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ISSN: 2574-1292 (Online) Journal homepage: [www.tandfonline.com/journals/rpdp20](http://www.tandfonline.com/journals/rpdp20)

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To cite this article: Slavo Radosevic, George Tsekouras & Peter Wostner (21 Jul 2026): Beyond pilots and policy labs: institutionalizing experimentation through transformative partnerships, Policy Design and Practice, DOI: [10.1080/25741292.2026.2704271](https://doi.org/10.1080/25741292.2026.2704271)

To link to this article: <https://doi.org/10.1080/25741292.2026.2704271>



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Published online: 21 Jul 2026.



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RESEARCH ARTICLE



# Beyond pilots and policy labs: institutionalizing experimentation through transformative partnerships

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## ABSTRACT

This paper conceptualizes the upscaling challenge in Transformative Innovation Policy (TIP) as a distinct governance problem. While experimentation is central to TIP, much of the literature focuses on pilots, policy labs, and bounded policy trials, paying less attention to how experimentation can be institutionalized once the objective is system-level change. We argue that pilots remain useful for testing narrowly specified interventions. However, they offer an incomplete institutional solution for transformative programmes that support socio-technical and territorial change. Scaling changes actor behavior, accountability demands, coordination requirements, and the political basis of legitimacy; it also unfolds over timeframes in which technologies, markets, and initial assumptions may change substantially. However, allowing experimentation to continue while scaling up raises the issue of governance, namely, how TIP can be governed in a way to balance these tensions and allow experimentation to continue without impeding the scaling-up process or vice versa. To address this gap, we develop a framework that contrasts agency-led, ecosystem-led, and hybrid governance solutions and investigate the extent to which these solutions support (or not) this dual objective of continued experimentation while scaling up. These solutions are being discussed across different institutional contexts using four European cases: Slovenia's Smart Specialization strategic partnerships, Sweden's VINNVÄXT, the Dutch Innovation Performance Contracts, and Denmark's Innovation Networks. Across institutionally different settings, these cases reveal common governance mechanisms: brokerage, diagnostic monitoring, tailored support, and mutually reinforcing top-down and bottom-up coordination. On this basis, we introduce transformative partnerships as an institutional form that embeds experimentation in governance rather than treating it as an isolated pilot. The paper contributes by specifying scaling as a governance issue in TIP and by identifying institutional design features that enable experimentation to become cumulative, adaptive, and durable.

## ARTICLE HISTORY

Received 21 March 2026  
Accepted 5 July 2026

## KEYWORDS

Transformative innovation policy; governance of experimentation; transformative partnerships; policy coordination; European innovation programmes

## 1. Introduction

Transformative Innovation Policy (TIP) asks public policy to do more than correct market failures or support isolated technology projects. It asks policy to shape the direction of change, to engage with broader socio-technical transformations, and to organize learning under high uncertainty (Schoot and Steinmueller 2018; Weber and Rohrer 2012). This makes experimentation central. Yet the practical question is not simply whether policy should experiment, but how experimentation can be organized so that it survives beyond a temporary pilot, generates wider institutional learning and adjustment, and becomes part of mainstream governance.

This question is especially salient in EU regional policy. Regional transformations involve multiple levels of government, firms, universities, intermediaries, and civil-society actors. They also unfold in settings that differ greatly in state capacity, social capital, network density, and administrative traditions. Under such conditions, experimentation cannot be treated as a self-contained technical exercise.

It must be embedded in institutions that can coordinate diverse actors, maintain legitimacy, adapt goals and instruments over time, and connect local discovery to broader policy strategy.

Policy experimentation can take many forms and occurs in different contexts. Some policy pilots concern public services, such as digital government, welfare provision, health, education or administrative reform. In such cases, scaling may depend primarily on legal mandates, budgetary decisions, organizational redesign or administrative roll-out. Our focus is narrower: experimentation in transformative regional innovation policy, where the objective is not simply to improve a service or replicate a tested intervention, but to support socio-technical and territorial change.

In this context, scaling depends on building critical mass, changing networks, overcoming regime resistance, connecting niches to markets, coordinating heterogeneous actors, and developing technological and organizational capabilities. A useful contrast is between scaling a digital welfare or health-service platform across a public administration, and building a regional battery, electric-mobility, circular-construction or industrial-decarbonisation ecosystem. The latter is the type of problem addressed in this paper. This distinction explains why pilots and policy labs, while useful in some settings, are insufficient as general institutional solutions for upscaling transformative regional innovation policy.

The recent TIP literature increasingly recognizes this challenge. It stresses directionality, portfolio approaches, stakeholder involvement and coordination, and iterative learning, and has moved well beyond linear views of innovation policy (Kattel and Mazzucato 2018; Lindner, et al. 2021). Work on Partnerships for Regional Innovation has also highlighted the need for place-based collaborative arrangements that connect experimentation with transformation goals (Pontikakis, et al. 2022; Bianchi et al. 2024). Even so, there remains a relative scarcity of work on the institutionalization of experimentation beyond pilots. The literature is stronger on why experimentation matters than on how to govern it once the ambition is to move from promising local initiatives to durable system-level change.

We address this gap by conceptualizing the upscaling challenge as a distinct transformation failure. The problem is that many pilots remain small or short-lived. A pilot cannot support the evolution of a regional innovation policy if the relative significance of technological trajectories changes during the scaling-up period. An even more important challenge is that scaling changes the nature of the policy task. When experimentation moves from a bounded trial to a broader transformation process, the central issues become political and organizational: who participates, who decides, how coordination is maintained, how learning is captured, how resources are reallocated, and how accountability is preserved while flexibility remains possible.

The paper asks three questions. First, what are the limits of pilots and policy labs as institutional solutions for experimentation in TIP? Second, how to design and operate governance modes which enable experimentation while upscaling? Third, what are the lessons to be drawn from the experience of some European transformative innovation policy approaches that attempt to move experimentation beyond pilots?

