REGIONAL MISSIONS

Interreg Europe

European Union | European Regional Development Fund

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Summary

This policy brief proposes a way for regions to pursue regional missions by implementing mini missions. Mini missions follow a challenge-driven approach to focus on specific predefined place-based challenges, seeking solutions within a shorter timeframe. By initiating mini missions, regional policymakers can embrace mission-driven approaches with enhanced leadership, agile institutional and governance capacities for breaking silos, delivering strong coordination, and securing funding complementarities. **Overall they can achieve large-scale system-level changes by setting visions and guiding innovation in a specific direction.** Many Interreg Europe projects have already begun experimenting with local and regional challenge-driven innovation policies offering many insights for regional policy learning. This policy brief features five policy recommendations deriving from the experience of Interreg Europe projects to inspire policymakers to better design and deliver challenge-driven innovation policies.

1. Introduction

Piret Tõnurist, <u>Observatory of Public Sector Innovation</u>, OECD.

Increasingly complex and interconnected socio-technical challenges, such as climate change mitigation and health equity, demand ambitious and holistic policy responses at all levels of government. Within the context of the **<u>OECD Mission Action Lab</u>**, a cross-directorate initiative supporting the implementation of mission-oriented policy, we encounter policymakers around the world who are eager to rise to these challenges.

Recognizing the inadequacy of traditional policy tools and approaches, they are turning to mission-oriented innovation policies – comprehensive and tailored packages of policy and regulatory measures designed to mobilize innovation for achieving specific societal objectives within defined timeframes.

These initiatives aim to transcend bureaucratic silos and mobilize broader society, to tackle systemic issues with systemic responses. Crucially, this necessitates mobilizing, synchronizing, and interlinking policies across different levels of governance.

Regional policymakers not only hold many key policy levers and responsibilities but are also in close proximity to the stakeholders and citizens who will be affected by, and can actively contribute to addressing, these challenges. For instance, in the battle against climate change, regional development plays a pivotal role in scaling and deploying climate-neutral technologies and infrastructure, as well as implementing sustainable natural resource management practices.

Transformative policy, we would argue, requires sustainable regional development, and vice versa. In fact, successful implementation of challenge-driven innovation policies holds the promise of integrating sustainable regional development practices on a broader scale, thereby building more resilient and future-proof regional economies.

However, transforming policymaking is no easy task. It requires experimentation, practical experience, and, most importantly, learning from the experiences of others. Hence, this policy brief assumes a critical role in accelerating the learning process, facilitating the exchange of best practices, and sharing expertise within and across regions**.**

1.1. The rise of transformative innovation policies and missions

The rise of societal grand challenges requires transformative changes beyond traditional research and innovation policy. A new era of innovation policy is dawning, with scholars and policymakers advocating for a third generation of "transformative" innovation policy. Innovation policies have evolved from linear models focused on economic growth in the 1960s, to national innovation systems for competitiveness in the 1990s, to the most recent approaches oriented to transformative changes (**<u>Schot and Steinmueller</u>**). Also spearheaded by the UN Agenda 2030 and the Sustainable Development Goals (SDGs), innovation must not blindly follow a competitiveness logic but must also respond to broader regional and societal challenges and be an 'intermediate step towards the longer-term goals of fostering sustainability and inclusiveness' (**<u>McCann and Soete</u>**).

Recognising the limitations of a narrow view of system failure in innovation policy, coupled with a growing focus on challenge-oriented approaches, mission-oriented policies have gained increased prominence. Transformative innovation policy approaches focus on addressing complex, multidimensional, and systemic societal challenges that extend beyond technological innovation and sector development. Among these approaches, the concept of a **missions-oriented innovation policy** is increasingly popular to policymakers.

Box 1. Defining missions - <u>The OECD Mission Action Lab</u>

Missions are "measurable, ambitious and time-bound targets that have the potential to become one of the most significant vehicles for change. They work to tackle complex challenges such as climate change and global health challenges, by taking a purpose-oriented, market-shaping approach. The public sector takes an active role in convening and coordinating actors around complex, cross-sectoral issues that cannot be solved by individual actors alone. Achieving carbon neutrality by 2030 is an example of a mission-oriented innovation approach to formulating climate goals" (**<u>The OECD Mission Action Lab</u>**).

Mission-oriented innovation policy is defined as "a coordinated package of policy and regulatory measures tailored specifically to mobilise science, technology, and innovation to address well-defined objectives related to a societal challenge, in a defined timeframe. These measures possibly span different stages of the innovation cycle from research to demonstration and market deployment, mix supply-push and demand-pull instruments, and cut across various policy fields, sectors and disciplines" (**<u>OECD</u>**). This definition can be broken down in three main dimensions: strategic orientation, policy coordination and policy implementation (**<u>OECD</u>**).

1.2. The "wicked" nature of societal problems and the selection of missions

The selection of pressing societal challenges is a complex process involving multiple actors. Missions are challenge-driven as they focus on problems, not sectors or companies. The mission-oriented approach to industrial policy provides direction for growth, spurs activity, and aligns the playing field with societal goals, without excessive state planning based solely on market competitiveness (**<u>Mazzucato et al.</u>**). Missions provide **directionality** through clear and well-informed orientations and strategic guidance (**<u>OECD</u>**). According to **<u>Mazzucato</u>**, there are five criteria for selecting missions, they should:

- Be bold, inspirational, with wide societal relevance;
- Have a clear direction: targeted, measurable, and time-bound;
- Be ambitious but realistic research and innovation actions;
- Be cross-disciplinary, cross-sectoral, and cross-actor innovation;
- Drive multiple, bottom-up solutions.

