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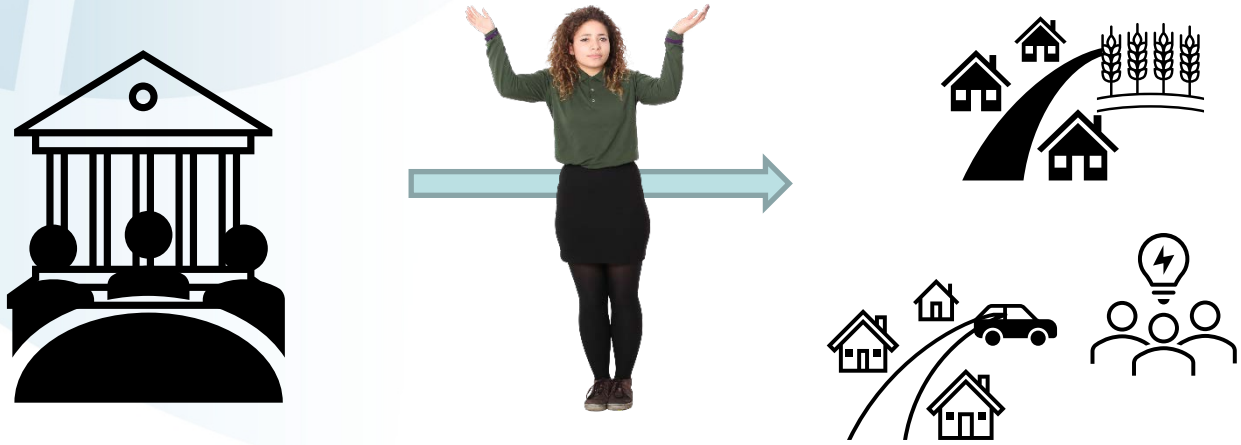
Challenges to local innovation and implementation of low-carbon energy-transition measures: A tale of two Austrian regions

