: conduct survey, data collection, support data analysis.
5	To what extent and in which ways are portfolio activities and interventions aligned and inform the TOC?	An analysis of the alignment (in the terms described in 4.1) of each of the portfolios with the TOC will be conducted as a short “reflection” after each portfolio session. These reflections will be captured by the EIT Climate KIC team and portfolio champions. In addition, a revision of the full TOC will be conducted during the Portfolio review sessions in three occasions: 2023, 2024 and 2025.	EIT Climate KIC to lead the collection of learning and insights at portfolio level, together with portfolio champions. Data analysis Slovenian partner: Support data analysis of qualitative stories of change, further exploration of stories when needed
6	What is changing as a result of the portfolio activation?	Innovation (Learning) Histories will be compiled at the end of the programme (2024-2025) based on insights gathered earlier in the process. These histories will be developed into communication and learning materials that illustrate connected innovation processes that happened as a result of the portfolio activation, which can be used to inform other stakeholders about this specific innovation approach.	EIT Climate KIC: methodological design, support data analysis Slovenian partner: data collection (interviews/collection of secondary material from portfolio) in coordination with EIT Climate KIC, lead data analysis and drafting of stories.

Deliverables

This scenario has 3 additional deliverables to the ones already included in the DD programme.

- **MEL Deliverable 1: Baseline evaluation year 2023.** This document describes the circularity system at its current state based on a selected set of indicators, as well as changes observed by participating stakeholders. It will include a revision of the TOC based on input from the portfolio activation process. It also showcases what have been the key changes and learnings achieved by the DD during Phase 1. Last, it will include a mapping of stakeholders involved to date based on social network analysis, that could serve as a baseline for the evaluation in year 2025.

- **MEL Deliverable 2: Revision of TOC year 2024.** This deliverable will include a revised version of the TOC based on the learnings achieved at that stage, an updated version of system level indicators and early signals of change at system level, and a report on outcomes, learning and insights emerging from the portfolio activation process, policy lab and other key activities.
- **MEL Deliverable 3: Programme Evaluation.** This deliverable comprises a full evaluation of the DD programme, using the methodological tools described above that would allow to identify the ways in which the DD activities have contributed to changes in local and national circularity systems. This also includes the development of innovation histories that summarize the key learnings of the portfolio, system level indicators, as well as a social network analysis of the stakeholders that have been engaged in the DD process.

Timeline See Figure 2

Scenario 2: Partial implementation

This scenario proposed a “light touch” evaluation; hence it is not able to provide solid evaluative evidence of the changes that the DD activities generate. Nevertheless, it will still provide some evidence and capture learnings that can be used to better understand what has worked, what not and for whom, drawing lessons on the DD activities.

Table 5. Description of evaluation components for Scenario 2: Partial implementation.

N	Evaluation Question	Approach & Periodicity	Responsible
1	What have been the key changes in the circularity system related to the DD, as understood in its TOC?	A set of indicators will be defined at the beginning (2023) and end (2025) of the project. Similarly, a report on early signals of change at system level will be developed. Indicators will be based on secondary sources; in case of new indicators these will depend on Slovenian partners.	Slovenian partner will be in charge of the coordination and collection of the set of indicators identified in the framework. EIT Climate-KIC will collect early signals and stories. If a dashboard is to be developed, this would be responsibility of the Slovenian partner.
3	What else is changing as a result of our activities?	Most Significant Change: Stories of change resulting from the programme activities will be collected throughout the programme implementation time. These will be discussed in two instances: 2023 (baseline – to understand changes triggered by phase one) and end of 2024, to compile insights for the evaluation of question 2.	EIT Climate-KIC – to provide methodological framework, organise workshops, data analysis and synthesis. Slovenian partner to conduct data collection and data analysis.
6	What is changing as a result of the portfolio activation?	Innovation (Learning) Histories will be compiled at the end of the programme (2024-2025) based on insights gathered earlier in the process. These histories will be developed into communication and learning materials that illustrate	EIT Climate-KIC: methodological design, support data analysis Slovenian partner: data collection (interviews/collection of

		connected innovation processes that happened as a result of the portfolio activation, which can be used to inform other stakeholders about this specific innovation approach.	secondary material from portfolio) in coordination with EIT Climate KIC, lead data analysis and drafting of stories.
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Deliverables