Our answer is that transformative partnerships offer a more promising institutional solution than relying solely on pilots. By transformative partnerships, we mean durable, multi-actor arrangements that combine: (a) strategic direction, (b) stakeholder mobilization, (c) brokerage, (d) diagnostic monitoring, and (e) tailored support. They are not simply forums for consultation, nor are they one-off collaborative projects. Rather, they provide an organizational infrastructure through which experimentation can become iterative, cumulative, and better connected to implementation. We derive this argument from a comparative reading of four cases - Slovenia, Sweden, the Netherlands, and Denmark - that differ institutionally yet perform similar governance functions.

The paper proceeds as follows. [Section 2](#) discusses the limits of pilots, policy labs, and trial-based approaches in the context of transformative policy and then examines the tradeoffs between agency-led, ecosystem-led, and hybrid governance solutions. [Section 3](#) introduces the comparative design and distills the key lessons from four policy programmes. [Section 4](#) develops the concept of transformative partnerships and links it to action learning, learning networks, and diagnostic monitoring. [Section 5](#) concludes with implications for regional innovation policy and TIP more broadly.

The governance issue is often hidden because experimentation is commonly associated with project-level novelty rather than institutional change. In much of the policy discussion, the emphasis falls on creating pilots, launching missions, or establishing labs. In contrast, the less visible questions of continuation, institutional embedding, and policy adaptation receive less attention. Yet these latter questions are decisive in regional innovation policy. Regional transformations cannot be delivered through central ministries alone, nor can they rely only on spontaneous ecosystem self-organization. They require arrangements that repeatedly connect strategy with discovery and implementation, and with reflection and adjustment.

## 2. Experimentation beyond pilots: limits and governance tradeoffs

### 2.1. *Why pilots and policy labs are not enough*

Experimentation in public policy can take different institutional forms, including pilots, policy labs, demonstration projects, and randomized or quasi-experimental trials. In the broadest sense, experimentation involves trial, feedback, and adjustment under conditions of uncertainty. In TIP, this is especially important because the objective is not only to improve a single instrument, but to discover workable pathways in complex systems where technologies, institutions, markets, and user practices co-evolve (Hoogma et al. 2002; Smith, et al. 2017).

Pilots and policy labs are attractive because they appear to lower the risks of change. Pilots allow policymakers to test an intervention on a limited scale before wider rollout. Policy labs can provide protected spaces for co-design, prototyping, and cross-disciplinary collaboration. Both may help reveal implementation bottlenecks, improve programme design, and produce early evidence of what works. This appeal is real, but its limits are equally important. Pilots typically operate in circumscribed settings with bounded objectives and special support conditions. Policy labs often remain organizationally peripheral to core administrative routines. What they demonstrate, therefore, is not automatically what can be sustained, generalized, or politically defended when a programme is scaled.

Much policy discussion of experimentation has been framed in terms of randomized controlled trials. For some narrowly specified interventions, RCTs or quasi-experimental methods can indeed be useful, and the experimental turn in public policy has sharpened attention to causal identification (Bravo-Biosca 2019). But TIP typically operates in settings where objectives evolve, the relevant actors are interdependent, and system-level coordination matters. In those contexts, the central issue is not only whether a pilot ‘worked’, but whether there is an institutional arrangement capable of carrying learning forward, mobilizing stakeholders, and embedding experimentation in wider policy routines. Evidence generated in a tightly controlled setting may therefore be informative but still insufficient for transformative purposes.

This is why developmental evaluation is often better suited to TIP than an ex post proof-of-concept approach: TIP requires continuous learning and adaptation during implementation, not simply a retrospective judgment about whether a pilot succeeded. Developmental evaluation treats implementation itself as a learning process and asks how interventions adapt as goals, contexts, and coalitions change (Patton 2011; 2016). Similarly, diagnostic monitoring emphasizes feedback during implementation rather than after-the-fact judgment alone (Kuznetsov and Sabel 2011; 2017). These approaches matter because transformative policy must identify not only which instruments appear promising, but also which institutional arrangements enable actors to learn, coordinate, and revise direction as the programme unfolds. Despite the clear value of these approaches, they do not support translating (evaluation or monitoring) outcomes into decisions or potential refocusses, as they do not provide the organizational platforms or infrastructure needed to make decisions.

Three implications follow. First, the distinction between a pilot and an upscaled programme is not merely a matter of size. Once interventions move beyond a protected niche, they face new political, organizational, and coordination demands. Second, learning from pilots is highly context-dependent. What works in a privileged demonstration setting may rely on unusual actors, temporary funding, or exceptional leadership and may not be reproducible elsewhere. Third, the

upscaling problem is deeply institutional. It concerns how learning is retained, how actors are mobilized, and how experimentation is connected to broader portfolios, regulations, and implementation routines.

This does not make pilots irrelevant. They remain useful when interventions are relatively bounded, when the objective is to test a specific instrument, or when a protected environment is needed to assess early feasibility. But in transformative policy, they should be understood as partial devices within a larger architecture, not as the institutional model for transformation itself. The core challenge is to move from isolated pilots to arrangements in which experimentation becomes recurrent, socially embedded, and organizationally durable.

A further limitation of pilots in transformative contexts is that they often presuppose closure around the problem definition. To evaluate results, the intervention, target group, and expected outcomes usually need to be stabilized in advance. Transformative policy rarely enjoys that luxury. Problem definitions evolve, new complementarities and opportunities emerge, and the desired direction may need to be refined through stakeholder interaction. What looks like disciplined experimental design from one perspective can therefore become premature closure from another. Consider, for example, a regional mobility transition initially organized around battery-electric vehicles. During scaling, constraints in charging infrastructure, shifts in vehicle architectures, fuel cell options, or alternative mobility models may alter the feasible transition pathway. This illustrates why transformative experimentation cannot presume full closure around a single technological trajectory. Policy labs try to soften this by creating space for co-design. However, unless their outputs are integrated into mainstream routines, budgets, and authority structures, they risk becoming islands of creativity with limited systemic impact.

