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INSTITUTIONALIZING EXPERIMENTATION IN INNOVATION POLICY: CHALLENGES AND SOLUTIONS IN UPSCALING



1. Motivation

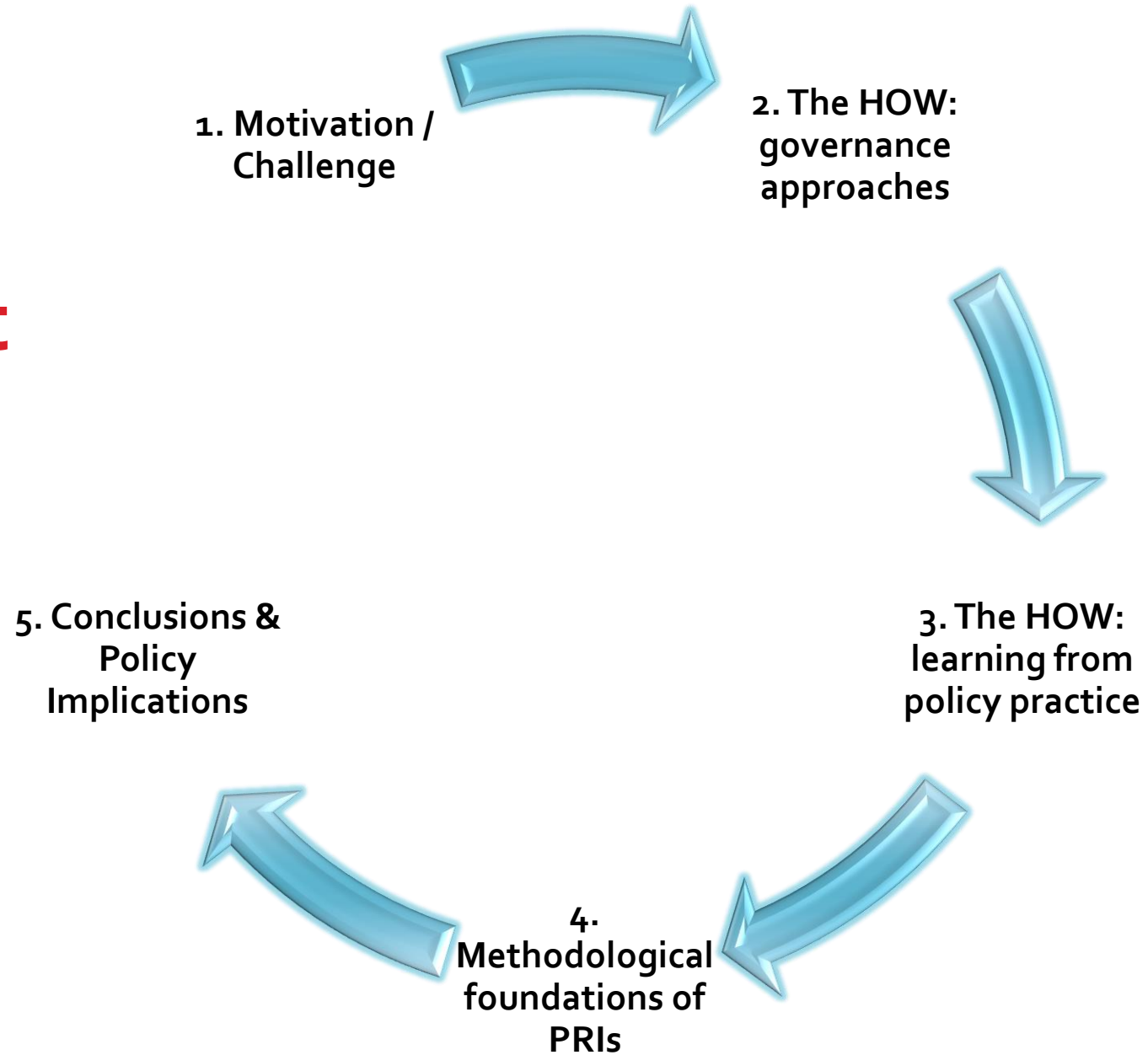
- A key feature of the transformative innovation policy (TIP) is directionality and intentionality of experimentation efforts.
- One of the major weaknesses however is **the lack of solutions for institutionalizing experimentation beyond pilots**

➔ HOW TO SCALE-UP?