This scenario does not contemplate additional Deliverables. The evaluation results associated with the activities described above will be included in the Annual Portfolio composition report already contemplated in the work plan. The production of additional MEL deliverables such as case studies, insights or others will be discussed case to case.

Timeline See Figure 3

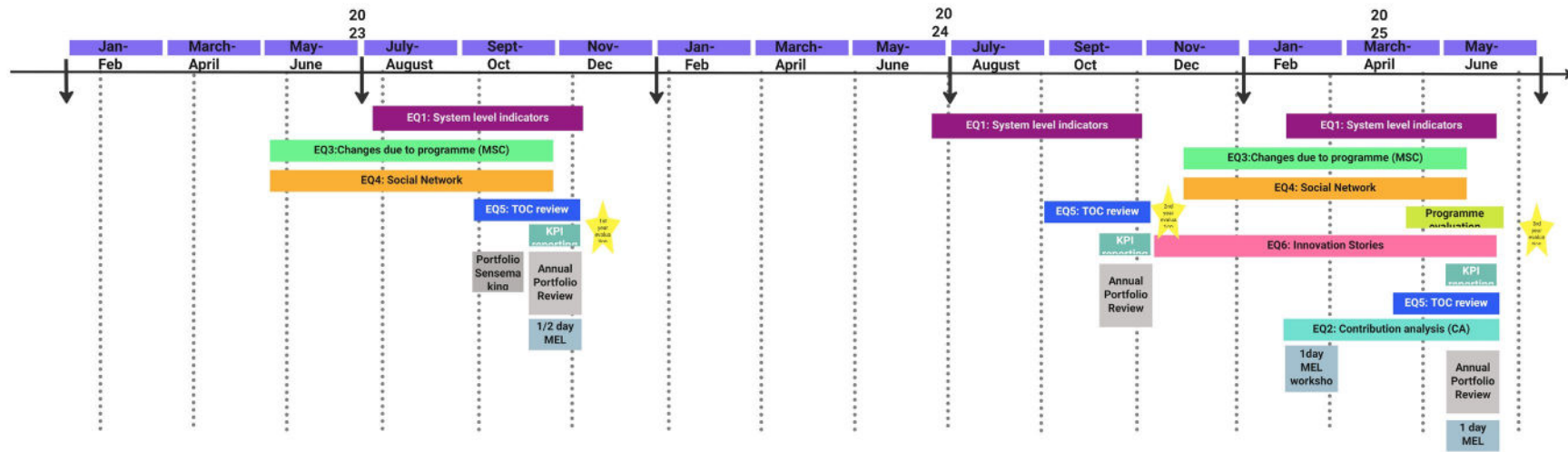


Figure 2. Timeline Scenario 1

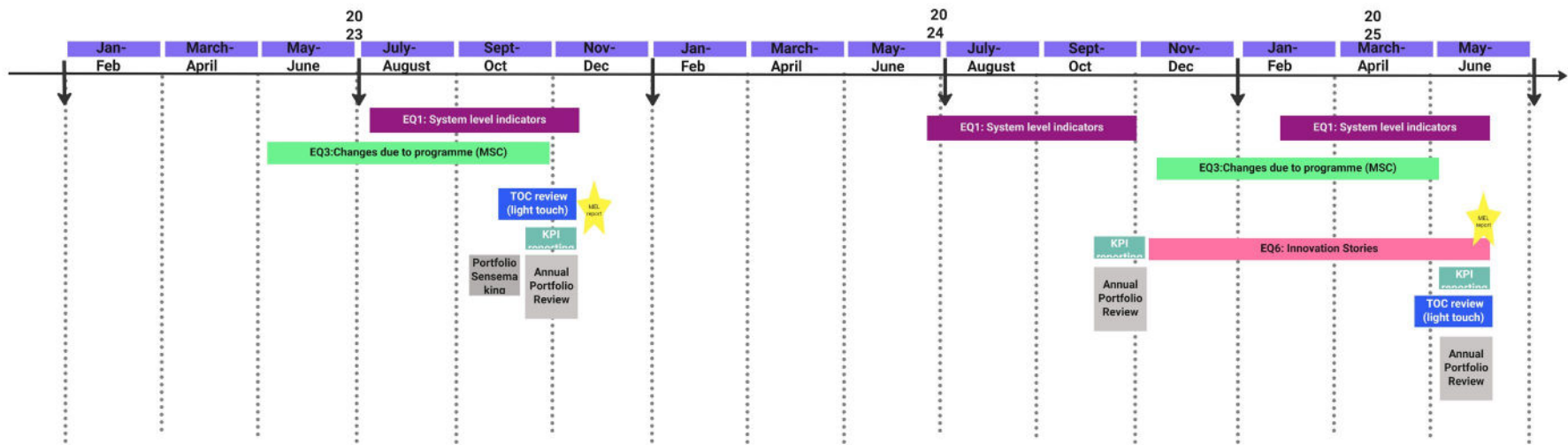


Figure 3. Timeline Scenario 2

Roles, Responsibilities & Resources

The successful implementation of this MEL plan will depend on the collaborative work of EIT Climate KIC and Slovenian partners. We describe below the roles and responsibilities of each of the core partners involved.

EIT Climate-KIC's role is to lead the methodological aspects of the evaluation, designing the methodologies to be used to answer the evaluation questions, and providing training to the stakeholders involved in the process. Furthermore, EIT Climate-KIC will be in charge of delivering the MEL component for each reporting phase, based on inputs provided by the whole DD team, as well as designing and implementing the yearly sensemaking and portfolio review sessions where these results will be discussed, preparing a brief for participants in these sessions.

It is important to note that the current resources allocated to MEL activities do not cover EIT Climate KIC's MEL team contribution, which will be required to design the evaluation methodologies proposed, analyse data and provide any guidance and capacity building efforts required to achieve the desired goals.

