

# Deliverable 1: A visual representation of the portfolio for the Deep Demonstration

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

Work Package 1: Portfolio Design, Composition and Dynamic management

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# 1. Introduction

This report provides an overview of the process and methodology used to produce a visual representation of the Deep Demonstration portfolio. The activities that were undertaken to develop this representation were delivered as part of Task 1.1 which aimed to establish a common frame of reference for portfolio composition, increasing understanding of all elements of the Deep Demonstration programme and their interdependencies.

In order to develop the visual presentation of the portfolio, we leveraged the knowledge gathered during Phase 1 of the Deep Demonstration and organised a workshop with various Slovenian stakeholders on 25<sup>th</sup> of October 2022. The aim of the workshop was to agree on the problem space that the Deep Demonstration portfolio will tackle as well as explore spaces for experimentation and portfolio attribution of value so that participants could experience already what it takes to make decisions on which projects to include in the portfolio or not. This report will not explain the activities we have done during that workshop but leverage its outputs to explain the set-up of the portfolio and specifically the methodology used to do so.

It is also important to note that given the portfolio will be activated by priority area (starting with Built environment), this portfolio visual had been developed as a tool to align different stakeholders on the overall view and understanding of the problem space the deep Demonstration is anchored in. We will be able to go back to it after the activation of all priority areas to extract learnings from the entire portfolio composition and make decisions at the whole Deep Demonstration level.

## 2. Problem space and Portfolio approach

### 2.1 Why use a problem space?

Our proposal is to work with a systems transformation portfolio focused on circular transformation. The portfolio will encourage integration of innovation actions across all dimensions of the Slovenian territory, from universities and social organisations, to industry, regional and local government, environmental organisation, financial institutions, individual entrepreneurs and trades, and national and international stakeholders. We believe a framing focus on transformation across the value chains and key enablers will create the conditions for Slovenia to accelerate the transition towards a circular economy.

The principal objective of using a portfolio approach is to seek to change a number of systems in Slovenia using innovation as a means of testing, learning and de-risking structural change.

Intervening to change systems – whether industrial, economic, social, agricultural or financial – means that we need to try to see those systems in terms of their constituent or structural elements – what they are made up of and how the elements relate to one another – and determine what is most relevant for the ambitions and commitments of Slovenia.

In order to achieve or ‘effect’ a change in a system, we need first to be able to see it *as a system*. Since systems are incredibly complex, that requires thinking in abstraction – i.e. creating an abstract or conceptual, mental model or picture – a representation – in order to ‘see’ it clearly and understand the cause and effect linkages between the elements that make it.

Creating a representation of those elements and their relationship to one another helps direct our innovation efforts and make targeted choices. A high-level abstraction or representation serves the purpose of taking action in a system because we are representing its structural elements in such a way as to choose where we are going to intervene to make change happen. As we act on those choices by activating innovation projects, initiatives, new business models, we learn what works and what does not. We learn what unexpected combinations, serendipities or spill-over effects can create exponential change dynamics or inspire and mobilise social change and positive consumer or community responses. Over time, this helps us understand how the system we are working on has changed or is changing so that we can extract learnings for policy making, commitments of capital, meaningful narratives and decision making.

We call the representation of the system we will work on, ‘problem space’. A ‘problem space’ is a heuristic device designed to produce a well-informed, dynamic portfolio so that we can respond effectively to the complex and uncertain problem of learning how to change complex systems through innovation.

## 2.2 Problem space for Slovenia Deep Demonstration

To construct a portfolio for Slovenia, focused on the problem space of circular transformation, we propose to work with three Constitutive Elements that emerge from the work done so far as being relevant elements for the country. These elements were presented during the workshop on October 25<sup>th</sup> and agreed upon as a purposeful representation of the problem space of circular transition we aim to work with.

The three constitutive elements of the problem space are listed below and each of them is composed of 4 to 5 markers resulting in the following structure.