Societal challenge-led missions are more complex and unstructured compared to traditional technology-led missions. These missions target important societal problems and future needs, requiring the development of technological and institutional solutions. Societal challenges are often open-ended and "**wicked**," making it difficult to formulate clear missions with specific targets. The "**wicked**" nature of societal problems—related to (1) contestation, (2) complexity, and (3) uncertainty—poses new challenges for innovation policymakers, as solutions cannot be predetermined (**<u>Wanzenböck et al.</u>**). Contestation refers to normativity and conflicts resulting from divergent claims and values. Complexity arises from the multi-dimensional nature of societal problems and challenges in determining responsibilities. Uncertainty stems from limited knowledge and fragmented evidence regarding risks, consequences, and the effects of inaction (**<u>Wanzenböck et al.</u>**). As a result, the selection of problems and solutions can be both divergent (contested, complex, and uncertain) or convergent (uncontested, well-defined, and informed).

> **Box 2. Five missions for the European Union (EU)**
>
> **The European Union (EU) is embarking on five missions guiding Horizon Europe**, the next EU research and innovation programme for 2021-2027. The following five missions and targets by 2030 support Commission priorities to tackle our greatest societal challenges.
> 1. **Adaptation to Climate Change:** support at least 150 European regions and communities to become climate resilient
> 2. **Cancer:** working with Europe's Beating Cancer Plan to improve the lives of more than 3 million people through prevention, cure and solutions to live longer and better
> 3. **Restore our Ocean and Waters**
> 4. **100 Climate-Neutral and Smart Cities**
> 5. **A Soil Deal for Europe:** 100 living labs and lighthouses to lead the transition towards healthy soils
>
> Each mission will operate as a portfolio of actions—such as research projects, policy measures or even legislative initiatives—to achieve a measurable goal that could not be achieved through individual actions.

1.3. The main dimensions of missions

The mission-oriented approach has three main dimensions: **strategic orientation, policy coordination and policy implementation** (see figure 1). It implies directionality through selecting specific societal challenges, legitimacy with a shared agenda to address them, a holistic policy coordination across policy silos, and an integrated implementation and policy-mix (**OECD**).
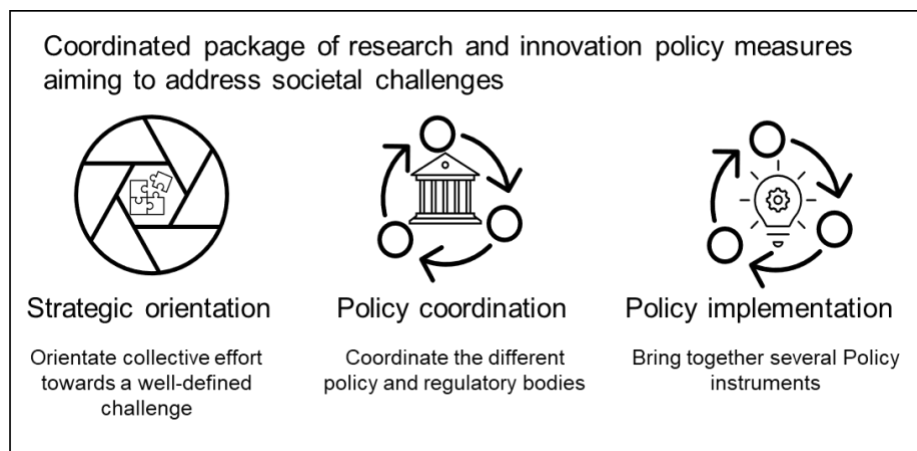

Figure 1. Three main dimensions of missions. Source: the authors from the **OECD**.

The mission-driven approach requires directionality and legitimacy. Directionality, which is often set at the supra-national or national levels, offers strategic framework policies to national and subnational decision-makers to guide them in the definition of priorities that will focus future actions (**Pontikakis et al.**). In the European Union, for instance, the European Green Deal or Horizon Europe missions illustrate such directionality that guides national and sub-national managing authorities in the definition of priorities and actions.

Legitimacy can be achieved through broad engagement and early involvement of relevant stakeholders. Commitment to shared goals and effective communication with stakeholders contribute to mission success. Strong signals and incentives convey political will and promote adaptation. Ambitious missions necessitate transformative narratives to legitimise the mission and highlight opportunities for change (**Lindner et al.**). The mission-oriented approach imposes higher demands for

legitimacy and support from various political and societal stakeholders. Unlike traditional innovation policies that mainly involve triple-helix actors, mission-oriented innovation policy requires engagement from a broader range of quadruple-helix actors.

The mission-driven approach necessitates cross-sectoral collaboration, going beyond traditional departmental boundaries. It requires integrated approaches to address societal challenges, combining research, innovation, and sector-specific measures. Overcoming departmental silos and fostering common perspectives are crucial for its success.

Policy coordination

The mission-driven approach expects the implementation of a comprehensive and well-planned strategy that uses a broad range of policy tools and funding programmes within an integrated policy mixes. The mission-driven approach requires flexibility, dynamic capabilities, reflection, and experimental learning from the different organisations implementing them. Lastly, clear objectives must be supported by adaptive evaluation and continuous monitoring and reflection on

Policy implementation

intermediate steps (**OECD**).

Box 3. From challenges to projects through missions.