Jenan Irshaid, Junko Mochizuki, Thomas Schinko

Assessing multi-level energy transitions

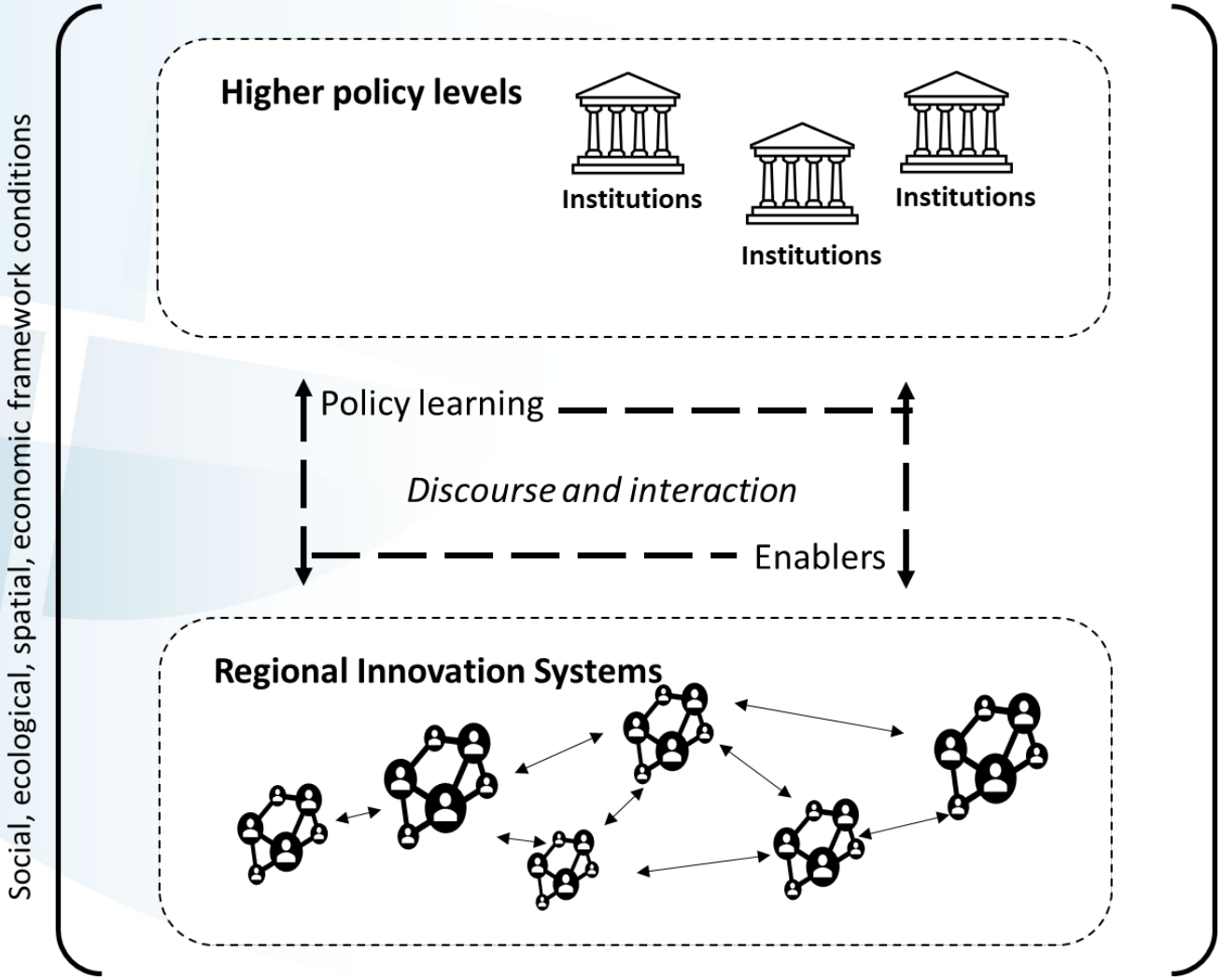
- Implementation of transformative measures takes place on the local level vs. decisions are made on national policy levels
- Currently no ideal conceptual or analytical framework



Assessing multi-level energy transitions

- **Multi-level perspective (MLP)** (Roberts & Geels, 2019) → technical innovation vs. social, technical and socio-technical innovation required
- **Regional innovation systems (RIS)** (Mattes et al. 2015) → regional scale socio-technical innovation; focus on regional sub-systems
- **Transition Management** (Smith & Stirling, 2005) → adaptation and learning
- Jessop et al. (2008) critique: “fallacy” of centrism as transition research is often centred on single dimension → Territory, place, scale and network (TPSN) Framework