This matters especially in regional innovation policy because programmes are typically implemented through layered funding streams, mixed public-private governance, and overlapping territorial competences. A pilot may reveal that a service, technology application, or collaborative format is promising. Still, it does not, by itself, solve the questions of who will host it, how it will be funded over time, how it connects to complementary instruments, or how it will be governed once exceptions and protected conditions are removed. The institutional work of scaling - standard setting, role definition, brokerage, conflict mediation, and portfolio adjustment - therefore cannot be inferred from pilot success.

Seen in this light, the upscaling challenge is closely related to the problem of institutionalization. Transformative policy is not only about discovering better interventions; it is about building capacities and routines that sustain discovery. This is why the relevant unit of analysis cannot be the isolated pilot alone. It must include the organizational arrangements that select, interpret, diffuse, and adapt lessons across a broader policy domain. Once that move is made, experimentation becomes inseparable from governance design.

## **2.2. Governance modes and the institutionalization of experimentation**

If pilots and labs are insufficient on their own, the next question is how experimentation should be governed. The Innovation Policy literature has discussed the 'cognitive structure' of the policy intervention, identifying three main types. Firstly, the 'market-based' policies which rely on the provision of endowment to market actors who are expected to 'mobilise' the innovation process because of their economic interest. Typical examples of such policies are programmes providing R&D subsidies and tax incentives to private companies (D'Andria and Savin 2015; Chen et al. 2025). Secondly, policies that assume active state participation, usually through a public agency, shape innovation rather than simply provide funds, directing them toward legitimate and effective missions. Typical examples include mission-oriented policies in which the innovation process is 'mobilized' or even directed by a public agency toward specific challenges (Mazzucato 2018; OECD, 2024). Thirdly, the innovation policies that prioritize the collective action of innovation actors materialized through a 'topology' of networks or ecosystems, assisted in some cases by a range of intermediaries (Bessant and Rush 1995; Borrás and Edquist 2013; Granstrand and Holgersson 2020). In reality, policy programmes follow a mix of these approaches (Bassart-I-Loré 2025), but the analytical distinctions drawn by these debates

**Table 1.** Tradeoffs between governance modes in transformative regional innovation policy.

| Dimension                | Agency-led                                                                        | Ecosystem-led                                                       |
|--------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Objectives               | Easier to define and prioritize                                                   | Harder to agree, but often richer and more legitimate               |
| Autonomy and flexibility | Strong formal authority and resource concentration                                | Distributed initiative, but slower collective decisions             |
| Legitimacy               | May be weaker if stakeholders are not fully engaged                               | Stronger if key actors participate meaningfully                     |
| Accountability           | Clearer vertical accountability in principle                                      | More complex mutual accountability across actors                    |
| Scaling                  | Better at providing leadership and coordinating instruments across the government | Better at bottom-up mobilization and embeddedness in local networks |

provide the foundation for identifying governance modes that can support the dual objective of experimentation while scaling up an innovation policy.

This focus on governance also reflects the distinction between input additionality and behavioral or system additionality (Nauwelaers and Wintjes 2002). TIP is concerned not only with whether more resources are mobilized, but also with whether actors change how they search, collaborate, invest, learn and coordinate. For this reason, the governance of experimentation cannot be reduced to the design of incentives or funding instruments. It must also consider the institutional arrangements through which public authorities, intermediaries, and ecosystem actors shape behavior during scaling.

This shift from resource mobilization to behavioral and system change makes the source of coordination central. If experimentation is to continue while scaling takes place, governance arrangements must both provide direction and maintain the distributed learning through which actors adapt their behavior. This leads us to distinguish between two ideal-typical governance modes: agency-led approaches, in which a ministry, mission agency, or interdepartmental body coordinates experimentation from above, and ecosystem-led approaches, in which experimentation is shaped through continuous stakeholder interaction around innovation challenges (see Table 1). The distinction between agency-led and ecosystem-led governance should thus be read as an analytical distinction between two stylized sources of coordination, rather than as a claim that real programmes fall neatly into one category. In fact, these are best treated as poles on a continuum rather than as mutually exclusive models (Pontikakis, et al. 2022; Ulmanen, et al. 2022). Which mode is more appropriate depends on the interaction between several conditions: the administrative and political system, the mandate and capacity of public agencies, the maturity and density of regional innovation ecosystems, the structure of the industry or domain, and the type of coordination failure being addressed. In this sense, while governance modes are not universal and require context-sensitive approaches, we sought to understand policy tradeoffs better and identify mechanisms more conducive to policy experimentation at scale.

Agency-led approaches offer clear mandates, the ability to concentrate resources, and potentially greater organizational autonomy. They may therefore be better at initiating a portfolio of experiments, aligning instruments across departments, or protecting long-term objectives from short-term fragmentation. They can also act more quickly when a strong central authority exists. Their weaknesses lie elsewhere: they can lack legitimacy among regional actors, struggle to interpret local needs, and encounter resistance when implementation depends on organizations beyond their jurisdiction. As programmes scale, the limits of formal authority become more visible, especially when transformation requires behavioral change by firms, universities, municipalities, and intermediaries.

Ecosystem-led approaches have a different profile. They derive legitimacy from participation and are often better at discovering locally relevant opportunities, uncovering bottlenecks, and mobilizing tacit knowledge distributed across actors. They can generate stronger ownership and may be more adaptive because priorities emerge through interaction rather than being fixed administratively. But these advantages come with tradeoffs. Broad participation can make prioritization harder, decision-making slower, and accountability more diffuse. In institutionally thin regions, ecosystem-led arrangements may also lack the organizational density required to sustain collective action over time.

