



**INNOVATION
AND SMART
SPECIALIZATION
FORUM**

MAY 18TH

Transformative innovation and shared agendas in Catalonia's S3

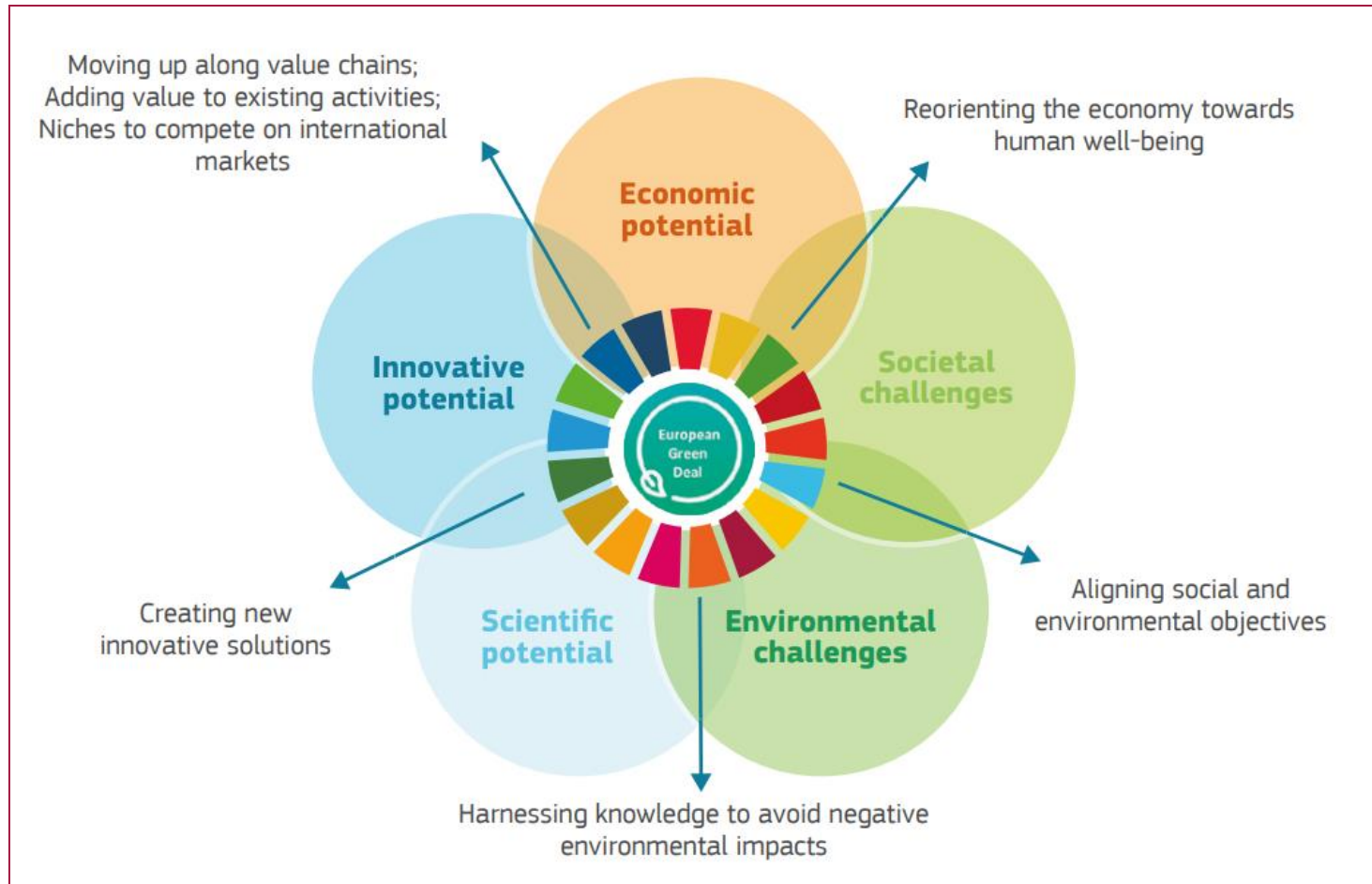
Tatiana Fernández Sirera
Head of Economic Strategy, Generalitat de Catalunya

Transformative Innovation

- Focus on societal challenges: clear directionality towards social and environmental sustainability (SDGs)
- Experimentation and promotion of alternative practices aimed at transforming socio-technical systems, to make them more sustainable and fairer
- Generation of learnings and new knowledge to reorient socio-technical systems towards the SDGs. Reflection processes to generate changes in beliefs, values, behaviors and ways of understanding socio-technical systems and how to transform them
- Recognition and empowerment of actors who are often excluded from the design and implementation of innovation and public policies (inclusivity)
- Management of consensus and conflict and exploration of different possible alternatives to move in the desired directions. This requires recognizing expectations and opening broad participatory processes

* Socio-technical systems: configurations of actors (with their knowledge and skills), technologies (products, infrastructures) and institutions (regulations, cultural symbols, markets) that perform a function for society (i.e. the provision of mobility, food, energy or water)

Addressing SDGs through transformative innovation requires systemic approaches (beyond ERDF)



- Persistent environmental and social challenges place sustainability and inclusive development at the forefront of political agendas and of S3.
- “Transformative innovation requires a clear direction at political level, place-based strategies, well-designed tools, entrepreneurial actors with the right skills, institutional capacity and a culture open to policy experimentation and risk-taking” (Mariya Gabriel).

