

BRIDGING SOCIAL INNOVATION AND POLICY MIX RESEARCH: AN EXPLORATION FOR THE CASE OF SOCIAL INNOVATION IN ENERGY TRANSITIONS

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Photo by Flor Avelino, 2019

AGENDA

- **Part I:** SONNET project on Social Innovation in Energy Transitions
- **Part II:** Policy Mix Literature within Sustainability Transitions Research
- **Part III:** Policy Mixes for the Diffusion of Social Innovation in Energy Transitions



PART 1: SONNET PROJECT ON SOCIAL INNOVATION IN ENERGY TRANSITIONS

Co-creating a rich understanding of the diversity, processes, contributions, success and future potential of social innovation in the energy sector

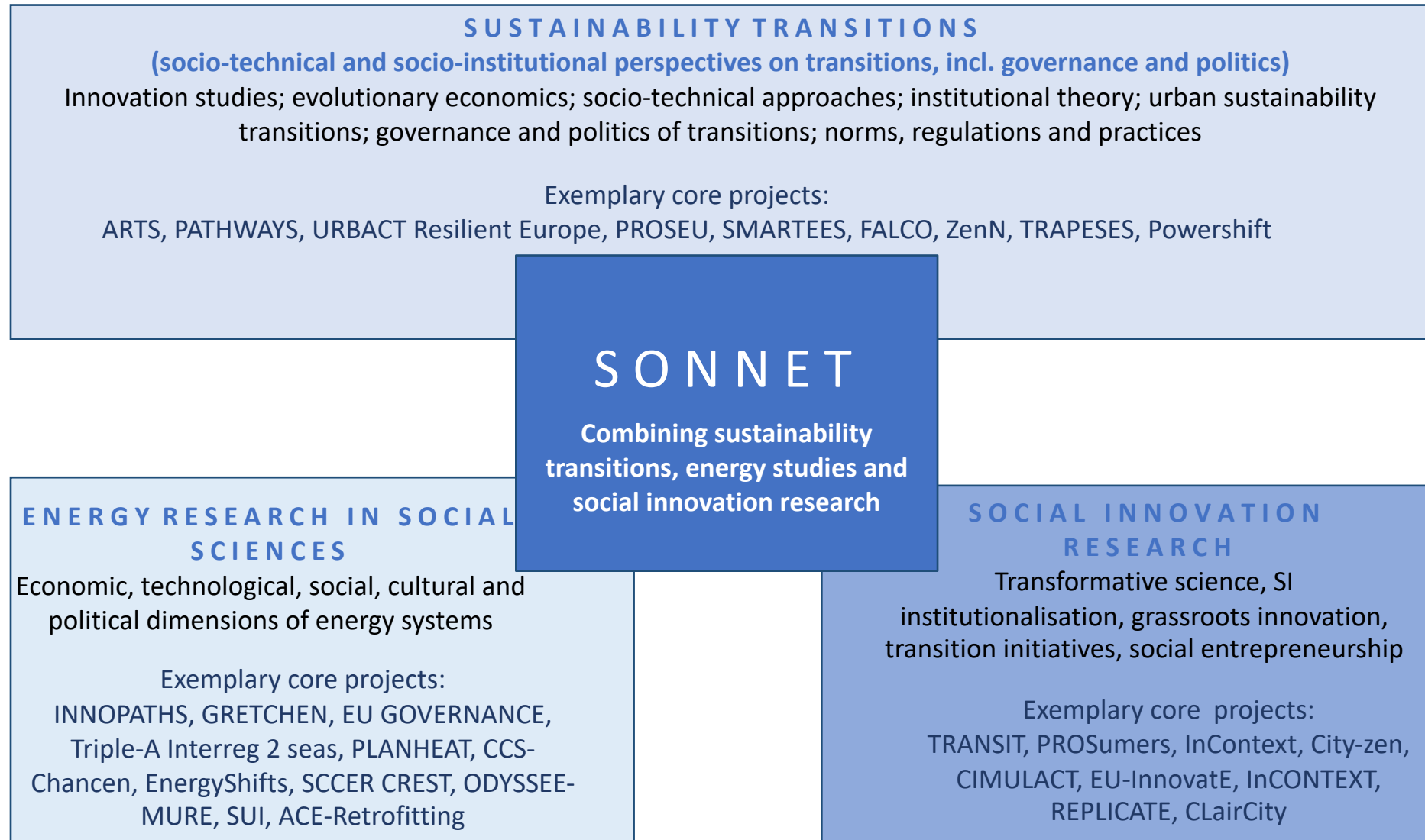


SONNET's **aim** and **definition** of social innovation

- SONNET's **overall aim** is to generate novel understandings of the diversity, processes and contributions of social innovation in the energy sector, and critically evaluate and assess their success and future potential towards supporting sustainable transitions of energy systems.
- SONNET's **definition of social innovation** in the energy sector:

Ideas, objects and/or activities
that **change social relations**
and
involve new ways of
doing, thinking about and **organising**
energy.