Hybrid arrangements are therefore common and, we argue, generally more promising. Governments can provide resources, framework conditions, a minimum framework, and accountability conditions, while stakeholder networks generate information, define problems, enable experimentation, and facilitate co-creation. The challenge is not to choose once and for all between hierarchy and networks, but to create institutional arrangements capable of moving between them as transformation unfolds.



A programme may require more state steering at launch, more network discovery during implementation, and renewed central coordination when scaling or policy integration becomes necessary.

This hybrid view also aligns better with the coordination failures highlighted in TIP research. Weber and Rohrer (2012) identify directionality, demand articulation, policy coordination, and reflexivity as central challenges of transformative change. None of these is resolved by hierarchy alone or by horizontal networking alone. Multi-level, horizontal-vertical, public-private, and timing coordination problems arise in different ways in both governance modes. The appropriate balance depends on administrative traditions, political systems, social capital, the density of regional networks, and the nature of the transformation challenge itself (Neto, et al. 2024; Sabel and Victor 2022).

A further issue is accountability. Agency-led models can establish clear lines of authority, but they may mask informational asymmetries and create capture risks when programme knowledge is concentrated in a few public bodies. Ecosystem-led models broaden participation, yet mutual accountability across many actors is harder to organize and may become performative unless there are agreed rules of engagement. For experimentation at scale, accountability cannot mean rigid adherence to fixed plans. It must include the capacity to revise, discontinue, and redirect activities transparently as evidence and circumstances change.

The implication is straightforward: experimentation at scale requires institutional forms that combine state capacity with ecosystem mobilization. Governments remain crucial as conveners, funders, and guardians of public purpose. But transformation also requires intermediation, distributed discovery, and actor commitment that cannot be commanded administratively. This is the governance space where transformative partnerships are relevant.

The tradeoff between agency-led and ecosystem-led governance should also be read dynamically. Early phases of transformation may benefit from stronger public direction because goals are weakly coordinated and existing actors have little incentive to invest in collective discovery. Later phases may require more distributed governance, as rigid central steering can suppress local initiative and prevent the programme from adapting to heterogeneous needs. Conversely, ecosystem-led processes may generate rich agendas in early stages but later need stronger public coordination to connect projects to procurement, regulation, skills policy, or infrastructure investment. Governance design, therefore, needs both temporal flexibility and institutional hybridity.

This dynamic perspective helps explain why regional innovation programmes often succeed when they mix stable rules with adaptive interpretation. Participants need predictable frameworks to invest time and resources, yet transformative objectives require room for reinterpretation as bottlenecks become visible. Hybrid governance is not valuable because it splits the difference between two extremes. It is valuable because it allows programmes to vary the relative weight of hierarchy, network coordination, and intermediation across stages of discovery, coalition-building, and implementation.

### 3. Methods, cases, and comparative evidence

To derive lessons on how experimentation can be institutionalized beyond pilots, we compare four European programmes: Slovenia's Smart Specialization strategic partnerships (SRIPs), Sweden's VINNVÄXT, the Dutch Innovation Performance Contracts (IPC), and Denmark's Innovation Networks.<sup>1</sup> The cases were purposively selected to capture variation in governance mode, institutional maturity, and territorial scale while remaining within broadly comparable European innovation-policy settings. Collectively, they provide information-rich cases rather than representative observations (Patton 2011). Our material consists of evaluations, official reports, programme documents and prior research by the authors (Radošević, Tsekouras, et al. 2023).

The comparison is therefore interpretive and mechanism-oriented rather than a formal causal test. We proceeded in three steps. First, each case was read as an institutional attempt to organize collaborative innovation beyond isolated projects. Second, we analyzed the cases around key policy and governance dimensions that are central to experimentation at scale, such as directionality and strategic focus, facilitation of collaboration and brokerage, the role of public authorities and of intermediary organizations, tailoring of support including accountability, as well as monitoring, adjustment, learning and upscaling processes during implementation (Radošević, Tsekouras, et al. 2023). Third, we

**Table 2.** Four cases and their main lessons.

| Case                          | Governance profile                  | Key mechanism                                | Main lesson                                                         |
|-------------------------------|-------------------------------------|----------------------------------------------|---------------------------------------------------------------------|
| Slovenia (SRIPs)              | Hybrid                              | State framework plus stakeholder ownership   | Hybrids matter where risk-taking and investment capacity are weaker |
| Sweden (VINNVÄXT)             | Agency-sponsored regional platforms | Brokerage, mentoring, and long-time horizons | Continuity helps experimentation mature                             |
| Netherlands (IPC)             | Bottom-up, facilitated              | SME groups plus industry secretaries         | Tailored support lowers coordination costs                          |
| Denmark (Innovation Networks) | Ecosystem-led in a dense system     | Transparent services and bridge-building     | Mature ecosystems still need organized intermediation               |

compared how these dimensions were addressed across different institutional settings to identify recurrent mechanisms rather than identical organizational forms. The mechanisms reported below are therefore not derived from formal statistical comparison, but from a structured functional comparison of how different programmes addressed similar governance problems.

The cases are not identical in objective or programme architecture, but that is precisely why they are analytically useful. All four programmes sought to organize collaborative innovation beyond isolated projects and all faced the question of how to sustain actor engagement over time. By comparing them functionally rather than formally, we can see how similar governance tasks were solved through somewhat different institutional means (see Table 2). This functional comparison is important because transformative policy rarely travels as a single model; it is translated into diverse administrative and regional settings.

Slovenia's Smart Specialization Strategy created Strategic Research and Innovation Partnerships around priority domains. The government defined the strategic framework and linked it to the use of European Structural Funds, but each partnership retained room to define niches, organize its business model, and shape modes of collaboration. This mattered because the strategy helped shift policy away from a purely horizontal approach and a narrow sectoral logic. Instead, it brought together actors with complementary activities oriented toward common markets and areas of opportunity. Evaluations suggest that SRIPs improved strategic focus, encouraged collaboration, and strengthened the institutional basis for more selective innovation policy (Bucar et al. 2022; Burger et al. 2023). At the same time, the case reveals limits: tailored support was uneven and insufficiently sustained, resulting in an institutional capacity that was not fully developed to convert network intelligence into flexible policy adjustments.