Source: Nakicenovic et al. (2021) doi:10.2760/766406

Our vision: S3 negotiated and cultivated in the region, based on place-specific needs and contributing to EU goals (European Green Deal, SDGs...)

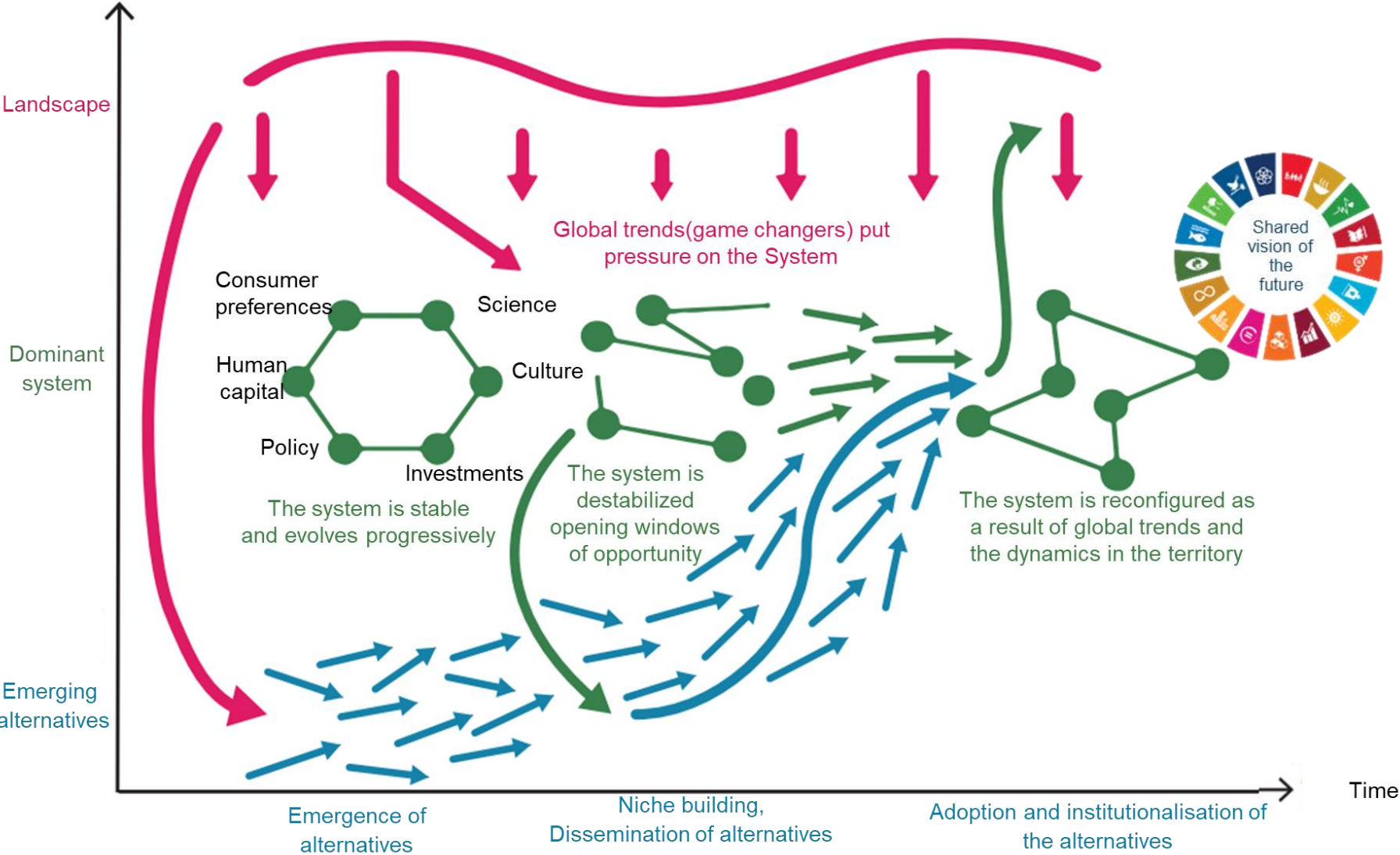


Designed by Mario Magaña / WeDo Project Intelligence. Made Easy SL

Addressing the complex challenges faced by regions requires:

- the reconfiguration of place-based innovation system structures
 - integrating public administrations and civil society
 - creating new collaboration networks
- The adoption of systemic and transformative innovation approaches
- The development of dynamic MEL frameworks (monitoring - evaluating - learning approaches)

Transformative innovation and the multilevel perspective framework: S3 beyond ERDF

