



Euroopan alueiden
komitea

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What is the added-value for the others when a city or region is an EU innovation forerunner?

The case of the Espoo City & Helsinki Region

(I have several hidden slides in my set)

PRI Playbook: SDGs Mapped on European Commission Policy Priorities through a Whole-of-Government European Commission Priorities Approach

European Green Deal	           
Economy that works for people	      
Europe fit for the digital age	 
European way of life	   
Stronger Europe in the world	 
European Democracy	  



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Source: https://ec.europa.eu/info/strategy/international-strategies/sustainable-development-goals/eu-holistic-approach-sustainable-development_en



European Committee
of the Regions

Sustainable Espoo Milestones



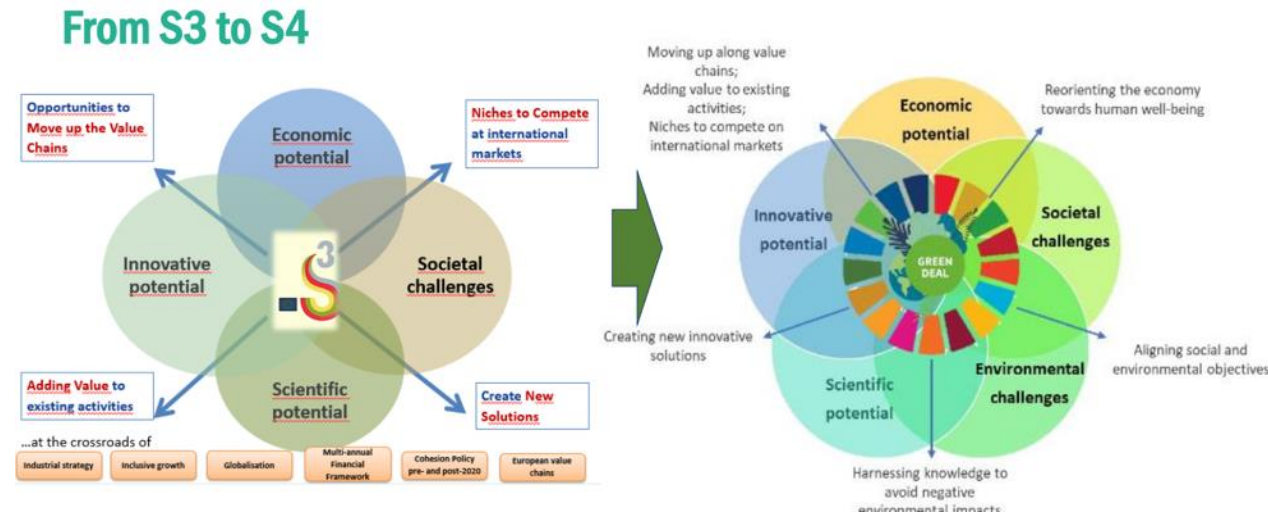
From Smart Specialisation to S4 and Implementing SDGs

Espoo Transformation Process

PHASE 1
1990's - 2020



PHASE 2
2021-2024



PHASE 3
2025-2030



Cities need to a mindset transformation from too narrow economical and ecological industry level innovations to holistic societal innovations encompassing all levels of participation. This requires moving from S3 and S4 thinking to more dialogue driven holistic approach. This can only happen within cities and by bringing SDGs to the core of municipal strategies. SDGs provide the required mindset, applicable metrics and planetary lingua – and values that citizens can relate to. All the pieces are ready, it is time for collaborative implementation.

Strategic Focus on Smart and Sustainable Growth by Implementing Green and Digital Going Local

