



DEEP DEMONSTRATION

Circular, Regenerative Economies

Three European countries are working with EIT Climate-KIC to design national-level transitions to fully circular economies.

ABOUT THESE FACTSHEETS:

This series of factsheets will introduce you to the purpose, partners, projects and processes of EIT Climate-KIC's Deep Demonstrations programme.



Deep demonstrations of systemic change

EIT Climate-KIC offers 'systems innovation as a service' to help Europe deliver a transformative green recovery

EIT Climate-KIC's response to climate emergency has been to focus our efforts on systems innovation, to generate options and pathways for radical transformations in whole countries, cities, regions, industries and value chains.

Deep Demonstrations are the large-scale projects through which we offer systems innovation as a service to Europe's most ambitious 'challenge owners' – i.e. the mayors, government ministries, industry leaders and funders who have the means and mandate to tackle Europe's biggest climate change challenges.



We designed the initiative to meet the increasing demand for our role as an orchestrator of systems innovation. Our systems innovation model uses a balanced portfolio of interventions – across education, technological innovation, citizen engagement, policy, finance and other relevant levers of change – to catalyse fast decarbonisation; to drive climate adaptation and resilience through circular economy approaches; and, in the case of industries, to generate new markets, business models and value chains coherent with a 1.5 degree world.

The world needs inspiration, and proof that inclusive, fast and large-scale change is possible

In 2019 EIT Climate-KIC launched eight Deep Demonstration projects to act as:

- a test bed environment for tackling climate change through systems innovation to build a net-zero-emissions economy
- sources of innovation and learning that can accelerate change and provide policy inputs.

Our aim with these projects is to achieve rapid systemic change, working with whole countries, regions, cities, landscapes and sectors.

We invite new partners and funders to work with us to expand and progress this initiative, for a rapid and inclusive green recovery across Europe.

Deep Demonstrations Factsheets

Circular, Regenerative Economies is one of the eight demonstrations in this first cohort of projects, and we are delighted to update you on it in our first series of Deep Demonstrations Factsheets.

In this series...

> 1.



Deep Demonstration of *Circular, Regenerative Economies*

Currently the project has
3 participating countries:
Slovenia, Bulgaria and Italy,
and we are opening up the
programme to other challenge
owners.

2. Deep Demonstration of Climate-friendly Food Systems and Diets
3. Deep Demonstration of Healthy Clean Cities
4. Deep Demonstration of Just Transformations
5. Deep Demonstration of Landscapes as Carbon Sinks
6. Deep Demonstration of Long-termism
7. Deep Demonstration of Resilient Regions
8. Deep Demonstration of Resilient, Net-Zero-Emissions Maritime Hubs

The circularity opportunity



The current economic system is linear and therefore wasteful. According to Circle Economy's *Global Circularity Report*, only nine per cent of the world's resources are cycled back into the economy after use. Globally, we produce two billion tonnes of waste per year and this is predicted to balloon by 70 per cent by 2050.

Waste (both before and after use) is incinerated, buried, or simply littered, wasting the potential utility and value of materials, and leading to ever more resource extraction.

Due to this wasteful, linear system, half of total greenhouse gas emissions and over 90 per cent of biodiversity loss and water stress come from resource extraction and processing.

A circular economy, in contrast, seeks to create a closed-loop system, in which resources are carefully designed for a circular lifecycle, and then re-used, repaired, shared, or, in the last resort, recycled.



For example, food, instead of being thrown away, would be composted or broken down through anaerobic digestion, with the resulting soil used to grow new food instead. Electronics would be designed for energy efficiency, durability, reparability, upgradability, maintenance, reuse and recycling, and would be supported by, for example, the 'right to repair,' a common charger and take-back schemes.

In construction we would see more recycled and sustainable materials, building retrofits for improved energy efficiency, integration of lifecycle assessments for buildings in public procurement, rehabilitation of brownfields, and increasing the safe, sustainable and circular use of excavated soils.

Systems thinking is critical to designing waste, CO2 emissions and pollution out of these and other systems.

Europe is taking action to realise this kind of economy.