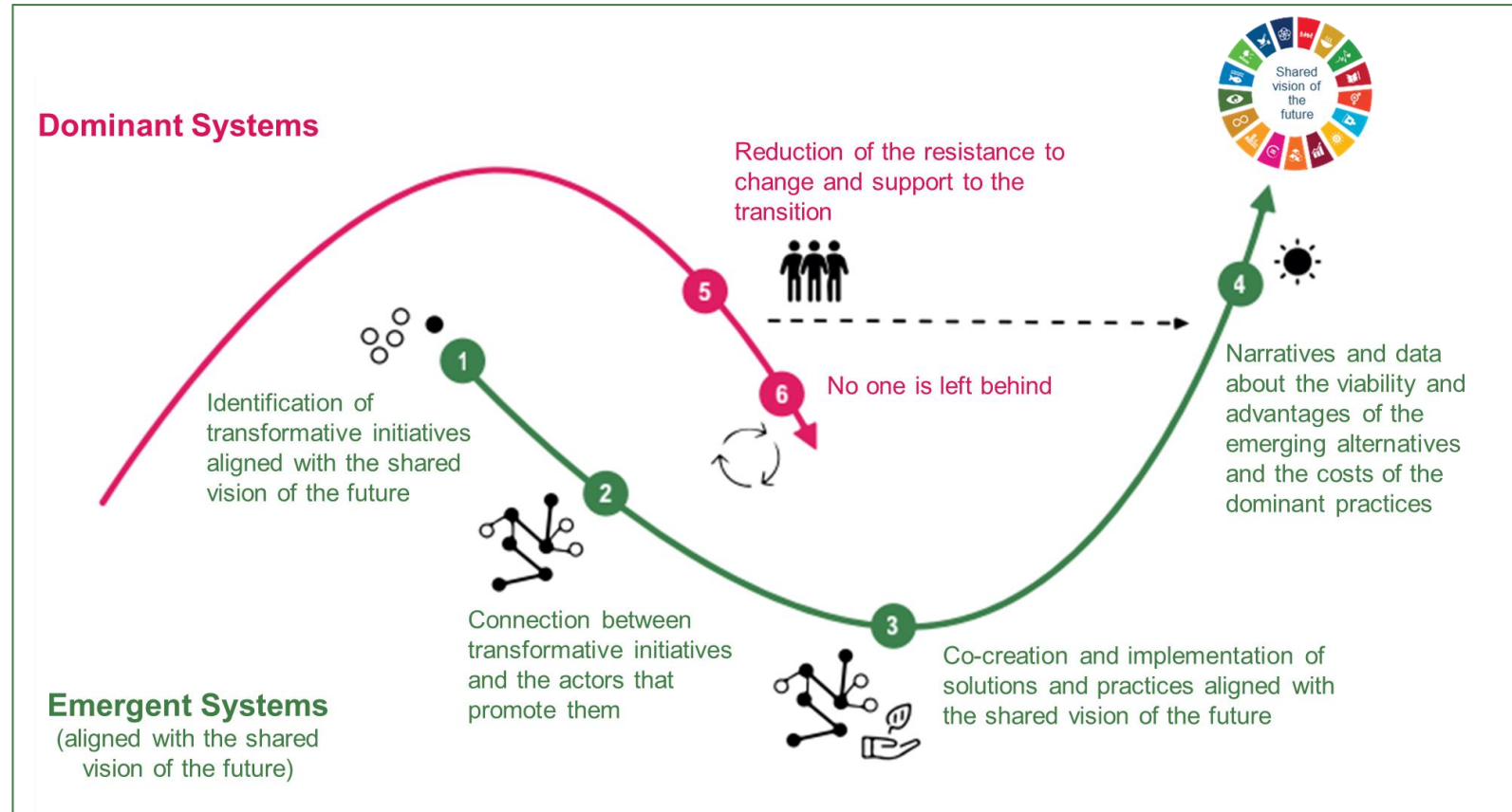


S3, through EDP, identify windows of opportunity and align efforts and resources (bottom-up) to develop alternatives that reconfigure the dominant system in the desired directions

Source: Adapted from Geels and Schot (2007)