Missions must establish precise objectives that can only be accomplished through a combination of projects and supportive policy interventions. For instance, addressing plastic waste in the oceans may necessitate innovation projects in various areas such as artificial intelligence, self-guidance, bio-plastic digestion, as well as the implementation of new design regulations and material standards (see Figure below, source: the authors from **Mazzucato)**.
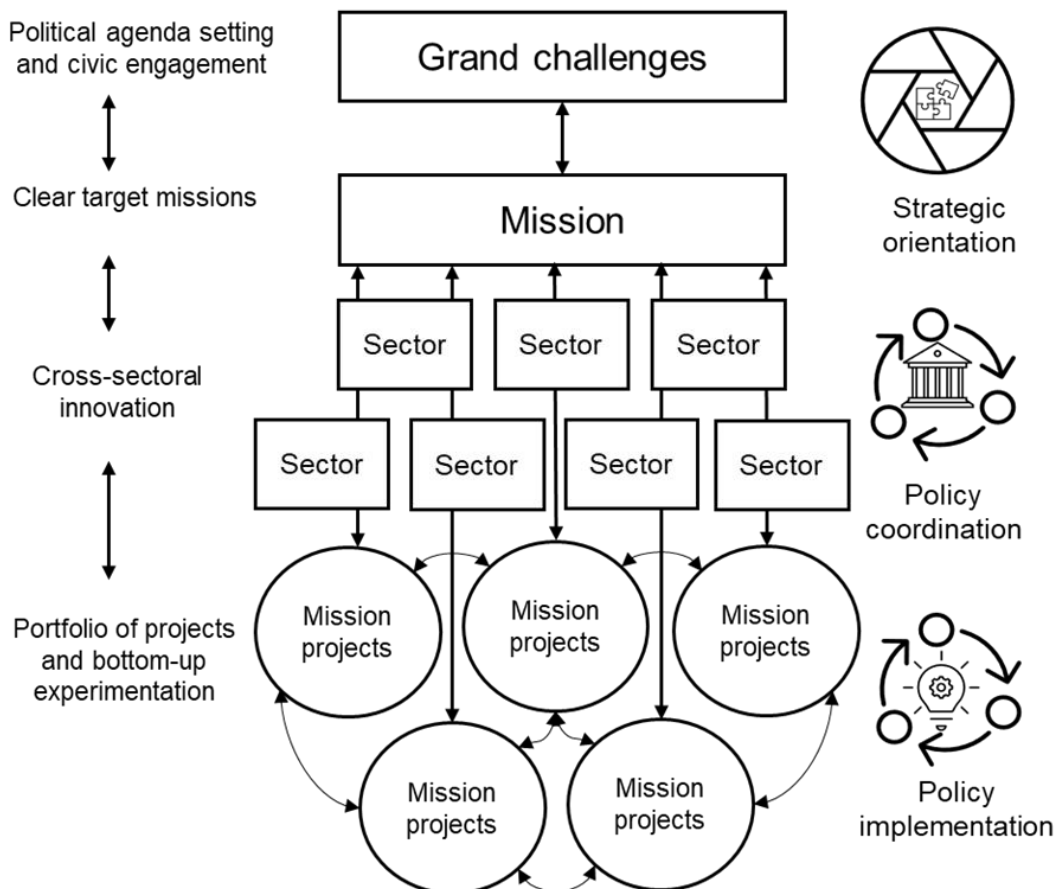
1.4. The complexity of the mission's policy concept

The mission-driven approach is a complex policy paradigm for policymakers who must develop new governance and administrative capacities to promote more systemic policymaking, to engage with legitimate, reflexive, and responsible governance arrangements, to coordinate policies across established regional policy silos, and to implement integrated policy-mixes using a range of policy and funding tools to solve complex and wicked problems. Missions not only require a capacity to learn and reflect from policy experiments in existing or new initiatives (reflexivity) but also a high-level political commitment. As a result, policymakers can face a number of transformational system failures (see Table 1)

Transformational system failure	
Directionality failure	Lack of shared vision regarding the direction of transformation process
Demand articulation failure	Insufficient spaces for learning about user needs
Policy coordination failure	Lack of policy coordination across sectors, technologies and territorial levels
Reflexivity failure	Insufficient self-governance and lack of adaptive policy portfolios

Table 1. Transformational system failure. Source: **Wanzenböck and Frenken**

Missions are often set at the supranational (see box 2) or national levels. Moreover, many national mission-oriented innovation policy initiatives were not designed as missions but became rebranded as missions through a gradual policy reorientation (**OECD**). Missions face three main weaknesses: (1) uncertainty in selecting and implementing them, (2) the complexity of opportunity costs makes it challenging to evaluate the successes and failures of missions, and (3) difficulty in holding individuals accountable for their progress and impact (**Larsson**). Critics of the mission-oriented approach argue that it disregards place-based societal challenges, favours established innovation clusters, neglects investments in education, and fails to empower all EU regions in mission selection (**Cappellano et al.**). Moreover, there is scepticism towards mission-oriented policies due to potential sector favouritism resulting from political decision-making influenced by lobbying efforts. As a result, it is unclear to which extent regions can engage in mission-driven approaches.

When it comes to regional missions, regional stakeholders face a significant challenge in selecting the appropriate societal challenge. At the sectoral level, this challenge of prioritisation was addressed through the design and implementation of the smart specialisation strategy (S3). The S3 strategy employed the entrepreneurial discovery process to carefully select priorities, aiming to avoid favouring fashionable sectors such as biotechnology or hydrogen. Consequently, there is a risk of encountering duplication in the form of similar broad regional missions, such as achieving carbon neutrality by 2050, promoting clean mobility, or preserving clean oceans. These types of missions not only raise concerns about **regional readiness** to tackle them effectively, but they may also be too broad, global in nature, wickedly complex, and distant in terms of their timeline to activate regional engagement among quadruple helix stakeholders.