- To address this issue, **we explore:**
 - The relevance and applicability of *pilots and their organisational solution policy* labs as two in-vogue approaches to experimentation.
 - *How to institutionalize experimentation* in the regional context through top-down or bottom-up, self-organized stakeholder involvement.
 - *Methodological issues in implementing Partnerships for Regional Innovation* (PRI) as the proposed main governance form for implementing transformative regional innovation policy in the EU in the next planning period ➔ **the how.**



Content



1. Challenge(s) of transformative innovation policy

- **The TIP approach:** experimentation, cross learning and discovery of 'what works' (Katell et al., 2018).
 - Currently focus on **pilots** and **policy labs**:
 - Pilots have number of advantages: they can be modified or cancelled, they are very suitable if the programme has limited scope and outreach, especially risks and failures are acceptable and technical risks are differentiated from strategic risks.
 - Can be efficiently „filtered“ with the use of „Randomised Control Trials“ (RCTs).
 - But RCTs conceptualise interventions as occurring in closed systems and study the intervention as a static and mechanical cause aimed at preconceived effects in a simple linear model of cause-effect. ≠
- TIP programmes:**
- The broader the scope and outreach of the intended program (complexity), the more there will be factors that pilots cannot account for (context dependency), the lower pilots' learning value or relevance.
 - Developmental evaluation seems more appropriate as „there are no known solutions to issues or where multiple pathways forward are possible“.
 - → use of “diagnostic monitoring” (Kuznetsov and Sabel, 2017) or early warning systems, when results do not seem likely, seems more appropriate.



'How can TIP programmes generate transformative change?

2. The HOW: governance approaches

- **How to engage stakeholders:** proponents of mission-oriented and TIP policies advocate either (Ulmanen et al. (2022)):
 - top-down approach (mission-oriented) or
 - promote bottom-up, self-organised stakeholder involvement (transformative policy).



2. Top-down vs. Bottom-up

Each of the two solutions has problems in resolving at least some of the following **coordination challenges**:

- multi-level (EU - regional-national),
- horizontal (inter-ministerial),
- vertical (ministry-agency-firms and knowledge institutions),
- intersectoral (public-private)
- timing coordination!

Table 1: Trade-offs between two modes of governance of regional Transformative Innovation Policy

	Individual agencies/'Whole of government'/Top-down	Ecosystem-driven/bottom up
Objectives	Easier to agree on	Difficult to agree on
Autonomy	High autonomy, which may lead to higher flexibility	Potentially cumbersome network governance
Legitimacy and critical mass	Weaker as it is uncertain if regional stakeholders will 'buy in'	High provided that all stakeholders are involved and engaged
Accountability	Mainly vertical and easier to address in principle, though also possibly with greater 'capture risks' due to information asymmetries.	Challenging mutual accountabilities, but easier implemented in institutionally 'thick' regions
Upscaling and implementation challenges	Challenging in enlarging it beyond the government actors and agencies' mandates (limited policy reach)	Easier to upscale and implement in institutionally 'thick' regions (developed inter-organisational co-operation and institutional capacity)
Appropriateness	For mission-oriented programs	For transformative sociotechnical programs

Source: authors



3. The HOW: learning from policy practice

Our approach:

- Policy practice has already generated relevant insights and lessons that could be used to implement transformative regional innovation policy, particularly PRIs:
 - **Advances country cases** (based on in depth analysis of Public Private Innovation Partnership programmes):
 - VINNVÄXT programme (Sweden)
 - Innovation Performance Contracts programme (Netherlands)
 - Innovation Networks programme (Denmark)
 - **Medium development level case:**
 - Smart Specialisation Strategy governance approach (Slovenia)

Elements of institutionalisation of PRI	Features of institutionalisation	Slovenian Strategic Research and Innovation Partnerships	VINNVÄXT programme (Sweden)	Innovation Performance Contracts (IPC) programme (Netherlands)	Innovation Networks programme (Denmark)
Facilitators	1. <u>Networks emerged driven by institutionally different facilitators</u> , establishing feedback loops with stakeholders throughout programme activities' planning and implementation phases!				
Forms of collaboration	2. Facilitators have <u>created space for communication and interaction</u> to explore new options and solutions!				
Moderators (brokers)	3. Facilitators (pro) <u>actively engaged in brokering activities</u> → the <u>funding</u> programme enables a broker to connect and <u>develop the relationship</u> between different innovation actors!				
Scope of moderation (brokerage)	4. Brokers' scope of activities is <u>not confined to R&D</u> - they are also assigned to facilitate commercialisation, training and especially connections between regional players and <u>international actors and value chains</u> .				
Tailoring of support	5. Networking programs have matched support to individual needs → the scope of <u>support was specific to individual actors within the particular mission</u> of upgrading the capabilities of respective companies!				
Diagnostic monitoring (flexibility because of new insights)	6. A distinctive feature of successful networking programmes is <u>flexibility in all stages</u> in the light of new insights → specific form of diagnostic monitoring → learning!				