SONNET builds on **three literatures** – and related projects

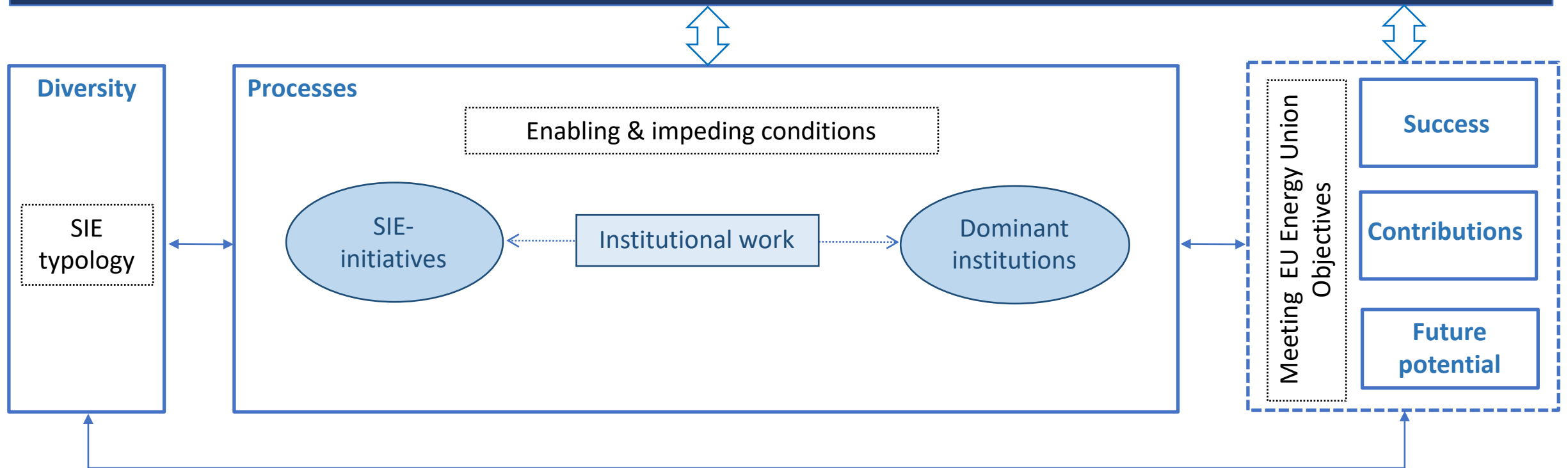


SOCIAL INNOVATION IN ENERGY TRANSITIONS: SONNET'S **CONCEPT**

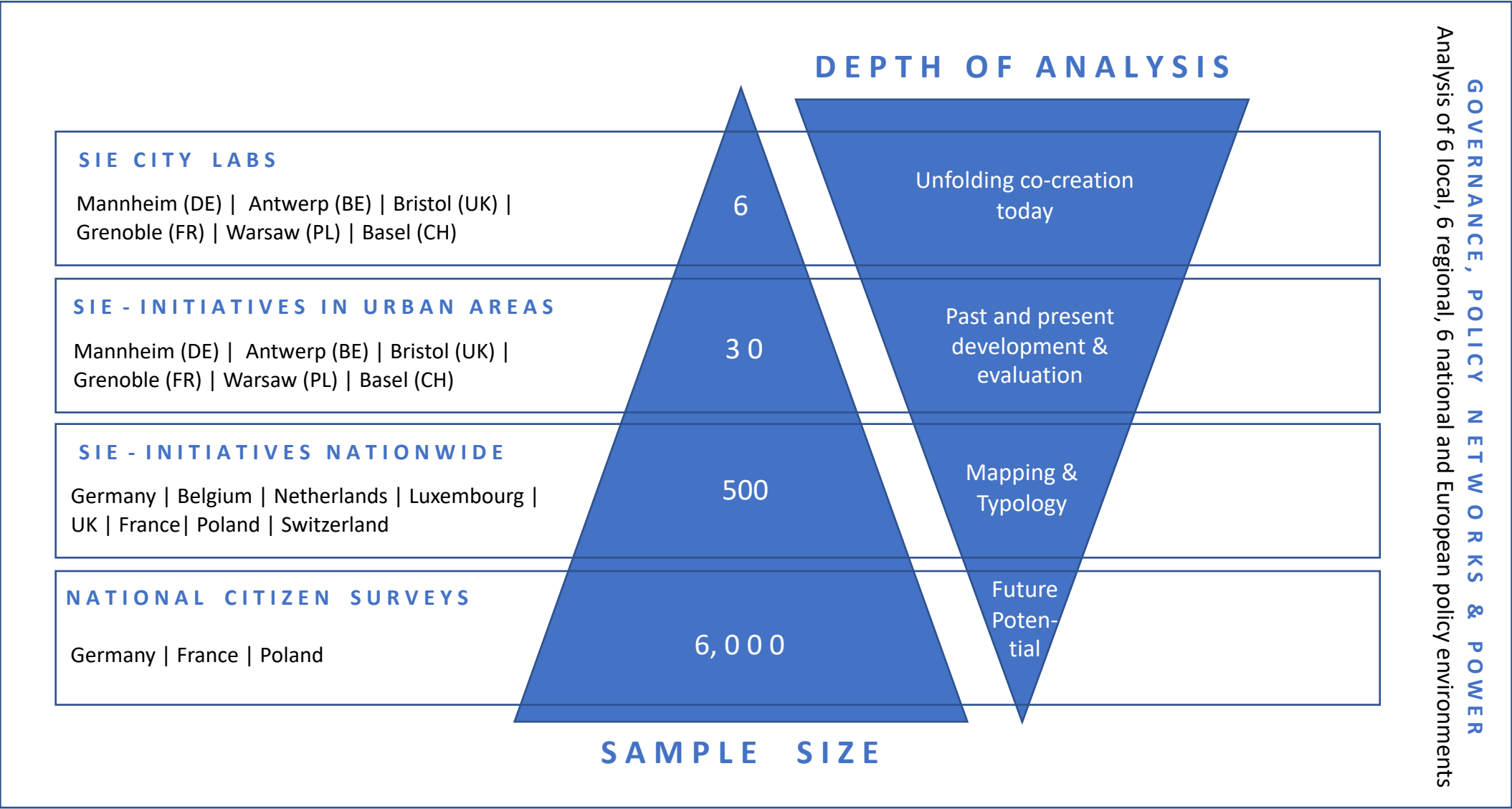
Co-creating a rich understanding of the diversity, processes, contributions, success and future potentials of SIE

Social Innovation in Energy Transitions

Socio-economic, socio-cultural (incl. gender) and socio-political dimensions and interrelations with socio-technical aspects



SONNET's empirical **research design** – a multi-method approach



PART 2: POLICY MIX LITERATURE WITHIN SUSTAINABILITY TRANSITIONS RESEARCH

A brief introduction

Energy Research & Social Science 33 (2017) 1–10

Contents lists available at ScienceDirect

Energy Research & Social Science

journal homepage: www.elsevier.com/locate/erss



Original research article

Conceptual and empirical advances in analysing policy mixes for energy transitions

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ARTICLE INFO

Keywords:
Policy mix
Energy transitions
Policy processes
Policy strategy
Consistency
Coherence

ABSTRACT

Energy transitions face multiple barriers, lock-in, path dependencies and resistance to change which require strategic policy efforts to be overcome. In this regard, it has been increasingly recognised that a multiplicity of instruments – or instrument mixes – are needed to foster low-carbon transitions. In addition, over the past few years a broader conceptualization of policy mixes for sustainability transitions has emerged which we adopt in this special issue. Such a broader perspective not only examines the interaction of instruments, but also captures corresponding policy strategies with their long-term targets and pays greater attention to the associated policy processes. It also encompasses the analysis of overarching policy mix characteristics such as consistency, coherence or credibility, as well as policy design considerations. Furthermore, it embraces the analysis of actors and institutions involved in developing and implementing such policy mixes. To explicitly consider these further aspects of policy mixes, this special issue includes fifteen papers with different analytical perspectives drawing on a range of social science disciplines, such as environmental economics, innovation studies and policy sciences. It is our hope that the conceptual and empirical advances presented here will stimulate diverse future research and inform policy advice on policy mixes for energy transitions.