2. Regional missions

This policy brief builds upon insights from the **Partnerships for Regional Innovation** to encourage regional policymakers to experiment with **mini-missions** through challenge-oriented innovation policies and thus pursue a small wins approach towards transformative changes. The challenge-driven approach focuses on specific predefined place-based challenges. In contrast, the mission-oriented approach aims to achieve broader societal or environmental missions, emphasizing long-term transformative change and collaboration across disciplines. Missions have a wider scope and involve sustained efforts to create lasting impact.

Dimitrios Pontikakis, Joint Research Centre (JRC), Sevilla, Spain.

There is an urgent need to transform our production and consumption systems, not least due to the vast challenge of climate change. To avoid some of the bleak scenarios, action needs to mobilise government policies across silos, interventions must be systemic, place-sensitive and must avoid creating or exacerbating social rifts.

This implies working not just with solution providers, such as businesses, universities and research centres but also directly with problem-owners such as patients, learners, farmers, commuters and workers, among many others. This amounts to a considerable broadening of the scope of innovation policy. A broadened scope can be manageable provided we find ways of working with the new stakeholders and with other policy areas. And herein lies the value proposition of challenge-driven innovation policy: that a societal problem or challenge can act as a simple organising principle for cooperation in complex decision-making structures. By unlocking cooperation between silos, challenge-drive innovation policies stand to re-balance innovation policy in three fundamental ways:

- **rebalancing the goals** (or directionality), towards local challenges, which insofar as they contribute to national and European goals can cascade upwards (in government) and sideways (in geography);
- **rebalancing stakeholders**, to include users and affected industries and social groups, especially those at risk or in need of transformation, and of course, towards those spearheading the sustainability transition;
- **rebalancing activities**, towards support for social innovation and towards production capabilities (not just innovation/knowledge capabilities), and crucially, support for complementary non-innovation activities.

The combined effect of this rebalancing stands a good chance to result in synergies between policies, co-benefits for the regional economy, society and the environment and amplified overall impact. **Challenge-driven innovation policies** begin with a societal challenge that is widely recognised and easy to understand by citizens, such as localised pollution, the social integration of marginalised groups, or the futures of workers from industries undergoing transitions. In a nutshell, you begin with identifying the challenge, and then work backwards from it with the right coalitions of stakeholders. A first step is defining the problem in a way that is a good match for your territory's capabilities. The next step is creating the spaces where stakeholder engagement, shared understanding and cooperation can be explored. Powerful portfolios of policies across domains and levels can emerge if public, private and civil society stakeholders agree to partner and work together on tackling a challenge. But this is not an easy task and cannot be taken for granted. Negotiation capabilities and a readiness to exert influence in areas you do not control are crucial for solving the challenge.

The methods for working together can vary and some may be more suitable than others in particular contexts. Missions, for example, are a tool that is challenge-driven and is gaining in popularity. But there are others. Policy labs can be used to tailor policies to the needs and constraints of beneficiaries, as well as to enable cooperation beyond policy silos. Regulatory sandboxes are showing potential, and if their high overheads can be justified, stand to create new markets in your territory and to attract new investment. All these ways of working together can be initiated alongside existing strategies and instruments, serving to rebalance innovation policies and make them relevant to today's challenges.

A challenge-based approach is not 'public policy as usual', where you begin with your budget, establish priorities, and implement them and check for impacts. Beginning with the problem opens a space for cooperation but it requires new capabilities including to promote a shared understanding, to communicate, negotiate and build trust for cooperation. In this process is not enough to change the policies that are directly under your control: you also must exert influence on others, influence that can hopefully grow over time. Nevertheless, it is important to recognise that the shift towards transformative innovation policies won't happen overnight and won't be simple. It is important to take a long-term view and allow for iteration and learning by doing.

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2.1. Partnerships for Regional Innovation – mini missions

The **Joint Research Centre (JRC)** has published a playbook for **Partnerships for Regional Innovation** to provide a strategic framework for innovation-driven territorial transformation, linking EU priorities with national plans and place-based opportunities and challenges. In May 2022, 63 regions, 7 cities and 4 Member States **were selected in the pilot project for Partnerships for Regional Innovation**. They will consider the needs of the territory through the lens of transition; they will adopt a broader framing of innovation and unlearn loaded framings; they will work backwards from goals with broad coalitions of stakeholders; they will complement, strengthen and reform governance; they will diagnose development bottlenecks and deploy a tailored policy mix that goes well beyond project-funding.

The partnerships are designed through a multi-level perspective, paying attention to the needs of local, regional, and national policymakers and opening pathways for their closer alignment and cooperation. **They aim to address two types of fragmentation that commonly affect the EU innovation ecosystem**: the fragmentation of funding instruments and policies in territories, and misalignments between regional and national with EU initiatives. **Partnerships for Regional Innovation** must:

- align multiple funds/policy domains for the green and digital twin transition;
- be suitable for various levels of governance (not just regions);
- deploy various support instruments (not just projects);
- allow linking with European missions and partnerships (e.g. through mission hubs).