**HELSINKI REGION'S EU VISION: FORERUNNER
IN CLIMATE NEUTRALITY AND INNOVATION**

**REGIONAL STRATEGY TO BE APPROVED BY
THE COUNCIL**



Helsinki-Uusimaa
Regional Council

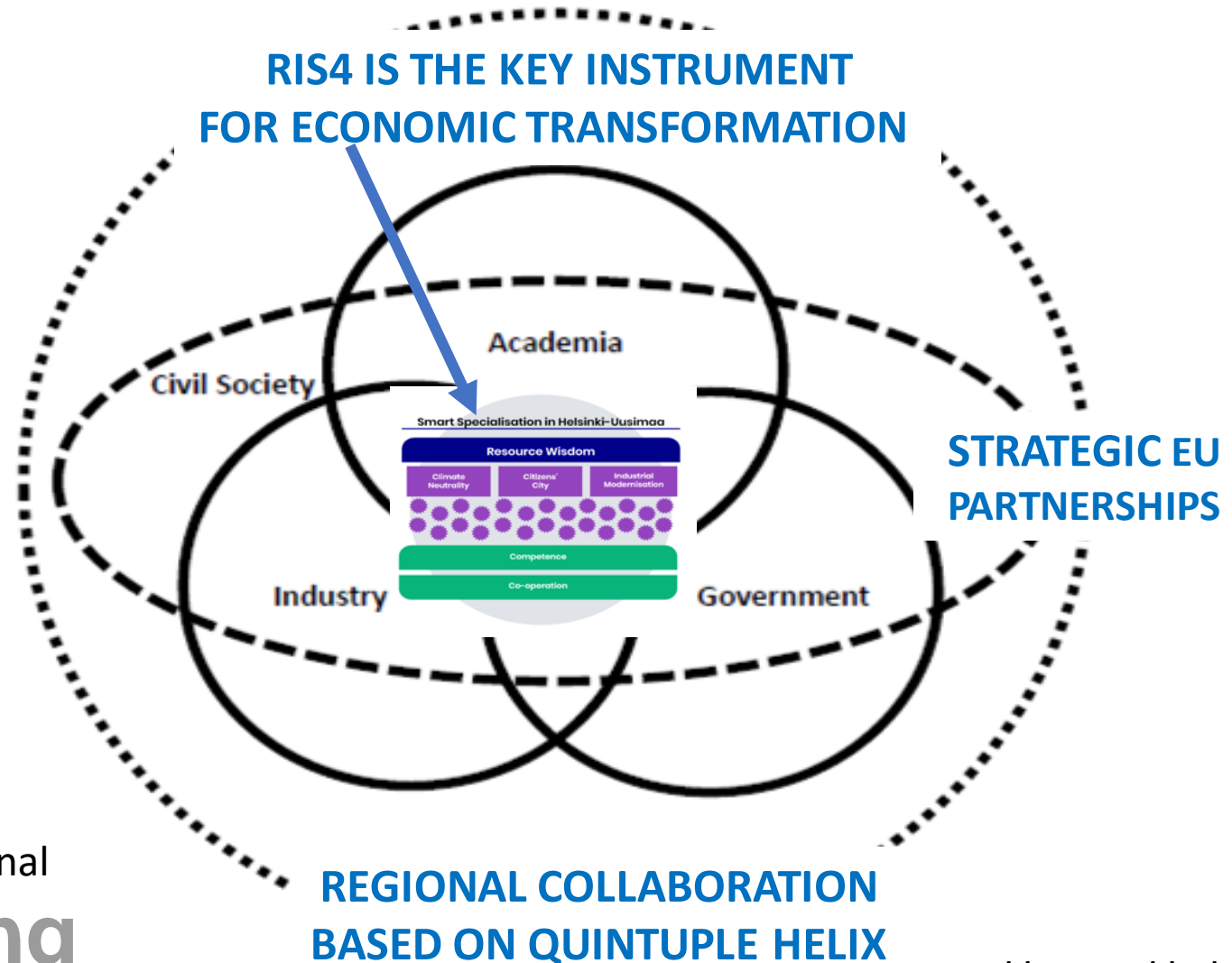
Targets of the Region by 2030:

- Carbon Neutrality
- R&D over 5 % of the GDP
- Employment rate over 80 %

&

Instruments: RRF & Horizon Europe & Cohesion & National
Public & Private Financing

**RIS4 IS THE KEY INSTRUMENT
FOR ECONOMIC TRANSFORMATION**



Markku Markkula

Why and How to Move Ahead with Forerunners?

Commissioner Mariya Gabriel has stressed several times that **the EU needs an upgraded role for innovation and place-based innovation ecosystems play a crucial role.** The CoR answers in its opinions:

- **CoR underlines closing the knowledge and innovation divide in Europe and the innovation gap between Europe and the US.**
- CoR reaffirms that the challenges are complex, and only part of the necessary scientific and technological knowledge exists. Reaching the targets is possible with extensive foresight activities, increasing R&D investments, real-world prototyping, experimenting, and scaling-up of the results.
- CoR highlights that the key questions are how the cities and regions learn to orchestrate necessary activities and how the activities attract private industrial and other investments.