Analytical framework for assessing barriers and enablers for transition

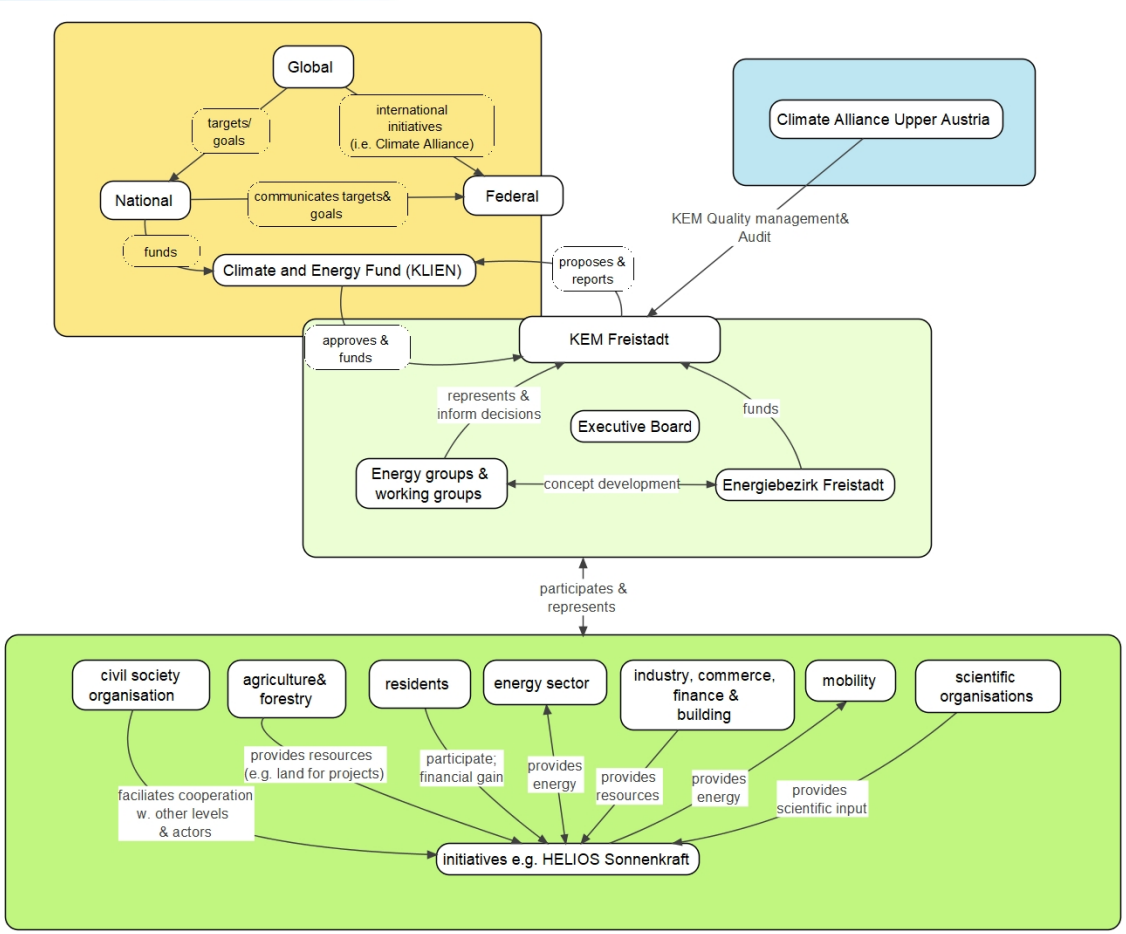


Irshaid et al., 2021

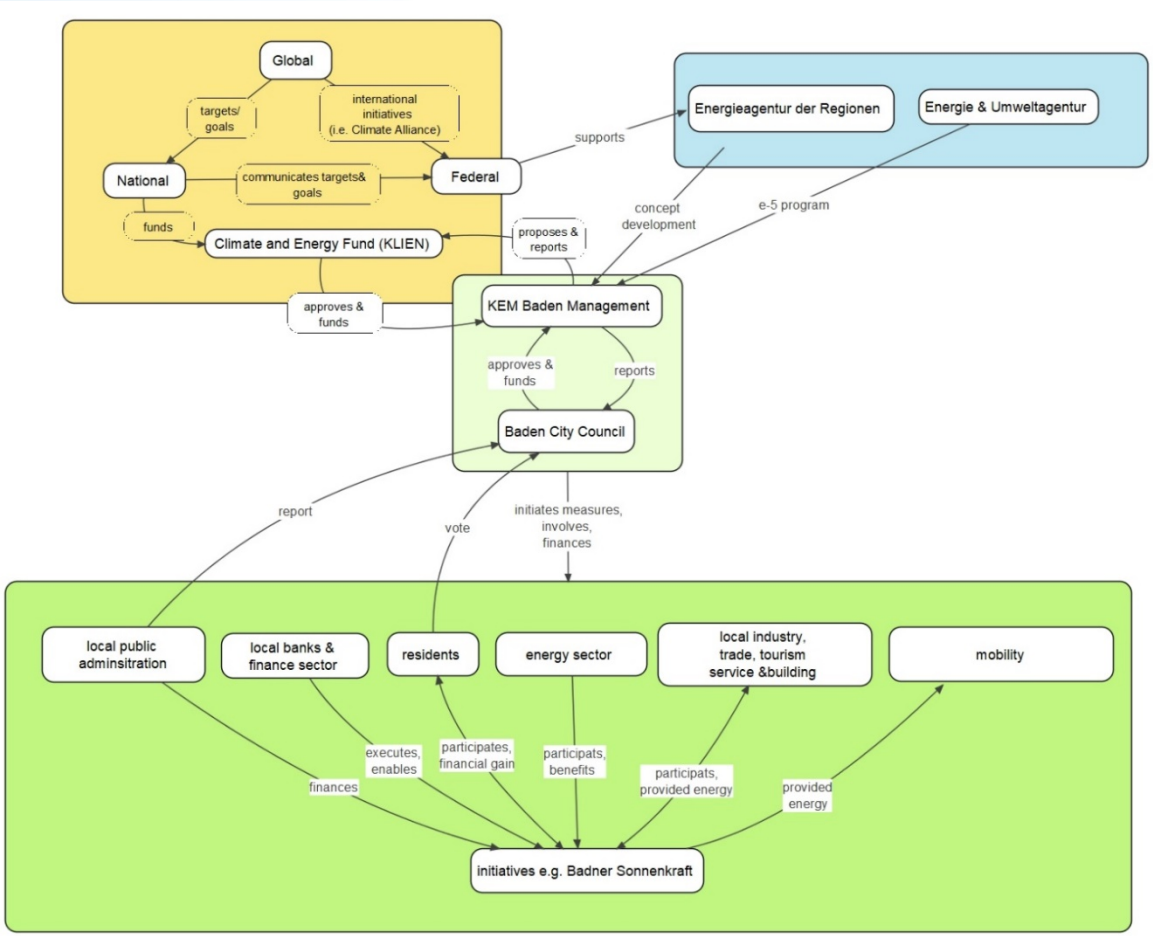
Methods

- Multi-level stakeholder mapping for case study regions (KEM Freistadt & KEM Baden)
- 19 in-depth stakeholder interviews
- Qualitative data analysis based on a Grounded Theory approach