To achieve these policy objectives, **Partnerships for Regional Innovation** has three 'building blocks':

- A **Strategic Policy Framework** that lays the foundation for action in the following two 'building blocks' and allows broader and dynamic planning using the concept of **Whole-of-Government approach** that allows broader and dynamic planning.
- The **Open Discovery Process**, which enables engagement, deliberation and path co-creation with variable sets of stakeholders, repurposing the established participatory governance approach of smart specialisation towards sustainability, and also introducing new ways of working across silos, working backwards from desired economic, societal and environmental goals (see Figure 2).
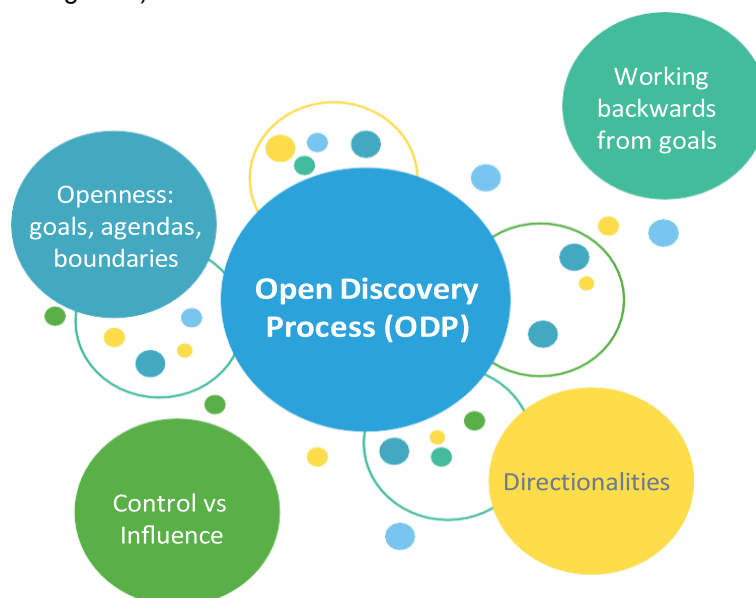

Figure 2. Open Discovery Process (ODP). Source: **Partnerships for Regional Innovation.**

- The **Policy and Action Mix** that includes the possibility to mobilise additional instruments to publicly-funded projects, as necessary for the desired outcomes, including private sector co-investments with a view to solve societal challenges.

The **Partnerships for Regional Innovation** has embraced the concept of small-scale missions through the concept of **Challenge-Oriented Innovation Partnerships (CHOIRs).** These mini missions involve multi-stakeholder partnerships, multi-government departments, and are designed to address specific place-based challenges within defined time frames. Unlike traditional missions, these mini missions would prioritise agreement, co-creation, and co-ownership. They would complement existing operational arrangements and unite disparate policy actions and funds under common goals, fostering tailored and timely solutions.

Mini missions must include the following elements that aim to foster collaboration, information sharing, and coordination among stakeholders to drive innovation and achieve collective goals:

- **Goals**: agreement on common goals, incorporating the twin green and digital transition and aligning with European policy priorities and initiative—for instance the European Green Deal.
- **Partners**: stakeholders determined by the goal, with the local or regional government proposing the initial goal based on shared challenges.
- **Partnership teams**: executive bodies consisting of stakeholders who dedicate part of their time to co-defining goals, building coalitions, developing projects, and proposing policy mix changes.
- **Open agendas**: co-developed dynamic agendas describing the desired pathway to achieve the goal, with stakeholders committing to additional actions beyond publicly funded projects.
- **Partnership hubs**: interfaces with government, coordinating activity horizontally and vertically, with dedicated public officials. They aggregate and share information, drawing inspiration from existing governance structures and using digital tools for efficient coordination (see **Partnerships for Regional Innovation**, p. 44).

2.2. Small wins through mini missions for transformative changes

Mini missions follow a small wins strategy that focuses on small-scale and bottom-up initiatives guided by a shared agenda to address societal challenges rather than through bold and radical changes stemming from the mission-oriented innovation approach. The concept of a small wins strategy can offer regional policymakers a possible path forward to engage in "a logic of stimulating distributed innovation efforts to foster gradual, yet in-depth change in a desired direction" that could be more practical and feasible at the subnational levels than large-scale, radical, and broad missions (**Bours et al.**). Small wins emphasise that small, concrete, and consecutive actions can accumulate and reinforce themselves to lead to transformative changes. They have four components. They should lead to concrete and visible results, shift current mindsets, operate at local and regional levels, and be endorsed by actors (**Bours et al.**).

The focus on broad societal grand challenges at the supranational and national levels has overshadowed the importance of smaller scale mini missions. The supranational and national levels can set overall goals, guide overall directions, establish generic regulations, and invest in supportive knowledge infrastructure. The subnational level must refine these overall goals, initiate bottom-up engagement and responsiveness, and define within a multi-scalar perspective the mini missions that can address targeted place-based societal challenges (**Henderson et al.**). Mini missions can complement grand challenges and allow regional policymakers to address a wider range of social and ecological innovations. This requires new skills and capabilities among regional policymakers. Regions face unique challenges that require localised solutions, drawing on local knowledge and gaining local support. These objectives are typically shorter in duration and can leverage existing knowledge and innovations (**Henderson et al.**).

Subnational level	
Assumption	Challenges specific to local circumstances
Rationales	Finding ways to tackle contextual problems
	Improving democratic decision-making
	Improving variety
	Achieving multi-actor coordination
Scale	Small-scale and contextual solutions
Legitimacy	Contested problem requiring responsiveness to citizens and multi-stakeholder participation in formulating needs and solutions

Table 3. Challenge-oriented innovation policy following the principle of subsidiarity. Source: **Wanzenböck and Frenken**.

Box 4. The Policy Learning Platform can help you to better understand and deliver mission-oriented innovation policies.

