

# “Local Energy Transition Experiments” for a low-carbon society transformation – Piloting a transition management process in the Bernese Alps




Research project by: CDE Centre for Development and Environment, University of Bern;  
Wyss Academy for Nature & Canton of Bern, Office for Environment and Energy (AUE).  
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## Content


- Project
  - Research questions
- Theory
- Timetable
- Developing a Transition Agenda
- Next steps - Implementing the Transition Agenda





We initiate, implement, and evaluate a transition management process towards climate neutrality in the Berner Oberland-Ost.

The «Regional Conference Oberland-Ost» made it a strategic goal to become climate neutral.



More specifically, we aim to jointly develop “energy experiments” which reduce the region’s carbon footprint.

- Housing
- Consumption
- Private sector (incl. agriculture and forestry)
- Communication
- Mobility
- Energy
- Tourism

# Research Questions

- How to support the development and implementation of local projects or «energy experiments»?
  - Which socio-technical and social innovations are triggered by the applied participatory approach?
  - What institutional, economic, infrastructural, ecological, and social factors support or inhibit implementation and establishment of corresponding innovations and how could these be addressed through (adapted) policy (mixes)?
  - To what extent can the context-specific results be generalized to other areas in the sense of a reflexive governance approach?



# Theory

## Transition management

- Process is guided by theory from
  - Transition literature (Geels 2002; Coenen et al. 2012) & Transition management (Loorbach et al. 2017; Wittmayer, 2016; Luederitz et al. 2017),
  - Social acceptance (Wolsink, 2018; Wüstenhagen et al., 2007)

## Transition team – Initiation and guiding of the process



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## Transition arena – Develops a common vision and agenda

Around 40-50 representatives from i.a. municipalities, energy sector, tourism sector, mobility sector, agricultural and forestry sector and civil society and more...