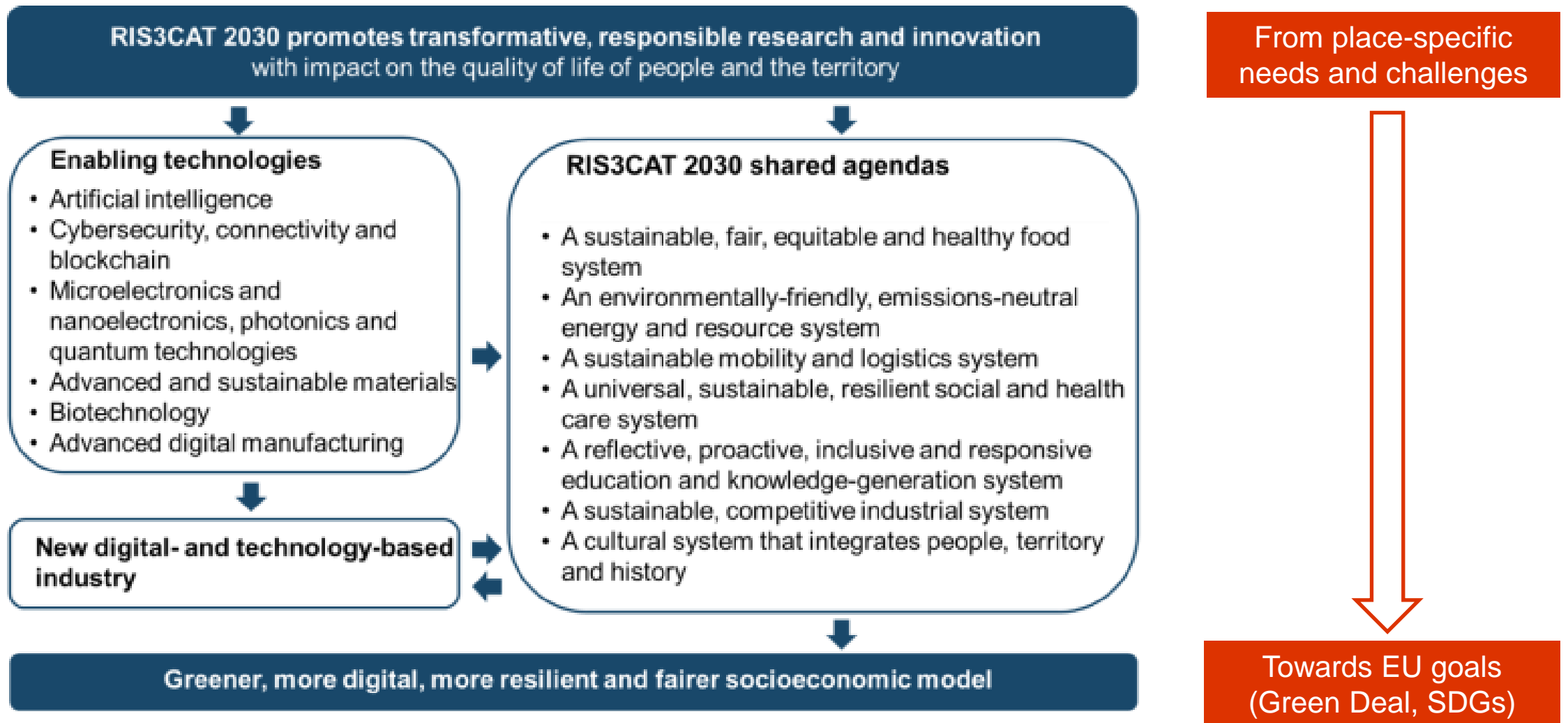
Integration of systemic and transformative innovation approaches to S3

- **Dominant system:** reducing resistance to change, supporting and accelerating transitions
 - through regulations, incentives, training, social policies, institutional changes
- **Emergent system:** discovering opportunities and supporting solutions and practices aligned with SDGs
 - through the S3 and EDP: EU funds for developing alternatives, experimenting, building new collaboration networks, risk-taking...



Adapted from Berkana Institute

RIS3CAT 2030, Catalonia's smart specialisation strategy



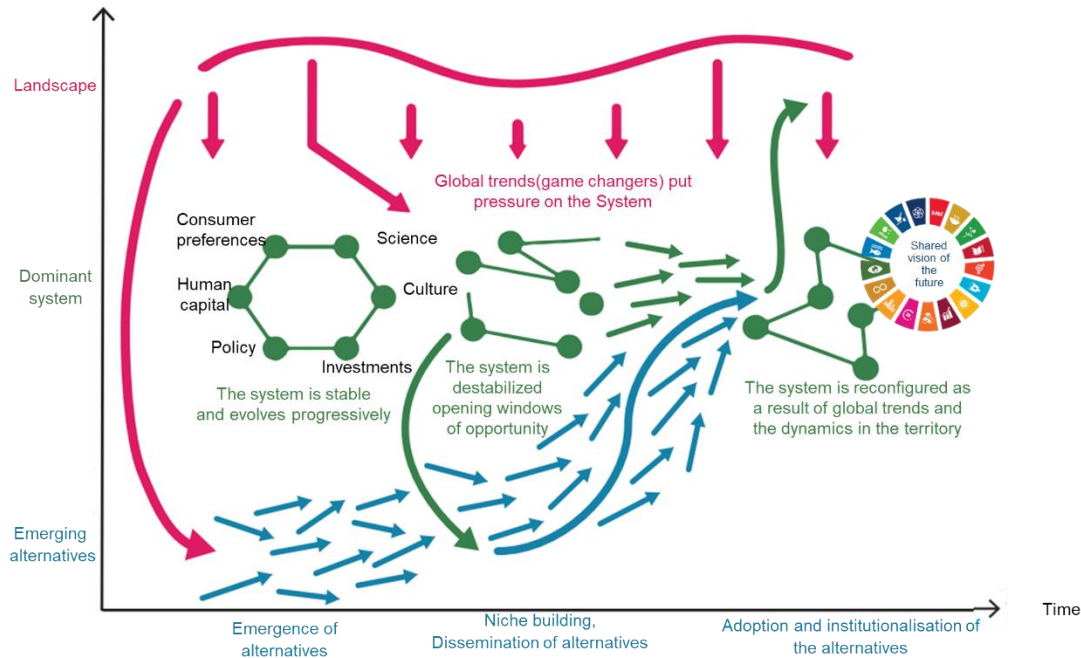
RIS3CAT 2030 main instruments

Moving from traditional S3 towards transformative innovation S3	RIS3CAT instruments
Creation of “new structures” for transformative innovation	<ul style="list-style-type: none"> ▪ Shared agendas ▪ Opportunities Discovery Mechanism (MDO) ▪ Transformative social innovation labs (LIST)
Development of skills and capacities for transformative innovation	<ul style="list-style-type: none"> ▪ RIS3CAT co-creation and learning space ▪ RIS3CAT MEL frameworks ▪ New structures (shared agendas, MDO, LIST)
Mobilisation and reorientation of existing innovation structures towards regional challenges and SDGs	<ul style="list-style-type: none"> ▪ Public procurement of innovation ▪ Singular projects ▪ Support to technology’s transfer ▪ Support to SMEs innovation