Research Policy xxx (xxxx) xxx

Contents lists available at ScienceDirect

Research Policy

journal homepage: www.elsevier.com/locate/respol



Policy mixes for sustainability transitions: New approaches and insights through bridging innovation and policy studies

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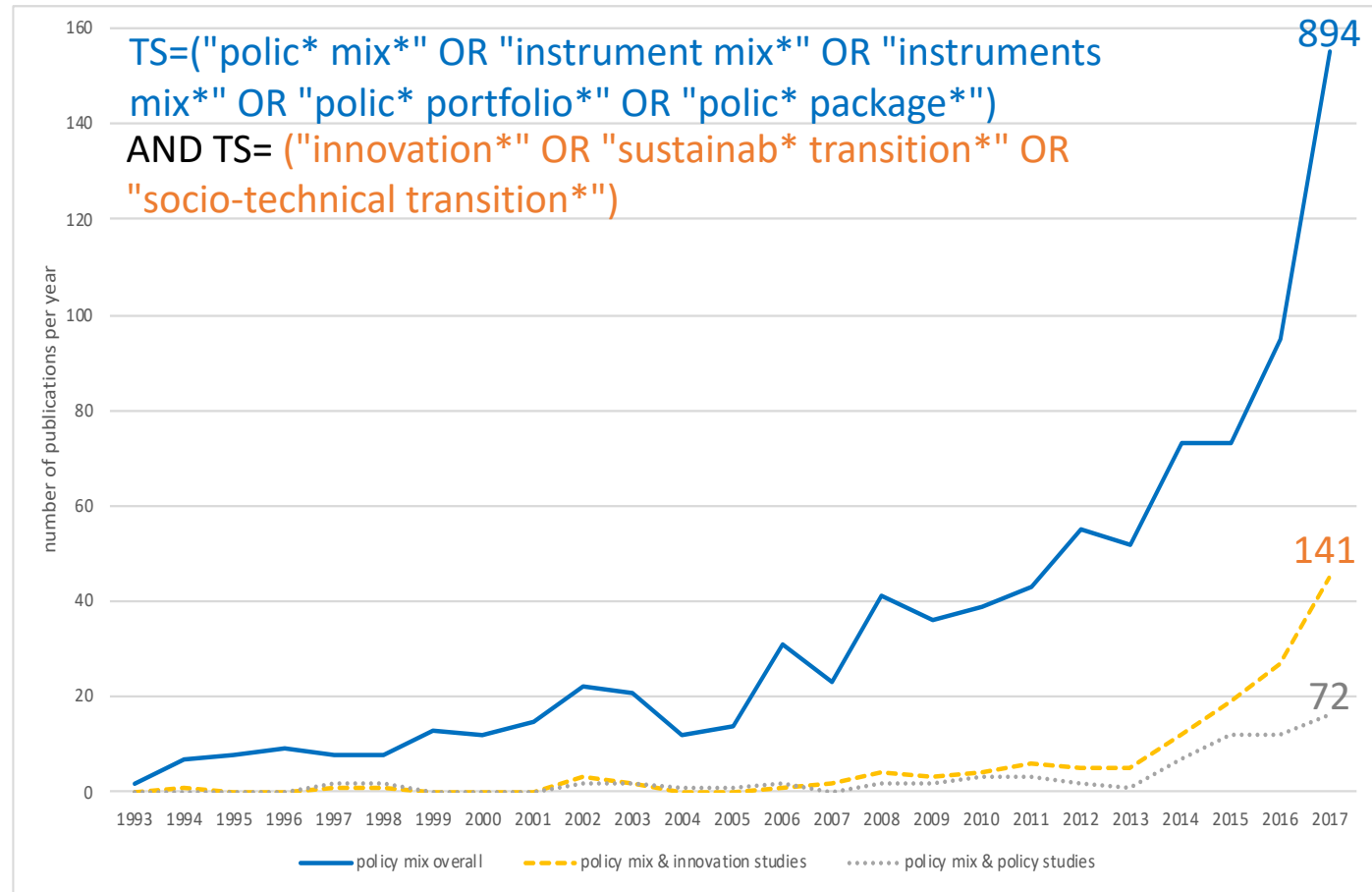
ARTICLE INFO

Keywords:
Policy mix
Innovation policy
Sustainability transitions
Innovation studies
Policy studies
Public policy

ABSTRACT

There has been an increasing interest in science, technology and innovation policy studies in the topic of policy mixes. While earlier studies conceptualised policy mixes mainly in terms of combinations of instruments to support innovation, more recent literature extends the focus to how policy mixes can foster sustainability transitions. For this, broader policy mix conceptualisations have emerged which also include considerations of policy goals and policy strategies; policy mix characteristics such as consistency, coherence, credibility and comprehensiveness; as well as policy making and implementation processes. It is these broader conceptualisations of policy mixes which are the subject of the special issue introduced in this article. We aim at supporting the emergence of a new strand of interdisciplinary social science research on policy mixes which combines approaches, methods and insights from innovation and policy studies to further such broader policy mix research with a specific focus on fostering sustainability transitions. In this article we introduce this topic and present a bibliometric analysis of the literature on policy mixes in both fields as well as their emerging connections. We also introduce five major themes in the policy mix literature and summarise the contributions made by the articles in the special issue to these: methodological advances; policy making and implementation; actors and agency; evaluating policy mixes; and the co-evolution of policy mixes and socio-technical systems. We conclude by summarising key insights for policy making.

Policy Mix: Popular **Buzzword**, including in Innovation Research – but not in social innovation research



Source: Kern, F., Rogge, K.S. and Howlett, M. (2019): Policy mixes for sustainability transitions: New insights through bridging innovation and policy studies. *Research Policy*, forthcoming.

