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Parallel session 6 : Improving Regional Research and Innovation Systems



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Improving Regional Research and Innovation Systems

- **Alasdair Reid**, Policy Director, EFIS Centre
- **Katalin Kovacs**, Senior Consultant, Innomine, Hungary
- **Eva Damm**, Policy Officer Research and Science, Culture and Tourism at Free State of Saxony, Germany
- **Magdalena Cymerys**, Policy Officer, DG RTD

***Moderator** : Alasdair Reid, Policy Director, EFIS Centre*

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Alasdair Reid



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Session 6 - Improving regional research and innovation systems

- A functioning innovation system, whereby stakeholders involved in innovation have the mechanisms and infrastructure to foster knowledge creation, distribution, and diffusion, is the backbone of Smart Specialisation.
- Through S3, regional partnerships should devise a set of “actions necessary to improve national or regional research and innovation systems” taking into account the stage of development of the regional innovation system.
- This session will focus on relevant examples of instruments and actions, as well as the policy mix evolution in the context of the New European Innovation Agenda.
- The regional presentations zoom in on the specificities as well as challenges and opportunities of specific instruments, as well as hurdles in regional R&I systems in the face of societal challenges, especially regarding adaptability, resilience, etc.

The only way is up ?

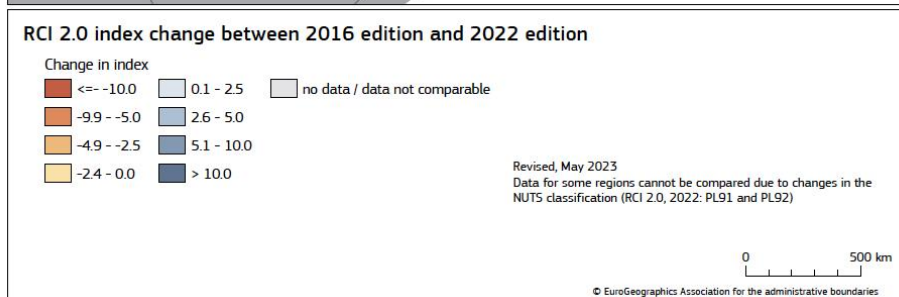
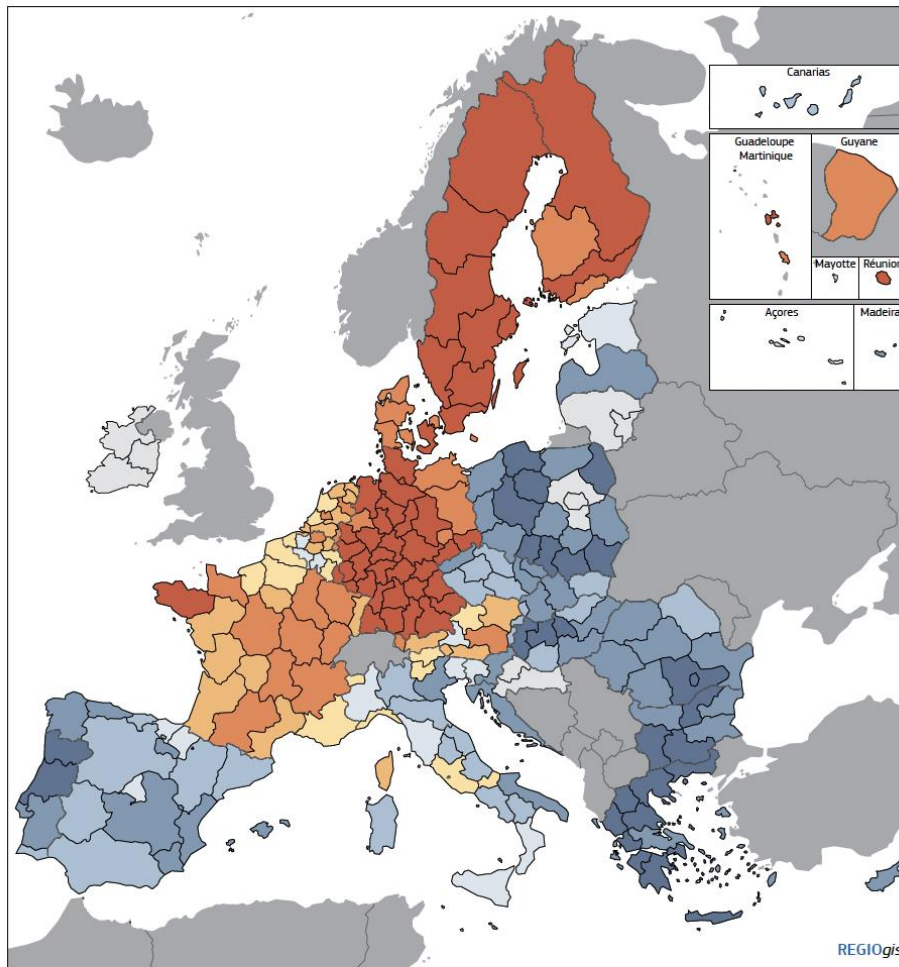
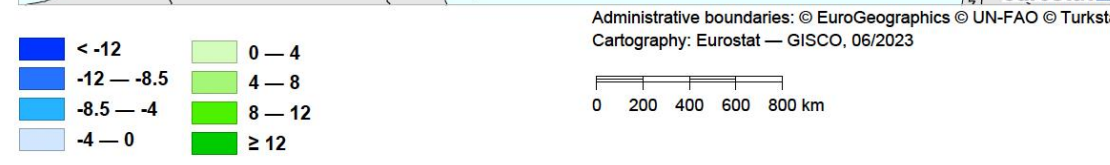
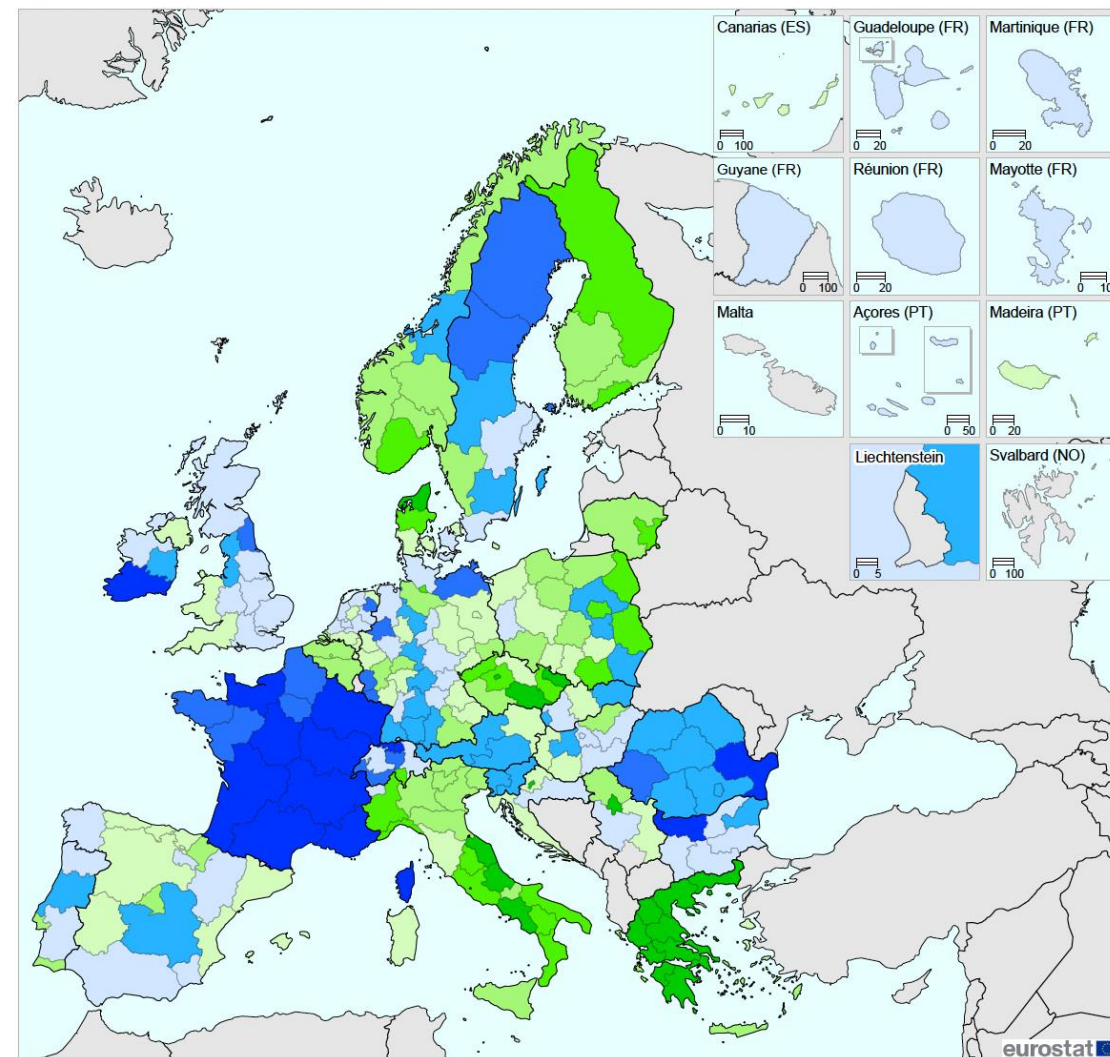