The bottom-line: to establish the institutional context 'in which an outcome will emerge from interaction among decision-makers, each of whom is in pursuit of solutions to his own problems', BUT who, at the same time, commit towards the same goals and converge their actions in the same direction!

The S4 case in SI



The S4 case in SI (2)

Precondition 1: Directionality and intentionality

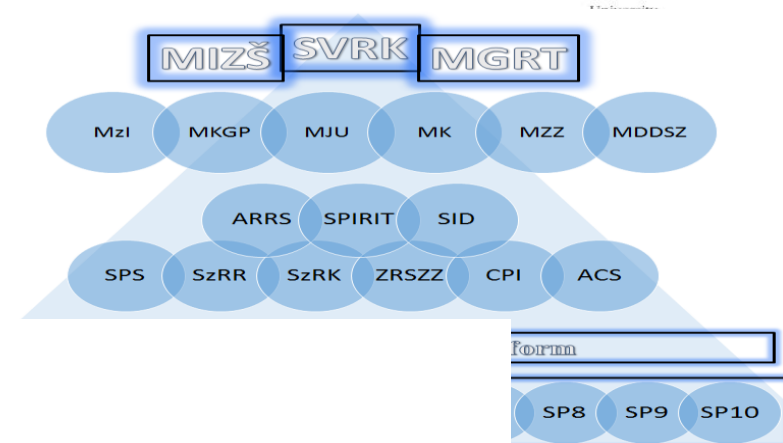
- Integrated whole-of-the-government approach
- Strong business orientation
- Niche orientation

Precondition 2: Open leadership from the top

- Stakeholders, particularly firms, expected the government to take the leading role, but on the basis of collaborative, forward-looking approach!

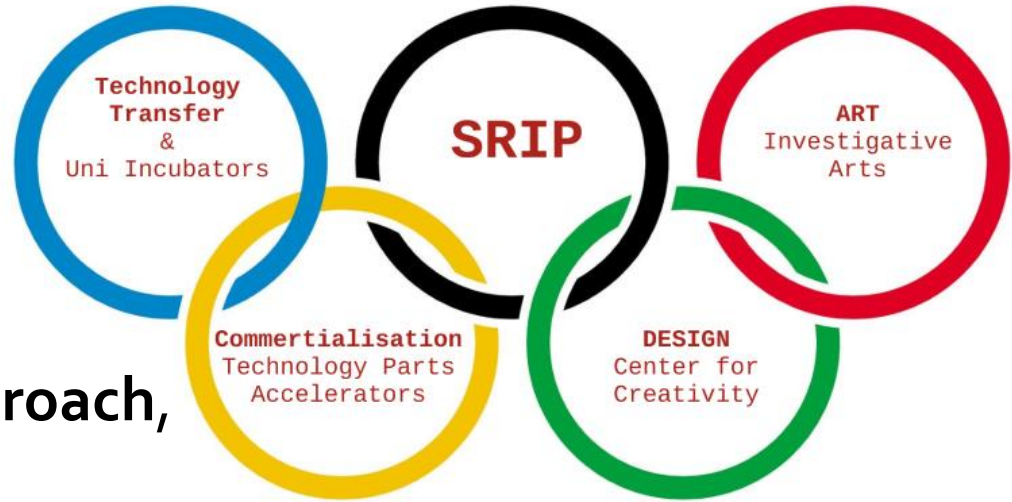
PRIs: Orchestrated experimentation and discovery from the bottom

- Strategic research and innovation partnerships - SRIPs
- The government set the framework conditions and allowed stakeholders of each SRIP to decide on their specific business model → flexibility.