What the forerunner cities offer for Europe?

- **Cities showcase how to co-create successful concepts for platform and test-bed communities in the new economy serving the citizens.** These offer real-life practical and innovative solutions in making **the transformation in an accelerated speed to green & digital.**
- Cities showcase how the effective Quadruple Helix collaboration can translate RDI to carbon handprint systems, products and services and other innovative solutions in implementing the UN SDGs.

What do the cities need from the EU?

- To be able to serve others in Europe and the rest of the world, pioneering cities need to be recognized and financially rewarded as the main transformational mechanisms in reaching the UN SDGs and the EU targets. **An urgent need is to make more flexibility in the EU financing system. Bottom-up piloting ambitious measures needs to be co-financed, as fast as possible.**
- As learned especially in the PRI, the EU Cities Mission and Innovation Capital, cities have enormous potential for co-creating forerunner concepts, instruments and examples of successful measures for reaching the EU Mission and other Horizon targets. For this cities need more step-by-step financing based and focused on their own on-going bottom-up RDI-related development.
- The whole Europe needs breakthrough societal innovations – the potential for these exists. **Using the ongoing PRI and the call for Regional Innovation Valleys,** the CoR is ready to support the implementation process to reach the ambitious goals.

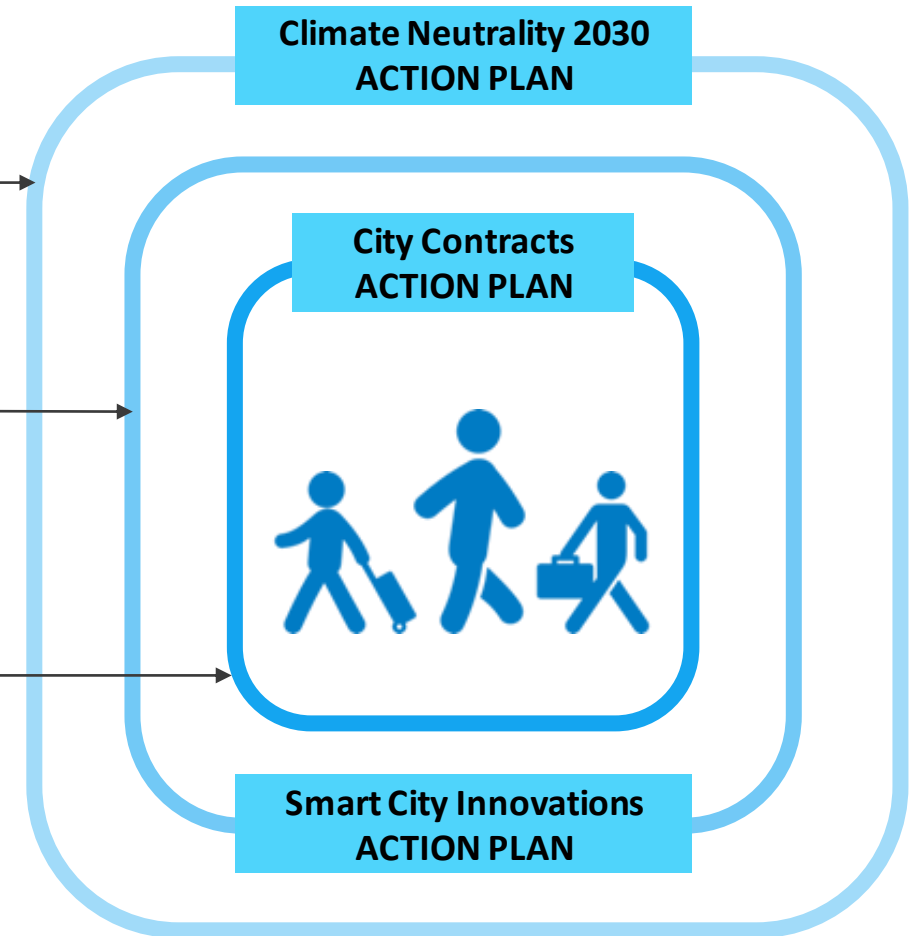
Mindset and Commitment of the Entire City

1. We believe in radical and multidisciplinary creativity
2. We perform our best when we share a purpose
3. We believe in building on closeness and trust
4. We believe that the change we need starts with our people's well-being

City's Roadmap
to SDGs & Climate
Neutrality 2030

The Entire
Community
Co-creating
Smart City
Innovations

Partnerships and
Commitments
using City
Contracts



Place-Based Innovation Ecosystem

Testbeds and living labs at Otaniemi-Keilaniemi have been co-designed by Espoo, Aalto and VTT to provide a path towards sustainable future in collaboration with companies and citizens. More than 400 R&D units.