Some observations

- Continuing growth: 1,344 today
- But Policy Mixes for Social innovation: 0
(Prosum*: 1, Cooperatives: 1)
- Social innovation: 2,118, of which
 - Policy or policies: 468
 - But policy mix: 0
 - Policy strateg*: 0
 - (Policy) instrument: 28
 - Politics, policy process: 211

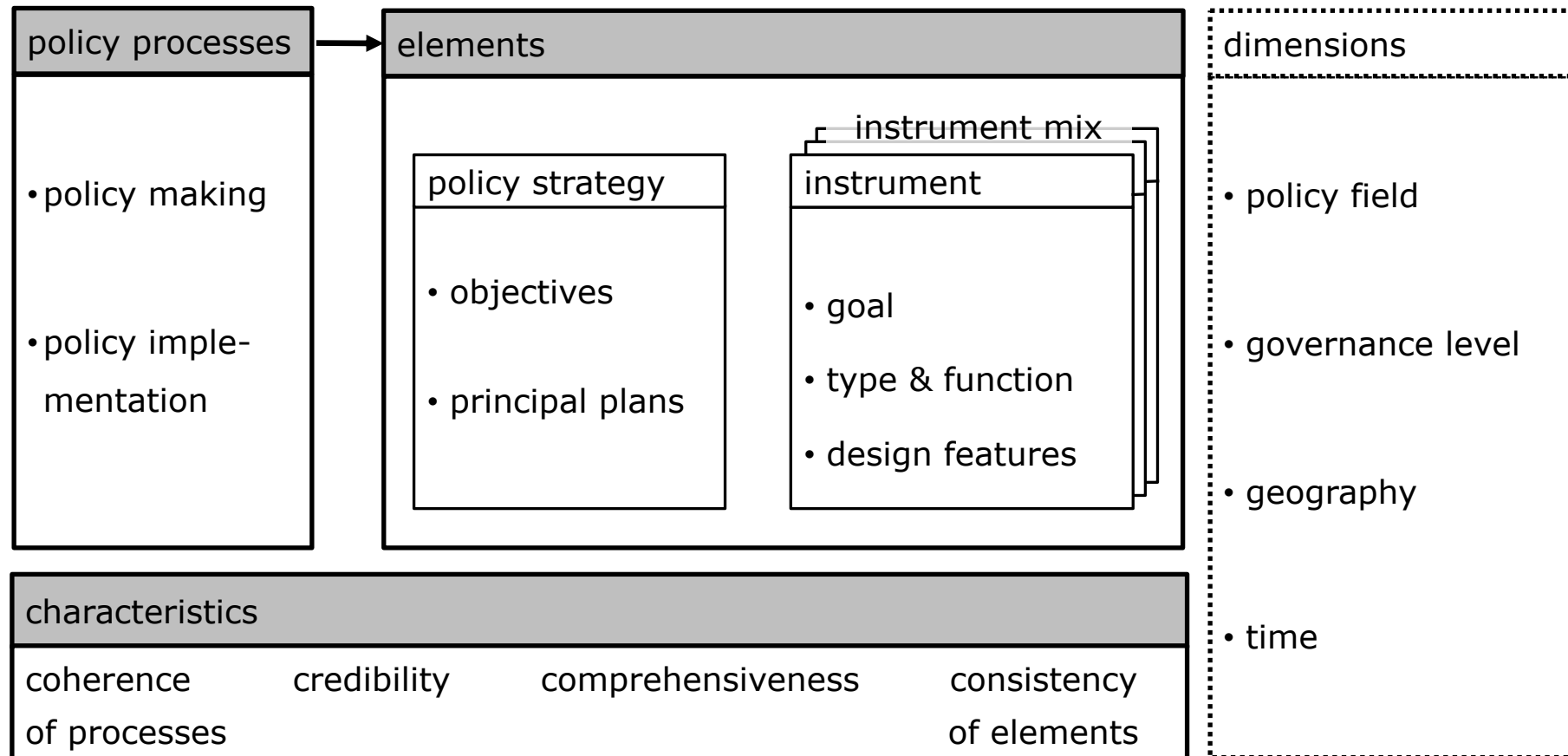
So what is meant by policy mixes? Clearly **no uniform definition!**