## Transition networks – Implements elements of the agenda

9 different project ideas

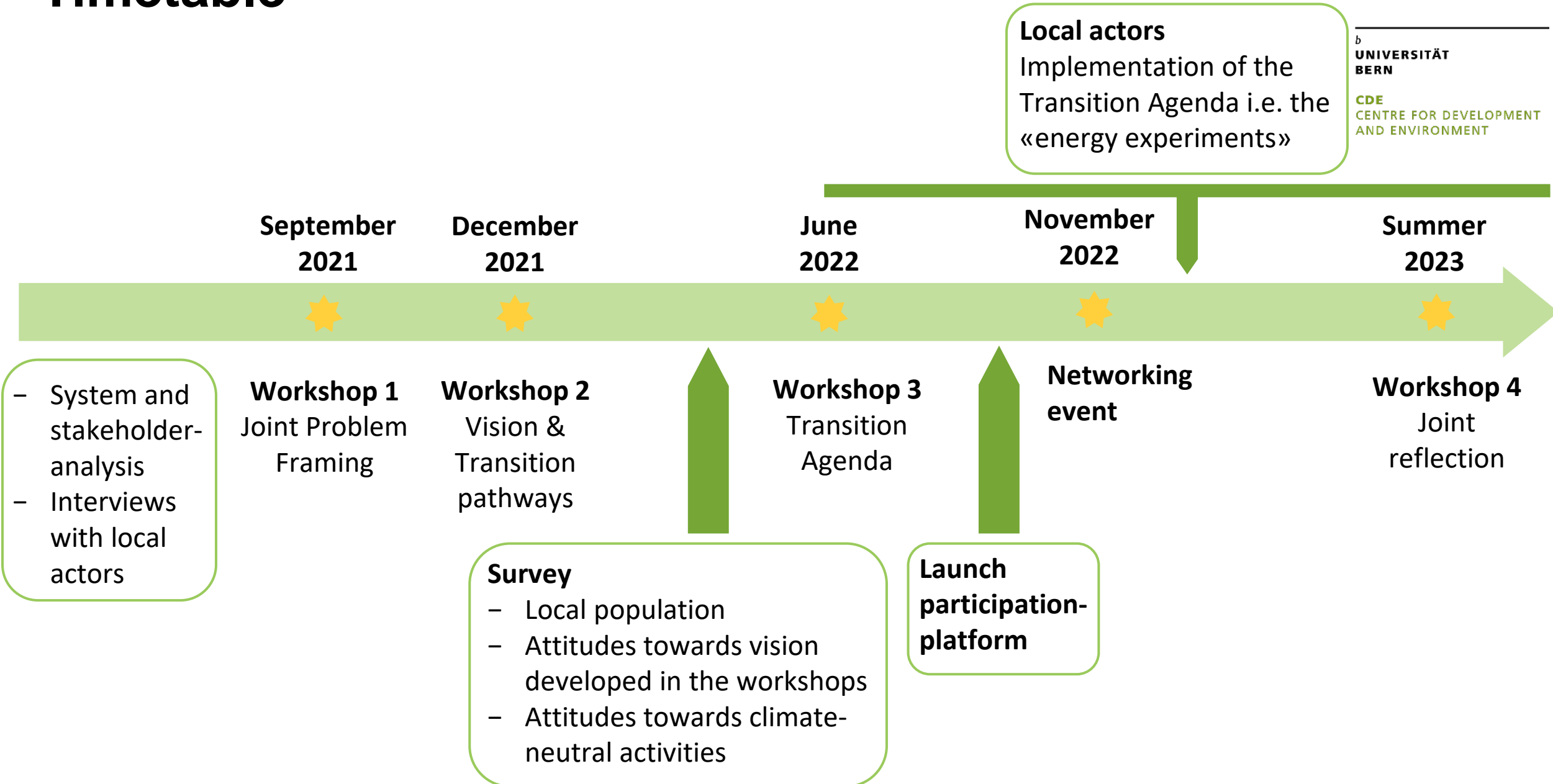
# Theory

## Supporting factors

- Strategic goal of the regional conference
- Engaged and strong/close collaboration of scientific and local stakeholder
- Process informed by scientific knowledge



# Timetable





# Developing a Transition Agenda

## Providing Feedback

- Evaluate each goal on:
  - Potential to reduce greenhouse gas emissions (based on CO<sub>2</sub> Balance)
  - Synergies with other goals (Mapping of interactions à la Nilsson et al. (2016))
  - Acceptance by the local population (Survey)



## Providing Inspiration

- Inviting speakers from other Alpine regions
- Collection of best practices, from within and outside the region.