The Green Deal Roadmap, released on 10 December 2019, seeks to design a set of "deeply transformative policies" at regional

and national level, with the circular economy one of eight key areas of focus. *The Commission's Circular Economy Action Plan*, released in March 2020, stated:

// The EU needs to accelerate the transition towards a regenerative growth model that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade. //

Doing so could bring dividends for the EU. Cleaner materials and circular production systems could generate trillions in net economic benefits. A recent report by the expert consulting company Material Economics also calculated that circular approaches could help to reduce CO2 emissions from materials production in the bloc by almost 56 per cent by 2050.



Case study: Slovenia

EIT Climate-KIC and Slovenia are working on a deep demonstration of what is possible when innovation is orchestrated, collaborative and mission-oriented and demand-led.

These transitions do not happen at speed without design, and in this regard Slovenia is ahead of the pack. Last November, the Slovenian parliament passed a motion to adopt an EIT Climate-KIC-led proposal called “A Deep Demonstration of a Circular, Regenerative and Low-Carbon Economy in Slovenia”. You can read more about this in the ‘Activities Update’ section of this Factsheet.



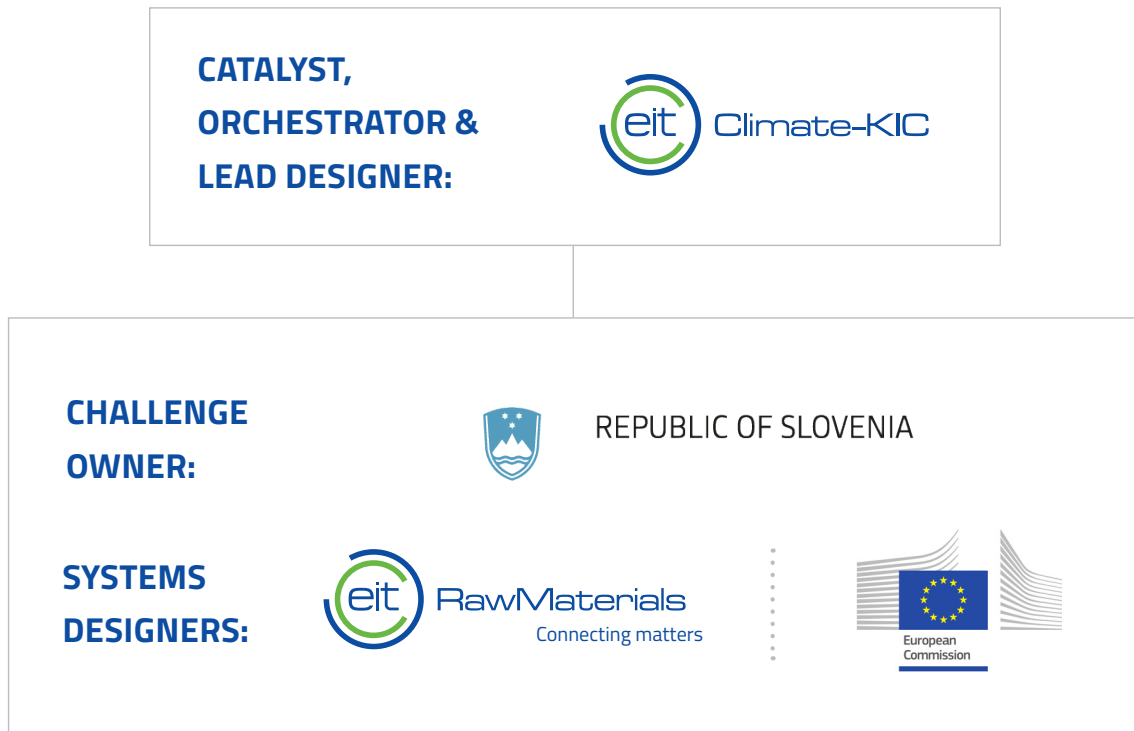
In brief, the *Deep Demonstration of Circular, Regenerative Economies* in Slovenia will design and deliver the smart and circular transition of local communities through a coordinated national approach. Innovation will tackle material production and waste flows across key economic systems: forestry, the built environment, mobility, manufacturing and food systems.



For Slovenia, the circular economy is a cross-cutting topic. It is included in key national documents and strategies such as the “Vision for Slovenia in 2050”, the “Slovenian Development Strategy 2030” and Slovenia’s Smart Specialisation Strategy (S4). It will also become part of the country’s long-term climate strategy, which is currently being prepared.