On the Slovenian government side, we would need one specific ministry or entity to coordinate the implementation of the MEL framework on site in Slovenia. Since achieving the intended goals of the framework requires considerable engagement of stakeholders and coordination with Slovenian institutions, a local entity is best suited to fulfil this role. Furthermore, the role includes ensuring data collection processes such as surveys and stakeholder engagement are adequately implemented. This ministry or entity will also be in charge of implementing the Data Management strategy (see next section).

Ideally, a dedicated resource will be in charge of these tasks. Additionally, resources will be required to coordinate the collection of system level indicators and analysis for those that currently do not exist. The details of the additional resources required are listed under the two scenarios. The current indicator list needs to be assessed against the available resources to fulfil it.

Dissemination Strategy

The MEL activities and outputs described in this document will generate learnings and insights that would be valuable for other stakeholders, within and beyond the Deep Demonstration. Hence, effective dissemination and communication of the results is important to ensure these insights reach their target audience.

For internal communications, we will aim to provide a summary of results and learnings to all stakeholders that have participated in the DD activities, which will be developed by the MEL & Sensemaking team together with the communication team.

For external audiences, this evaluation can provide concrete evidence of the DD in terms of case studies and/or stories, that could be shared with national or internal media and position Slovenia as a leader in the circular transition in the EU context. The outreach and dissemination strategy will be

defined by the communications team. Furthermore, lessons learned, and experiences can be very relevant for other local and national governments engaging in this journey, and these would be shared in forms of policy briefs or other types of tailored documentation when appropriate. These outputs will be defined on a case-by-case basis.