The **Interreg Europe Policy Learning Platform** can help local and regional policymakers to better design and implement subnational missions by facilitating the exchange of experience from different institutional contexts, offering policy support and showcasing success stories via the **Good practice database**. The **Policy Learning Platform** can provide a forum for direct discussions among partners from different projects – either in thematic workshops, **matchmaking sessions**, **peer reviews**, or in webinars and online discussions, and provide expert advice through our on-demand **policy helpdesk service**.

For instance, **the Policy Learning Platform organised a peer review for the benefit of the Region of Central Macedonia, Greece**, on the design of open innovation calls. The peers emphasised the significance of adopting a challenge-driven approach that prioritizes open innovation challenges. This approach proves effective in addressing societal challenges specific to the region, as it not only motivates various stakeholders but also adds a compelling emotional aspect to the process.

3. Policy Recommendations

This policy brief provides five policy recommendations, from more general to more specific advice focusing on **innovation policies using a challenge-driven approach**. They are illustrated with good practices coming from Interreg Europe projects and partners.

Luc Hulsman, Northern Netherlands Alliance, the Netherlands

In the Northern Netherlands innovation is much about creating synergies between economic and societal objectives. Since 2014 societal challenges have been at the core of the regional S3.

The logic is to capture urgency, to create commitment and to exclude no-one in advance.

Since 2014, we have been working on ways to translate this logic into implementation. We have been experimenting with our innovation support system. For instance, with ERDF, **designing instruments as open calls,** invitations for actors to come forward with new ideas and solutions to challenges. An important element has been the focus on objectives, rather than actions, giving actors more room for manoeuvre.

From these experiments, it is a relatively small step to true mission-oriented policies. What we have learned from our experience, is for 'missions' to work, they need to relate to the players missions are aimed to have an effect on. **We believe missions should be concrete and understandable, with a relatively short time span**. In this way it is most likely a mission will result into actual actions. Linking missions to what a region can do best we believe to be important as well. Otherwise, missions will result in the overlap, 'S3' was intended to avoid.

Policy recommendation 1. To use innovation procurement as a transformative policy tool.

The first policy recommendation is for regional policymakers **to promote innovation procurement as a transformative policy tool.** The mission-oriented approach relies on specific tools, with **public procurement** being crucial for achieving desired outcomes. By directing demand towards missions, procurement serves as a catalyst for innovation and investment. It can create new markets and reshape existing sectors. To effectively implement missions, procurement must consider objectives beyond cost, focusing on qualitative and quantitative criteria aligned with economic and social goals.

An example of mini-missions driven by public procurement is the greening efforts in the maritime transport sector in Western Norway (**Bugge et al.**). By 2022, more than 60 ferry routes along the western coast of Norway will be partially or fully electrified. The Norwegian Shipowners Association has set targets for a 50% reduction in shipping emissions by 2050 and carbon-neutrality by 2100. Policy documents have emphasised the connection between emission reductions in maritime transport and economic opportunities for the domestic maritime industry through innovation. Public procurement has been a crucial driver of innovation, supported by investment and research grants. The combination of these policy instruments has created momentum and led to a decision that all new public tenders for ferry transport services from 2023 onwards should require low- or zero-emission solutions.

Box 5. To use innovation procurement as a transformative policy tool.

Through market-creating public procurement, mini missions can create a demand for novel products and services that address specific societal or economic challenges. In **STEPHANIE**, the **Civil UAVs Initiative (CUI)** is a public procurement programme launched in 2015 by the Region of Galicia to create a technological R&D pole and promote the aerospace sector in the civil field. Public Procurement is the main tool used in the CUI initiative to promote innovation in the provision of public services. The field of Unmanned Aerial Vehicles (UAVs) could provide innovative solutions in various public sectors, such as land/aquatic resources management, cultural and natural heritage, tourism, emergencies and early detection of terrorist or vandalism actions. The innovation procurement has been structured in 3 main phases: Pre-Commercial Procurement (PCP), Public Market Consultation, Public Procurement of Innovation (PPI), with the aim to identify strategic partners, solutions, technologies, and market trends. The Government of Spain awarded the initiative with the National Prize of Innovation in 2016.

Policy recommendation 2. To promote synergies between Horizon Europe and European Regional Development Fund (ERDF)

The second policy recommendation is for regions to build synergies between the two most important EU research and innovation funding instruments—Horizon Europe and the European Regional Development Fund (ERDF). Synergies involve two or more programmes interacting to produce a greater effect than individual interventions. This is important as Horizon Europe and ERDF have different albeit complementary objectives, priorities, and target beneficiaries, which influence their modes of delivery (see the insights from the online discussion on **Synergies between Cohesion Policy and Horizon Europe**). The importance of synergies between these funding sources has also been recently reinforced with calls such as implementing co-funded action plans for connected regional innovation valleys.

The European Commission acknowledges the importance of the concentration of resources with the encouragement of exploiting complementarities and synergies between the ERDF, Horizon Europe, and other funds to achieve a critical mass of funding in priority areas (see ANNEX I on **Synergies with EU Missions**). There are four types of synergies.
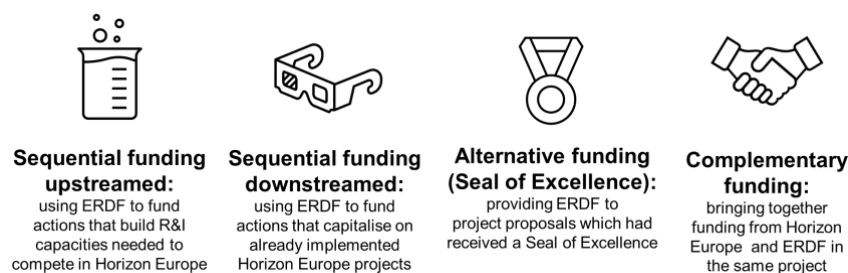
Sequential funding upstreamed:
using ERDF to fund actions that build R&I capacities needed to compete in Horizon Europe

Sequential funding downstreamed:
using ERDF to fund actions that capitalise on already implemented Horizon Europe projects

Alternative funding (Seal of Excellence):
providing ERDF to project proposals which had received a Seal of Excellence

Complementary funding:
bringing together funding from Horizon Europe and ERDF in the same project

Figure 3. Main types of synergies. Source: **European Court of Auditors - Synergies between Horizon 2020 and European Structural and Investment Funds**.