# Developing a Transition Agenda

Sector

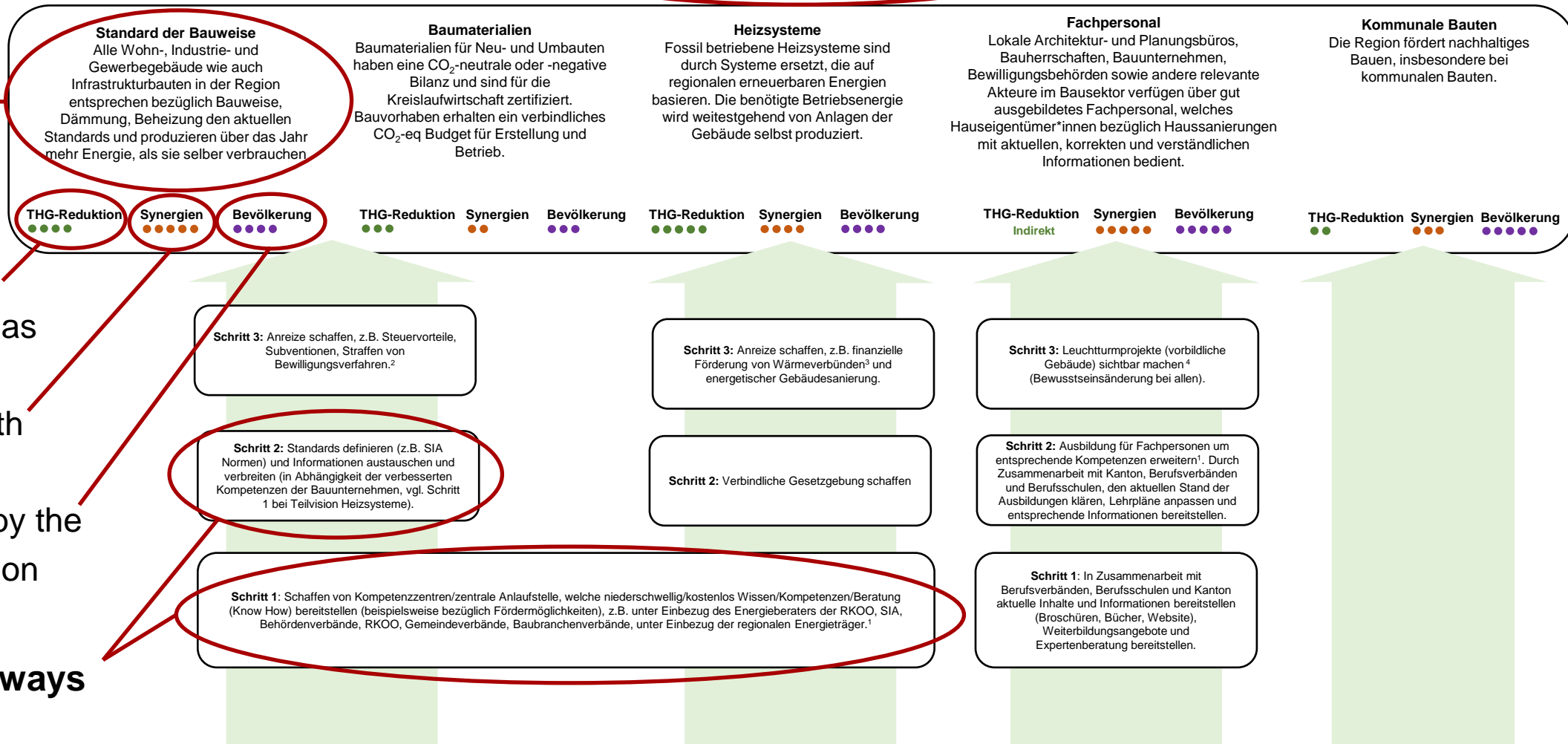
Gebäude und Wohnen

Goals

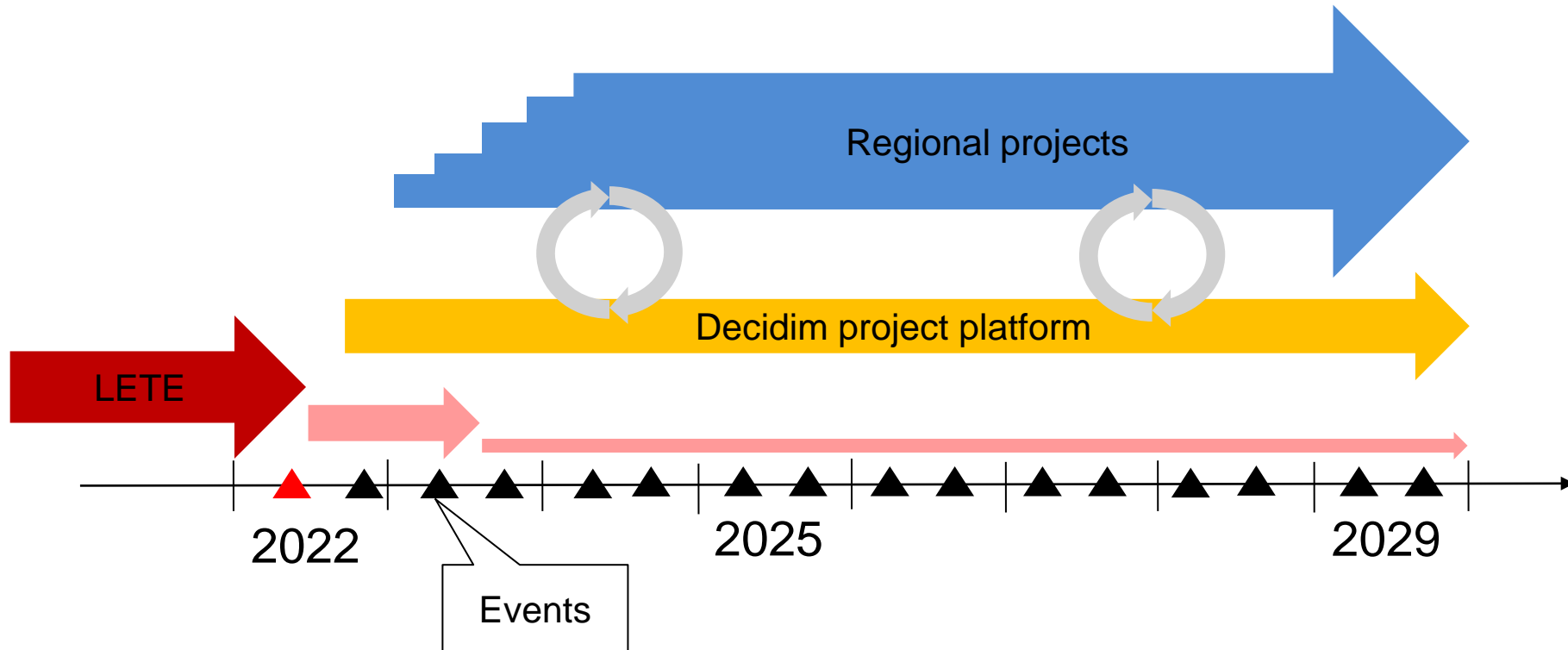
Evaluation

- Potential for reduction greenhouse gas emissions
- Synergies with other goals
- Acceptance by the local population