	<div>Environmental economics</div> <div><div><div><div><div>external interaction</div><div>Climate Policy</div><div>internal interaction</div></div><div><div>Environmental Policy</div><div>Other policy areas</div></div></div><div><div><div>$P_{e1}, P_{e2}, P_{e3}, \text{etc.}$</div><div>$P_{c1}, P_{c2}$</div><div>$P_{o1}, P_{o2}, P_{o3}, \text{etc.}$</div></div></div></div><div>Source: Sorrell et al. (2003), p. 28, Fig. 4.1</div></div>	<div>Policy studies</div> <div><table><tr><th rowspan="2"></th><th colspan="2">Instruments</th></tr><tr><th>Consistent</th><th>Inconsistent</th></tr><tr><td>Goals</td><td></td><td></td></tr><tr><td>Coherent</td><td>Replacement (conscious effort made to recreate or fundamentally restructure policies through the replacement of old goals and means by new ones)</td><td>Conversion (New instrument mixes evolve while holding old goals constant)</td></tr><tr><td>Incoherent</td><td>Drift (New goals replace old ones without changing the instruments used to implement them)</td><td>Layering (New goals and instruments are added to old ones without abandoning previous ones)</td></tr></table><div>Source: Kern and Howlett (2009), p. 396, Table 1, supplemented with <i>definitions</i> from p. 395</div></div>		Instruments		Consistent	Inconsistent	Goals			Coherent	Replacement (conscious effort made to recreate or fundamentally restructure policies through the replacement of old goals and means by new ones)	Conversion (New instrument mixes evolve while holding old goals constant)	Incoherent	Drift (New goals replace old ones without changing the instruments used to implement them)	Layering (New goals and instruments are added to old ones without abandoning previous ones)	<div>Innovation Studies</div> <div><div><div>Dimensions in which interactions can occur</div><div>Across: Policy space Governance space Geographical space Time</div></div><div><div>Possible types of interaction</div><div>Between: 'different' instruments targeting the same actor/ group (within/across dimensions) 'different' instruments targeting different actors/ groups involved in the same process (within/across dimensions) 'different' instruments targeting different processes in a broader system (within/across dimensions) Between: 'the same' instruments (across different dimensions)</div></div><div><div>Possible sources of tension between instruments in the policy mix</div><div>Conflicts between: policy rationales policy goals implementation approaches</div></div><div>Source: Flanagan et al. (2011), p. 709, Fig. 1</div></div>					
	Instruments																					
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<div>Example 2</div>	<div><div><div><div>Is it a single- or multi-aspect environmental issue?</div><div>Multi-aspect</div><div>Single-aspect</div></div><div><div>A first best optimum can not be reached by a single instrument.</div><div>The optimal mix of instruments will depend on the specificities of the environmental issue and on the existence of any market failures.</div></div><div><div>Is it feasible to address environmental externality directly?</div><div>No</div><div>Yes</div></div><div><div>One or more proxy instruments would have to be used.</div><div>A first best optimum can – under certain assumptions – be reached by a single instrument.</div></div><div><div>The assumptions include: - Well established property rights - Full information - Perfect foresight - No market-power</div><div>Are all assumptions (reasonably) valid in the current context?</div><div>No</div><div>Yes</div></div><div><div>A second best optimum requires one instrument per market failure.</div><div>The optimal mix of instruments will depend on the specificities of the environmental issue and on the market failures present.</div></div><div><div>Use of a single instrument could be preferable.</div><div>Would there still be anything to gain by applying a mix of instruments?</div></div></div></div> <div>Source: Simplified from Braathen (2007), p. 187, Fig. 1</div>	<div><table><tr><th rowspan="2"></th><th colspan="3">Policy Content</th></tr><tr><th>High Level Abstraction</th><th>Programme Level Operationalization</th><th>Specific On-the-Ground Measures</th></tr><tr><td>Policy Goals</td><td></td><td></td><td></td></tr><tr><td>Ends or Aims</td><td>What General Types of Ideas Govern Policy Development?</td><td>What Does Policy Formally Aim to Address?</td><td>What are the Specific On-the-ground Requirements of Policy?</td></tr><tr><td>Policy Means or Tools</td><td>Instrument Logic What General Norms Guide Implementation Preferences?</td><td>Mechanisms What Specific Typoes of Instruments are Utilized?</td><td>Calibrations What are the Specific Ways in Which the Instrument is used?</td></tr></table><div>Source: Simplified from Howlett and Rayner (2013), p. 175, Table 1</div></div>		Policy Content			High Level Abstraction	Programme Level Operationalization	Specific On-the-Ground Measures	Policy Goals				Ends or Aims	What General Types of Ideas Govern Policy Development?	What Does Policy Formally Aim to Address?	What are the Specific On-the-ground Requirements of Policy?	Policy Means or Tools	Instrument Logic What General Norms Guide Implementation Preferences?	Mechanisms What Specific Typoes of Instruments are Utilized?	Calibrations What are the Specific Ways in Which the Instrument is used?	<div><div><div>policy processes</div><div>• policy making • policy implementation</div></div><div><div>elements</div><div><div>Policy strategy</div><div>• objectives • principal plans</div></div><div><div>instrument mix</div><div>• goal • type & purpose • design features</div></div></div><div><div>characteristics</div><div>consistency of elements coherence of processes credibility comprehensiveness</div></div><div><div>dimensions</div><div>• policy field • Governance level • geography • time</div></div><div>Source: Rogge and Reichardt (2016), p. 1629, Fig. 1</div></div>
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Source: Rogge, K.S., Kern, F., Howlett, M., 2017. Conceptual and empirical advances in analysing policy mixes for energy transitions. Energy Research & Social Science 33, 1–10.

What is new in the **second generation** of policy mix research?

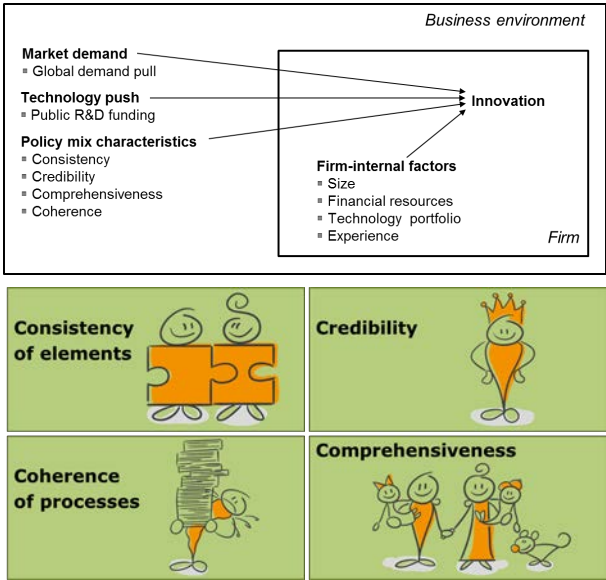
Policy strategy, policy processes and characteristics



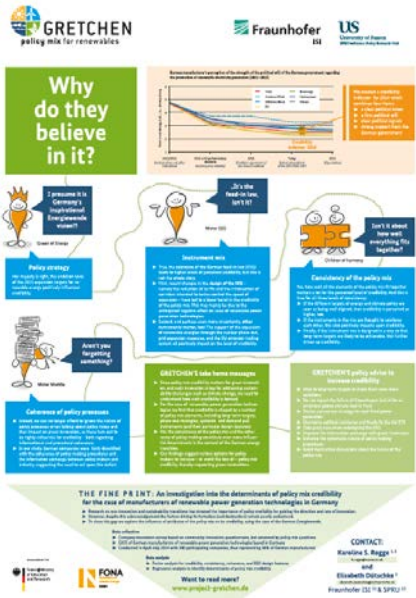
Source: Rogge, K.S., Reichardt, K., 2016. Policy mixes for sustainability transitions: an extended concept and framework for analysis. *Research Policy*, 45 (8), 1620–1635.