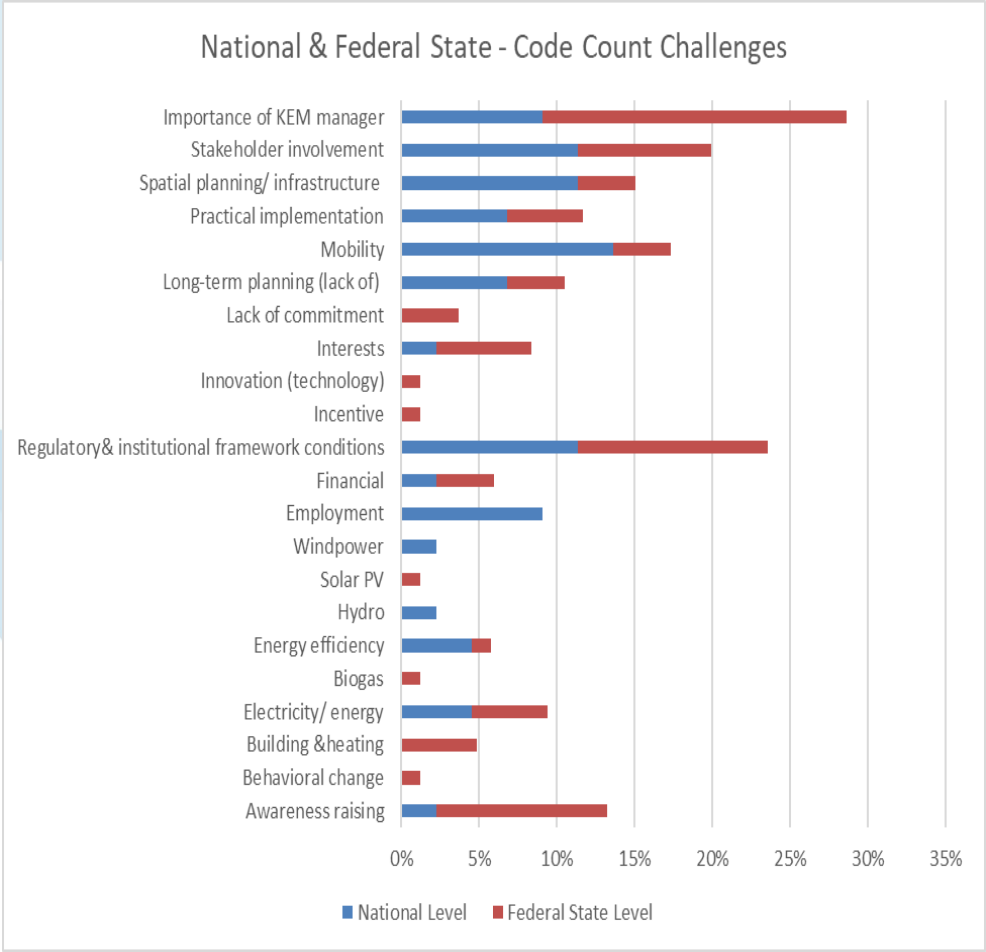
Case study: KEM Freistadt



Case study: KEM Baden



Results: Challenges and enabling factors on the national and federated state levels



- Accessibility to funding
- Inadequate & inefficient institutional and regulatory conditions
- Interest groups and policy making
- Poor policy integration

Results: Regional innovation and institutional voids

- Example: crowdfunded solar PV installations in KEM Freistadt and KEM Baden
- Challenge: crowdfunding not permitted by non-financial organisations (Finanzmarktaufsicht)
- Institutional void: no specific regulations for crowdfunding initiatives
- Enabler: KEM manager network → cooperation with regional bank
- Policy learning: Alternativfinanzierungsgesetz 2015