Sweden's VINNVÄXT is a long-running programme initiated by VINNOVA to build internationally competitive regional innovation milieus. Its significance lies not only in financing projects but in creating strategic regional processes and stable meeting arenas. A notable feature was active brokerage. Ideas could emerge from firms, universities, and other 'idea donors', then be developed through mentoring, pilot studies, competence-building, and help in accessing finance. The programme combined need-driven innovation with long-term horizons, allowing experimentation to mature and relationships to deepen. VINNVÄXT therefore illustrates how agency sponsorship and regional mobilization can be combined without collapsing into either command-and-control administration or loose networking.

The Dutch Innovation Performance Contracts targeted groups of SMEs willing to collaborate on innovation. Participating firms combined individual and joint projects and were supported by an industry secretary who helped with coalition building, planning, administration, and problem-solving during implementation. IPCs were deliberately flexible: they were not tied to a single technology or sector, and they moved through a staged process in which collaboration was first diagnosed and organized and only then translated into project portfolios. This sequencing is important. It shows that network formation and project implementation are not separable activities; they need to be developed together. The Dutch case demonstrates how brokerage and tailored support can reduce coordination costs and enable SMEs to participate in collaborative experimentation that would otherwise be too demanding.

Denmark's Innovation Networks were organized around clearly defined professional or technological areas and supported interaction among firms, universities, and other actors. The programme offered



bridge-building, partnership development, knowledge communication, and project facilitation. At the same time, the joint organization Netmatch helped develop a common language for services and made network offerings more transparent to users. The Danish case is important because it shows that even in a relatively dense institutional environment, ecosystem-led experimentation still requires organized intermediation. Mature ecosystems do not eliminate the need for brokers; if anything, they make specialized brokerage and service articulation more valuable.

Taken together, the four cases reveal several common patterns. First, they differ institutionally but converge functionally: all rely on facilitators that convene actors, structure collaboration, and maintain continuity. Second, brokerage is critical for mobilization and sustained transformation. Whether performed by SRIP coordinators, VINNVÄXT platforms, IPC secretaries, or Danish network managers, brokers connect actors, translate between interests, and enable diagnostic monitoring. Third, support is tailored rather than generic. In all four cases, participants receive combinations of networking, project development, problem diagnosis, mentoring, and access to wider policy resources, depending on needs and priorities. The resulting architecture is therefore not a pilot architecture but a partnership architecture in which experimentation is embedded in broader institutional settings.

The cases also show that context matters. In institutionally thicker systems such as Sweden, Denmark, and the Netherlands, agency-sponsored or ecosystem-led arrangements can operate with less direct state steering because organizational routines and networks are already relatively developed. In settings where risk-taking and investment capacity are weaker, as in Slovenia, hybrids that combine top-down support with bottom-up coordination are more important. Transformative partnerships should therefore be understood not as one model but as a family of institutional solutions adapted to different regional capacities and political-administrative environments.

The Slovenian case is also significant because it shows how transformative partnerships can emerge through a smart specialization process rather than through a mission agency. The partnerships had to mediate between EU conditionalities, national policy objectives, and stakeholder expectations. That made brokerage and legitimacy especially important. Where these were stronger, the partnerships moved beyond consultation and became vehicles for agenda-setting and project formation; where they were weaker, the risk was that collaboration remained thinner and more formal.

VINNVÄXT also demonstrates the value of continuity for experimentation. Long time horizons did not simply make the programme larger; they changed the quality of interaction. Repeated exchanges allowed actors to refine their expectations, reduce uncertainty about one another's commitments, and engage in more ambitious collective projects than short competitive calls typically permit. This is a reminder that duration is not just an administrative feature but a governance resource.

The Dutch IPC scheme further illustrates that tailored support is not a supplementary service added after programme design. It is part of the institutional solution itself. SMEs often need help in identifying collaboration opportunities, translating broad innovation ambitions into operational plans, and handling the administrative burdens of collective projects. The position of industry secretary reduced these burdens while also serving as a broker and translator across firms with different capabilities and incentives.

In Denmark, articulating services through Netmatch mattered because transparency and a common service language improved participants' usability. This is an often-overlooked aspect of experimentation at scale: programmes need not only good ideas and committed actors, but also intelligible interfaces that allow potential users to understand what is offered, what is expected, and how to engage. Organized intermediation thus includes not only relationship-building but also codification and communication.

#### **4. Transformative partnerships as an institutional solution**

The comparative evidence suggests that the most important move beyond pilots is not simply to run more experiments, but to create institutions that can sustain experimentation. We call these institutions transformative partnerships. Their defining feature is that they connect strategic direction, collaboration and co-creation, learning, and implementation in a durable arrangement rather than in

a temporary project. In this sense, transformative partnerships are less a discrete policy instrument than an organizational solution to the upscaling challenge.

A useful way to understand their logic is through action learning and learning networks. The four programmes all institutionalized iterative learning: stakeholders interacted repeatedly, reflected on bottlenecks, and modified activities as implementation unfolded. In management research, action learning refers to learning through joint work on real problems combined with structured reflection (Brockbank and McGill 2003). When organized across firms, policymakers, intermediaries, and knowledge organizations, this can evolve into learning networks: inter-organizational arrangements that generate practical knowledge, identify process bottlenecks, and feed lessons back into programme design (Bessant et al. 2012; Bessant and Tsekouras 2001).