1. Novel technologies

AI, 5G and beyond,
autonomous systems.
Electrification, hydrogen.

2. Digital infrastructure

Backbone for smart
city innovations.
Data as a fuel for
innovations.

3. Venturing

Co-creation platform
with startup incubation.

4. Underpinned by leading companies

Scaling up the innovations,
joint offerings.

4. Top-notch research and deep-tech science

Global collaboration.
EU projects.

Zero Emission Mobility Hub ZEM Hub

Charging solutions.

Smart Urban Mobility Lab

Living lab for people flow and
seamless travel chains solutions.

Testbed Circular Economy

New material solutions,
new business models.
Cleantech Garden

Testbed Sustainable Food System

Food processing and supply chains
Cleantech Garden

Future Urban energy

Sector integration, energy
communities, smart grids,
electrification of heating and
transportation. Energy-efficient
and flexible buildings.

6. Resilient city

Post-Covid springboard.
Situational awareness.
Showcase of safe, secure
and green city.

Sustainable Lifestyle Lab

Living lab open for Espoo citizens,
students and visitors. New business
models and services for sustainable
lifestyle.

5. Commercialisation

Global sales. Talent
attraction. Invest in.

Deep Tech for Sustainable Growth

1. **Wireless networks (5G/6G)** – radically improved communication and autonomy in society and across industries
2. **Artificial intelligence** – a critical enabling technology in areas such as industry, healthcare and transportation
3. **Quantum technology and microelectronics** – to enable revolutionary technological leaps in computing power and computer simulation
4. **Biotechnology and new materials** – urgently needed to replace fossil-based or animal-based raw materials for sustainable growth
5. **Electrification of society** – Green transition and sector-integration solutions
– Electrification: transport, revolution in industry and heating solutions –
Hydrogen: transmission and storage of large amounts of energy



The Five Moonshots for Green Growth in Finland

The Climate Leadership Coalition CLC identified five Moonshots which lean on Finland's lasting competitive advantages and have the potential to help the country make significant leaps in terms of exports and carbon handprint. The entire CLC partner network of 90 companies is behind this shared message to the Finnish Society, especially Government.

NET-POSITIVE LIVING

Finland as the leader in providing holistic net-positive living offering, incl. wooden construction, net-zero living solutions, and demand response systems

BIO-BASED PRODUCTS AND MATERIALS

Finland as the global leader in developing and supplying advanced bio-based solutions, incl. circular textile fibers, circular consumer packaging, long-lasting consumer products, and advanced lightweight biomaterials

DECARBONIZATION TECHNOLOGY AND SERVICES

Finland as the forerunner in providing smart technology solutions for high-emitting industrial processes, incl. electrification, lifecycle services, and energy system optimization

CIRCULAR BATTERIES AND GREEN METALS

Finland with a circular battery ecosystem, and Finland as the leading supplier of green specialty steel, and other metals in Europe (e.g., for advanced applications in automotive and aviation)

GREEN HYDROGEN-ENABLED SOLUTIONS

Finland as a competitive country for producing green hydrogen-enabled solutions, incl. green steel, synthetic fuels, green ammonia-based fertilizers, and food proteins