Priority areas
<ul style="list-style-type: none"> <li>• <b>Built environment</b></li> <li>• <b>Mobility</b></li> <li>• <b>Food systems</b></li> <li>• <b>Forest-based – Wood sector</b></li> </ul>
Transformation pillars and Enablers
<ul style="list-style-type: none"> <li>• <b>Education</b> Skills, Employability, Workforce, Schools, Higher Education, Communities</li> <li>• <b>Policy &amp; procurement</b> Power, decision making, collective action, policy, tax institutions, administrations, governments</li> <li>• <b>Entrepreneurship, SME support, Business models</b> Business models, capability, product &amp; service innovation, social responsibility</li> <li>• <b>Science, Research and Technology</b> Product &amp; service innovation, Technology, Digitalisation</li> <li>• <b>Financial architecture</b> Funding, capability, assets, value, accounting, banks, insurance, investors</li> </ul>
National transformation (ie. type of action to drive circular transformation)
<ul style="list-style-type: none"> <li>• <b>Awareness &amp; capability</b> Building skills, knowledge, tools for awareness, capability and advocacy</li> <li>• <b>Behaviour change</b> Elements of the system are changing; people start adapting their behaviour</li> <li>• <b>Structural change</b> Better structures are designed (or existing ones connected) to address multiple levers of the system</li> <li>• <b>Redefine paradigms</b> Conditions for change are created (ie. rules, roles of institutions, etc.)</li> </ul>

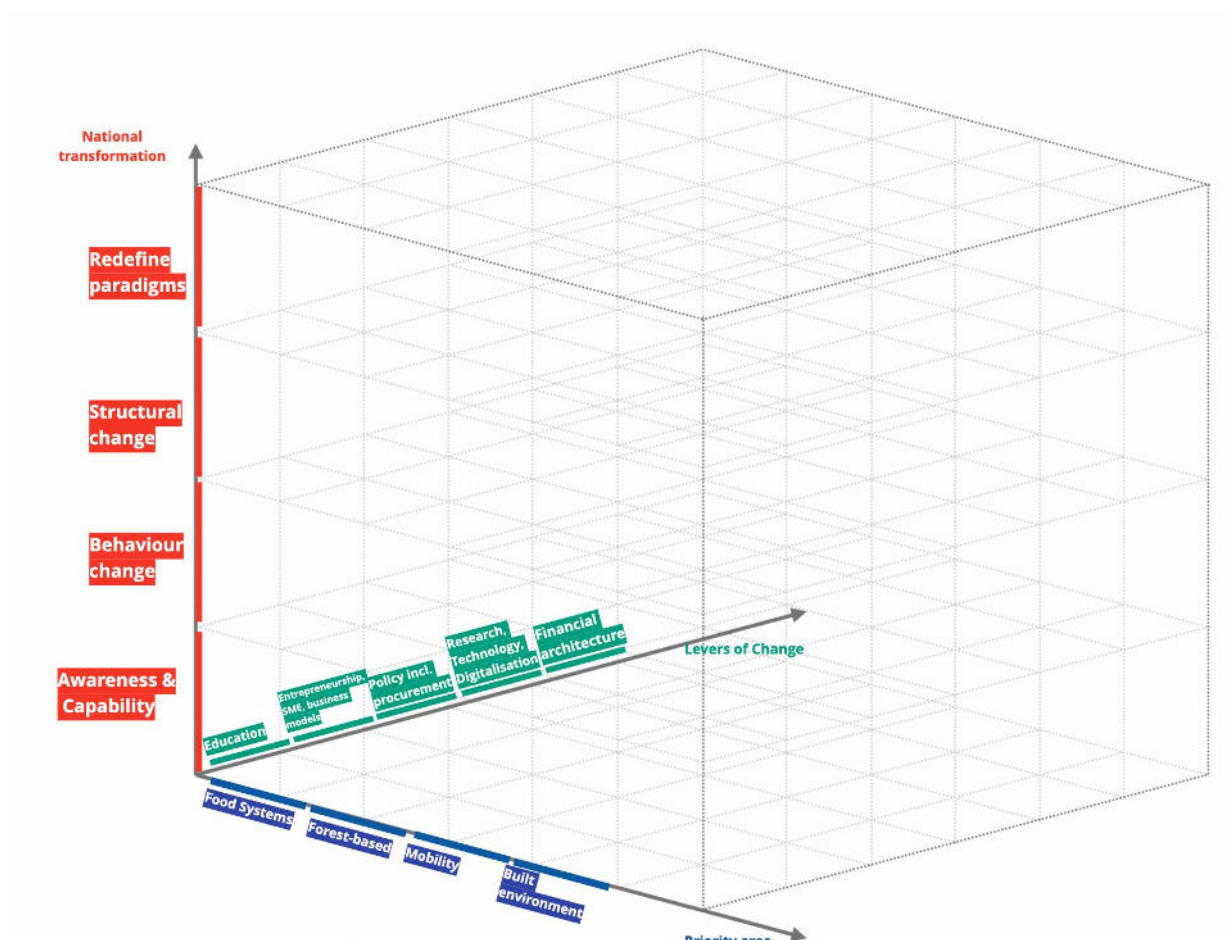
The first two constitutive elements refer to the priority areas (ie. value chains) and the transformation pillars and enablers (ie. levers of change) identified back in the 2019 proposal as well as through Phase 1. The last constitutive element of 'National transformation' represents the type of actions needed to drive the circular transition; for example, we cannot change the whole system by having only capability building activities, we need a range of innovation actions across these system change levers.