Example 1: Policy mix **characteristics** are relevant for innovation

- Positive link between **Consistency** and **Credibility** of the national policy mix and private R&D expenditures
- **Coherence** of policy processes impacts perceived policy mix **credibility** (as strongest influencing factor)



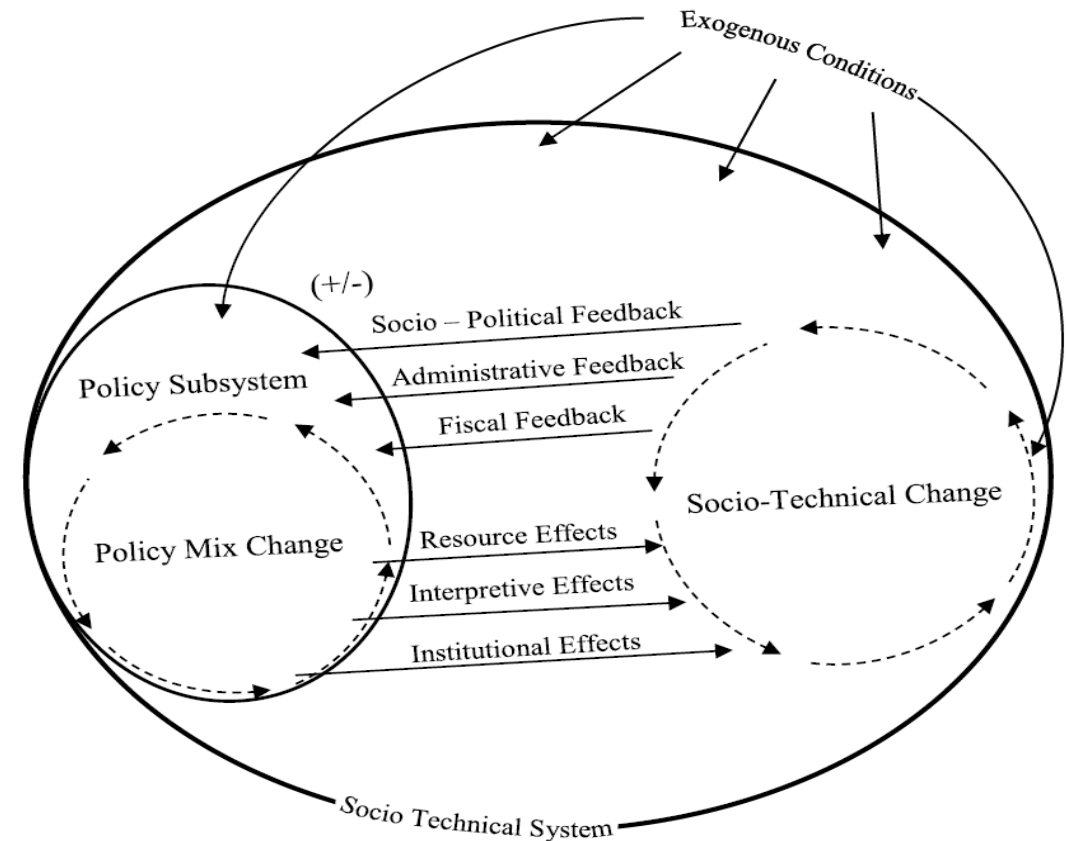
Source: Rogge, K.S & Schleich, J. (2018): Do policy mix characteristics matter for low-carbon innovation? A survey-based exploration of renewable power generation technologies in Germany. *Research Policy*, 47 (9), 1639-1654.



Source: Rogge, K.S. & Dütschke, E. (2018): Exploring perceptions of the credibility of policy mixes: the case of German manufacturers of renewable power generation technologies. *Environmental Science and Policy*, 87, 74-84.

Example 2: Co-Evolution of Policy Mix and socio-technical systems: Concept and Application

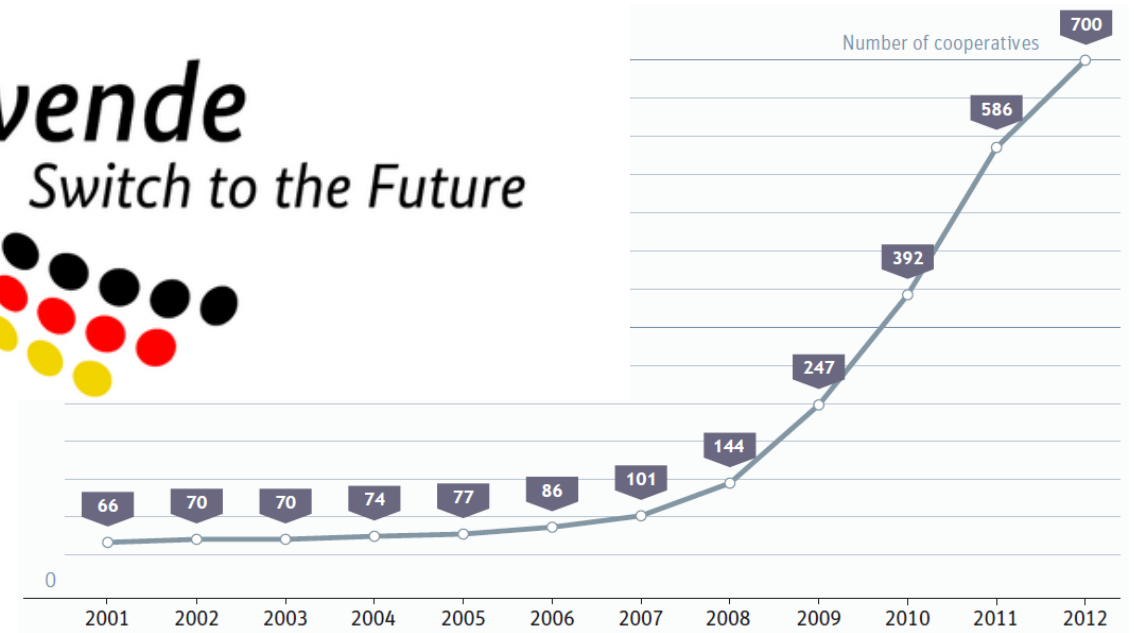
- Basic idea of **Policy Feedbacks**:
Co-evolution of policy and system through policy effects and system feedbacks
- Implications for **Policy Design** for sustainability transitions:
 - Create incentives for mobilizing further support (Winner)
 - Solve problems which could reduce political support (Losers)
- **Illustration**: UK Zero Carbon Homes Strategy (2006-2016)



Source: Edmondson, D., Kern, F. & Rogge, K.S. (2019): The Co-Evolution of Policy Mixes and Socio-Technical Systems: Towards a conceptual framework of policy mix feedback in sustainability transitions. *Research Policy*, available online.