This perspective adds something important to TIP. It shifts attention from single interventions to the institutional capacities through which experimentation becomes cumulative. Learning networks do not simply evaluate policy after the fact. They make policy implementation itself a source of discovery. In that sense, they operationalize diagnostic monitoring: continuous problem identification, feedback, and adaptation as programmes proceed (Kuznetsov and Sabel 2011). For transformative policy, where goals are demanding and uncertainty is high, this is more appropriate than assuming that a single successful pilot can be replicated at scale.

Across the cases, three strategic features of transformative partnerships stand out. First, they combine top-down and bottom-up coordination. Governments establish framework conditions, provide legitimacy, and align policy instruments, but experimentation gains substance only when firms, knowledge actors, and intermediaries shape priorities and projects from below. The point is not to compromise for its own sake, but to mutually reinforce directional policy and distributed problem discovery.

Second, transformative partnerships rely on brokers with both competence and legitimacy. Brokerage is not an auxiliary function. Collaboration rarely happens spontaneously, particularly where firms are heterogeneous, universities operate with different time horizons, and rules and reporting requirements constrain public agencies. Brokers convene actors, translate between different languages and interests, identify opportunities for joint work, and help maintain trust when expectations diverge. They also reduce transaction costs for participants and expand their innovation horizons, especially for SMEs, which often lack the slack resources to navigate collaborative schemes or to expand into relatively new collaboration formats (Livieratos et al. 2022).

Third, transformative partnerships institutionalize flexibility through monitoring and feedback. Successful partnerships do not merely tolerate adjustment; they build it into their design. Continuous feedback allows programmes to refine priorities, modify services, identify underperformance, and connect participants to additional resources. Priorities, services, and connections can change as innovation actors pursue the innovation ‘journey’ and a variety of ‘constellations’ of innovation partners and activities emerge (Livieratos et al. 2026). This is the organizational basis of accountable experimentation (Radošević, Tsekouras, et al. 2023b). The point is not to relax accountability but to redefine it: responsible experimentation requires the capacity to adapt transparently, including the capacity to discontinue unpromising activities.

These features can be summarized through three linked activities. The first is *diagnosis*: identifying regional challenges and opportunities through systematic engagement with firms, R&D organizations, public bodies, and civil society. Diagnosis is not a one-off exercise conducted at programme launch. It is a continuing process through which partnerships remain connected to emerging needs, opportunities, and constraints. The second is *mobilization*: connecting actors around a shared direction for experimentation through platforms, arenas, and routines that create continuity and trust. The third is *facilitation*: supporting projects, services, and collective actions tailored to participants’ needs, including coaching, matchmaking, project development, access to expertise, and links to finance or international networks.

These activities are iterative rather than sequential. Diagnosis informs mobilization; mobilization reveals new needs; facilitation generates information that reshapes both diagnosis and coordination. Upscaling, therefore, occurs not through the simple replication of pilots but through the co-evolution of relationships, capabilities, and institutional rules that lead to collective action (Wostner, et al. 2026).

This also explains why short funding cycles and unstable administrative frameworks can be so damaging. Institutionalization requires time for shared routines, trust, and expectations to form.

The policy implication is that building transformative partnerships requires investment in intermediary capacity as much as in projects. Policymakers need organizations and individuals able to act as brokers, interpret feedback, maintain accountability, and connect experimentation to wider policy portfolios. This is especially important in less densely populated institutional regions, where partnerships cannot rely on mature stakeholder networks with strong capabilities. Public authorities must therefore think not only about which projects to fund, but also about which organizational capacities make experimentation governable and scalable.

In this sense, transformative partnerships fill an important gap in TIP. They provide a way to connect the ambition of directional transformation with the practical requirements of implementation. They neither displace the state nor romanticize self-organization. Instead, they create an institutional architecture in which strategic intent, distributed learning, and adaptive coordination can reinforce one another over time.

The move from action learning to co-creation is particularly important. Action learning helps actors reflect on concrete problems as they arise; co-creation extends this into shared agenda-setting and joint responsibility for implementation. In the cases examined here, co-creation did not mean that all actors agreed on everything or held identical power. It meant that transformative goals were progressively specified through interaction and that project portfolios emerged from negotiated discovery rather than from unilateral programme design. This distinction matters because many collaborative schemes invoke co-creation rhetorically while in practice offering only consultation at the margins.

Transformative partnerships also imply a particular role for public authorities. The state does not disappear into facilitation, nor does it monopolize problem-solving. Its role is to provide authorization, resources, and an enforceable framework for collaboration, while also preserving the possibility of redirection when learning reveals that some pathways are not viable. Public actors must therefore combine directional intent with reflexive capacity. They need to know when to hold a course and when to revise it. Given information asymmetries, this process is demanding and fraught with challenges. Still, it is more promising than assuming that transformation can be steered effectively by either central command or network spontaneity alone.

From a design perspective, several practical principles follow. First, *partnerships should be built around a recognizable challenge, opportunity or domain* that gives participants a reason to invest. Still, the framing must remain open enough to allow problem or opportunity redefinition and the discovery of complementarities. Second, *brokerage should be explicitly resourced* rather than treated as invisible coordination work. Third, *monitoring systems should capture process learning and emerging bottlenecks*, not only final outputs. Fourth, *policy mixes should allow participants to move from networking and diagnosis to project development, capability building, and wider system integration* without having to exit one instrument before entering another.

These principles suggest that the institutionalization of experimentation is inseparable from the architecture of support. Transformative partnerships need meeting arenas, credible facilitators, tools for shared diagnosis, mechanisms for handling conflict, and pathways to complementary resources. They also need the authority to say no. Accountable experimentation is not endless inclusion or permanent prototyping. It requires choices, sequencing, and sometimes termination. What distinguishes transformative partnerships is not that they avoid discipline, but that they combine discipline with learning and adaptation.