Figure 2: Innovation performance change 2016-2023



Uneven distribution of performance change

Table 8: Performance change over time by regional performance group

	All regions	Innovation Leaders	Strong Innovators	Moderate Innovators	Emerging Innovators
Performance increase	211 (88%)	32 (89%)	61 (87%)	58 (84%)	60 (94%)
Performance decrease	28 (12%)	4 (11%)	9 (13%)	11 (16%)	4 (6%)
	239	36	70	69	64

Overall performance is improving for almost 90% of regions

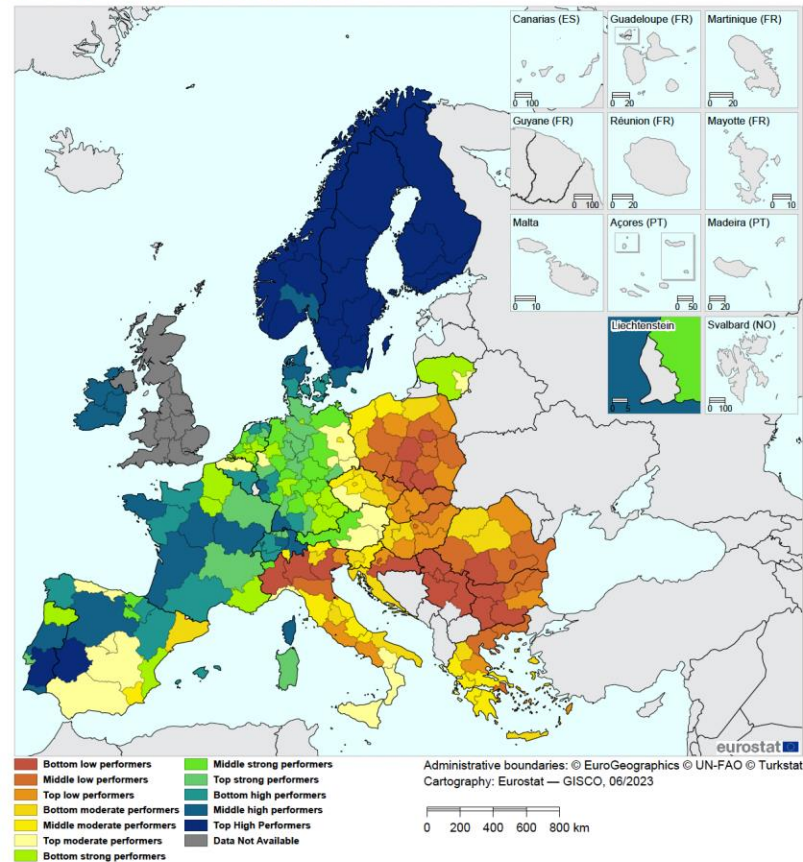
Table 9: Performance change over time relative to EU by regional performance group

	All regions	Innovation Leaders	Strong Innovators	Moderate Innovators	Emerging Innovators
Performance increase relative to EU	126 (53%)	17 (47%)	33 (47%)	43 (62%)	33 (52%)
Performance decrease relative to EU	113 (47%)	19 (53%)	37 (53%)	26 (38%)	31 (48%)
	239	36	70	69	64

But half the emerging innovator regions are falling behind EU average

Improving regional R&I systems for what ? Direction sustainability and well-being

Air emissions in fine particulates (PM2.5) in Industry



Ecological ceiling:
ecological and ecosystem services SDGs

Operating space:
economic and infrastructure SDGs

Social foundation:
economic and social SDGs



Sustainability agenda broadens the scope of smart specialisation

Smart specialisation	Traditional orientation	Broader scope
End	competitive economic advantage	sustainability goals
Means	a differentiated technical capability	a transformed sociotechnical system
Dynamics	sectoral change	a multilevel and multi-actor transition
Process	strategic focus combined with actor initiatives	directionality combined with experimentation
Context	place based	reflecting both local and global considerations

Implications for innovation policy design

- Sustainability goals and system focus require new **policy framings**
- Multi-actor and multi-level processes need enhanced **capabilities** and enriched **policy mix**
- Innovative **policy design & implementation** to address:
 - **Directionality** - more systemic, explicit, normative and globally relevant (Sustainable Development Goals)
 - **Diversity** - much wider in scope in the variety of innovators (from business to citizens) and the range of innovation (social and technical)
 - **Capabilities** – new competences for top-down/bottom-up interaction are essential
 - **Dynamics** - requires a broader policy mix and the navigation of more transformative change
 - **Place** – regional and local remain a key focus with extra attention to multilevel processes