Taking the two approaches to the next level:
towards systems innovation and upscaling

mutually reinforcing top-down and bottom-up approach,
 leading towards the virtuous cycle :



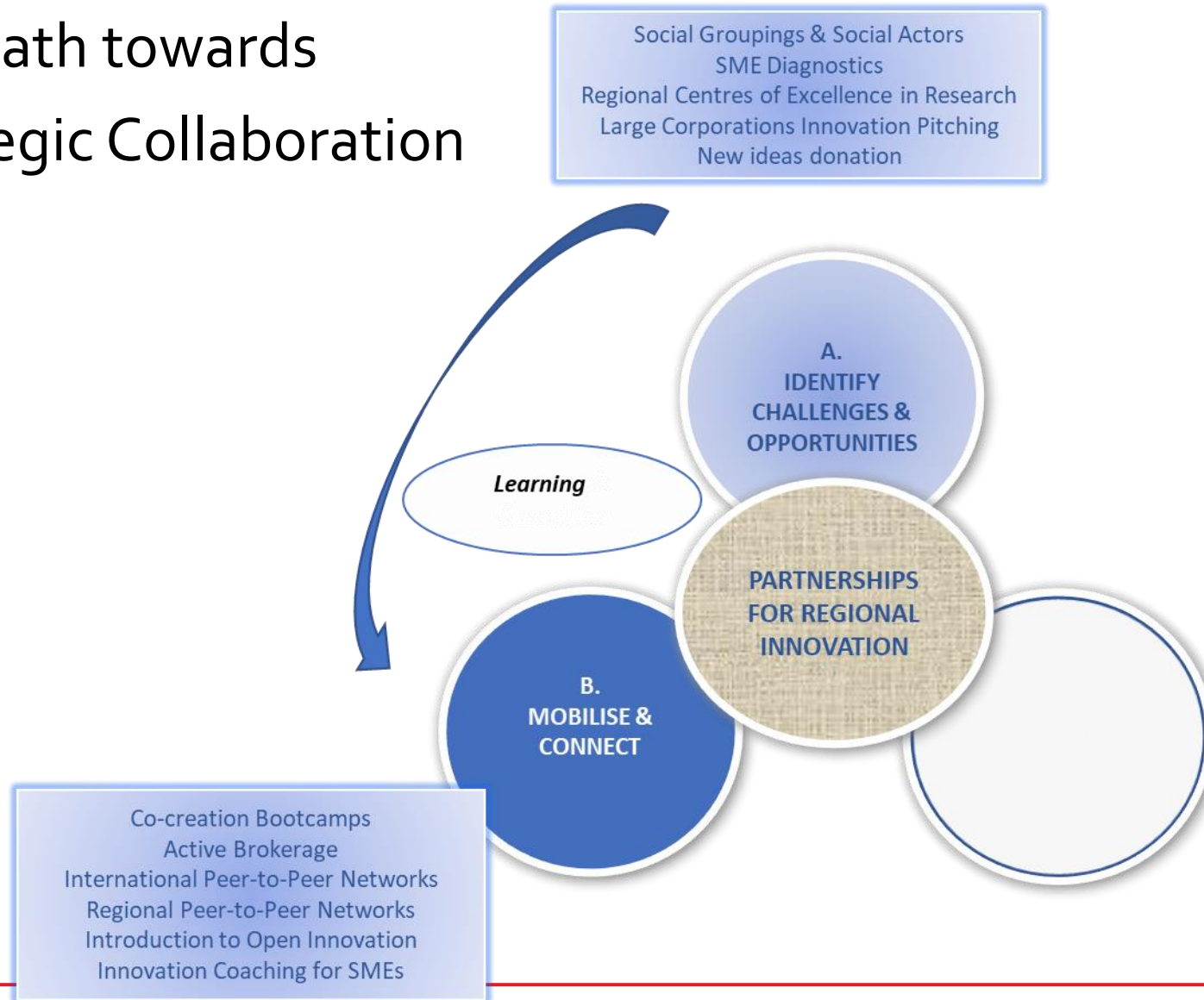
1. The government must have a system of checks and balances (monitoring for accountability, gov. as a guardian of the framework conditions & preventing „mediocre ambition“)
2. PRIs must integrate into the broader innovation, business, and start-up support ecosystems.
3. For the system to upgrade, the policy mix must be constantly adjusted to the changing and rising needs of the PRI / SRIP stakeholders.
4. Governments must ensure long-term commitment and political ownership
 Relationships leading to **TRUST**.