EIT Climate-KIC is also exploring similar projects with the Bulgarian government, with Italy, and with other regional and national governments in Europe.

Slovenia partners



Catalyst, orchestrator and lead designer

EIT Climate-KIC is Europe's largest public-private partnership addressing climate change through innovation to build a net zero-carbon economy. We are supported by the European Institute of Innovation and Technology (EIT), a body of the European Union.

Our response to climate emergency has been to focus our efforts on systems innovation to generate options and pathways for radical transformation. Our Deep Demonstrations are part of a much larger portfolio of climate innovations covering finance, urban transitions, land-use and production systems.

In this demonstration EIT Climate-KIC is responsible for stakeholder orchestration, and for programme and financing model design. You can read more about our Deep Demonstrations initiative [here](#).

Challenge owner

Government of Slovenia (eight ministries):

- Government Office for Development and European Cohesion Funds
- Ministry of Education, Science and Sport
- Ministry of Economic Development and Technology
- Ministry of the Environment and Spatial Planning
- Ministry of Infrastructure
- Ministry of Agriculture, Forestry and Food
- Ministry of Finance
- Ministry of Foreign Affairs

Systems designers

EIT RawMaterials is the largest consortium in the raw materials sector worldwide, uniting over 120 core and associate partners and more than 180 project partners from leading industry, universities and research institutions from over 20 EU countries.

The Joint Research Centre (JRC) is the **European Commission's** science and knowledge service. The JRC employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.

Activities update

How has our systems innovation methodology been applied in this Deep Demonstration?



Visit the [Appendix](#) to learn about our systems innovation methodology

The Slovenia chapter of EIT Climate-KIC's *Deep Demonstration of Circular, Regenerative Economies* has completed a first iteration of the 'Intent' component and is currently creating a 'Frame' for action.

Circular economy – moving away from linear business models and transitioning to closed-loop systems – has been defined by the Government of Slovenia as one of the country's strategic development priorities.

In terms of intent, the country aims to become a European leader in harnessing circularity to create a net zero, regenerative economy by 2050. Their goal is to decarbonise their economy and society while securing the well-being and prosperity of all Slovenes for decades to come. But achieving net-zero greenhouse gas emissions by the middle of this century will require critical structural and exponential changes that must occur rapidly and on multiple fronts simultaneously.

Slovenia has been identified as an excellent pilot country as it offers a fertile environment to test and experiment with a systems approach, along with committed national institutions and organisations. In the 'intent' phase of the demonstration, we focused on identifying the right partners, establishing trust, finding a common language and working with challenge owners to establish a firm commitment to design a portfolio of innovations that works across various levers of change – including education, finance, procurement, production systems, regulation, policy, behaviour and citizen engagement.

This resulted in eight national ministries coming on board, committed to applying EIT Climate-KIC's systems innovation methodology to help the country transform its linear economy into a circular one.

In an unprecedented cross-sectoral and cross-disciplinary approach, we have been working with the Slovenian government to marry up different disciplines and departments. The first months focused on scoping, relationship-building, and defining high-level goals and outcomes.

We identified five key value chains to trigger a systemic transition: forestry, built environment, mobility, manufacturing, and food. Linked programmes will target communities, companies, and policymakers, to be delivered via a dedicated vehicle: The Slovenian Centre for Smart and Circular Transition.

To make this happen, funding must be mobilised and coordinated from both private and public sources. We are working to develop a new investment logic for the circular economy, where initial investment from the KICs will catalyse much larger, blended finance from the Slovenian national budget, structural funds, banks and foundations

Create circular communities

Circular schools

Circular learning & resources

Circular synergies

Foster circular development

Circular discovery process

Circular performance

SME circular innovation support

Circular policy design

Transitions policy hub

Circular procurement

Circular higher education

Forest-based value chains
Built environment
Mobility
Manufacturing
Food system

Transformation Capital for Circular Economy

Next steps and how to get involved

Our next steps are to finalise the detailed work plan for Slovenia and to start implementation in 2020. During 2020 we will also implement our monitoring, learning and evaluation strategy to synthesise all insights we have gained so far.

We will be continuing our work with two additional challenge owners – **Bulgaria** and **Italy** – and are seeking to engage with new challenge owners.