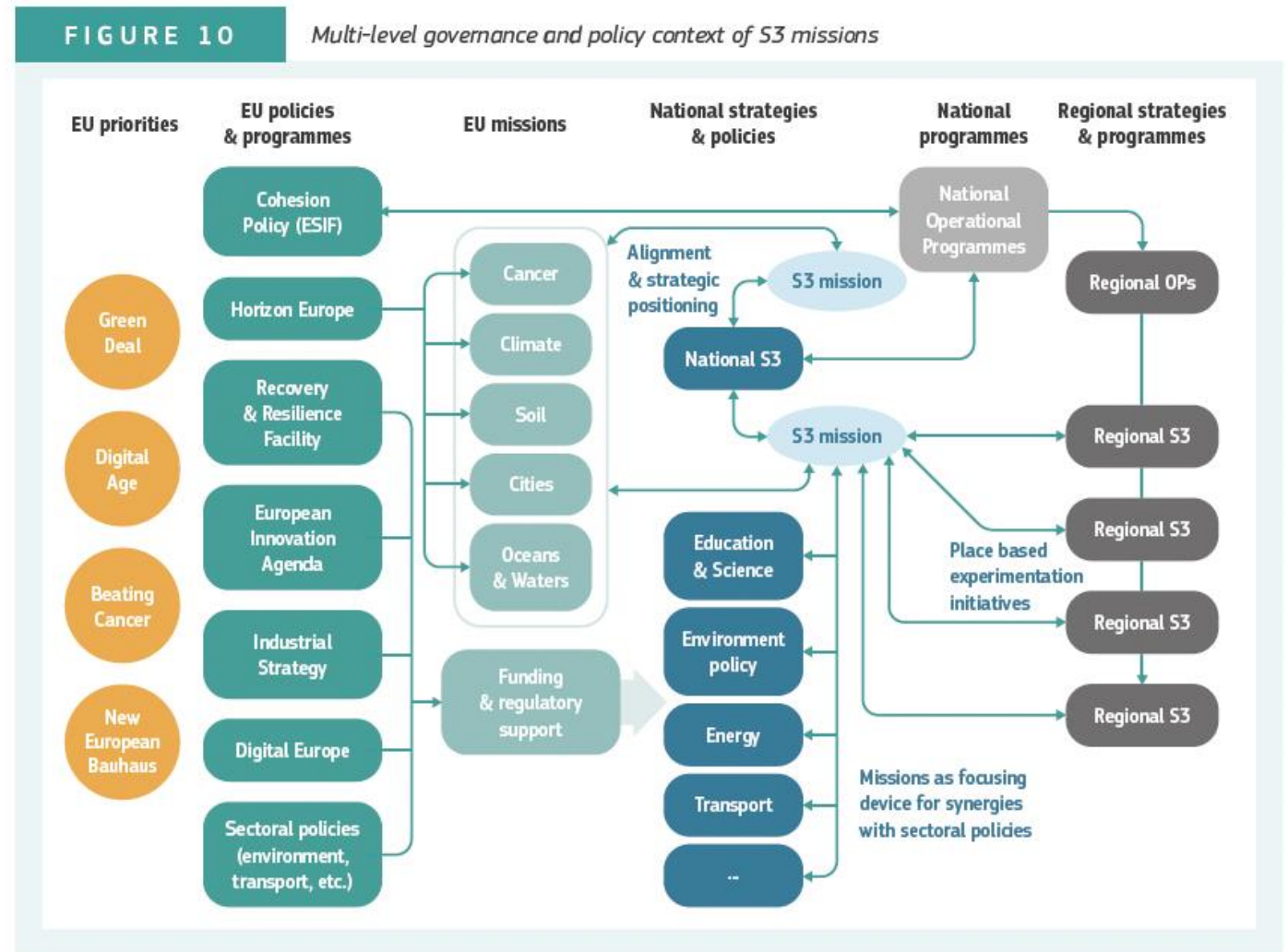
System framing of challenges and missions

- Missions or challenges address a societal sustainability outcome
- Innovation actions need to be situated in a specific sociotechnical system with a clear 'end-use'
- Such system framing facilitates a wider inclusion of different types of innovation and actors
- Ensuring the diversity of innovation actors needs a mission framing which is not just technological specialisation or an industrial sector.
- The systems identified need to be used more explicitly as a policy tool to enable effective concertation of different actors
- This entails an innovation portfolio approach at a system level not just from the view of an individual (e.g. funding) organisation.

Adopting a mission led approach to S3

A S3 mission has three broad functions:

- Alignment of national S3 priorities and regional S3 partnerships to ensure a strategic positioning in EU missions.
- As a ‘focusing device’ (increasing synergies) between national R&I (S3) priorities and policies and other policies (environment, energy, industry, etc.)
- As a means of guiding and scaling regional level policy experiments and initiatives that contribute to the national (and potential EU) mission priorities.





JRC SCIENCE FOR POLICY REPORT

Aligning smart specialisation with transformative innovation policy

Lessons for implementing challenge-led missions in smart specialisation



Joint Research Centre

2023
EUR 31622 EN

Thank you !

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S3 Strategy focus: How Hungary is strengthening
its R&I ecosystem?

Katalin Kovács, Ph.D.



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National Economic Priorities

Hungary: moderate innovator



Structure of priorities

- Socio-economic development differences between counties
- Different RDI performance in different regions
- National level priorities with a national scope
- Addresses territorial level to plan the distribution of resources between specialisations

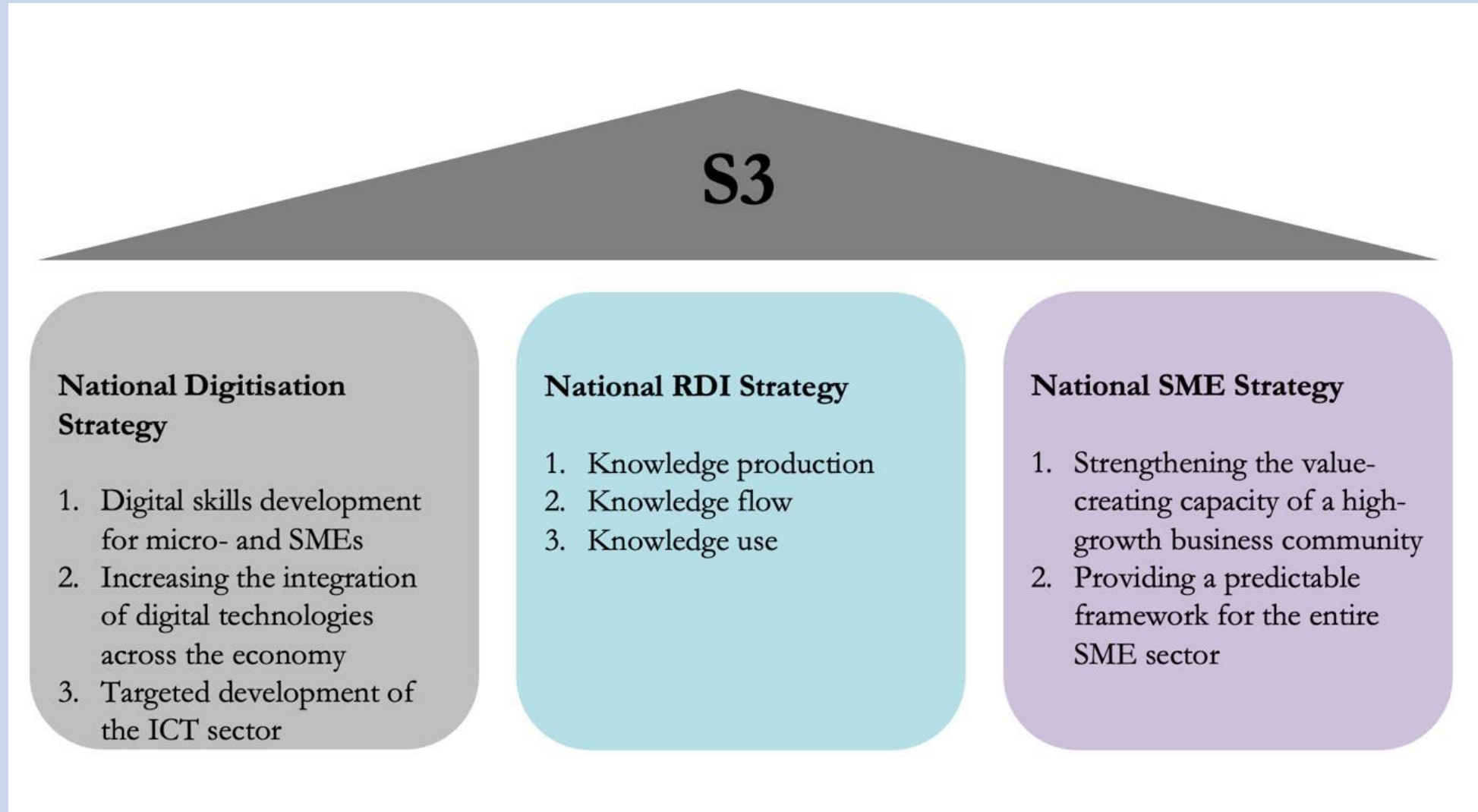
Regional differentiation:

- Knowledge regions
- Industrial production zones
- Moderate knowledge and technology intensive areas

Territorial Innovation Platforms (TIPs) in Hungary established in the first phase of the EDP (November 2019 - February 2020)



Framework for S3 and sectoral strategies



(NRDI Office own editing) – S3 Strategy)