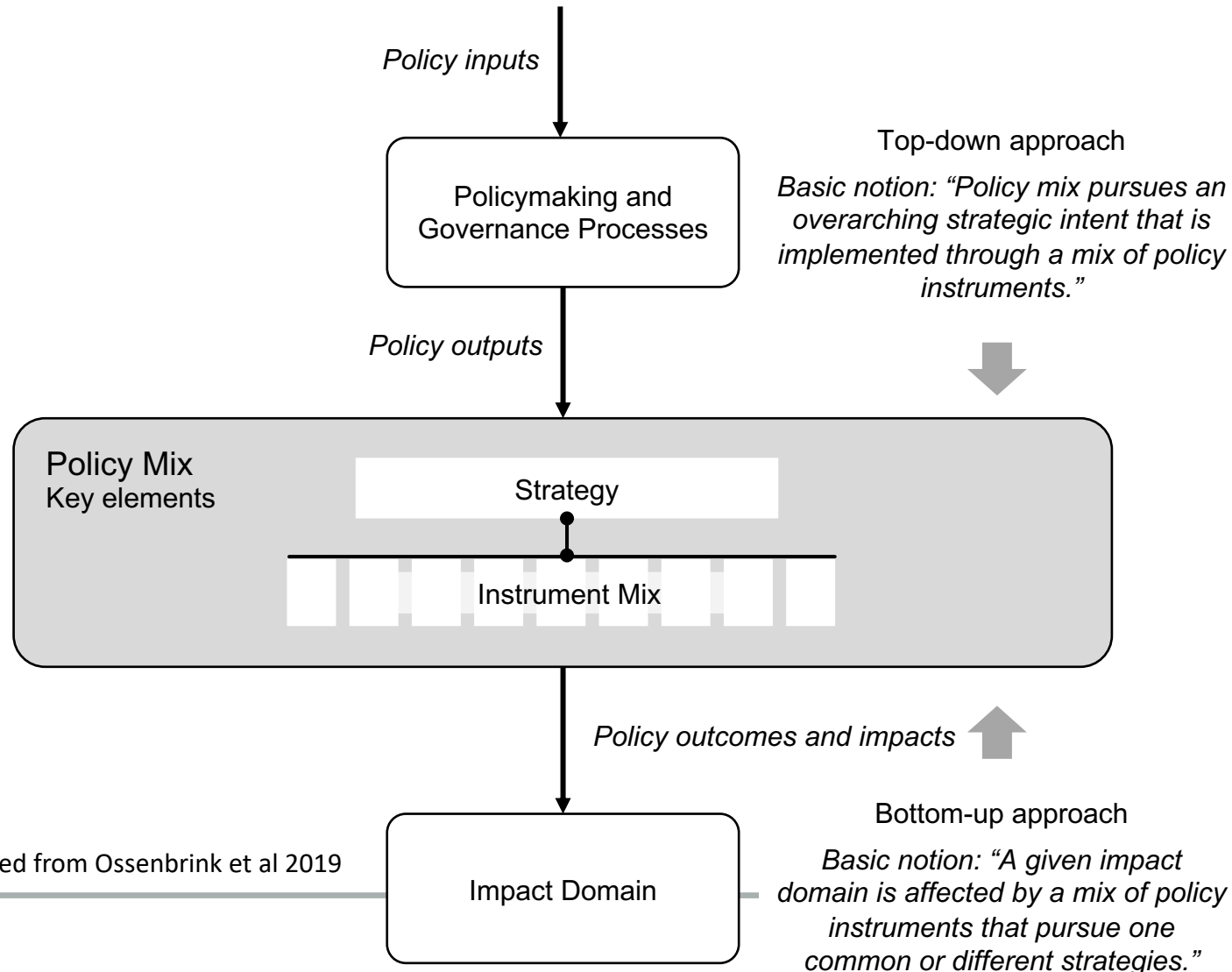
PART 3: POLICY MIXES FOR THE DIFFUSION OF SOCIAL INNOVATION IN ENERGY TRANSITIONS

Three Examples and an Outlook on Bridging Social Innovation and Policy Mix Research



Source: Morris and Pehnt (2014): German Energy transition.

Example 1: Should we map Policy Mixes for Social Innovation? (Ossenbrink et al. 2019 Research Policy)