In order to understand what it takes to change a system, we like to use the exercise of the iceberg model that helps understand what are the root causes of events and potential issues we observe that can slow down system transformation. We do this by looking at the patterns and trends we perceive taking place over time, the underlying structures (ie. Rules, norms, policies, guidelines)

explaining the state of play and finally the mental models (behaviours, traditions, assumptions) and paradigms of thoughts (beliefs, values) representing the deep roots of the original events. Only by understanding these root causes, we can address the right elements to change a system.

The combination of the Constitutive Elements results in the following portfolio visual for the problem space of circular transformation in Slovenia. This is intended to be the point of reference for the portfolio composition at the whole Deep Demonstration level. Given the portfolio will be activated by priority area (starting with Built environment), a similar process will be done by priority area using a bottom-up approach and this overall portfolio visual had been developed as a tool to align different stakeholders on the overall view and understanding of the problem space the deep Demonstration is anchored in. We will be able to go back to it after the activation of all priority areas to make sense of the entire portfolio composition and make decisions at the whole Deep Demonstration level.

### Problem Space: Circular transformation



# 3. Positions or spaces for experimentation

## 3.1 What is a position?

A position identifies and articulates a rationale for **where** an element of the system can be engaged with to develop solutions and induce transformation. The articulation of a position incorporates what is or what needs to be on the ground to form an **action**.

We can think of a position as an area to explore, an intention to go in a place of intervention so that we can learn from it and take action to catalyse change.

In a portfolio, it is very important to work with multiple positions to observe the system from multiple perspectives so that we can understand influences and dynamics leading to change.

## 3.2 Example positions for Slovenia Deep Demonstration

During the workshop on the 25<sup>th</sup> of October, participants did an exercise to develop example positions for the Slovenia Circular transformation problem space.