For regions with weaker institutional thickness, this implies a phased strategy. Public support may initially need to carry a greater share of the coordination burden, help identify legitimate intermediaries, and establish the basic routines of collaboration. As networks thicken and trust accumulates, more responsibility can shift toward stakeholder-led agenda formation and self-organized project generation. In institutionally stronger regions, the challenge is often different: not creating networks from scratch, but preventing mature ecosystems from becoming fragmented, complacent, or opaque to newcomers. In both situations, the relevant question is how to design partnerships to sustain discovery while expanding reach and accountability.

## 5. Conclusions

This paper has reframed the upscaling challenge in Transformative Innovation Policy as a problem of institutionalization and governance.

Pilots and policy labs can be valuable instruments for testing ideas under uncertainty, but they are not sufficient institutional solutions for transformative change. Their limitation is not simply that they are small or temporary. Rather, scaling alters actor incentives, coordination demands, accountability conditions, and legitimacy requirements in ways that isolated experiments cannot resolve on their own.

The comparison of four European cases points to a different institutional logic. Across Slovenia, Sweden, the Netherlands, and Denmark, experimentation became more durable where programmes created partnership architectures that combined strategic direction, stakeholder mobilization, brokerage, tailored support, and diagnostic monitoring. Although the cases differed in governance mode and institutional context, they performed similar functions: they created facilitators, relied on brokers, tailored support to participants, and used feedback to adjust implementation.

Two conclusions follow. First, experimentation at scale requires *hybrid governance that combines agency authority with ecosystem legitimacy*. Public authorities remain essential for setting direction, providing resources, and maintaining accountability, but they cannot generate transformative learning through hierarchy alone. Conversely, stakeholder networks provide distributed knowledge and ownership, but they require frameworks, resources, and coordination mechanisms for experimentation to influence mainstream policy. Second, *intermediary capacity is constitutive of transformative policy rather than peripheral to it*. Brokerage, facilitation, trust-building, and diagnostic monitoring are not support functions added after programme design; they are part of the institutional infrastructure through which experimentation becomes cumulative, adaptive, and durable.

These findings have practical implications for regional innovation policy. Policymakers seeking to move beyond pilots should not focus only on selecting promising projects or multiplying experimental calls. They should invest in the organizational capacities that make experimentation governable: credible intermediaries, long-term facilitation, routines for feedback and adjustment, mechanisms for conflict resolution, and links between project-level learning and broader policy portfolios. In this sense, the design question is not only about what to experiment with, but also about how to create institutions that can learn, adapt, and scale responsibly.

The argument has limitations. The four cases are European innovation-policy programmes and should not be treated as a representative sample of all possible experimental arrangements. They are used to generate analytical insights into how experimentation can continue while scaling takes place. The lessons are most directly transferable to regional innovation policy contexts where some administrative capacity, intermediary capability and stakeholder organization already exist (Radosevic, Schwaag Serger, and Soete 2026). Transferability is likely to be more difficult in regions with very weak institutional thickness, limited trust among actors, fragmented public authority or high policy churn caused by political cycles. The findings should also be applied cautiously to public-service experimentation, where scaling may depend more directly on legal mandates, budgetary decisions or administrative roll-out. The contribution of the paper is therefore analytical rather than prescriptive: it identifies governance mechanisms and design principles that can help institutionalize experimentation beyond pilots, while recognizing that their organizational form must be adapted to different policy domains and institutional settings.

Future research should examine how transformative partnerships operate in institutionally thinner regions, how they evolve over longer time horizons, and how their performance can be assessed without reducing experimentation to narrow output metrics. The contribution of this paper is therefore analytical rather than prescriptive: it identifies governance mechanisms and design principles that can help institutionalize experimentation beyond pilots, while recognizing that their organizational form must be adapted to different policy domains and institutional settings. For TIP, the central lesson is that transformative change requires not only experiments, but institutions capable of making experimentation cumulative, accountable, and governable.

## Note

1. The basis for this section is extensive evidence presented in our working paper (Radosevic, Tsekouras, et al. 2023).

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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## References