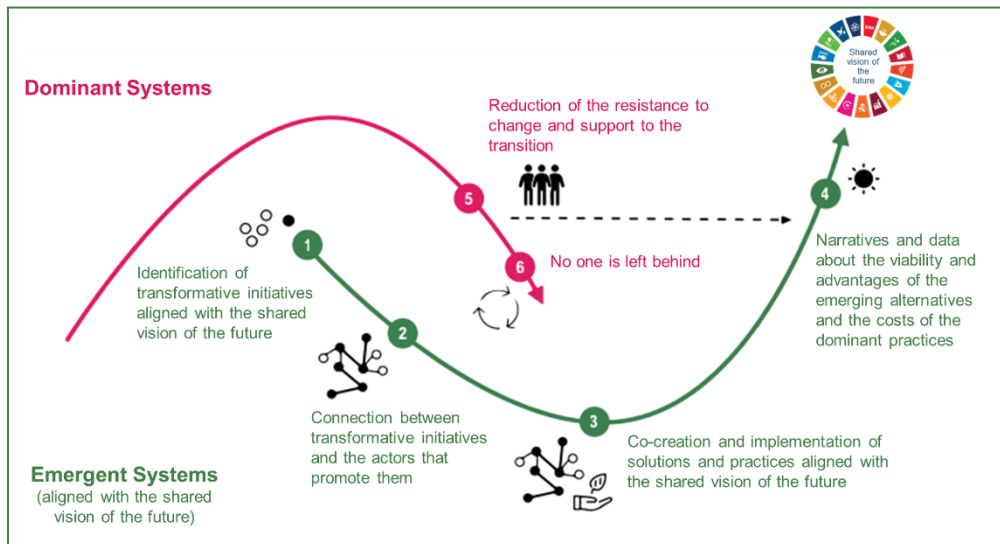
The implementation requires:

- Abilities to develop, test and ensure the wider acceptance and uptake of innovation, novel practices and solutions
- Abilities to identify and frame place-based problems and regional vulnerabilities
- Strong orchestration capacities to coordinate multi-actor processes; mediate between different interests and minimise trade-offs and conflicts between regional innovation and path development, activities and scales; formulate shared visions and set collective priorities.

Shared Agendas: from theory to practice



- Shared Agendas respond to the pressures of global trends and take advantage of their opportunities
- Shared Agendas promote alternatives to dominant practices, more aligned with the SDGs, acting at two levels:
 - Promoting spaces in which actors collaborate to experiment with new ideas, models and ways of doing and organizing and generate alternatives (e.g. energy communities, regenerative agriculture, collaborative economy, etc.)
 - Promoting that alternative practices become institutionalised and contribute to transforming systems in the directions desired by society

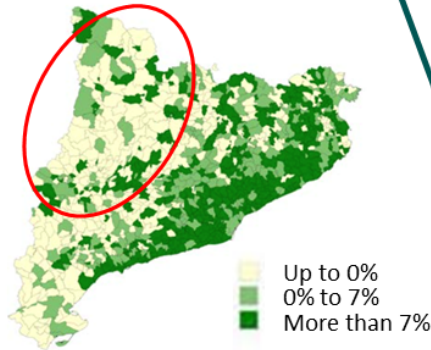


The Shared Agenda of Terres de Lleida, Pirineu i Aran

LOCAL CHALLENGE

The territory needs a change in the economic model

The current economic model is not attractive to retain and capture population. The 95% of municipalities have less than 5,000 inhabitants



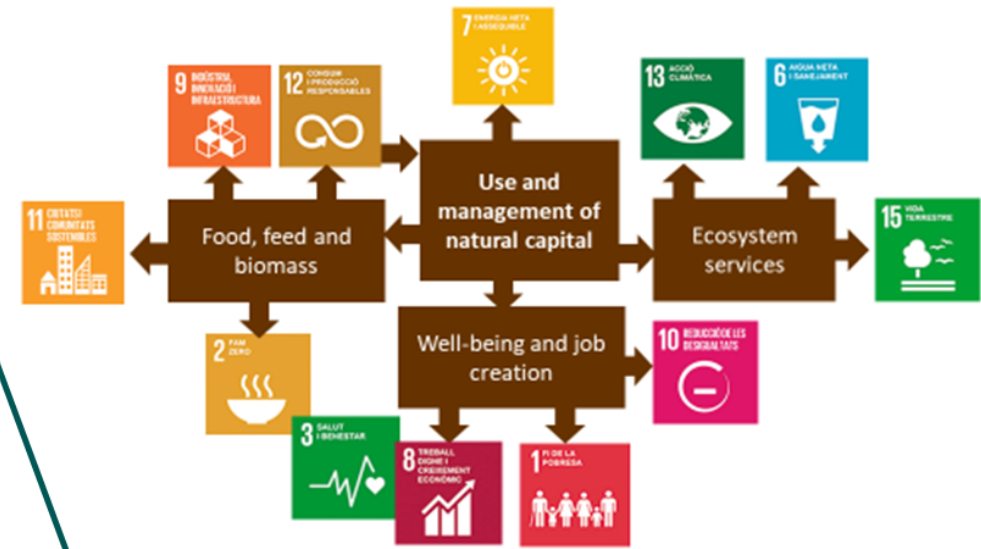
Predicted population growth (%) 2018-2033. Source: Idescat