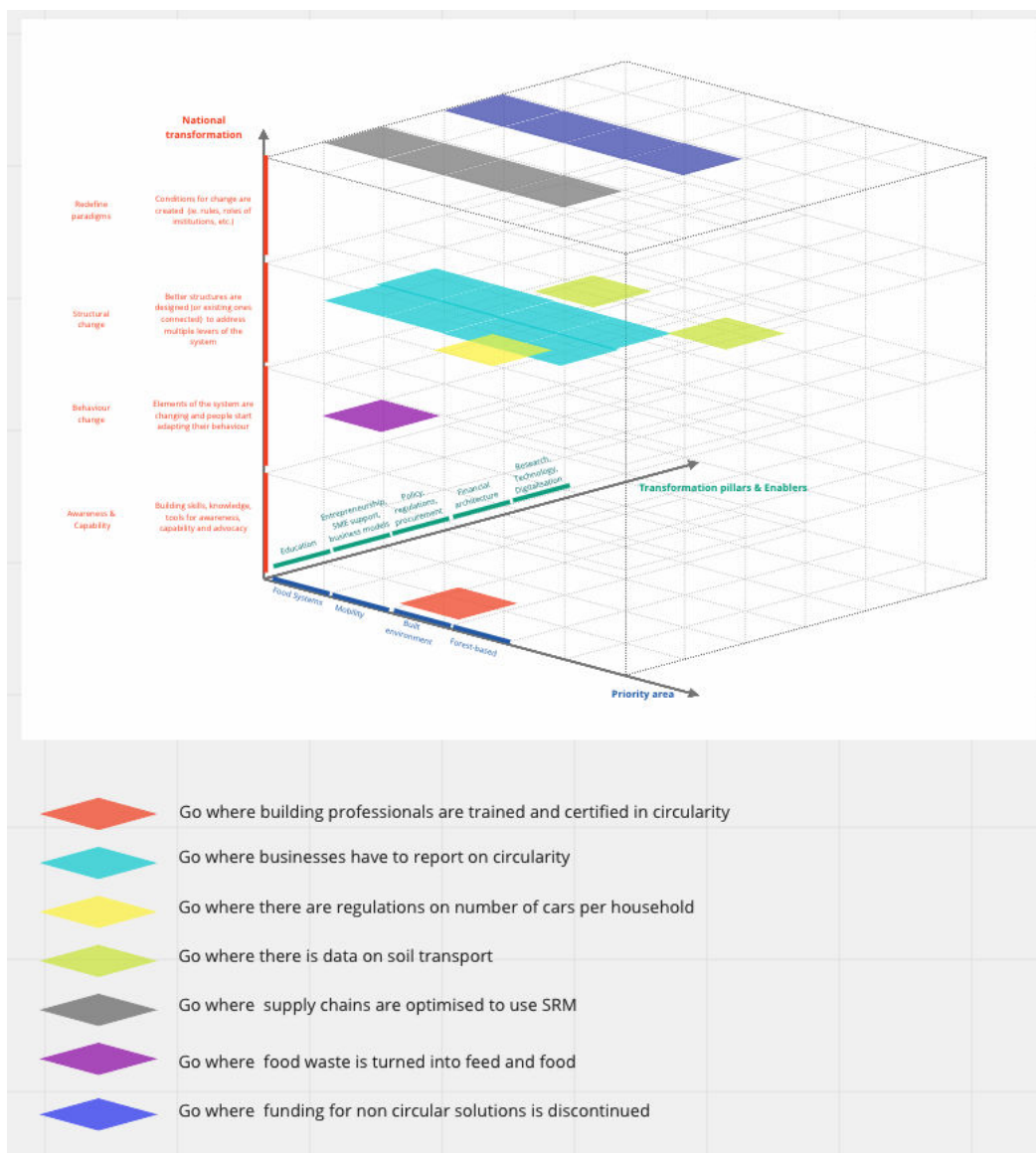
Here is a list below of some of these positions developed with the constitutive elements in brackets. This list is non exhaustive as other positions were proposed during the workshop.

- Go where building professionals are trained and certified in circularity (Education, Built environment, Capability building)
- Go where food systems in schools and public canteens follow a circular model (Education & Policy, Food, Capability building)
- Go where citizens are empowered to compost their food waste (Education, Food, Behaviour change)
- Go where businesses have to report on circularity (Policy & Businesses, All priority areas, Structural change)
- Go where there are regulations on number of cars per household (Policy, Mobility, Structural change)
- Go where public buildings use alternative sources of energy (Policy, Built environment, Structural change)
- Go where supply chains are optimised to use Secondary Raw Materials (Business models, Built environment and other priorities, Paradigm shift)
- Go where unused office space is re-used and repurposed (Business models, Built environment, Behaviour change)
- Go where food waste is turned into feed and food (Business models, Food, Behaviour change)

- Go where there is integrated and centralised data to measure circularity (Research & Tech, All priority areas, Structural change)
- Go where research explores the right balance between private electric cars vs. green public transport (Research & tech, Mobility, Capability building)
- Go where there is data on soil transport (Research & tech, Food/Forestry, Structural change)
- Go where funding for non-circular solutions is discontinued (Funding, All priority areas, Paradigm shift)

The interplay between the positions in the wider Deep Demonstration portfolio of circular transformation support the extraction of learnings and feedback loops through a portfolio logic. This is a key step to advance on the development of the ambitious workplan for Slovenia.

You can find below a mock-up of the problem space with some of the positions represented in it.