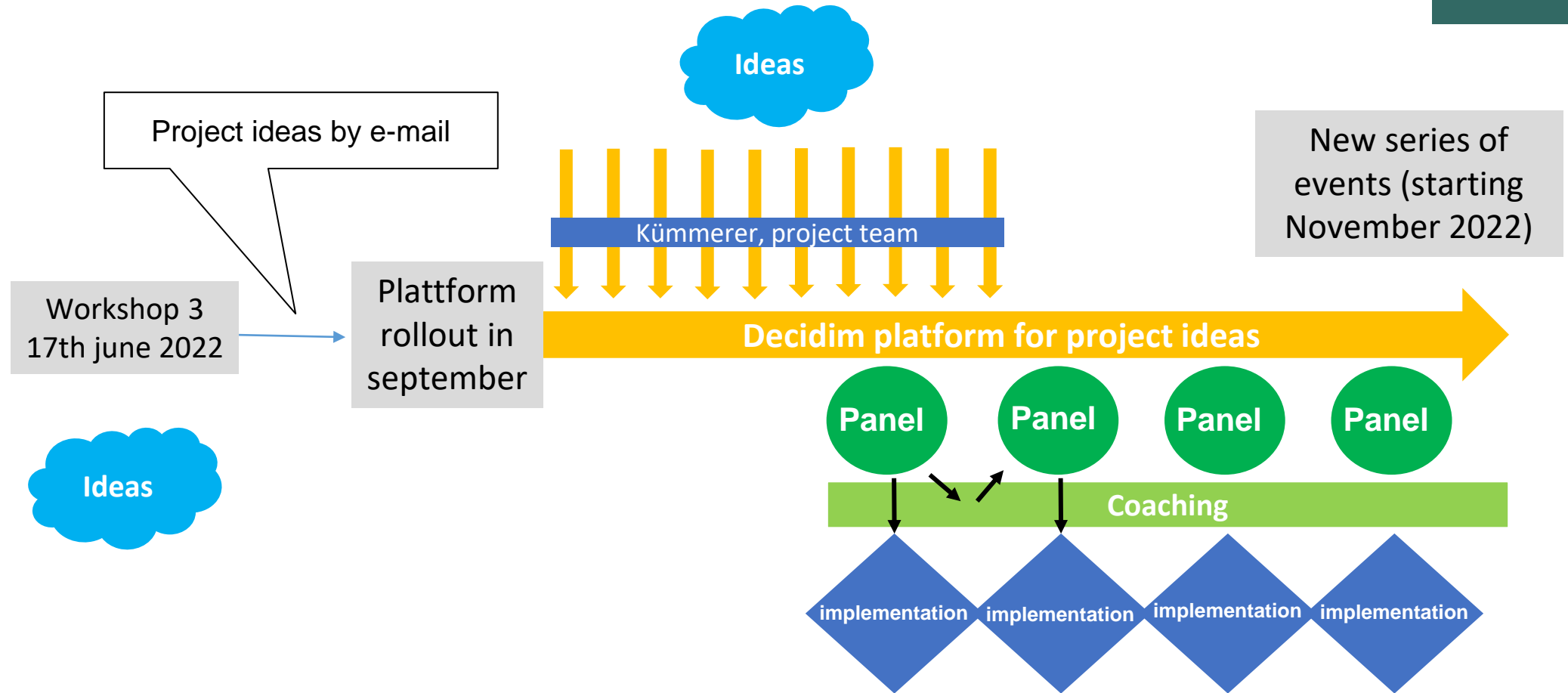
Steps of the transition pathways



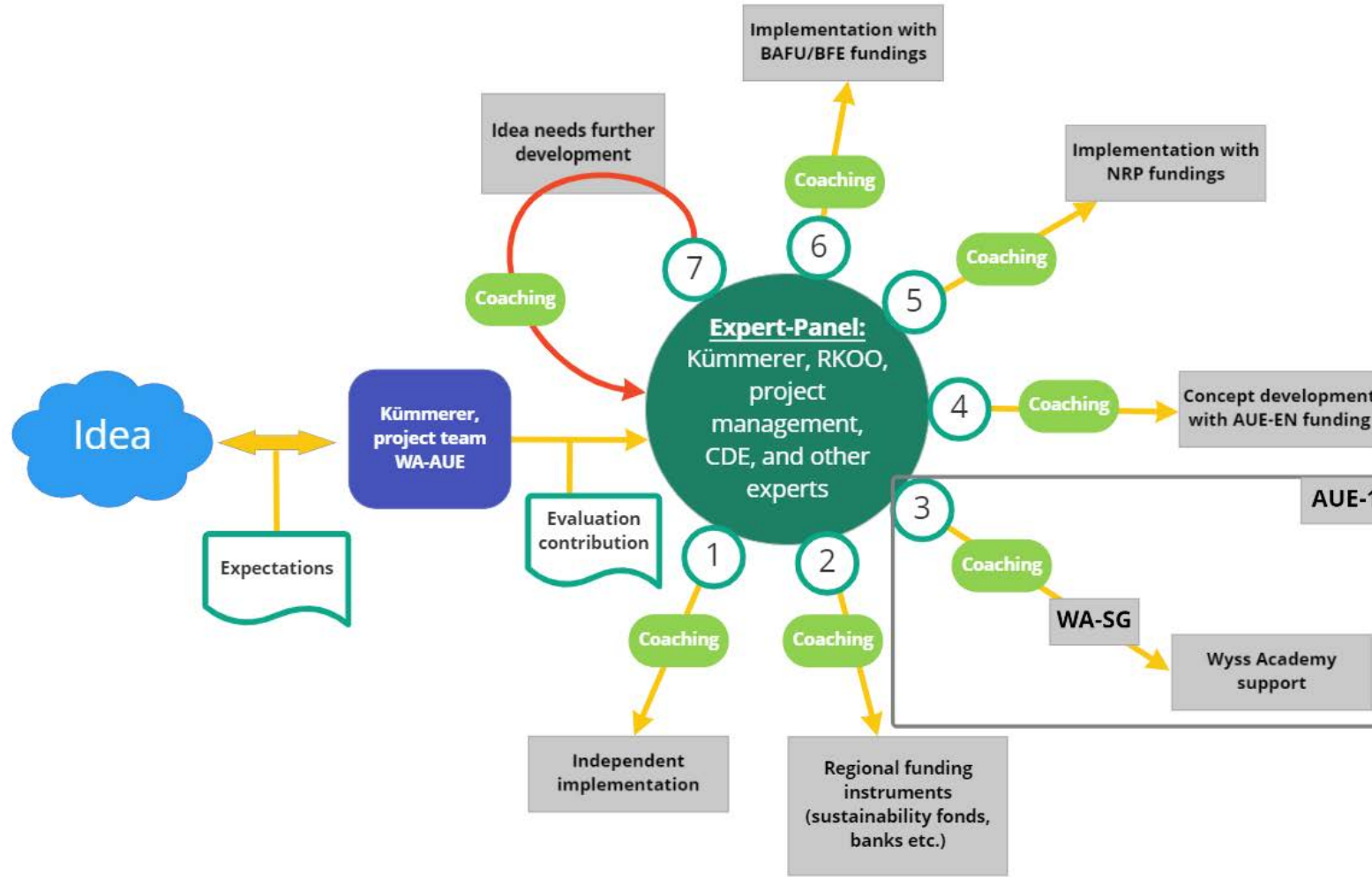
# Project overview



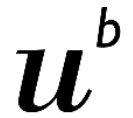
# A continuous process



# From ideas to implementation



# Achievements



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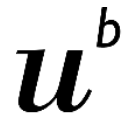
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- Shared and highly committed common problem view and visions
- Project ideas / «energy experiments» developed by local actors, informed by the common agenda
- Institutionalizing and anchored process («Kümmerer», support from Canton)

# Future challenges

- How to keep actors engaged?
- How to reach the local community and businesses (use of digital platform, physical events, «Kümmerer» -> caretaker)
- To what extent can the research process be replicated in other regions?

# Thank you!



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## More Information

Project website:

[https://www.cde.unibe.ch/research/projects/local\\_energy\\_transition\\_experiments\\_for\\_a\\_low\\_carbon\\_society/index\\_eng.html](https://www.cde.unibe.ch/research/projects/local_energy_transition_experiments_for_a_low_carbon_society/index_eng.html)

## Project team:



Kanton Bern  
Canton de Berne

- Thomas Rosenberg  
Leiter Klima- und Wyss Academy Projekte
- Flurin Cappis  
Projektmitarbeiter Klimaschutz & Wyss  
Academy Projekte



- Dr. Olivier Jacquat  
Head of Hub Bern
- Anja Strahm  
Research Scientist, Hub Bern



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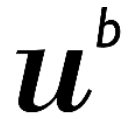
- Dr. Stephanie Moser  
Head of Just Economies and  
Human Well-Being Impact Area