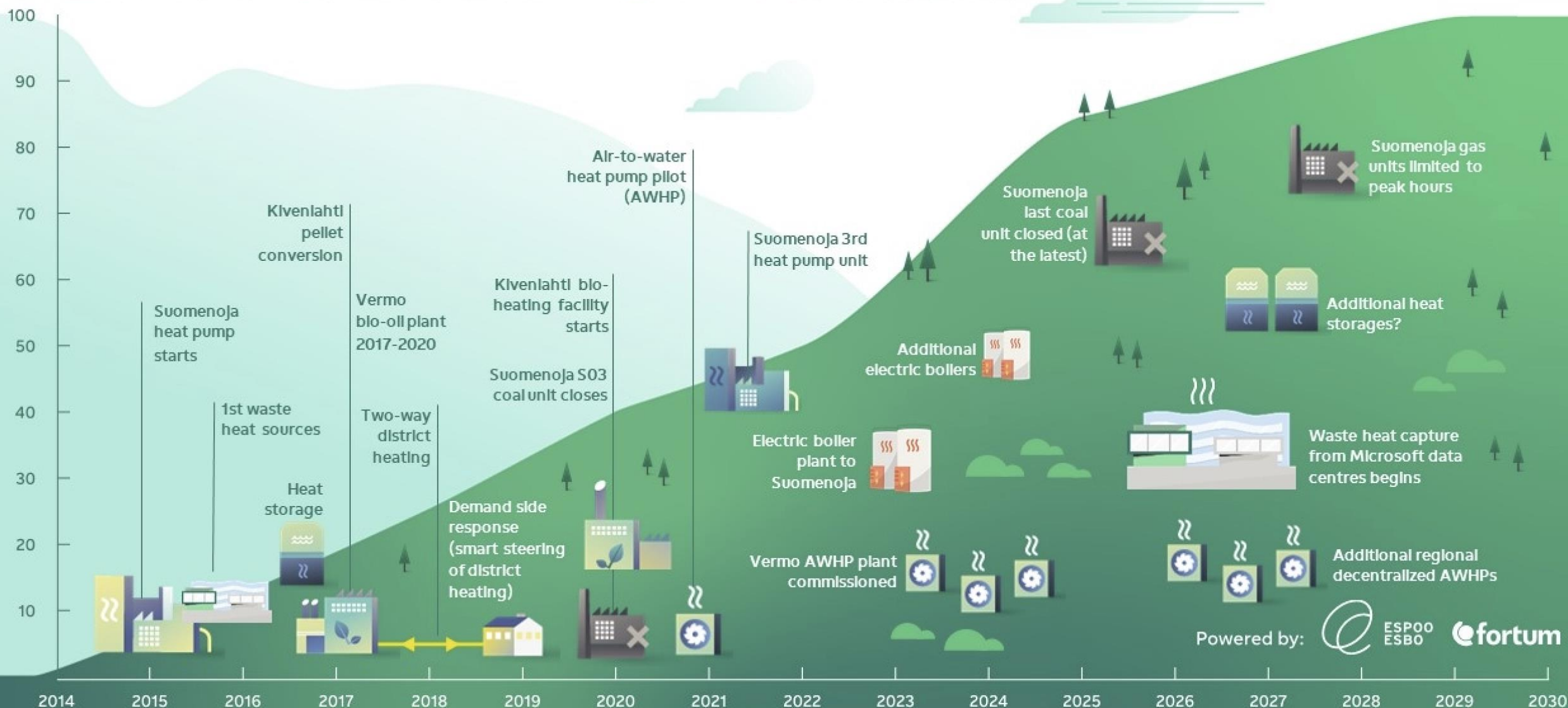
Example Investment Plan: Providing Carbon Neutral District Heating by 2029