5. Data Management Plan

The project will collect a variety of qualitative and quantitative data to answer key questions regarding the impacts and changes produced by the Deep Demonstration work. The data should be hosted by a Slovenian institution, as this might facilitate the transfer of capacities and practices in the long run, a key vision of the Deep Demonstration. One suggested possibility would be the Slovenian Open Data initiative, which depends on the Ministry of Public Administration: <https://nio.gov.si/nio/asset/portal+odprti+podatki+slovenije-744?lang=en> If this possibility is explored, contact should be made with the technical resources to ensure data gathering and technical requirements are aligned in both ends.

This is the type of collected data:

- Survey data (national level) produced by local Slovenian institutions such as Slovenian Statistical Office. This is mostly structured data, comprised of text and numbers;
- Qualitative Data such as interviews, reflections, case studies, including visuals and audio recordings;
- Financial data regarding government spending in specific sectors;
- Sales and use data from private sector;
- Secondary data collected from other Slovenian and international databases such as European Patent Office, etc.

Importantly, all data should have adequate metadata as well as methodological indications on how it was collected. Financial and personal data will be collected; hence the selected database must be GDPR compliant and there must be a shared procedure for data anonymizing. Non-anonymized data will be stored to be accessed by a very limited set of stakeholders.

The structured data (quantitative data and structured text, like surveys) should be stored in a Relational Database Management System. On-premise solutions would be PostgreSQL, MySQL, SQL server or Oracle DB. Cloud-based options would be the 3 big clouds (AWS by Amazon, Azure by Microsoft, or GCP by Google), or Snowflake.

The metadata for unstructured data like videos, interviews, reflections, audios should be stored in a NoSQL, non-tabular database. The data itself can be stored in blobs in a relational database management system. The consumption (reconverting into files that make sense to humans) and the association of these unstructured data to other elements like projects or locations will be a significant technical challenge, so we recommend the involvement of professional data engineers and data architects.

Proposed Roles and Access (more stakeholders might be included later):

- EIT Climate KIC: data input and analysis, access to non-anonymized data stored by Ministry of Public Administration (limited set of stakeholders).
- Ministry of Public Administration: coordination and maintenance of the database, storage of sensitive and non-anonymized data, a limited set of stakeholders will have access to non-anonymized data. Responsible for anonymizing sensitive data and sharing configuration.
- Slovenian Statistical Office: data provider, access to anonymized data
- Institute for Macroeconomic Analysis, Slovenian Environmental Agency: access to anonymized data for analysis.
- EIT Climate-KIC will be in charge of reporting
- Important: interviews and case study data should have limited access even when anonymized – only EIT Climate-KIC and selected stakeholders from the Ministry of Public Administration. This is because it would relate to project implementation results and reflections- positive and negative. A curated version of this data will be shared more broadly. Ensuring that this data is safely stored and shared only with appropriate stakeholders will be the responsibility of the Ministry of Public Administration.

Timeline

- The project runs until 2025 but we would like to keep the data for 5+ years if possible. Non anonymized data should expire when the project is finished.

Sharing

- Indicators and Analysis produced with these data should be accessible to a general public via Business Intelligence platforms, like PowerBI, Tableau and similar tools. This is not an immediate need, but would be nice to have for the mid and end term review of the Deep Demonstration

6. Annex

6.1. Annex 1: System Level indicators

The table below proposes a series of existing and new indicators that illustrate key aspects of the Theory of Change. They are structured along the four pathways: Citizens & Communities, Business, Public Sector, and Academia & Research. Note that indicators for the first two pathways are more readily available, while for Public Sector and Academia & Research suitable indicators are still lacking and would have to be developed through the project.