- Susanne Wymann von Dach  
Senior Research Scientist
- Felix Poelsma  
PhD Candidate



# References

- Coenen, L., Benneworth, P. and Truffer, B. (2012). Toward a spatial perspective on sustainability transitions. *Research policy*, 41(6), pp. 968-979
- Geels, F.W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy*, 31(8-9), pp. 1257–1274.
- Loorbach, D., Frantzeskaki, N., & Avelino, F. (2017). Sustainability Transitions Research: Transforming Science and Practice for Societal Change. *Annual Review of Environment and Resources*, 42(1), 599–626. <https://doi.org/10.1146/annurev-environ-102014-021340>
- Luederitz, C., Schöpke, N., Wiek, A., Lang, D. J., Bergmann, M., Bos, J. J., ... & Westley, F. R. (2017). Learning through evaluation—A tentative evaluative scheme for sustainability transition experiments. *Journal of Cleaner Production*, 169, 61-76.
- Nilsson M, Griggs D, Visbeck M. 2016. Policy: Map the interactions between Sustainable Development Goals. *Nature News*. 534:320.
- Wittmayer, J. M. (2016). Insights and lessons for the governance of urban sustainability transitions. In *Governance of urban sustainability transitions* (pp. 153-169). Springer, Tokyo.
- Wolsink, M. (2018). Social acceptance revisited: gaps, questionable trends, and an auspicious perspective. *Energy research & social science*, 46, 287-295.
- Wüstenhagen, R., Wolsink, M., & Bürer, M. J. (2007). Social acceptance of renewable energy innovation: An introduction to the concept. *Energy policy*, 35(5), 2683-2691.
- Landratsamt Oberallgäu [Image] (2022). Vorbilder in Sachen Klimaschutz GALERIE DER ALLGÄUER KLIMASCHUTZ-UNTERNEHMEN. <https://www.allgaeu-klimaschutz.de/klimaschutz-unternehmen.html>