Espoo 
Clean 
Heat 

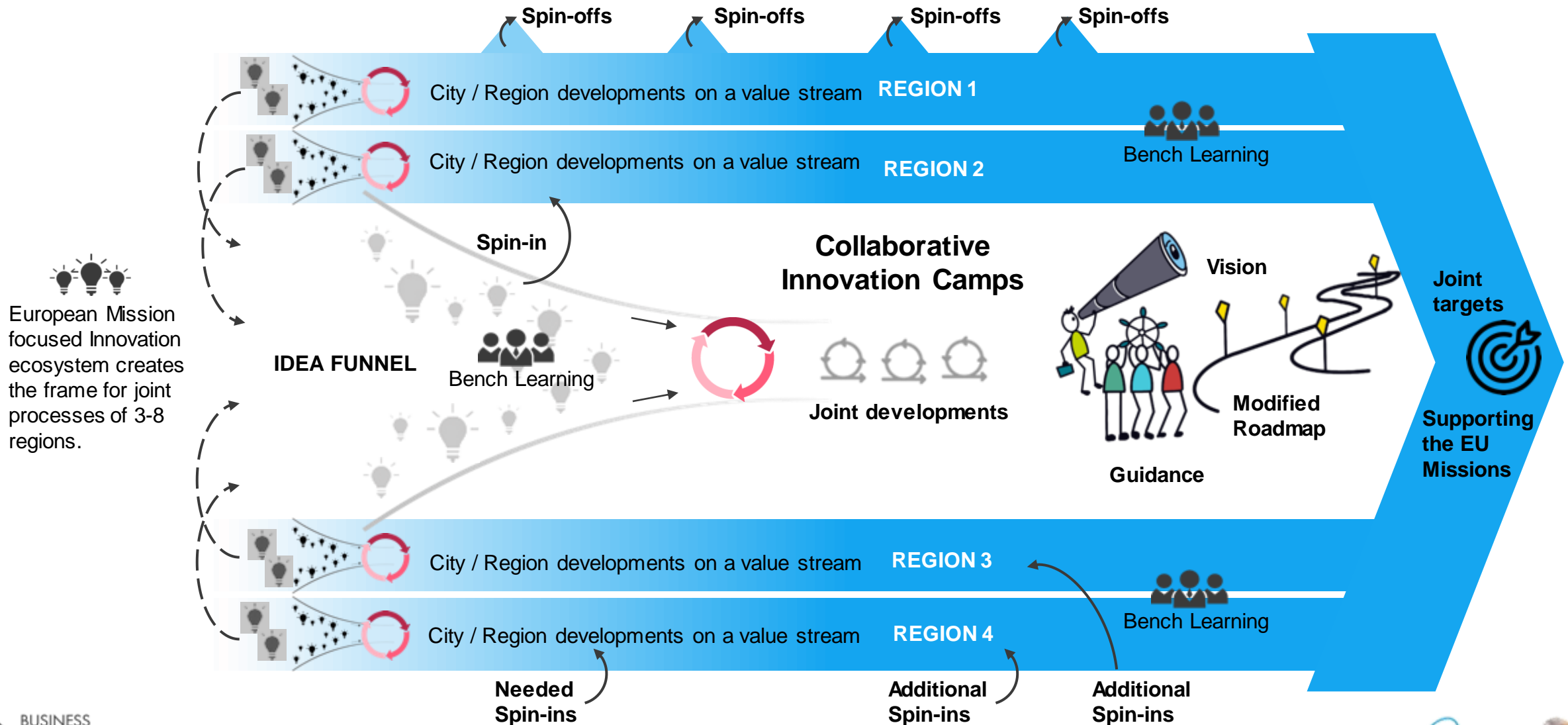
Illustrative

CO₂ emissions compared to the 2014 level, %

Share of carbon neutral production, %



Orchestrating Bottom-up Partnerships for Co-creating Innovations



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SAXONY, GERMANY

Simul⁺ - Achieving the plus together.