4. How to really do it: Methodological foundations of PRIs

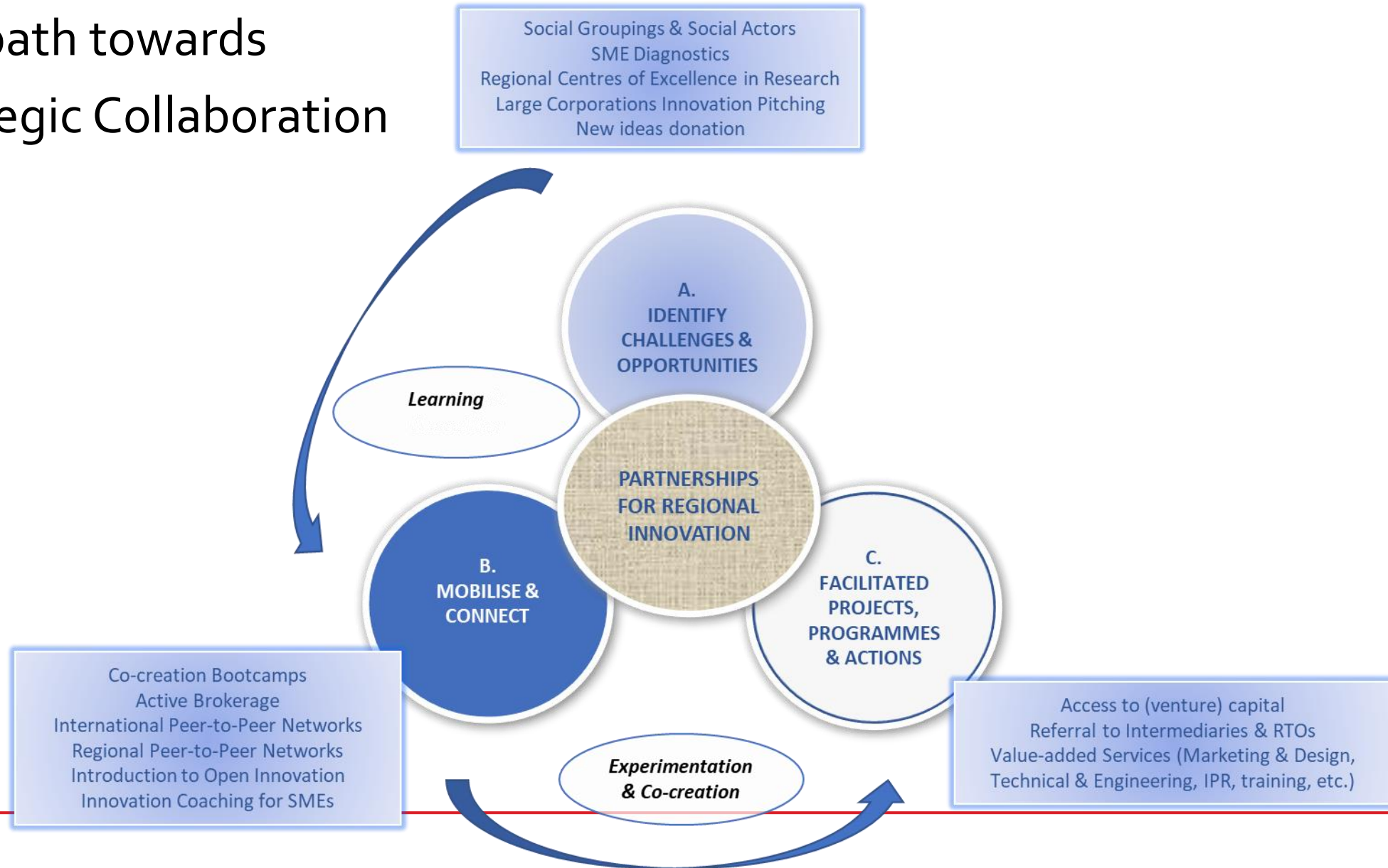
1 The path towards Strategic Collaboration