Code	TOC Pathway	Indicator name	New or Existing	Starting year	Organisation responsible & link
C01	Citizens & Communities	Food Self Sufficiency	Existing	2023	ARSO Food self-sufficiency Environmental indicators (gov.si)
C02	Citizens & Communities	Amount of household waste generated	Existing	2023	Statistical Office Waste indicators by: INDICATORS , YEAR. SiteTitle (stat.si)
C03	Citizens & Communities	Passenger kms per type of transport (PR01)	Existing	2023	Statistical Office Passengers transport and traffic by MEASURES, TYPE OF TRANSPORT/TRAFFIC and YEAR. PxWeb (stat.si)

C04	Citizens & Communities	% population eating a local diet	Existing	2023	ARSO http://kazalci.arso.gov.si/en/content/structure-imports-consumed-food
C05	Citizens & Communities	# urban gardens	Existing	2023	Provided by three municipalities: Ljubljana, Maribor and Kranj
C06	Citizens & Communities	# farmers contracts to rent land to grow food	Existing	2023	Provided by two cities: Ljubljana and Kranj
C07	Citizens & Communities	Food consumption/Plate carbon footprint	New	2024	Planned to be defined and tracked by ARSO and Ministry of Agriculture from 2024
C08(*)	Citizens & Communities	Household energy consumption	Existing	2023	ARSO Final energy consumption by sector Environmental indicators (gov.si)
C09(*)	Citizens & Communities	Household energy efficiency	Existing	2023	ARSO Energy efficiency and energy use in sectors of final energy consumption Environmental indicators (gov.si)
C10	Citizens & Communities	# items given to library of things, centres for reuse	Existing	2023	Provided by two municipalities: Kranj and Velenja (Ljubljana TBC)
C11	Citizens & Communities	Turnover share of repair of computers and personal and household goods (percent in total business economy)	Existing	2023	Available in Slovenia Country Report – Eco Innovation Index (original source tdb)
C12	Citizens & Communities	Citizens who have chosen alternatives to buying new products (% of respondents)	Existing	2023	Available in Slovenia Country Report – Eco Innovation Index (original source to be defined)
C13(*)	Citizens & Communities	Share of dwellings with local energy production	Existing	2023	ARSO Housing Environmental indicators (gov.si)

C14(*)	Citizens & Communities	Volume of water consumed per capita	Existing	2023	Statistical Office Key data for waters by YEAR and MEASURES. PxWeb (stat.si)
C15(*)	Citizens & Communities	Food Waste per capita (kg/capita)	Existing	2023	Statistical Office Waste indicators by: INDICATORS , YEAR. SiteTitle (stat.si)
C16	Citizens & Communities	Number of community programmes and trainings on growing food and attendance	New	2024	Currently exploring this indicator with specific municipalities
C17	Citizens & Communities	Community participation	New	2024	Currently exploring this indicator with specific municipalities
C18	Citizens & Communities	Public awareness survey on climate change impacts (OP07)	Existing	2023	ARSO Public awareness on climate change impacts Environmental indicators (gov.si)
B01	Business	Circular material use rate (CMUR)	Existing	2023	Statistical Office Indicators of secondary raw materials by INDICATOR and YEAR. PxWeb (stat.si)
B02	Business	Share of employees in activities related to the circular economy as part of total employment	Existing	2023	IMAD, based on EIB data aPoP_2022_w.pdf (gov.si) https://data.eib.org/eibis/graph
B03	Business	Share of GDP generated by activities related to the circular economy	Existing	2023	IMAD Productivity Report