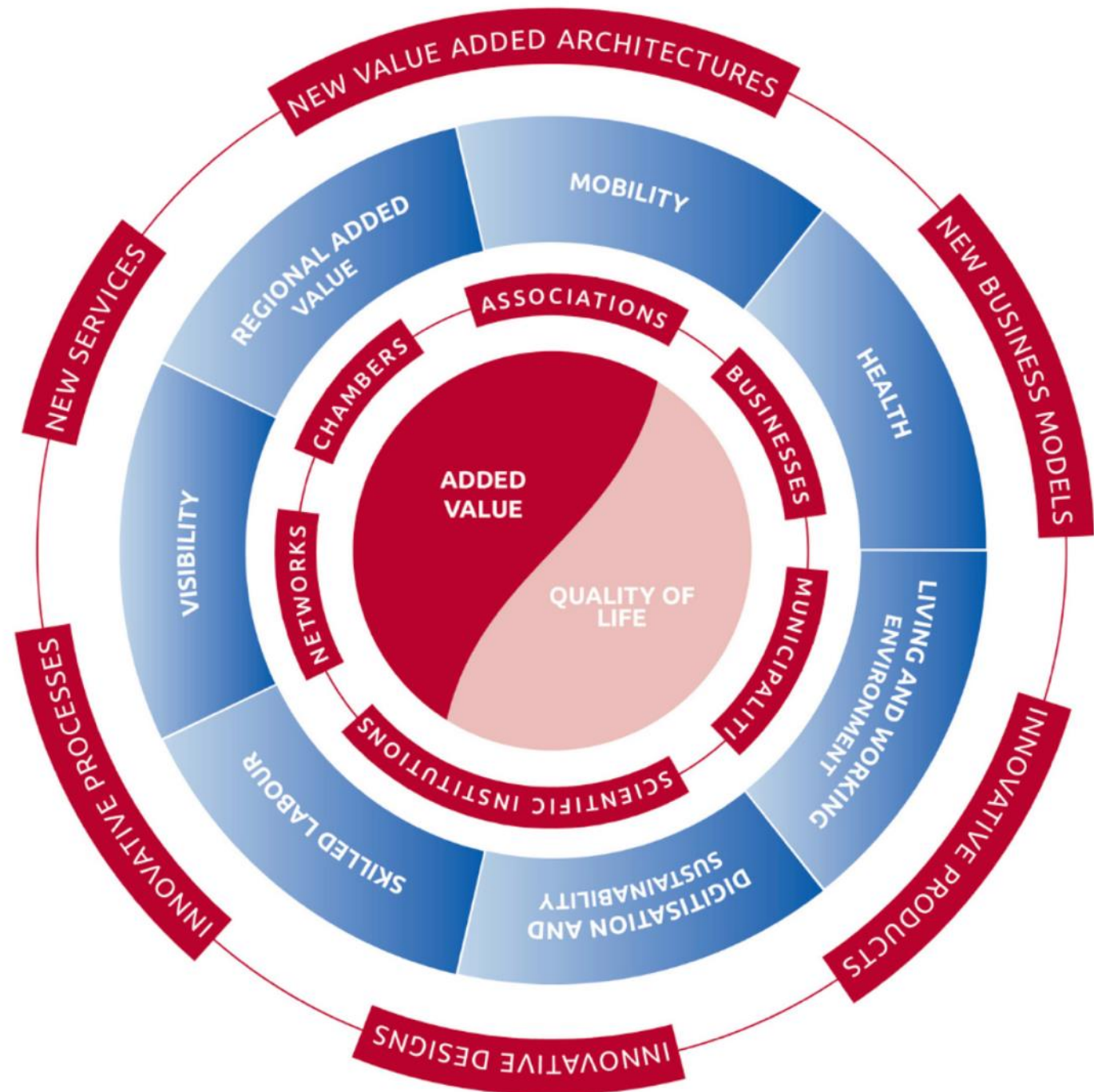
The Latin word "simul" means "together" – which is exactly our motto: bringing people together to achieve more, to achieve a plus together.

Together with partners from the economy (companies, chambers, associations), science, clusters as well as municipalities and committed citizens, we take up promising ideas and implement them in our regions.

simul⁺ is based on three pillars; **Knowledge transfer, participation fund, model projects.**

Simul⁺ is a network and a platform. It reflects the themes and goals of the Saxon State Ministry for Regional Development and is interdepartmental in nature. Hereby, our guiding principle is **innovation-based regional development.**

www.simulplus.sachsen.de/en/



Summary: Complex and Confusing or Not ?

Facing the EU Challenges at the City Level → Changing the Role of the Espoo City

For most people, everything seems to be complex and fragmented. We need a systemic innovative approach. Espoo City is making the transformation a true success story by operationalizing a conscious and well-targeted set of orchestrated activities.

1. City → City is the Platform for the Whole Community
2. General City Strategy → Council's Process and Decision on the Espoo Transformation Narrative
3. Focus on Sustainable Development → Climate Neutrality 2030 Including 4 Dimensions: Ecologic, Economic, Social & Cultural
4. City 2030 → Shared Vision 2030 & Working backwards using the roadmap, milestones and action plan covering all major thematic areas
5. UN SDGs → Sensemaking & a Collaborative VLR process focusing on engagement and implementation
6. Digitalising city operations → National forerunner on Green & Digital Going Local
7. A Number of Separate Projects → Council's Priorities Leading to Orchestrated Portfolios based on major transformational measures
8. RDI → Systemic Collaboration with Universities & Research Organizations & Industry
9. Youth Council → Motivating engagement of all youth activity sectors, including schools, sports and culture
10. Regional Innovation Policy → The Helsinki Metropolitan Area Ecosystem of Several Place-Based and Thematic Innovation Ecosystems
11. Five EU Missions → Bottom-up Activities in Regional Collaboration and EU Partnerships
12. Collaboration → City as a Community & Engaging Main Stakeholders using City Contracts
13. Investments and Implementation → Strong Leadership & Use of All Funding Sources in Synergy
14. European Frame → Use of the Best Global Knowledge, and PRI Organised by JRC & CoR