Box 5. To promote synergies between Horizon Europe and ERDF

Mini missions can combine different funding instruments to have a greater impact. In **SMARTPILOTS**, the good practice **Shared pilot facilities Bio Base Europe Pilot Plant (BBEPP)** highlights the role of not-for-profit pilot and demonstration infrastructures to build upstream synergies within an interregional perspective involving Flanders and the Netherlands. BBEPP is involved in Horizon 2020 and Interreg projects and has supported over 100 companies to move up their Technology Readiness Levels (TRLs). The initiative highlights that pilot infrastructures must be aligned with regional strategies and have a governance that supports open access to effectively promote university-industry collaboration.

The **Innovation voucher for Seal of Excellence projects** shows how regional policymakers took advantage of the Seal of Excellence initiative to provide innovation vouchers to SMEs in Lombardy, Italy. In 2016 and 2017, the Lombardy region extended the voucher programme to phase 1 proposals receiving the Seal of Excellence, offering 30,000 euros to draft feasibility studies and business plans. The initiative illustrates that European Regional Development Fund (ERDF) funds can complement H2020 support, enabling local companies to advance their innovation and commercialisation efforts.

Policy recommendation 3. To design and implement challenge-driven prizes.

The third policy recommendation is for regional policymakers to introduce innovation inducement prizes with a challenge-oriented approach to solve regional societal challenges. **Challenge-oriented regional prizes** is a type of contest used by public sponsors to break down a complex societal challenge into manageable and coherent regional challenges that can be regionally addressed with place-based solutions.

Challenge-oriented regional prizes (CORPs) must be carefully designed to identify regional societal challenges, attract competent solvers, and answer questions regarding co-sponsors, participant eligibility, competition rules, intellectual property rights, awards and criteria, and public engagement. As such, CORPs can be seen as a small-wins strategy for regions to start engaging in transformative innovation policies and build institutional and governance capacities to experiment with more systemic approaches to solve place-based societal challenges (watch our webinar on **hackathons and challenge prizes**).

Box 6. Challenge-driven hackathons in Sofia, Bulgaria.

Micro missions can initiate transformative changes. In **INNOBRIDGE**, the city of Sofia is experimenting with challenge-driven hackathons as micro missions to solve pressing local societal challenges. The Sofia Development Association was created by the Municipality of Sofia, Bulgaria, to promote quadruple helix engagement and to pilot and test innovative solutions. The Association has organised more than **20 hackathons to solve place-based urban challenges**. Hackathons are short-term competitions where teams compete to develop minimum viable products (MVP) before presenting them to a jury. The winners receive a prize money to further develop their MVP and prototypes.

The Sofia Development Association is involved to frame the challenges, to find funding for the prize money thanks to co-sponsorship, to assist prototype development, and to support further public procurement or commercialisation. **Building on the experiences of Interreg Europe partners**, such as the good practices from Castilla y Léon, Spain:

- Entrepreneurial Campus Contest
- University-Business challenge contests

the partner in Sofia introduced changes to its hackathons to provide an interregional dimension and an emphasis on S3 priorities. In November of 2022, a hackathon focused on '**InnoAirChallenge: just green transition and urban mobility**'. This event was organised with funding from Urban Innovative Actions. The purpose of the hackathon was to **develop digital solutions for urban mobility** with the goal of tackling air pollution in Sofia.

Policy recommendation 4. To have an integrated regional policy-mix.

The fourth policy recommendation is for regional policymakers to build on their experience with the Smart Specialisation Strategy (S3) to design and implement mini missions within an integrated regional policy-mix. The **regional policy mix** refers to the combination of various strategies, policy tools, initiatives, and measures implemented by regional authorities to promote regional economic development and address specific regional challenges.

The **open innovation call** serves as a relevant policy tool that can be incorporated into the regional policy mix to support mini missions. The **Northern Netherlands Alliance (SNN)** introduced the **open innovation call** as an initiative aligned with a mission-oriented innovation policy approach, emphasising specific goals and regional challenges rather than focusing solely on industrial sectors. The **Open Innovation Call**, which has a budget of €20 million for two years and can contribute to 40% of the total eligible costs, specifies strictly defined objectives but not the actions to reach those objectives. The selected projects must follow a collaborative approach, an integrated approach, generate business creation, have a lasting impact, and generate social significance. An interdisciplinary panel of external experts—from the private sector, the public sector, and universities—select the projects.


Box 7. To have an integrated regional policy-mix.

Mini missions can benefit from large scale and structuring regional projects. In **BEYOND EDP**, **Ambition Research Development 2020** from region Centre-Val de Loire, France, aims to spur ambitious regional R&D projects with an international reach and socio-economic impact for the territory. The programme provides funding for up to €10 million per project through public calls to create partnerships among research centres, universities, and private companies on ambitious R&D projects. The selected projects were closely connected to the S3 priorities and the main cluster and business networks of the region. The regional policymakers approved five major projects in areas such as energy storage, biopharmaceuticals, cosmetics, environmental engineering, and tourist heritage. These projects were chosen based on their potential to create socio-economic impacts. The large amount of public funding facilitates the creation of strategic projects structuring the regional S3 priority.