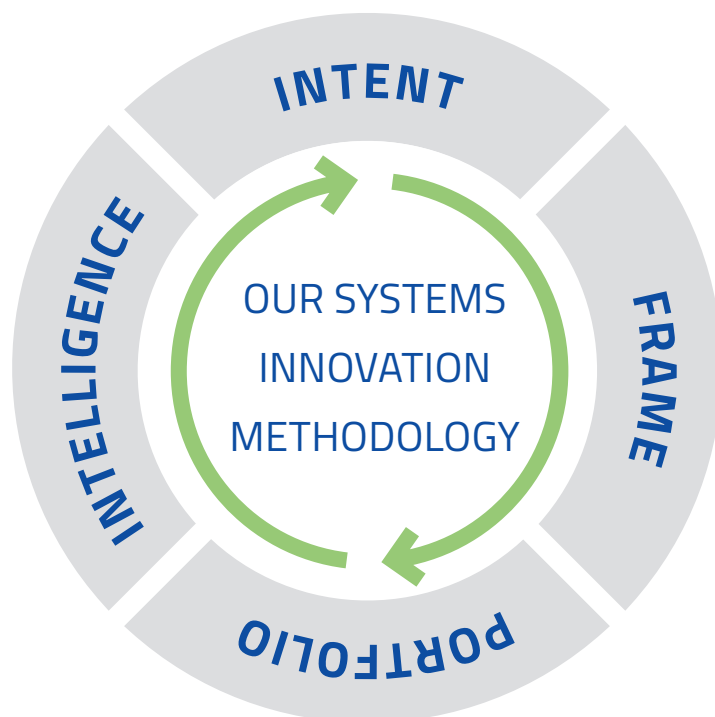
✉ We would like to hear from partners and funders interested in supporting and designing national economy transitions. Email us at: circularity@climate-kic.org

Our systems innovation methodology

EIT Climate-KIC is a delivery partner for systems transformation

Deep Demonstrations are the large-scale projects through which we offer our 'systems innovation as a service' model to Europe's most ambitious 'challenge owners' – i.e. the mayors, government ministries, industry leaders, and funders who have the means and mandate to tackle Europe's biggest climate change challenges.

Our systems innovation methodology is comprised of four, non-linear and iterative components:



INTENT**FRAME****PORTFOLIO****INTELLIGENCE****1. We establish a clear **INTENT** for the project:**

We engage Europe's most ambitious **challenge owners** – i.e. city mayors, regional leaders, government ministers, community leaders and CEOs of major companies – to secure a clear intent and demand-side pull for transformational change.

In this intent phase we listen to key stakeholders to understand local or sectoral challenges, as well as current commitments with regard to decarbonisation and resilience. We start to identify the multiple systems at play in the 'problem space' and may also discuss the role of culture, identity, habits, needs and top-of-mind concerns.

We establish a clear commitment to (1) work together on an innovation portfolio to catalyse radical transformation of the systems identified, and (2) willingness to bring existing programmes within a systems innovation portfolio logic.

INTENT**FRAME****PORTFOLIO****INTELLIGENCE****2. We create the **FRAME** for action:**

Together, we formally map out the relevant systems to identify where and how innovation can play a role in catalysing change dynamics, and we start to design a hypothetical portfolio – i.e. innovation 'positions' or leverage points that can address barriers and opportunities.

INTENT

FRAME

PORTFOLIO

INTELLIGENCE

3. We build and manage a **PORTFOLIO of 30–100 connected innovations designed to address leverage points identified in earlier stages:**

These may combine interacting innovations in behaviour, technology, citizen engagement, policy, education and other levers of change. To activate this live portfolio, we search for multiple innovation solutions and possibilities, and we launch calls for new and unexpected ideas, shaped by what we learn on the ground.

INTENT

FRAME

PORTFOLIO

INTELLIGENCE

4. We use sense-making and learning to generate actionable **INTELLIGENCE:**

It is our desire that decision-makers have actionable intelligence and knowledge at their fingertips, to accelerate learning about how to achieve transformation at scale. Beyond EIT Climate-KIC and our Deep Demonstration partners, we also want others to follow our journey and benefit from our learnings. To that end, we are committed to reporting transparently on our Deep Demonstration programme as it unfolds. Feedback loops inform policymaking and dynamic management of the innovation portfolio.