- Bassart-I-Loré, M. 2025. "Mixing Innovation Policies for Low-Carbon Transitions? An Agent-Based Approach." *Technological Forecasting and Social Change* 222, 124372. <https://doi.org/10.1016/j.techfore.2025.124372>.
- Bessant, J., and H. Rush. 1995. "Building Bridges for Innovation: The Role of Consultants in Technology Transfer." *Research Policy* 24 (1): 97–114. [https://doi.org/10.1016/0048-7333\(93\)00751-E](https://doi.org/10.1016/0048-7333(93)00751-E).
- Bessant, J., and G. Tsekouras. 2001. "Developing Learning Networks." *AI & Society* 15 (1-2): 82–98. <https://doi.org/10.1007/BF01205739>.
- Bessant, J., A. Alexander, G. Tsekouras, H. Rush, and R. Lamming. 2012. "Developing Innovation Capability through Learning Networks." *Journal of Economic Geography* 12 (5): 1087–1112. <https://doi.org/10.1093/jeg/lbs026>.
- Bianchi, G., C. Matti, D. Pontikakis, R. Reimeris, K. H. Haegeman, M. Miedzinski, P. Sillero Illanes, et al. 2024. "Innovation for Place-Based Transformations." Bianchi, G. editor(s), *Publications Office of the European Union*, Luxembourg, <https://doi.org/10.2760/234679>, JRC135826.
- Borrás, S., and C. Edquist. 2013. "The Choice of Innovation Policy Instruments." *Technological Forecasting and Social Change* 80 (8): 1513–1522. <https://doi.org/10.1016/j.techfore.2013.03.002>.
- Chen, F., B. Wu, W. Q. Lou, and B. W. Zhu. 2025. "An Evolutionary Analysis of the Effect of Dual-Credit Policy on Technology R & D Diffusion among New-Energy Vehicle Enterprises in a Complex Network." *Environment, Development and Sustainability* 1–33. <https://doi.org/10.1007/s10668-025-06848-3>.
- Bravo-Biosca, A. 2019. "Experimental Innovation Policy." *NBER Working Paper* 26273. p. 1–49.
- Brockbank, A., and I. McGill. 2003. *The Action Learning Handbook*. London: Routledge.
- Bucar, M., M. Crnigoj, B. Lipnik, A. Jaklic, M. Stare, B. Udovic, B. Likar, and P. Strukelj. 2022. *Vrednotenje Sistema in Izvajanja S4*. University of Ljubljana, Ljubljana.
- Burger, A., M. Crnigoj, A. Jaklic, B. Kalar, and I. Kolesa. 2023. *Priprave Metodologije in Presoja Ucinov Ukrepov S5*. University of Ljubljana.
- D'Andria, D., and I. Savin. 2015. "Motivating Innovation in a Knowledge Economy with Tax Incentives (No. 2015-004)." *Jena Economics Research Papers* 2015-004, Friedrich-Schiller-University Jena.
- Granstrand, O., and M. Holgersson. 2020. "Innovation Ecosystems: A Conceptual Review and a New Definition." *Technovation* 90-91: 102098. <https://doi.org/10.1016/j.technovation.2019.102098>.
- Hoogma, R., R. Kemp, J. Schot, and B. Truffer. 2002. *Experimenting for Sustainable Transport*. London: Spon Press.
- Kattel, R., and M. Mazzucato. 2018. "Mission-Oriented Innovation Policy and Dynamic Capabilities in the Public Sector." *Industrial and Corporate Change* 27 (5): 787–801. <https://doi.org/10.1093/icc/dty032>.
- Kuznetsov, Y., and C. Sabel. 2011. *New Open Economy Industrial Policy: Making Choices without Picking Winners*. Washington, DC: World Bank.
- Kuznetsov, Y., and C. Sabel. 2017. "Managing Self-Discovery: Diagnostic Monitoring of a Portfolio of Projects and Programs." In P. Bianchi and S. Labory (eds), *International Handbook on Industrial Policy*. Edward Elgar Publishing.
- Lindner, R., et al. 2021. *Mission-Oriented Innovation Policy: From Ambition to Successful Implementation*. Luxembourg: Publications Office of the European Union.
- Livieratos, Antonios D., George Tsekouras, Wim Vanhaverbeke, and Antonios Angelakis,. 2022. "Open Innovation Moves in SMEs: how European SMEs Place Their Bets?" *Technovation* 117: 102591. <https://doi.org/10.1016/j.technovation.2022.102591>.
- Livieratos, Antonios D., George Tsekouras, Wim Vanhaverbeke, and Georgia Tsiliki. 2026. "Unlocking SME Innovation Success through Sequenced Collaboration." *Small Business Economics* 66 (4): 1605–1633. <https://doi.org/10.1007/s11187-025-01156-6>.



- Mazzucato, M. 2018. "Mission-Oriented Research & Innovation in the European Union." *European Commission* 36: 36546.
- Nauwelaers, C., and R. Wintjes. 2002. "Innovating SMEs and Regions: The Need for Policy Intelligence and Interactive Policies." *Technology Analysis & Strategic Management* 14 (2): 201–215. <https://doi.org/10.1080/09537320220133866>.
- Neto, J. R., et al. 2024. "Factors for Innovation Ecosystem Framing and Legitimacy in Transformative Innovation Policy." *Technological Forecasting and Social Change* 206: 123630.
- OECD. 2024. *Mission-Oriented Innovation Policies for Net Zero: How Can Countries Implement Missions to Achieve Climate Targets?*, OECD Publishing, Paris, <https://doi.org/10.1787/5efdbc5c-en>.
- Patton, M. Q. 2011. *Developmental Evaluation*. New York: Guilford Press.
- Patton, M. Q. 2016. "State of the Art and Practice of Developmental Evaluation." *New Directions for Evaluation* 149: 27–39.
- Pontikakis, D, et al. 2022. *The Playbook for Fostering Partnerships for Regional Innovation*. Luxembourg: Publications Office of the European Union.
- Radosevic, S., G. Tsekouras, and P. Wostner. 2023. *Institutionalising Experimentation in Innovation Policy: challenges and Solutions in Upscaling*, JRC134408 Seville: European Commission.
- Radosevic, S., D. Kanellou, and G. Tsekouras. 2023. "The Experimentation–Accountability Trade-off in Innovation and Industrial Policy: are Learning Networks the Solution?" *Science and Public Policy* 50 (4): 655–669. <https://doi.org/10.1093/scipol/scad013>.
- Radosevic, S., S. Schwaag Serger and Soete, L. (eds.) 2026. *Research Handbook on Regions and Transformative Innovation Policy*. Cheltenham: Edward Elgar Publishing.
- Sabel, C. F., and D. G. Victor. 2022. *Fixing the Climate*. Princeton: Princeton University Press.
- Schot, J., and W. E. Steinmueller. 2018. "Three Frames for Innovation Policy." *Research Policy* 47 (9): 1554–1567. <https://doi.org/10.1016/j.respol.2018.08.011>.
- Smith, A, et al. 2017. *Grassroots Innovation Movements*. London: Routledge.
- Ulmanen, J, et al. 2022. "Lost in Translation: Challenges in Creating New Transformative Innovation Policy Practices." *Research Policy* 51 (9): 104574.
- Weber, K. M., and H. Rohrer. 2012. "Legitimising Research, Technology and Innovation Policies for Transformative Change." *Research Policy* 41 (6): 1037–1047. <https://doi.org/10.1016/j.respol.2011.10.015>.
- Wostner, P, et al. S. 2026. "Unravelling Innovation Transition Traps: The Imperative of Collective Action." In S. Radošević, S. Schwaag Serger, and L. Soete (eds), *Research Handbook on Regions and Transformative Innovation Policy*. Edward Elgar, Cheltenham