Policy recommendation 5. To experiment with novel governance arrangements.

The fourth policy recommendation suggests that regional policymakers should explore novel governance arrangements (read our policy brief on **Regional Innovation Governance**). One such model is the concept of **Anticipatory Innovation Governance** introduced by the **OECD Observatory of Public Sector Innovation (OPSI)**. It involves developing a broad-based capacity to actively explore possibilities, engage in experimentation, and continuously learn within a larger governance system.
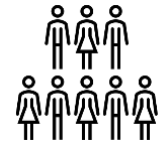
Governance systems must acknowledge the complexity of problems, employ systems thinking, and recognize the roles of innovation and foresight in the face of disruptive technologies like automation, digitalization, climate change, and aging. Anticipatory innovation governance entails adopting non-linear policymaking processes that embrace uncertainty and complexity. The concept supports future-oriented learning and action based on empirical experimentation, and must have space for:

- Effective and efficient products and services (enhancement-oriented innovation)
- Directed innovation to solve societal challenges (mission-oriented innovation)
- Undirected entrepreneurial discovery (adaptive innovation)

For instance, in the **Catalan Smart Specialisation Strategy (RIS3CAT 2030)**, the **Shared Agendas** experiment with new inclusive governance arrangement to promote sustainable practices and align regional policy objectives with the Sustainable Development Goals (SDGs). They foster participation, change beliefs, and capitalize on synergies between EU, national, regional, and sub-regional funds.

A Shared Agenda involves several key steps:

- Developing a shared vision aligned with the SDGs.
- Conducting a shared diagnosis of the limitations of the current socio-technical system.
- Identifying opportunities and solutions through the ongoing transformation.
- Articulating initiatives that address common challenges through intersectoral collaboration and knowledge sharing.
- Ensuring the participation of all stakeholders, including citizens and civil society, in shaping both the visions and the path to achieve them. In Shared Agendas, it is not limited to the research, business, and public sectors alone.

Box 7. To experiment with novel governance arrangements.

Mini missions must experiment with novel governance arrangements. In **HIGHER,** the Slovenian Ministry for Economic Development and Technology shared its **Strategic Research and Innovation Partnerships (SRIPs):** these are long-term partnerships focusing on nine areas related to Industry 4.0, the digital economy, and the circular economy, that involve quadruple-helix actors—private companies, public institutions, universities, and civil society. The nine areas were selected according to the Slovenia Smart Specialisation Strategy (S4). The SRIPs work on each thematic area to coordinate R&D activities, network internationally, share capacities and knowledge, and develop human resources. Each SRIP, which is piloted by different organisations (private companies, universities, chamber of commerce), must devise its strategic roadmaps to achieve a higher competitive position not only through technological foresight but also through identifying regulatory framework changes.

Sources of further information on regional missions

- European Commission – **Guidance on Innovation Procurement**
- European Commission – **The New European Innovation Agenda**
- European Commission JRC – **Case studies towards Green Transition in EU regions**
- European Commission JRC – **Partnerships for Regional Innovation** (an updated, process-oriented edition of the PRI Playbook is due by the end of 2023)
- European Commission JRC – **Partnerships for Regional Innovation Concepts and Rationales**
- Interreg Europe Policy Brief – **Open, Social, and Responsible Innovation**
- Interreg Europe Policy Brief – **Innovation Procurement**
- Interreg Europe Policy Brief – **Regional Innovation Governance**
- Interreg Europe Policy Brief – **University-Industry Collaboration**
- OECD – **Public Procurement of Innovation**
- OECD – **The design and implementation of mission-oriented innovation policies**
- OECD – **The OECD Mission-Oriented Innovation policies online toolkit**
- OECD – **Examining Proto-Missions**
- University College London – **Mission-oriented public procurement: international examples**
- University College London – **Missions: A Beginner's Guide**

If you have any additional policy questions regarding regional missions, do not hesitate to contact us through our on-demand **policy helpdesk service**. If you would like to explore the policy challenge of designing and implementing regional missions in more detail, you can consider a Policy Learning Platform **peer review** or **matchmaking**.

Annex 1: Selection of relevant Interreg Europe projects dealing with challenge-driven policies

Project	Policy Objective
BEYOND EDP	To promote inclusive and continuous entrepreneurial discovery process (EDP)
DIALOG	To promote citizen's engagement in defining research and innovation policies to foster social impact.
ERUDITE	To enhance rural and urban digital innovation territories
FOODCHAINS4EU	To strengthen regional innovation policies to build sustainable food chains
INNO4SPORTS	To promote innovation in sports ecosystems
INTENCIVE	To enhance customer-oriented health services
ITHACA	To improve active and healthy ageing of the population
HIGHER	To improve innovative models of public private partnerships for the S3
MARIE	To align the concept of Responsible Research and Innovation (RRI) with the S3 concept
OSIRIS	To solve real-life societal challenges through open social innovation methods - stimulating a bottom-up co-creation process for regional development
PASSPARTOOL	To develop key tools to assess and improve soft innovation policies, namely related to social, organisational, institutional, and open innovation
SMART PILOTS	To support shared pilot facilities on the Key Enabling Technology Industrial Biotech and the European Bio-economy
TITTAN	To improve European healthcare systems for healthy and active ageing
URBAN M	To stimulate innovation through collaborative maker spaces

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