Source: Adapted from Ossenbrink et al 2019

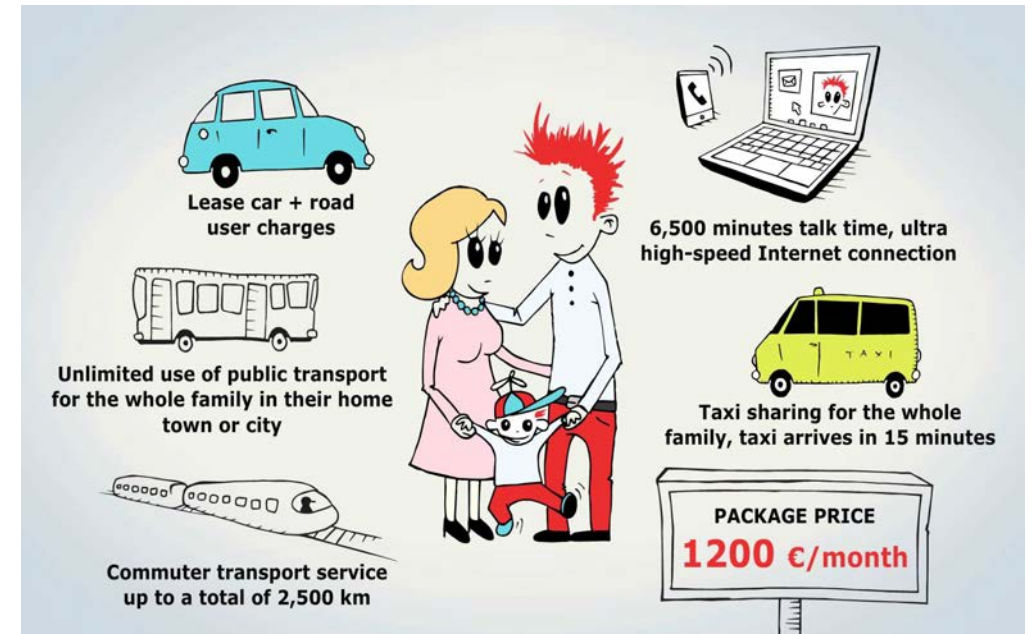
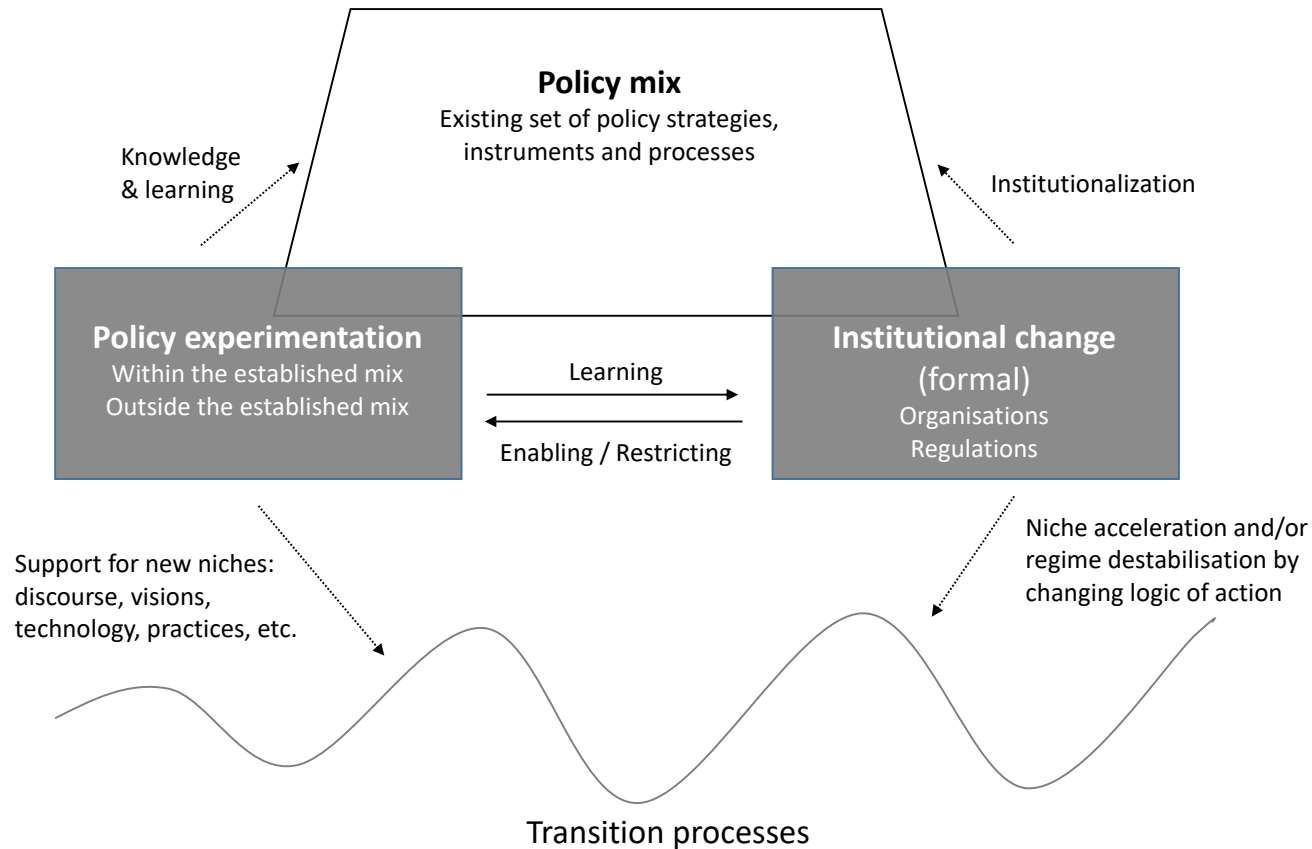
Questions

- Are the mapping approaches applicable for policy mixes for social innovation?
- Which approach would be more appropriate for social innovation?
- To which extent has such a policy mix mapping already been conducted for Social Innovation?

Example 2: How to co-design SIE city labs as part of comprehensive innovation policy? (*SONNET project*)

Socio-economic focus	Socio-cultural focus	Socio-political focus
ANTWERP	GRENOBLE	MANNHEIM
Aim is to address energy poverty and transition to clean and affordable energy through citizen participation and develop novel service models that tackle these challenges.	Aim is to empower energy users to change their daily practice and reduce energy consumption and develop novel service model in the process.	Aim is to develop novel urban governance arrangements to enhance SIE-initiatives and practices for enabling SIE.
BRISTOL	BASEL	WARSAW
Aim is to develop novel investment practices and business models that make it possible to implement 'hard to realise' energy efficiency measures within community buildings.	Aim is to understand how novel digitalisation developments combined with changing social relations (e.g. gamification approaches and smart applications) can achieve energy savings.	Aim is to develop collaborative governance arrangements to make energy more visible, focusing on vulnerable households and public buildings.

Example 3: From policy experimentation to institutionalization in transformative policy mixes? (*SET project*)



Source: Ministry of Transport and Communications, Finland

Source: Kivimaa and Rogge (2019): Interplay of policy experimentation and institutional change in transformative policy mixes: the case of Mobility as a Service in Finland.

Discussion: What characterizes the diffusion of social innovation?

- **Policy rationale:** Is there a role for policy to support the diffusion of SI? (*Failures*)
- **Policy objective:** SI for what? (*Directionality, SONNET: Sustainable Energy Transitions*)
- **Policy mix for SIE:**
 - What is the relevant policy mix for SIE? (*Systematic Mapping*)
 - Does the policy mix only support diffusion directly, or also indirectly? (*Creative Destruction*)
 - Which policies are enabling and which hindering SIE? (*Evaluation*)
 - Which governance arrangements are relevant for SIE? (*Multi-Level & Participative, SONNET: Urban & Energy*)
 - How can the diffusion of SIE be supported through policy networks and the empowerment of SIE initiatives ? (*Politics*)
 - Which role do institutions play for SIE diffusion? (*Institutional Work*)
 - ...



LOOKING FORWARD TO OUR DISCUSSION!

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