Demographic, activity and occupation indicators confirm the loss of human capital coupled with low added value economic production with little capacity to generate attractive jobs

Indicator	Lleida	Catalunya
Cumulative GVA 2007-2018 (crisis/recovery balance)	-4,2%	+6,2%
Affiliation contraction 2007-2018	-5,5%	+1,3%
Population variation (2011-2020)	-1%	+3%

GLOBAL OPPORTUNITY

Rural territories are rich in natural capital and they are key actors to achieving a green and climate-neutral Europe



BIOHUB CAT one-stop-shop to support the development of circular and sustainable bioeconomy

Objectives

1. Promoting services for entrepreneurship and innovation to reduce the risks of circular bioeconomy businesses
2. Creating the conditions for attracting bioindustries and enhancing the competitiveness of existing ones.
3. Increasing the role of the RDTI ecosystem in addressing barriers faced by companies
4. Increasing public and private demand and services linked to the circular bioeconomy
5. Promoting policies and instruments to support the bioeconomy
6. Building alliances with European key actors

Main lines of activity



BIOHUB CAT Tech
Open access preindustrial plant for validation of biotechnologies and bioproducts



BIOHUB CAT Feedstock Push
Observatory : platform for locating and characterising local renewable biological resources



BIOHUB CAT RDI Nodes
Enhancing the capacity and orientation of the RDTI ecosystem to support bioeconomy businesses



BIOHUB CAT Industrial Park
Promotion of specialised industrial areas for the development of bioindustries



BIOHUB CAT Arena
Modelling of territorial investment planning and enhancement of existing capacities



BIOHUB CAT Market Pull
Replacement of fossil consumables by bioproducts in the different sectors of activity



BIOHUB CAT Business services
Portfolio of specific services for companies and business models



BIOHUB CAT Sustainability constrains
Definition and application of impact assessment parameters for decision making



BIOHUB CAT EU links
Missions and exchanges of experiences with leading European regions in the development of the bioeconomy



BIOHUB CAT Accelerator Lab
Spaces and programs to support bioeconomy entrepreneurship and businesses



BIOHUB CAT Skills
Identification of professional profiles and promotion of the training offer