# 4. Innovations actions and portfolio activation

## 4.1 Innovation actions

The positions described in section 3 help us choose where to act. For example, if we look at the position:

### *Go where supply chains are optimised to use Secondary Raw Materials*

This Position is interesting for Slovenia as it explores how multiple industries (construction industry but also automotive and other mobility industries) are reacting to mounting pressures from policy makers and consumers to embrace the circular economy. Soaring prices of raw materials and advances in technology create opportunities to capture economic value from the circular economy. Leading companies recognise this opportunity, they drive new revenue streams and harness new circular technologies to lower their cost base while responding to consumer demands. Cities, regions and countries also have ambitious sustainability goals and explore new ways to lower carbon emissions throughout better production processes (from businesses), but also citizen behaviour change, updated policies and financial incentives.

Introducing and connecting a range of innovation actions around this Position will help Slovenia reimagine and test processes around manufacturing and design to keep pace with consumer sentiment, but also accelerate enabling conditions through policy innovation. This will enable businesses to adapt existing products and services and reimagine existing capabilities to take a new leadership position in a circular economy with real and lasting impact and enable the government to design the right policies to enable the change to happen.

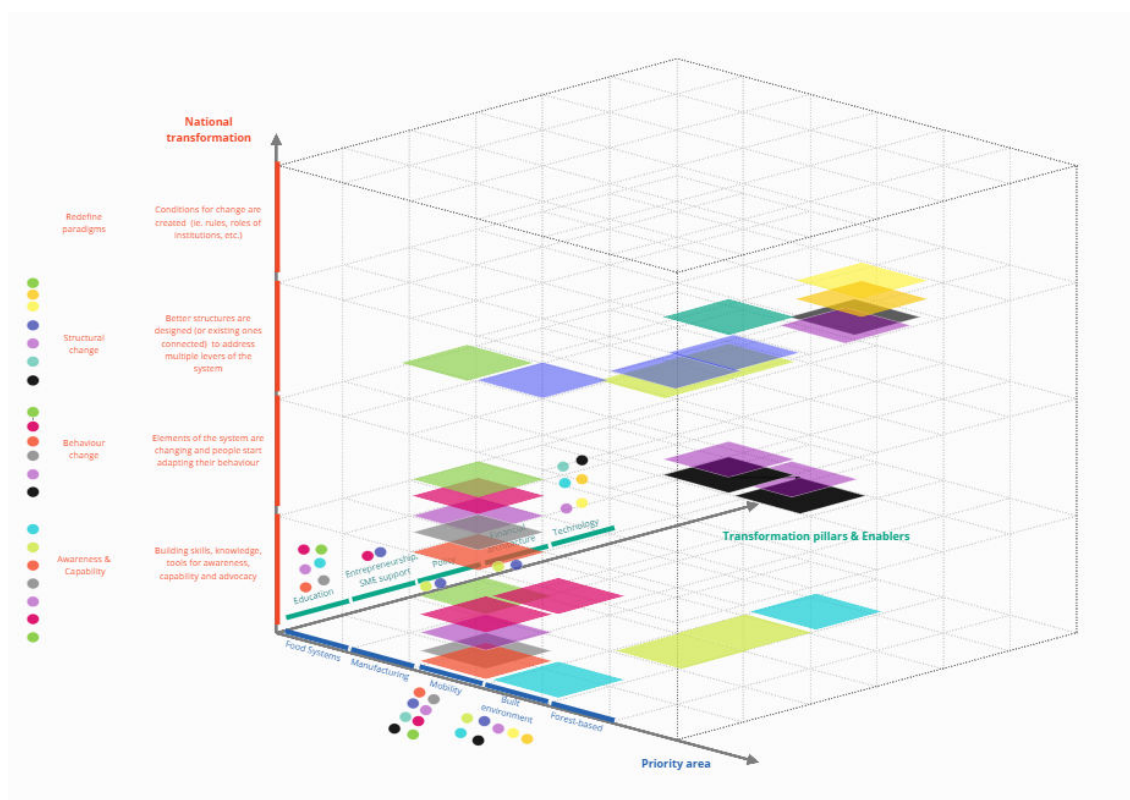
The mapping of existing initiatives and the research carried out allows us to draft examples on how positions might be developed, nested within the current Portfolio as a collection of existing and potential actions. It must be said that the level of definition of each potential new action helps to better guide into acquiring new knowledge and information to further define the actions themselves. This helps defining what other actions we would like to be part of the portfolio and consequently launch calls for proposals (if funding is available) or calls for expression of interest in order to select additional innovation actions to be part of the portfolio so that we can extract learnings from them.