Factors hindering the strengthening of the RDI ecosystem

- Research-enterprise cooperation in Hungary remains below the EU average
- Poor knowledge flow in the innovation ecosystem
- Challenges of training and availability of the RDI workforce
- Low RDI performance of companies, esp. SMEs
- Focus: to strengthen the SMEs
- Digitalisation level of SMEs is of low level, needs more focus

In sum

- The Hungarian S3 strategy does not have regional aspects
- There are no regulations prioritised, and also not targeted by specific measures on regional level

National initiatives

- GINOP Plusz-1.2.3-21, Supporting the development of micro, small and medium-sized enterprises, in order to support them to meet modern business and production challenges, especially in less developed regions”.
- A relevant initiative is the [Neumann program](#)



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Strengthening the Saxon R&I System
Smart Specialisation (S3) Forum 2023 |
28 November 2023 – Barcelona

Eva Damm | Policy Officer Science and Research, Culture and Tourism
| Representation of the Free State of Saxony to the European Union



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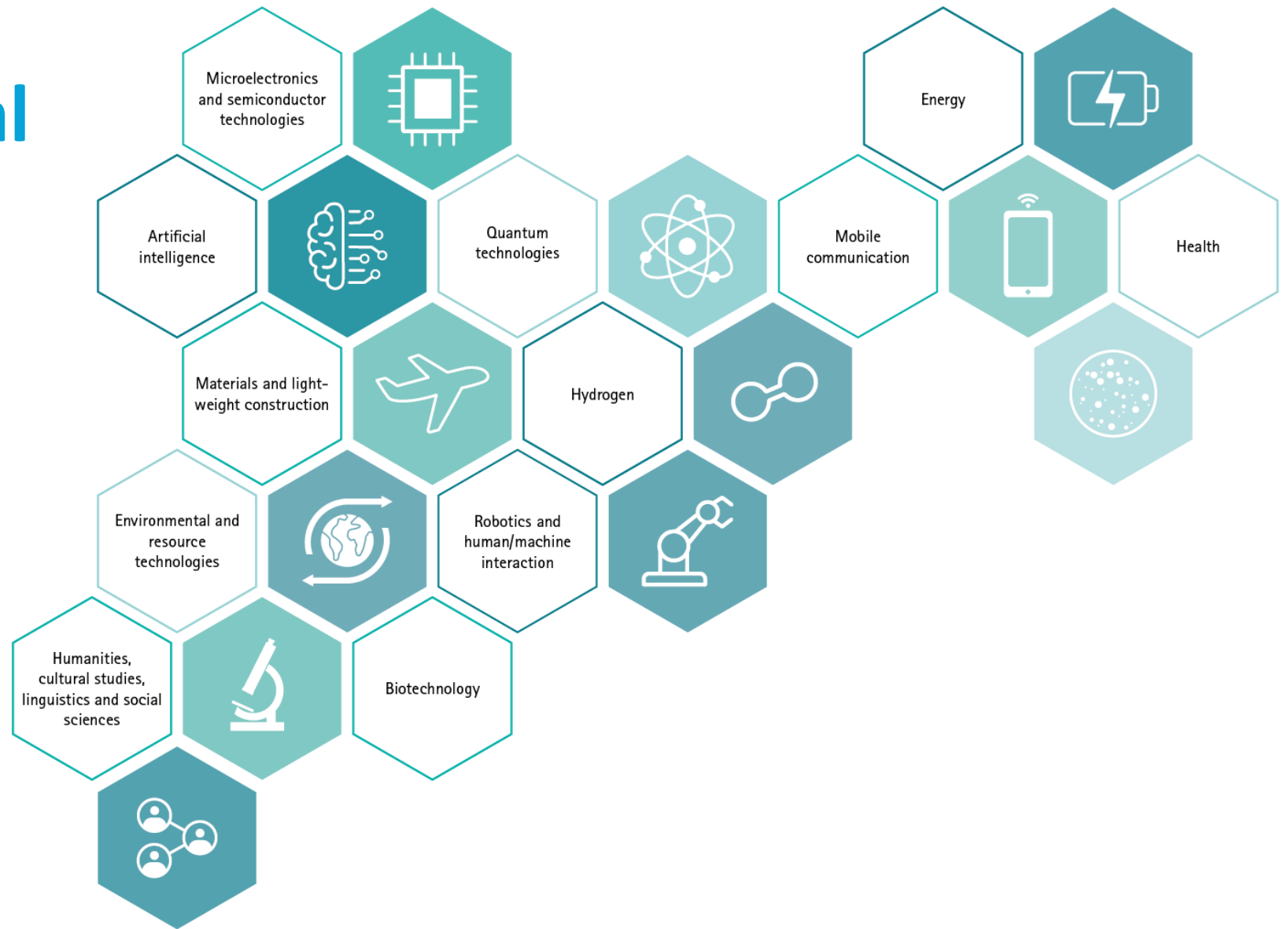
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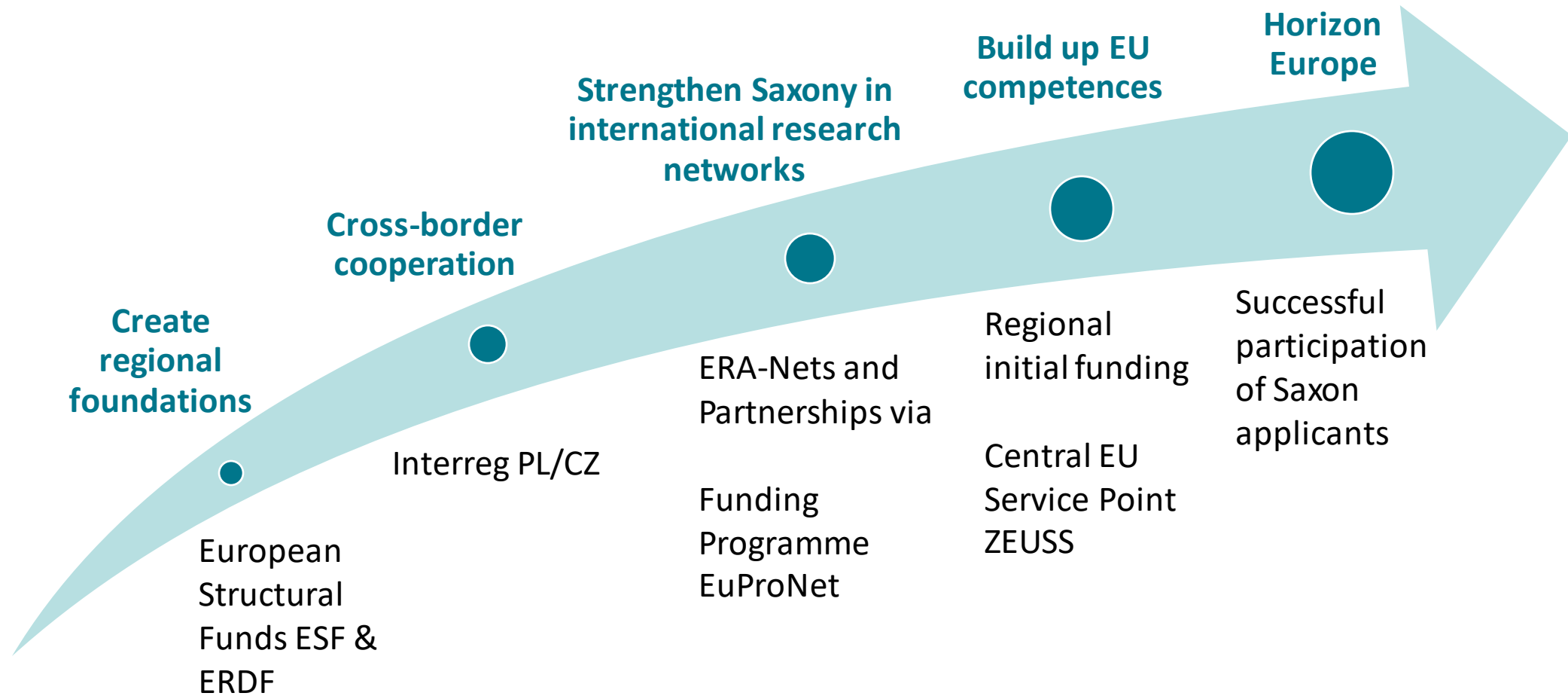
Saxony's Research System is well established...