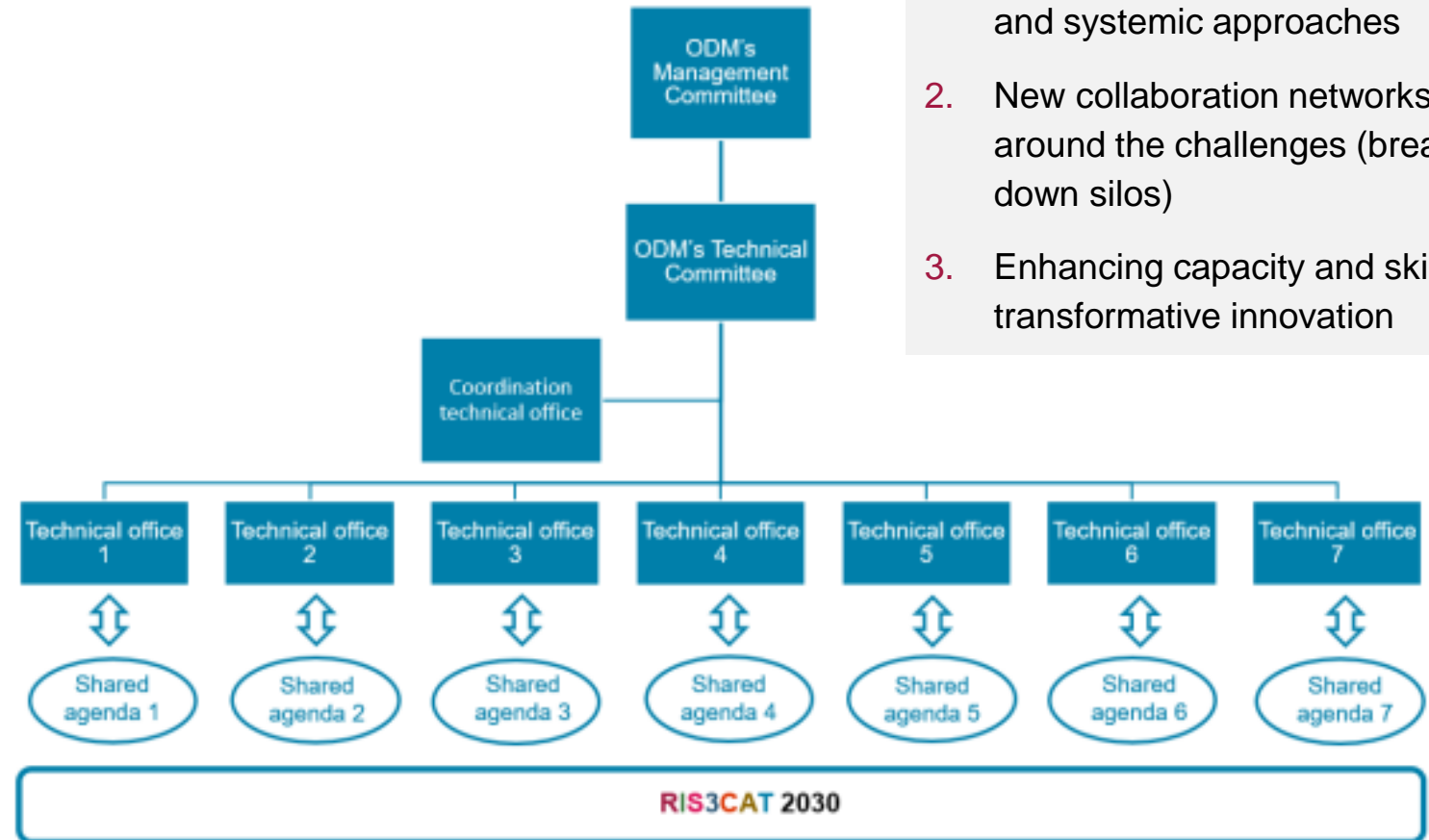


BIOHUB CAT Policy Instruments
Development of public policies and instruments to support the bioeconomy

BIOHUB CAT Awareness: awareness, communication and dissemination

The Opportunities Discovery Mechanism supporting Shared Agendas (Government)

- Coordinated by the Secretariat for Economic Affairs and European Funds
- Dedicated staff (with ERDF) integrated in different regional Ministries working together to address local and regional challenges and support shared agendas
- Stable support from experts in transformative innovation policy, systems thinking, data scientists...



3 keys:

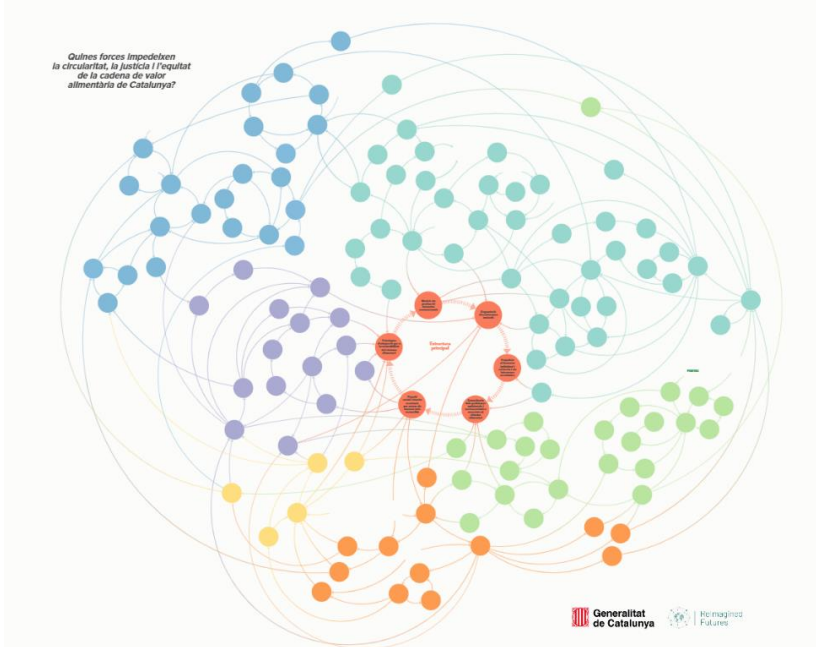
1. Focus on challenges at local and regional level: challenge-driven and systemic approaches
2. New collaboration networks around the challenges (breaking down silos)
3. Enhancing capacity and skills for transformative innovation

Transformative social innovation labs supporting Shared Agendas

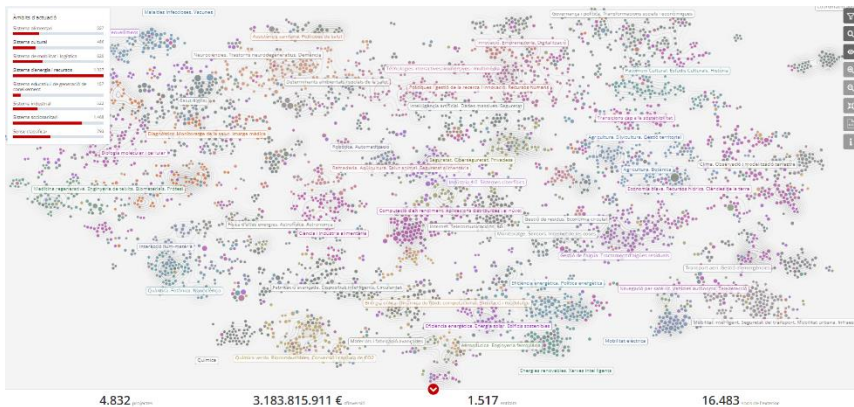
- **Goal:** to support Shared Agendas promoted by local and regional actors to address challenges related to SDGs through transformative innovation
- **Who promotes them?** Universities and research centers with the support from ERDF
- **How?** Supporting the transformation of socio-technical systems to address local and regional challenges: building new collaboration networks for innovation, supporting new business models, implementing technological and social experimentation to develop alternatives, engaging society in innovation processes, supporting policy design (collaborating with the Opportunities Discovery Mechanism)
- **What are their main characteristics?**
 - Offer a safe, neutral, and facilitating environment in which the local actors can co-create and experiment with alternatives;
 - Cultivate a systemic vision of the territory's challenges and promote transformative action oriented towards sustainability;
 - Promote the participation and inclusion of all relevant actors in the processes;
 - Develop methodologies of experimentation that combine research and action;
 - Maintain a flexible and adaptable approach to the needs of the actors of the area;
 - Focus on transformative outcomes and systemic change.