Given we agreed to activate the portfolio by priority area, the next steps for us will be to do this exercise for the first priority area which is Built environment. Consequently, the image below is just an illustration to show how the portfolio visual helps understand where current projects sit along

the positions and within the broader problem space, it is not an exact representation of what we aim to do with the portfolio.

We used examples of current projects happening in Slovenia linked specifically to the Mobility and Built environment priority areas to define the illustrative visual below.

## MOBILITY & BUILT ENVIRONMENT – Visualization of existing and potential actions



- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li><span style="color: red;">●</span> <b>KRsKOLESOM</b><br/>Mobility / Education / Awareness &amp; Behaviour change</li> <li><span style="color: yellow;">●</span> <b>PERFECT</b><br/>Built environment/ Policy &amp; Financial / Awareness &amp; Capability, Structural change</li> <li><span style="color: grey;">●</span> <b>AVANTZGO</b><br/>Mobility / Education / Awareness &amp; Behaviour change</li> <li><span style="color: blue;">●</span> <b>ECOCICLE</b><br/>Built environment &amp; Mobility / Policy, Financial, SME support / Structural change</li> <li><span style="color: teal;">●</span> <b>NTMC</b><br/>Mobility / Technology / Structural change</li> <li><span style="color: black;">●</span> <b>NEXT-E</b><br/>Mobility &amp; Built environment/ Technology / Behaviour &amp; Structural change</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: purple;">●</span> <b>EDISON</b><br/>Mobility &amp; Built environment / Education &amp; Technology / Awareness, Behaviour &amp; Structural change</li> <li><span style="color: yellow;">●</span> <b>READY4USE</b><br/>Built environment / Technology / Structural change</li> <li><span style="color: orange;">●</span> <b>FRISSBE</b><br/>Built environment / Technology / Structural change</li> <li><span style="color: cyan;">●</span> <b>WOOLFE</b><br/>Built environment / Education &amp; Technology / Awareness &amp; Capability</li> <li><span style="color: pink;">●</span> <b>Soft Sustainable measures</b><br/>Mobility / Education &amp; SME support / Awareness &amp; Behaviour change</li> <li><span style="color: green;">●</span> <b>URBAN-E</b><br/>Mobility / Education / Awareness, Behaviour &amp; Structural change</li> </ul> |
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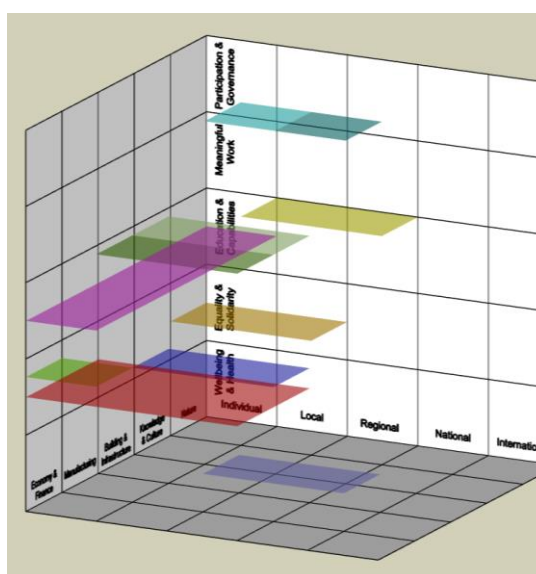
## 4.2 Portfolio activation & Intelligence

Portfolio is the core of the systems transformation approach we propose to develop in Slovenia. It commences with a call for solutions to act on the framing and positioning work done through the portfolio exercise described above (ie, definition of problem space and positions). This is followed by selection and of an initial combination of innovation initiatives, using a portfolio composition process. The process then engages partners, government representatives, industry and civil society in co-creation or co-design for effective learning, potential synergies and/or complementarities.