4. How to really do it: Methodological foundations of PRIs

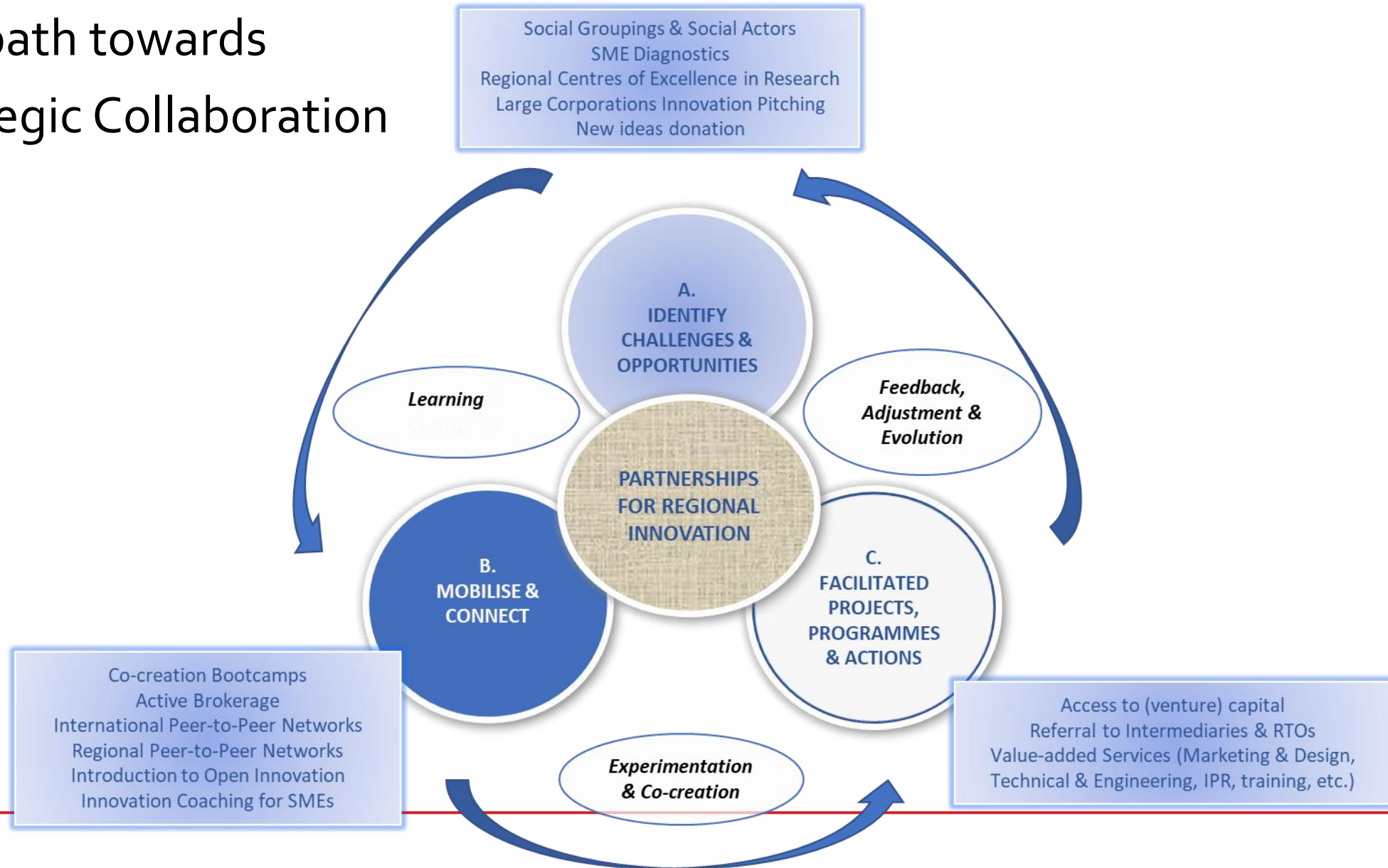
2 The path towards Strategic Collaboration