Topics of special strategic importance for Saxony

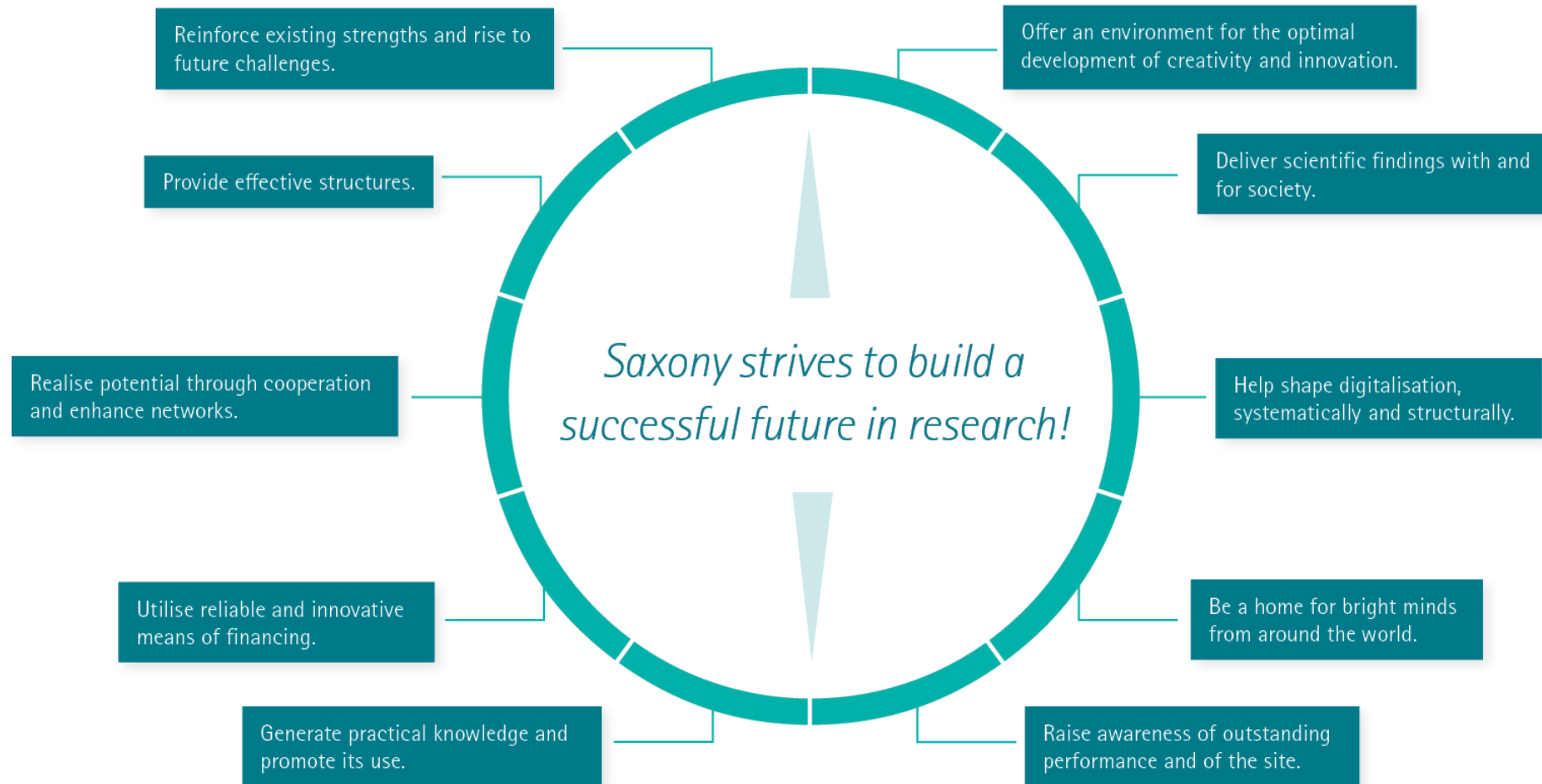


From the regional foundations to Horizon Europe

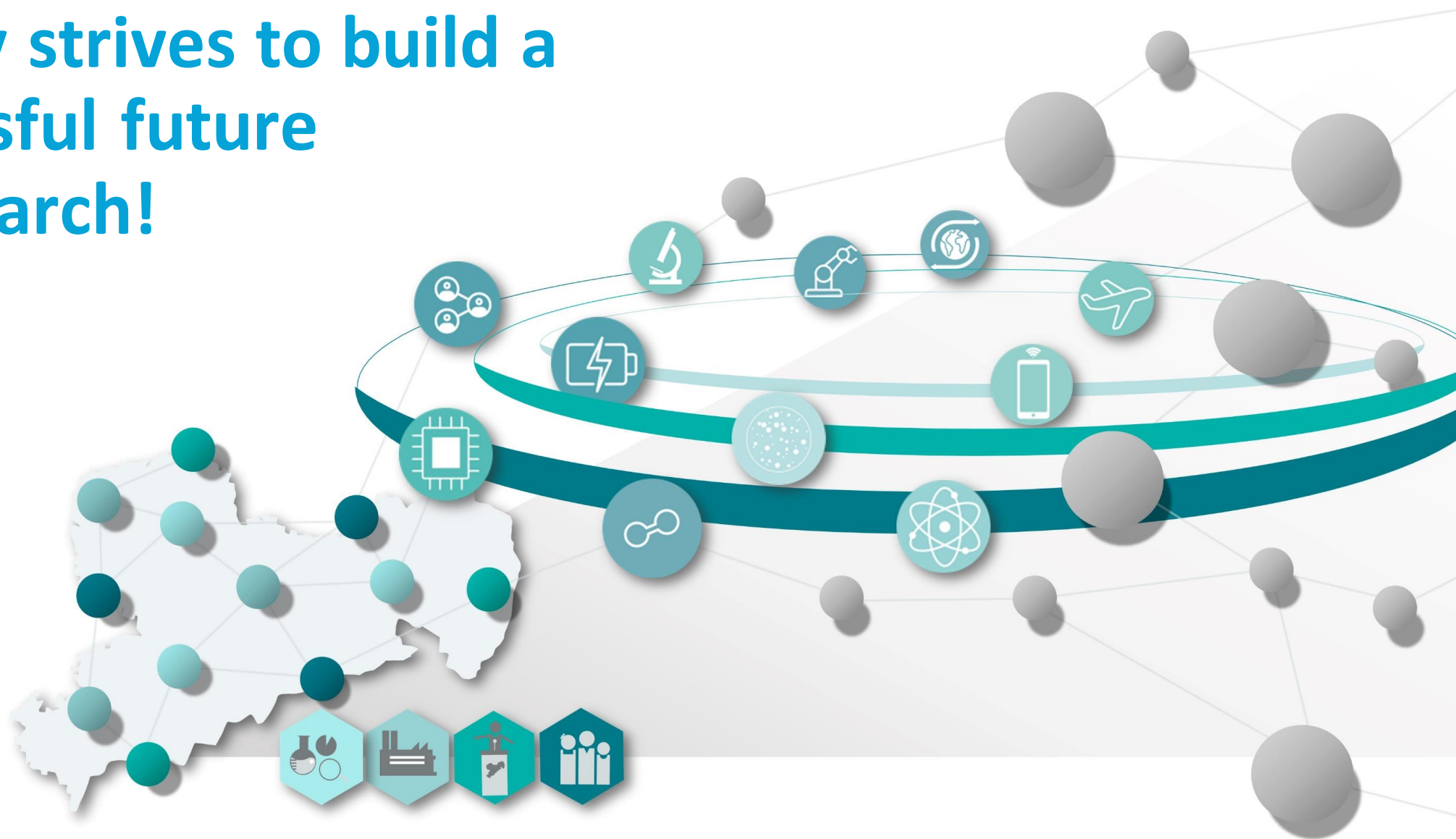


Strong commitment to European research partnerships and hubs





Saxony strives to build a successful future in research!