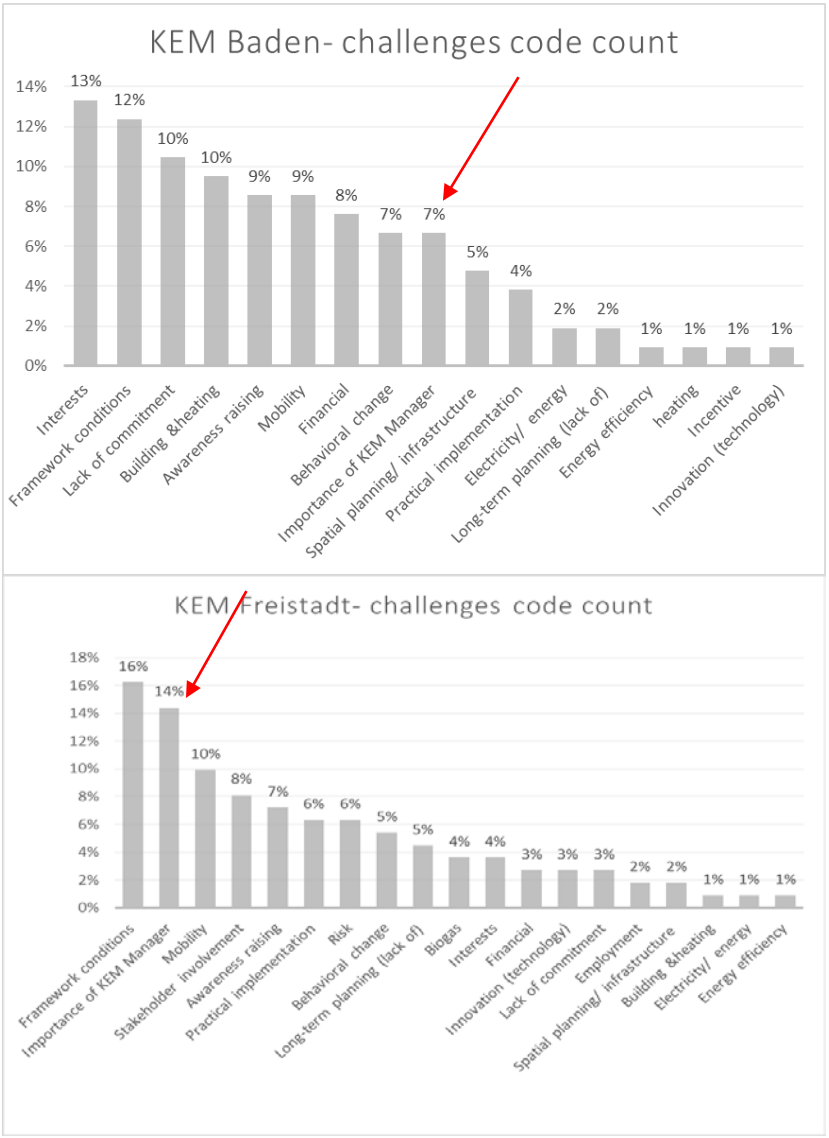
Results: lacking policy integration

- Contradictory taxation systems
  - Pendlerpauschal (commuter's allowance)
  - Property taxes
  - Historical building protection
- Ineffective policy instruments:
  - Biogas subsidies
  - Refurbishment subsidies
  - Short-term KEM funding scheme

Results: Regional challenges and enablers

+ Well-connected KEM Manager
+ Political support
+ Federal level support

- Local financing
- Conflicts of interest
- Long-term planning
- Rural (Freistadt) → low population density, dispersion of infrastructure
- Sub-urban (Baden) → commuters; historical buildings protected



Conclusion

- KEM program have potential for innovation and implementation of practical energy-transition measures, if provided with appropriate framework conditions.
- Vertical and horizontal policy implementation needed for policy learning and adaptation
- Innovation managers play crucial role in connected sub-systems
- Importance of understanding geographical, environmental and societal dimensions in analysis and planning

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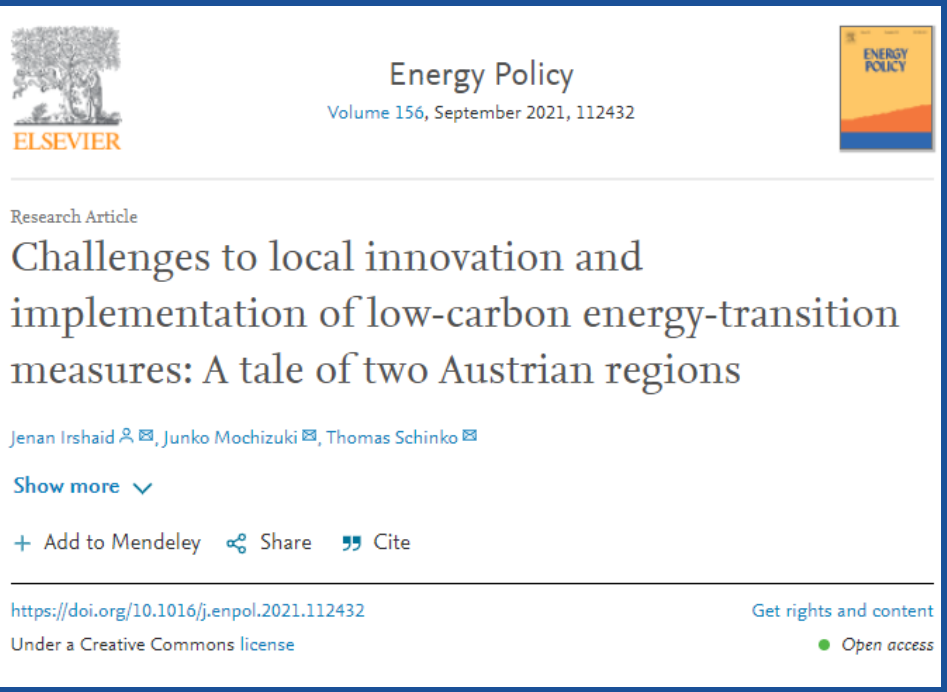
Questions & Comments



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