4. How to really do it: Methodological foundations of PRIs

3 The path towards Strategic Collaboration

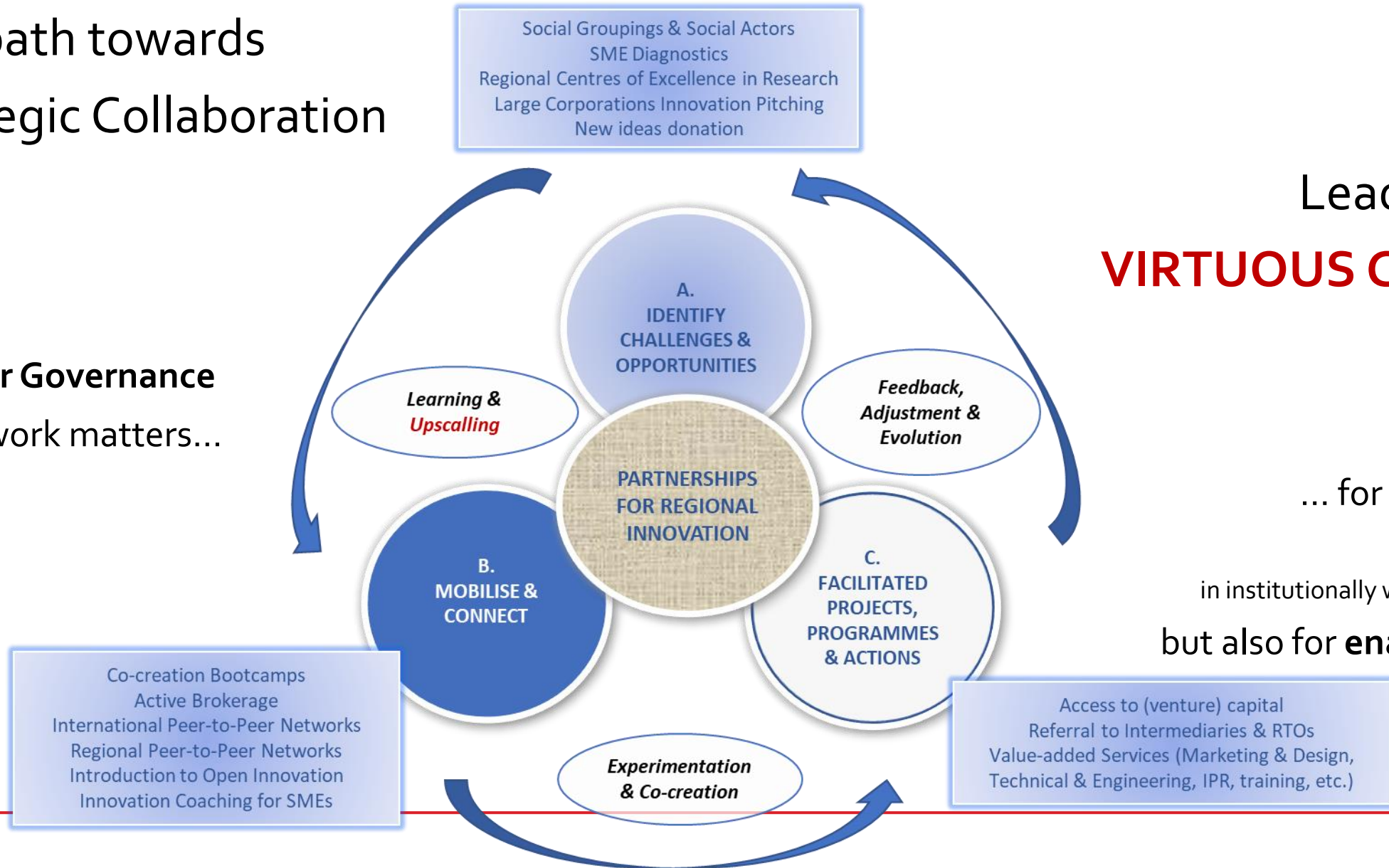




4. How to really do it: Methodological foundations of PRIs

3 The path towards Strategic Collaboration

Broader Governance Framework matters...



Leading to **VIRTUOUS CYCLE!**

... for **scalling**, especially in institutionally weaker areas, but also for **enactment!**



4.4 Action Learning as the underlying mode of Work of PRIs (Learning Networks)

- Through action learning, individuals learn with and from each other by working on real problems and reflecting on their own experiences." (McGill and Beaty, 2021: 11)
- 'Action learning' is a 'highly situational' practice (Gifford, 2005:2).
- But PRIs / LNs should be set up as:
 - formal inter-stakeholder arrangements,
 - with explicit operational structure and business model!





4.5 Action Learning as the underlying mode of Work of PRIs (Learning Networks)

Transformation (of a region or a country):

- Requires addressing large set of complex and / or ill-defined problems and opportunities...
- ... for that experimentation with diverse coalitions is needed.

➔ Co-creation and Strategic Collaboration!

PROGRAM MARTINA

Osnovni cilj programa MARTINA je okrepitev položaja in vlogo slovenske industrije na področju materialov, še posebej visokotekovinskih jekel in aluminija, ter krepiti konkurenčnost na globalnem trgu s prehodom iz standardnih v razvojne izdelave v mednarodnih verigah in mrežah vrednosti. Program MARTINA se v kontekstu strategije pametne specializacije usmerja na prednostno področje rabe materialov kot ključnih produktov, na temen in nastajajočih področjih jekla, aluminija in multikomponentnih materialov, hkrati pa povečuje še uporabo materialov v industriji, ciljno v avtomobilski, ki je strateško gospodarstvo strateškega značaja, tako po obsegu, dodani vrednosti, kot potencialu in stopnji izvoza.

Program vključuje in povezuje kar pet od ključnih identifičnih industrijskih sektorjev in sicer: metalurški, omrežja, žagarski, kemično in avtomobilski industriji. Program povezuje 16 partnerjev (7 industrijskih, 6 inštitutov, 3 razvojne centre), ki središča vlagajo v skupen razvoj novih materialov kot ključnih produktov, orodij in tehnologij oblikovanih s ciljem, da se okrepi sodobnost proizvodnje ključnih materialov in dosežejo visoko dodano vrednost in nastopajo v mednarodnih verigah vrednosti.