B04	Business	Assessment of green innovation within companies in the country	Existing	2023	IMAD, based on Eco Innovation Index https://green-business.ec.europa.eu/eco-innovation_en
B05	Business	% companies complying with green standards	Existing	2023	ARSO http://kazalci.arso.gov.si/en/content/environmental-management-systems-2
B06	Business	Share of Slovenian companies that have in place internal carbon and energy targets and monitoring	Existing	2023	IMAD, based on EIB data aPoP_2022_w.pdf (gov.si) https://data.eib.org/eibis/graph
B07	Business	# eco labelled products and services (per million population)	Existing	2023	Available in Slovenia Country Report – Eco Innovation Index (original source to be defined)
B08	Business	Business awareness survey on climate change impacts	Existing	2023	IMAD, based on EIB data aPoP_2022_w.pdf (gov.si) https://data.eib.org/eibis/graph
B09	Business	Business survey on direct investments in sustainability	Existing	2023	IMAD, based on EIB data aPoP_2022_w.pdf (gov.si) https://data.eib.org/eibis/graph
B10	Business	Business survey on circular economy measure including industry symbiosis	Existing	2023	IMAD, based on EIB data aPoP_2022_w.pdf (gov.si) https://data.eib.org/eibis/graph

B11	Business	Resource productivity	Existing	2023	ARSO Resource productivity Environmental indicators (gov.si)
B12(*)	Energy efficiency of businesses	Energy efficiency of businesses	Existing	2023	Statistical Office Energy efficiency and energy consumption in the industry sector Environmental indicators (gov.si)
B13(*)	Business	Energy consumption of businesses	Existing	2023	ARSO Final energy consumption by sector Environmental indicators (gov.si)
B14	Business	Indicators from Spirit	New	2024	Specific indicators to be defined in conversation with Spirit.
B15	Business	Imports and exports of SRM	Existing	2023	Statistical Office Indicators of secondary raw materials by INDICATOR and YEAR. PxWeb (stat.si)
B16	Business	Development/Investment in measures for building resilience to physical risks as result of Climate Change	Existing	2023	IMAD based on EIB data aPoP_2022_w.pdf (gov.si)
B17	Business	Private investments and gross value added related to circular economy sectors	Existing	2023	Eurostat Statistics Eurostat (europa.eu)
P01	Public sector	Employee attitude towards innovation in public sector	Existing	2023	MJU Innovativa – yearly survey
P02	Public sector	Degree of innovativeness in public sector	Existing	2023	MJU Innovativa – yearly survey

P03	Public sector	Policies or regulations implemented to improve green policies	New	2024	To be explored whether this indicator can be collected at national level.
P04	Public sector	Public Investment in Green R&D	Existing	2023	OECD Main Science and Technology Indicators (oecd.org)
P05	Public sector	Total value of public procurement GPP orders	Existing	2023	MJU Reports and analyses (gov.si)
P06	Public sector	Effects of GPP	Existing	2023	Care for Climate (please note this is limited 3 specific types of GPP) https://www.care4climate.si/en
P07(**)	Public sector	Incentives for public sector innovation for public servants	New	2024	To be explored with MJU/Innovativa
P08(**)	Public sector	Incentives for green behaviour for public servants	New	2024	To be explored with MJU/Innovativa
A01	Academia & Research	Study programmes that have a GreenCOMP as horizontal topic	New	2024	RRF Monitoring – this indicator would have to be compiled from RRF reports from participant institutions
A02	Academia & Research	Study programmes with Climate change as a topic	New	2024	RRF Monitoring – this indicator would have to be compiled from RRF reports from participant institutions
A03	Academia & Research	Slovenian patents developed for circular or climate solutions	Existing	2023	Eurostat https://ec.europa.eu/eurostat/web/circular-economy/indicators/main-tables
A04	Academia & Research	Publications on Climate Change/sustainability	New	2024	Needs to be calculated based on publication database

A05 (**)	Academia & Research	Implementation of a sustainability office	New	2024	This indicator is not being monitored at the moment, its development would have to be discussed during the DD implementation
A06(**)	Academia & Research	Carbon footprint of schools and universities	New	2024	This indicator is not being monitored at the moment, its development would have to be discussed during the DD implementation
A07(**)	Academia & Research	% sustainable infrastructure	New	2024	This indicator is not being monitored at the moment, its development would have to be discussed during the DD implementation

(*) the use of this indicator will depend on the composition of the portfolio.

(**) not monitored or being planned monitored at the moment. The development of this indicator would have to be explored.