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Regional Innovation Valleys

MAGDALENA CYMERYS

Policy Officer, DG Research and Innovation

Innovation, Policy and Access to Finance



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New European Innovation Agenda: 5 flagships, 25 actions

Funding for deep tech scale-ups



Enabling deep tech innovation through **experimentation spaces** and **public procurement**



Improving policy making tools

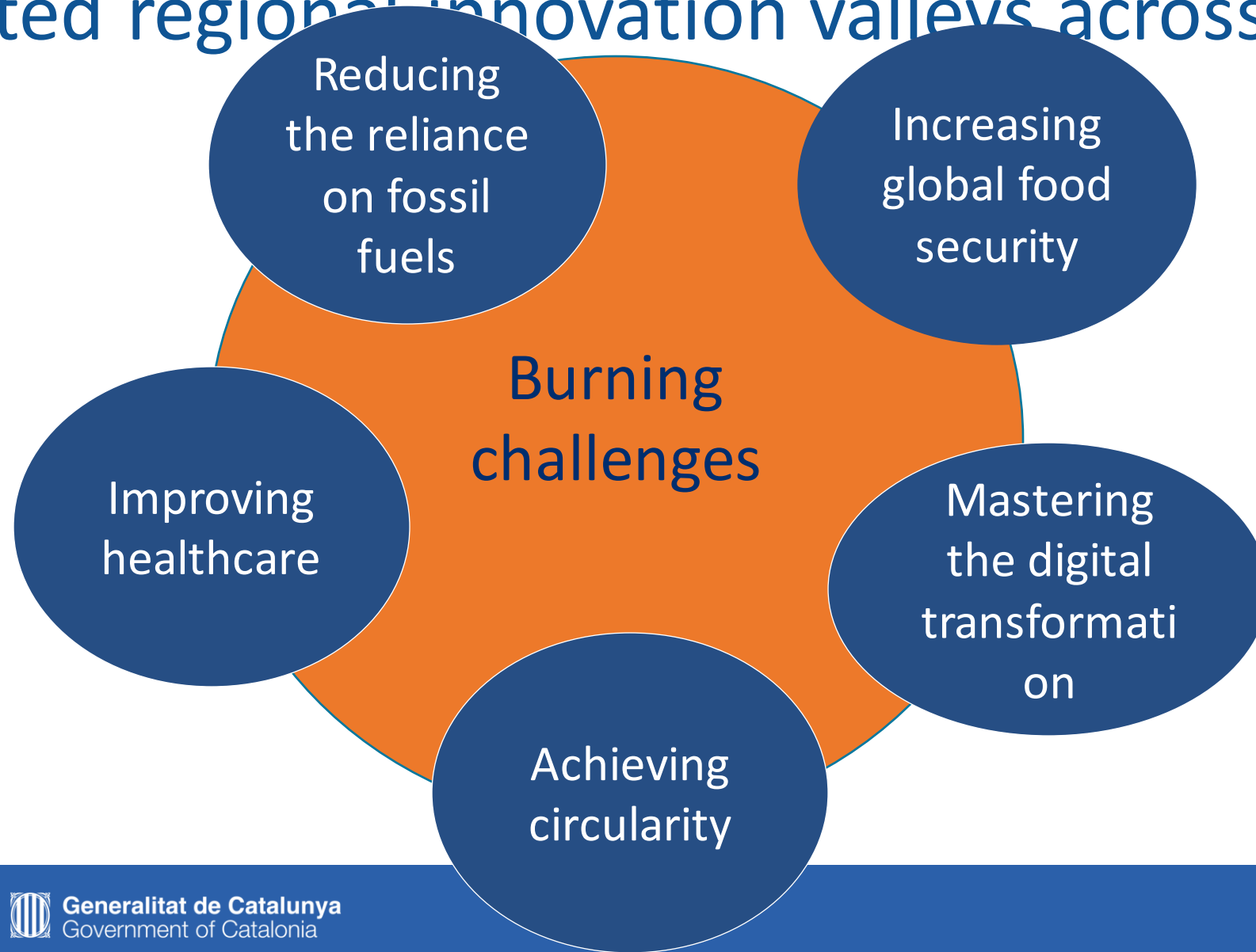


Accelerating and strengthening innovation in **European Innovation Ecosystems** and addressing the innovation divide



Fostering, attracting and retaining **deep tech talent**

New European Innovation Agenda: Fostering connected regional innovation valleys across the EU



Question

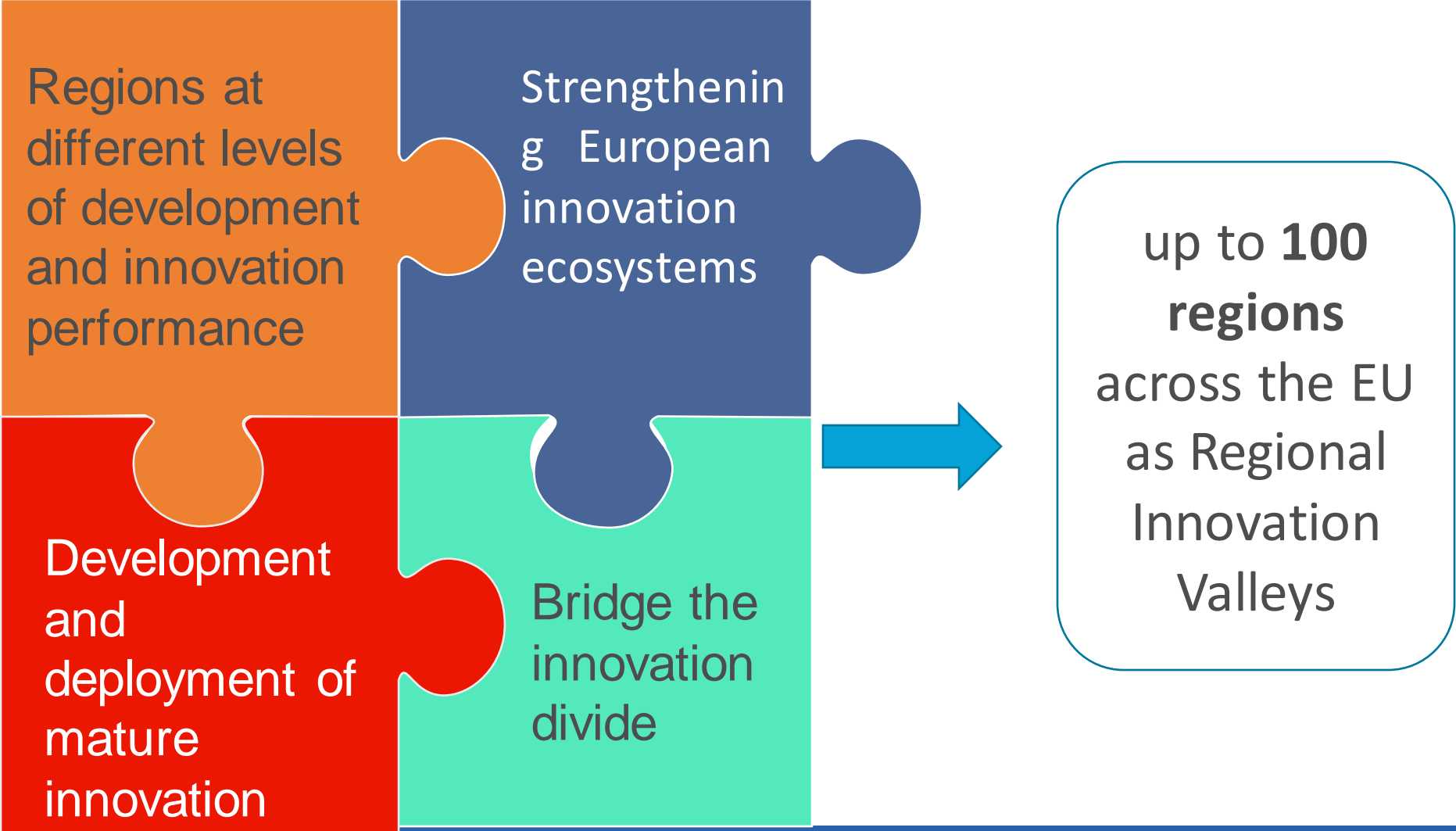
Which are the burning challenges you are trying to solve?