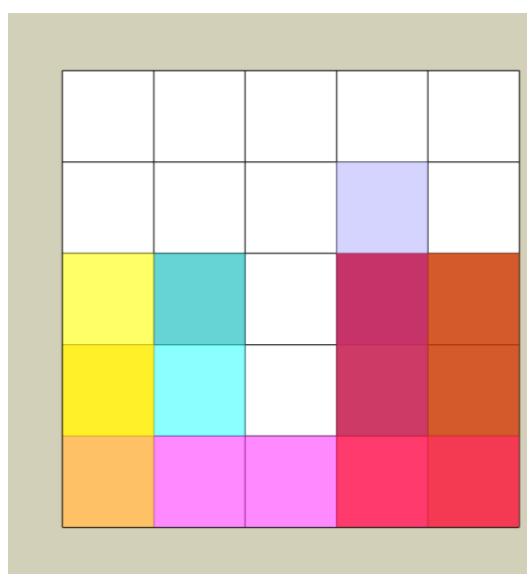
Through the portfolio workstream (ie. WP1), we build and manage a portfolio of connected innovations, designed to catalyse change by intervening on leverage points identified in earlier stages. These actions may combine behaviour, technology, business model innovation, citizen engagement, policy innovation, procurement experiments, education and other levers of change.

Innovation initiatives in the portfolio are supported through dynamic portfolio management and regular sense-making to extract observations, analyses and learnings from the experience and insight that innovation provides, to connect different innovation actions to explore synergies – actual or potential – and to understand interdependencies, cause and effect, unexpected consequences, obstacles and barriers, potential multipliers, change dynamics and pathways to scale. All this in order to learn about and act upon possibilities for transformation.

One of the main uses of the Portfolio visual is also to identify gaps in the portfolio. Consequently, it helps to decide where to introduce potential new Positions and innovation actions with the objective of learning faster and more comprehensively about how to achieve successful and competitive systems transformation. In the following images, some example Positions are placed in the Problem Space, and using different views empty spaces are detected.



3D Model



Top view

An effective portfolio has:

- A set of interventions that help create momentum towards strategic outcomes
- Strategic outcomes that have been identified as cornerstone in helping transform the current situation to a preferred one
- A dynamic management approach, adjusting the portfolio strategy as insights emerge from its implementation
- A dedicated core team that has the skill, mandate and resourcing to build a successful portfolio – A network of collaborators
- A governance model, operating primarily through a small advisor group, meeting regularly to provide guidance and receive intelligence.
- A balanced portfolio has initiatives that create opportunities for synergies and linkages across multiple dimensions:
  - Scale: large and small
  - Domain: from policy to finance to social media
  - Cloak-speeds: fast and slow
  - Resourcing: cheap to expensive
  - Perspective: citizen to investor to politician
  - Context: top down to bottom up

If the portfolio has too many initiatives with the same characteristics, then it might be unbalanced, not creating positive sum change.

Portfolio management and intelligence generation is dynamic, it is an iterative process that continues to loop through active research, selection and activation of or connection to innovation actions and to sensemaking. It includes an active process of decommissioning once learnings are sufficient or and real innovation options begin to emerge opening up possibilities for larger scale investment or scaling.

## 5. Conclusion

Using a portfolio visual like illustrated in section 2 to frame and support the Deep Demonstration innovation activities has the following benefits:

- It creates a frame of reference and a common language for innovation activities across sectors.
- It will create the conditions for the Slovenian government to integrate the actions and learnings from the portfolio with a multi-scale focus on circular transformation.
- It will enable the Slovenian innovation ecosystem to see and consider the strengths and weaknesses of the current combination of projects, seen as a structured portfolio in relation to their climate commitment to determine where else to intervene and with what actions.
- It will enable the Slovenian innovation ecosystem to conduct systematic research to identify complementary and diverse innovation ideas and actions from all over the world as well as from across Europe, to introduce into the portfolio, or connect to existing initiatives, to learn faster, build partnerships and discover breakthrough solutions.
- It will provide a frame to guide collaborative sensemaking and deep listening activities to learn from innovation on the ground to support policy making, decision making more broadly, funding bids and to guide local and international investors interested in the country.
- It will provide visibility, line of sight and above all reassurance to potential funders and investors that the process the Slovenian government is leading is impact-led, robust and world-class in terms of its rigour and its thoughtfulness, and its competitiveness.

Regarding next steps, the portfolio composition will now take place by priority area with a specific portfolio visual representation being developed for each of them, starting first with Built environment. This visual representation of the whole Deep Demonstration portfolio will be a reference point after the activation of all priority areas to put them all together.