KLJUČNI KAZALNIKI IN MEJNIKI

211,77 FTE	122	46
Raziskovalnih in razvojnih	Inovacij	Novih mentorstev
89	106	
Procesnih/ organizacijskih rešitev	Zaposlenih oblik	
8		
Novih produktov		
19,415 FTE	2,928.007 €	3,606.786 €
iz opravljenih s strani novih raziskovalcev	Novih investicij	Novih investicij v R&D

VISOKOTRONNA JEKLA

Razvoj je bil osredotočen na visokotronna jekla za avtomobilsko industrijo, s ciljem povečati mehanske in dinamične lastnosti jekel, namenjenih konstrukcijskim in varnostnim elementom.

CLUSTERIZACIJA

Razvoj jekla z visoko trdnostjo in visoko odpornostjo na dinamično obremenjevanje, ter zmehčanje medsebojnega vpliva.

PARTNERJI

Steel Steel, TPV, IMT, ULIMIT, UMPEL, ZAG

VISOKOTRONE ALUMINIJEVE ZLITINE ZA AVTOMOBILSKO INDUSTRIJO

Razvoj aluminijevih zlitin za avtomobilsko industrijo in novih tehnologij litja.

CLUSTERIZACIJA

Razvoj aluminijevih zlitin z boljšimi mehanskimi lastnostmi in uporabni vzvi delovni recikliranega aluminija, brez upora na kvaliteto končnega izdelka. Modifikacija: Izvedba izdelka ter upravljanje nove tehnologije litja.

PARTNERJI

IMPULS, TALUM, TPV, VESOLU, IMT, ULIMIT, IN UMPS.

Why are PRIs/LNs critical for the success of this process:

- They provide for facilitated interaction among a diversity of stakeholders and participants ➔ **learning.**
- Successful implementation requires negotiation among topics and individuals and skilled balancing of different perspectives or interests ➔ **common direction.**
- They enable synergies and new solutions, while having capacity to adapt previously agreed processes and procedures to emerging new problems which demand new solutions ➔ **value creation, adaptation & upscaling.**



5. Conclusions & Policy Implications (1)

1. Pilots and policy labs as the mainstream institutional solutions to experimentation, at least in the context of the EU regional innovation policy, face serious challenges.
2. Transformative regional policies require complementary national or regional government-facilitated approaches complemented by bottom-up driven partnerships for regional innovation (PRIs).
3. PRIs should , within a formal context:
 - promote learning and mobilisation of diverse coalitions of stakeholders in a common direction
 - via facilitation, brokering, negotiations, promoting syneriges and finding new solutions,
 - in a constantly adapting context,
 - with chances of upscaling and enactment being improved when embedded in a broader eco-system with (pro)active government.



5. Conclusions & Policy Implications (2)

4. The 'thicker' the initial institutional environment, the easier it is to introduce more advanced PRI functions.
5. Weaker institutional environments will require greater commitment due to lacking intermediary organisations, but also, e.g., with regard to ensuring accountability → thus, the weaker the institutional environment, the stronger the role for the government.
6. Stability (~ political cycles) is essential for building institutional capacities, relationships and trust and thus for putting in place **virtuous cycle of co-creation and strategic collaboration!**

== TRANSFORMATION of a REGION / COUNTRY!



JRC Working Paper coming out in July 2023

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Thank you!

A poster for the RSA Annual Conference 2023. The top section has a light blue background with the text: "RSA ANNUAL CONFERENCE 2023", "Transforming Regions:", "Policies and Planning for People and Places", and "14th-17th June 2023, School of Economics and Business, University of Ljubljana, Slovenia". Below this is a photograph of the Ljubljana Castle on a hill overlooking the city. The bottom section is a white banner with logos for the Regional Studies Association (RSA), the University of Ljubljana School of Economics and Business (SEB), and the Republic of Slovenia Ministry of Cohesion and Regional Development.

RSA ANNUAL CONFERENCE 2023
Transforming Regions:
Policies and Planning for People and Places
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RSA Regional Studies Association
A leading & impactful community

University of Ljubljana
SEB School of Economics and Business

REPUBLIC OF SLOVENIA
**MINISTRY OF COHESION
AND REGIONAL DEVELOPMENT**