# Appendix

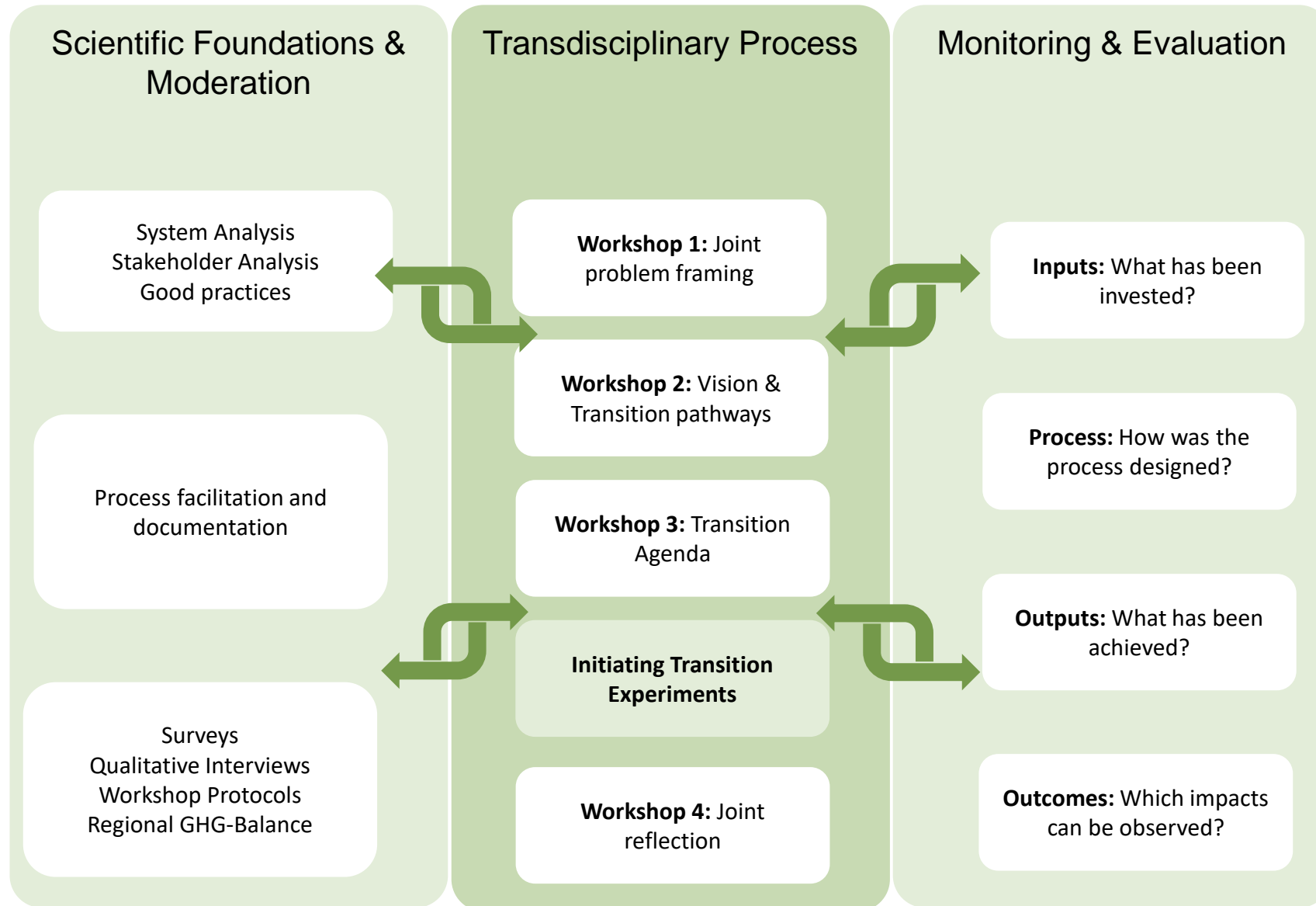


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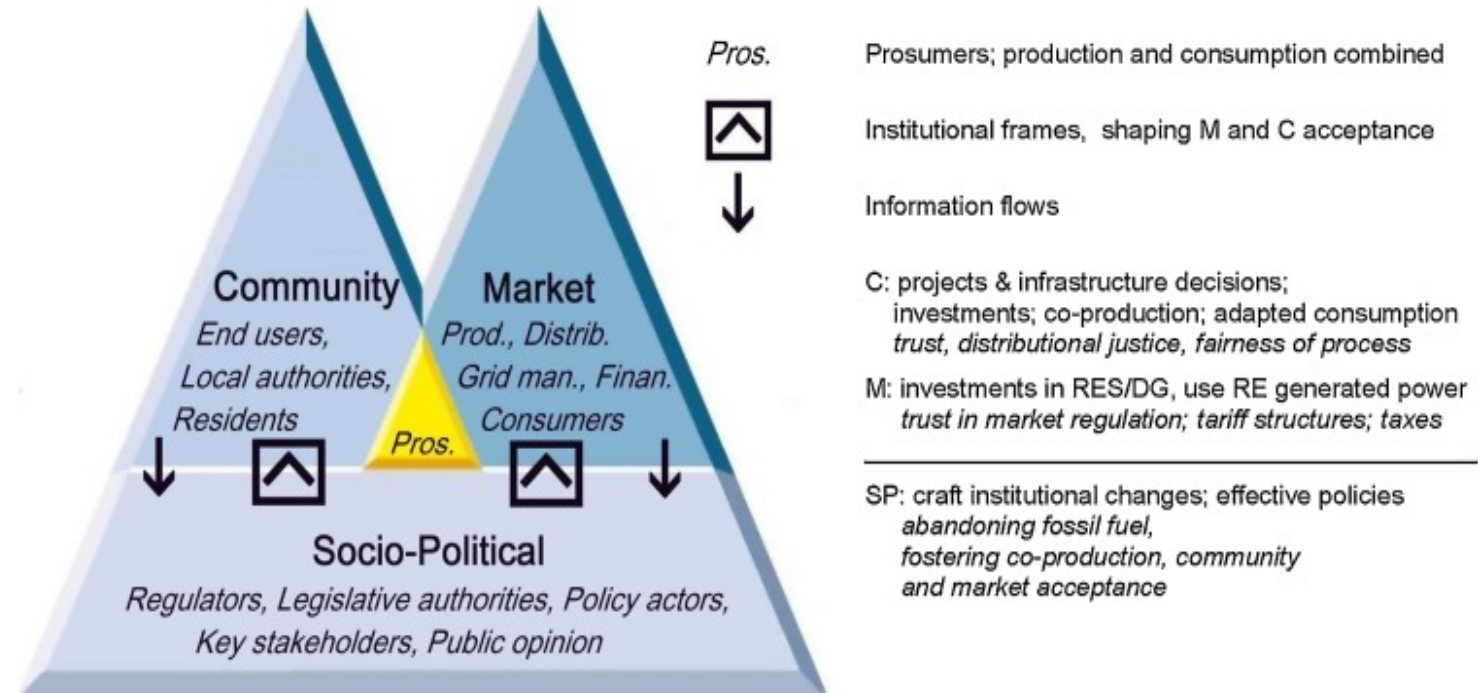
# Project Overview



# Theory

## Social acceptance

- Socio-political acceptance: General positive/negative attitudes. Does not imply support for concrete or local projects.
- Community acceptance: Concerns the acceptance of specific projects (such as siting decisions).
- Market acceptance covers economic dimension. Adoption of technologies by consumers, as well as investors.



# Theory

## Transition literature

- Over the last 10 years → Rise of scientifically guided multi-actor initiatives which aim to support sustainability transitions (Hyysalo et al., 2019; Luederitz et al. 2017).
- Transitions as socio-technical processes (Geels 2002; Loorbach et al. 2017).
  - Lack of spatial dimension (Coenen et al. 2012; Truffer et al. 2015) therefore take into account:
    - Difference in regional political systems and power dynamics.
    - Spill-over to regions with different geographical features.