Opportunities discovery processes and monitoring supporting Shared Agendas

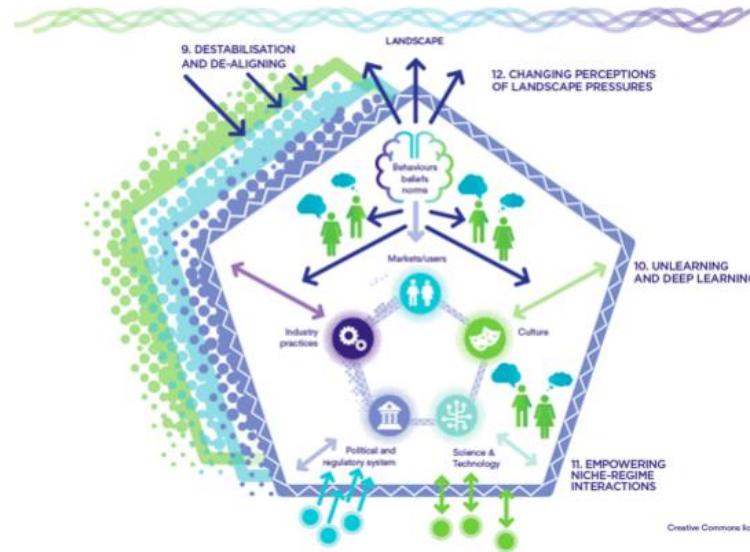
Experimenting with system's mapping



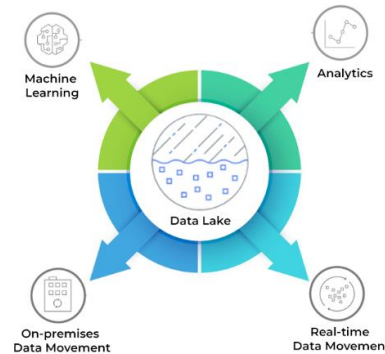
Exploring open data, semantic techniques and visualisation tools



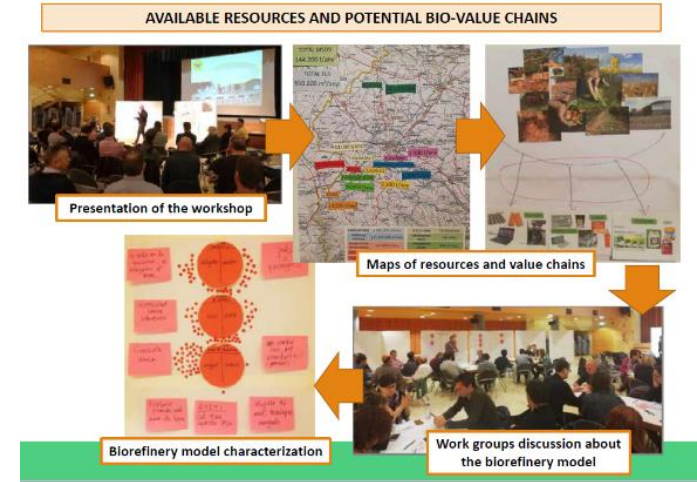
Working with MEL frameworks and transformative outcomes (TIPC)



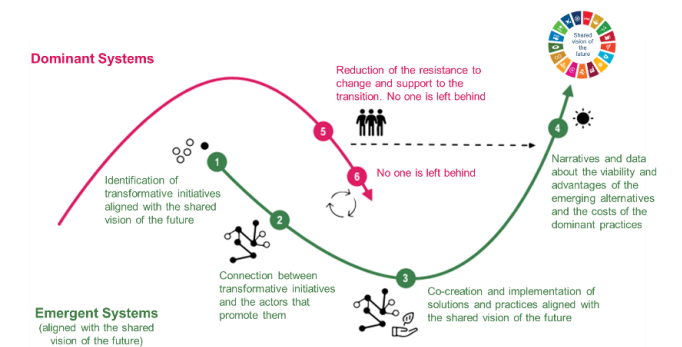
Exploring the possibilities of data lakes (through innovation public procurement)



Engaging stakeholders in understanding and addressing local challenges



Developing frameworks and methodologies for collective transformative action





Generalitat de Catalunya



Unió Europea

<https://fonseuropeus.gencat.cat/ca/ris3cat/2030/>