- Reducing the reliance on fossil fuels
- Improving healthcare
- Increasing global food security
- Mastering the digital transformation
- Achieving circularity

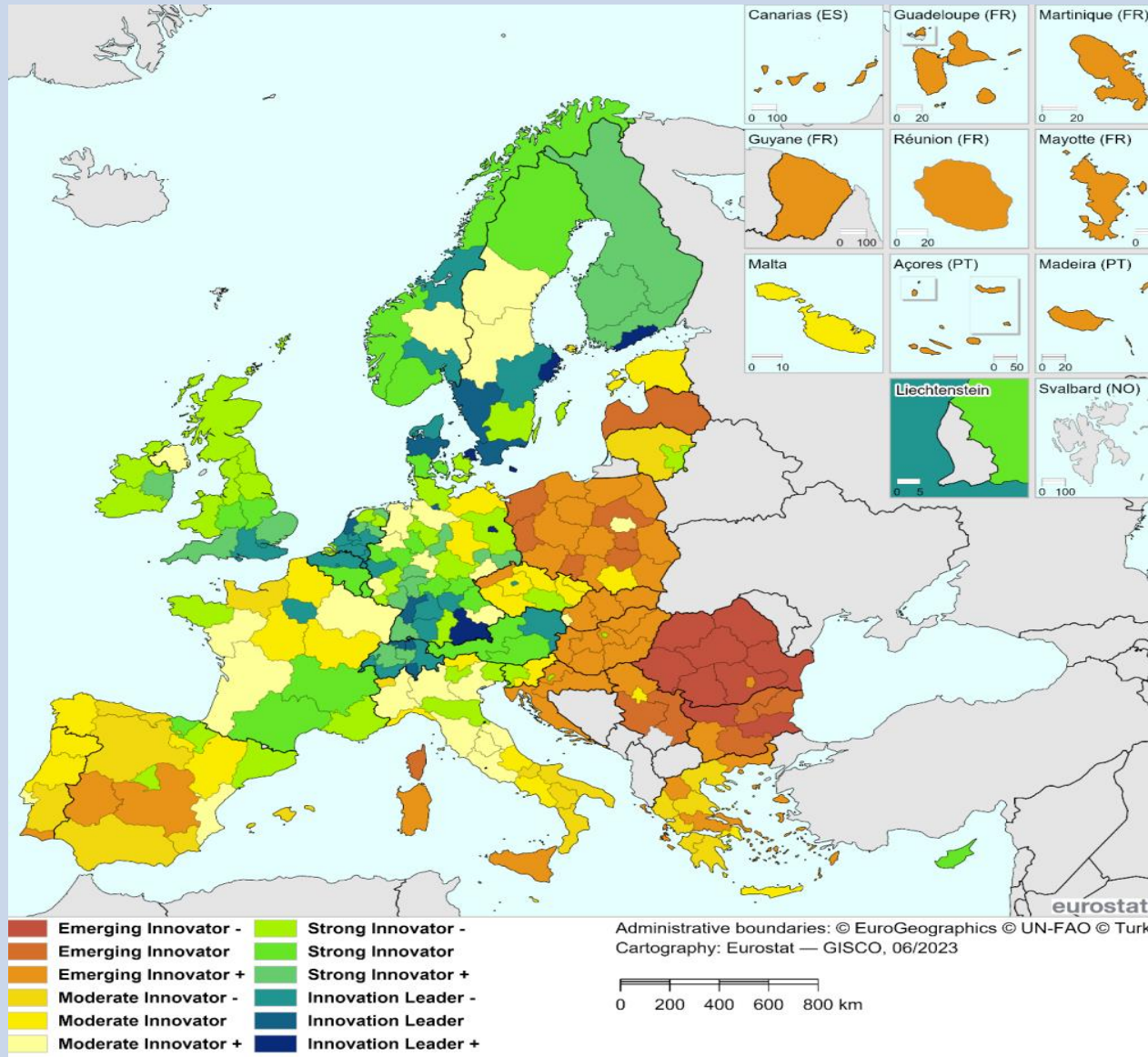
Regional Innovation Valleys: key definitions

Regional Innovation Valley	<ul style="list-style-type: none">➤ Enhance the coordination and directionality of the region's R&I investment and policies, at regional level in support of key EU priorities➤ Engage, building on shared or complementary smart specialisation areas in interregional collaboration to develop innovation, including deeptech, and help increase innovation cohesion➤ Strengthen and connect their regional innovation ecosystems
Deep tech innovation	<ul style="list-style-type: none">➤ concrete solutions to our societal problems by finding its source in a deep interaction with the most recent scientific and technological advances and by seeking to produce a profound impact in the targeted application areas.
Innovation action	<p>An action primarily consisting of activities directly aiming to produce plans and arrangements or designs for new, altered or improved products, processes or services, possibly including prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.</p>

Regional Innovation Valleys framework



Differences in Research and Innovation capacity



Source: Regional Innovation Scoreboard 2023

New European Innovation Agenda – Flagship 3

Cohesion and R&I policy tackle the innovation divide

Build on Smart Specialisation Strategies

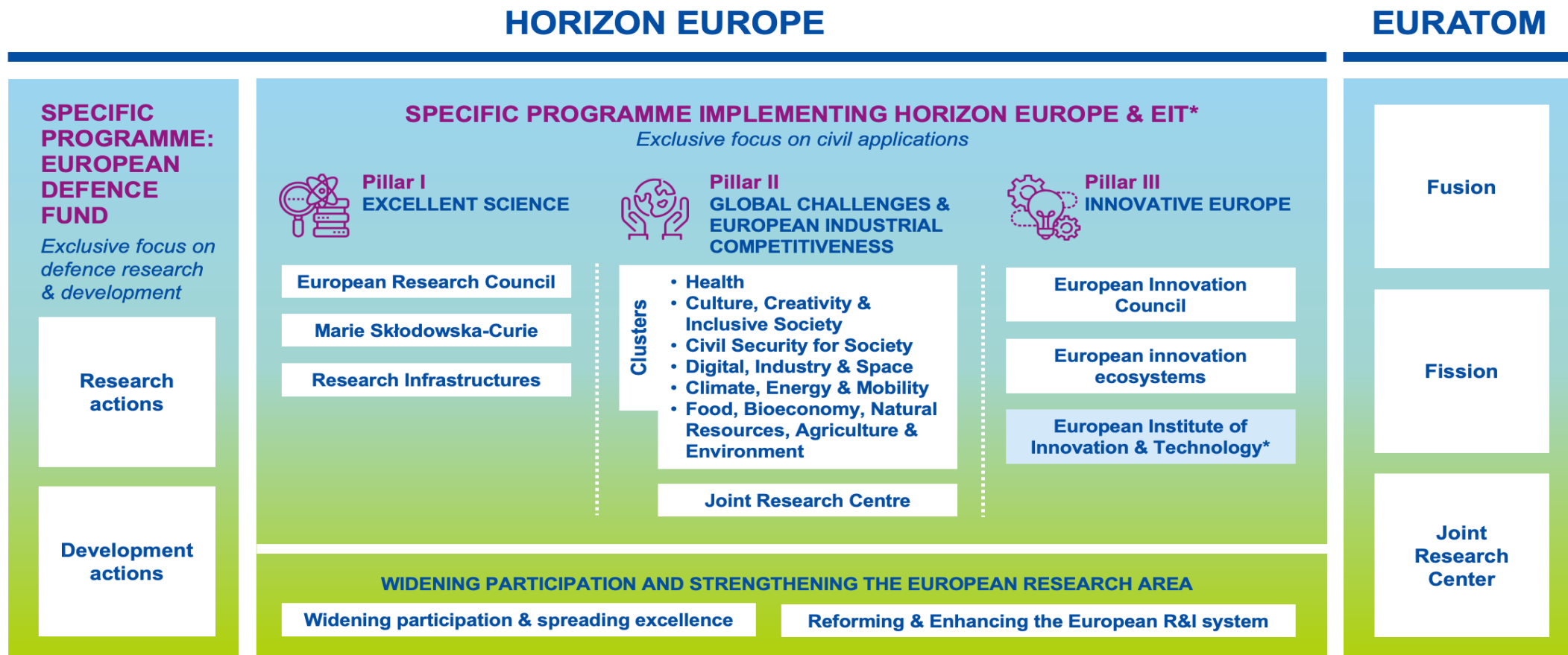
Fostering connected regional innovation valleys across the EU

Enhance the directionality of regional R&I investment and policies

I3

EIE

European Innovation Ecosystems in Horizon Europe



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Interconnected Innovation Ecosystems HORIZON-EIE-2023/2024

- CONNECT-01-01: Organisation of the **Women TechEU Scheme**
- CONNECT-01-02: **Preparatory action** for setting up joint programmes among innovation ecosystems actors
- CONNECT-02-01: Stimulating **Experimentation Practices**
- CONNECT-02-02: Specialist Advisory Services to build capacities on **innovation procurement**
- CONNECT-03-01: Implementing co-funded action plans for connected **regional innovation valleys**
- HORIZON-EIE-2024-CONNECT-01-01: The **African Union-European Union Innovation Platform**
- HORIZON-EIE-2024-CONNECT-01-02: **Startup Europe**
- HORIZON-EIE-2024-CONNECT-02-01: Expanding **Academia-Enterprise Collaborations**
- HORIZON-EIE-2024-CONNECT-02-02: Mutual learning and support scheme for national and **regional innovation** programmes

Co-fund regional innovation valleys

Coordination & Support Part

Create Interconnected Ecosystems



Innovation Action 3-4 Interregional Innovation projects in specific area(s)

- **Market uptake of research**
- Support companies in scaling up their ideas, **deploying and demonstrating deep technologies** in real world environments and with end users
- Access to **cross border infrastructure and expertise**
- **Exchange of staff, training and skills development**
- Developing standards and regulations **through sandboxes and test beds**

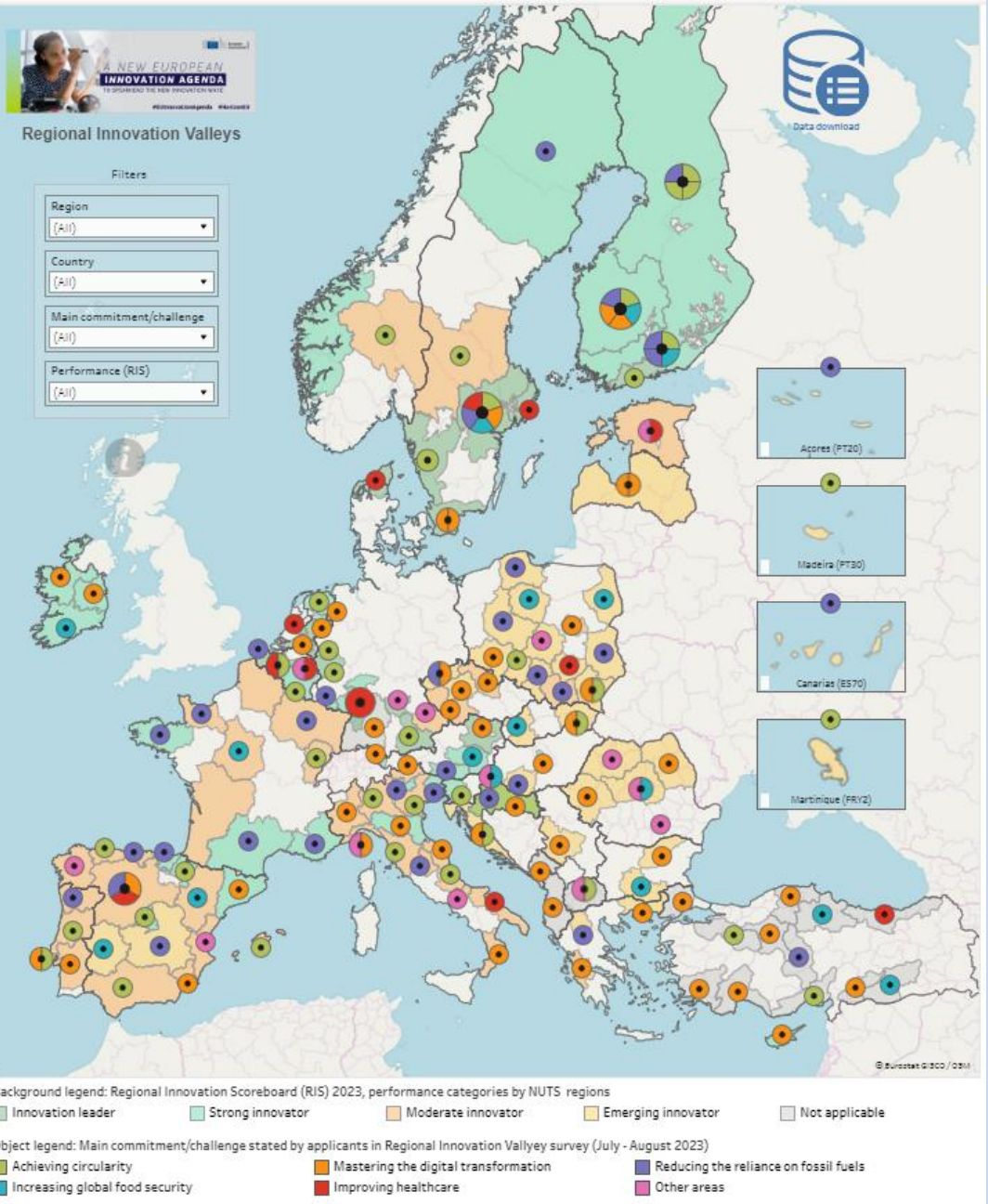
- **Reduce reliance on fossil fuels**
- **Increase global food security**
- **Master the digital transformation (including cybersecurity)**
- **Improve healthcare**
- **Achieve circularity**



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Thank you! Any questions?
[New European Innovation Agenda roadmap \(europa.eu\)](https://europea.eu)
[Interregional Innovation Investments \(I3\) Instrument](#)
[European Innovation Ecosystems \(europa.eu\)](https://europea.eu)
[Regional Innovation Valleys Online Info Session](#)
[Matchmaking Event for the territories interested to become Regional Innovation Valleys \(RIVs\)](#)
[Inforegio - S3 Community of Practice](#)

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