New RSA Research Network: Transformative Knowledge Regions



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A new RSA research network, *Transformative Knowledge Regions* (TRAKR), has

been formed. It aims at exploring a proposed shift from “knowledge-intensive” to “transformative knowledge” regions and renewing the understanding of knowledge as an asset in regional development taking into consideration the inescapable agenda of sustainability transition.

The transitioning of the prevailing forms of production, consumption and living in more sustainable directions has become a key and broadly shared concern, reflected in, for instance, overarching policy documents and strategies of the EU. While the Lisbon agenda in 2000 (European Commission, 2000) had the goal of making Europe “the most competitive and the most dynamic knowledge-based economy in the world” through intensive knowledge creation to foster market driven innovations, the current Green Deal Strategy (European Commission, 2019) sets the mission to transform the European economy and society towards a more sustainable future.

The sustainability agenda has raised new important research questions regarding how to give direction to science, research, and innovation, for instance through “mission-oriented” policy that actively shape markets in society (Boon et al. 2022; Mazzucato, 2021). In this view, scholars have underlined the necessity to involve a larger scope of actors such as public bodies, civil society, and NGOs, as well as the need to address innovation not merely with a technological focus but also with a social innovation approach that emphasises socio-technical and institutional changes as well (Boon et al., 2020; Coenen & Morgan, 2020; Marquez et al., 2018; Schot and Steinmueller, 2018).

In a regional development perspective, the need for a system-level sustainability transition calls for a profound and critical reconsideration of the role of knowledge as well as the dynamics of generation and use of knowledge within and across space and places. The multi-scalar, combinatorial knowledge dynamics, involved in business and region-level innovations, have been conceptualised and studied by use of, for instance, the knowledge bases model of analytical, synthetic, and symbolic knowledge and innovation biography approaches (Jeannerat and Crevoisier, 2016; Manniche et al., 2017, Butzin and Widmaier, 2016). But are these conceptualizations and approaches also applicable for the studying of the knowledge dynamics involved in multi-level system transition?

The above research debate on sustainability transition and mission-oriented innovation policy has made recent inroads in regional studies and economic

geography (e.g. Flanagan et al., 2022; Tödtling et al., 2022; Uyarra et al., 2019), by building on the growing research within the geography of transitions (Binz et al. 2019; Coenen et al, 2012; Truffer and Coenen, 2012; Truffer et al., 2015). Particular focus has been on niche innovations and their diffusion across space (e.g. Hansen and Coenen, 2015; van Winden and Carvalho, 2019), on the multi-scalarity of sustainability transitions (Miörner and Binz, 2021), and the legitimation, dynamics and agents of regional "green path creation" (Boschma et al., 2017; Grillitsch and Hansen, 2019; Gong et al., 2022). While these studies implicitly challenge conventional innovation rationales, they hardly address knowledge as an explicit research matter. Most often, knowledge is considered as an implicit vector of change associated with technology and as co-evolving with other resources in innovation systems.

The aim of the TRAKR network

30 researchers from 15 European countries have signed up as members of the RSA research network *Transformative Knowledge Regions* in a common strive to:

- Further conceptualise sustainability transitions and innovation directionality challenges from an explicit knowledge perspective,
- Discuss new (or further develop) methodological and empirical avenues to study the spatiality of transformative knowledge, its modes of generation, use and implementation, and
- Disseminate results to regional development practitioners, e.g. through a policy forum.

Against this background, the research network will address the following research questions:

- What is the role and contribution of knowledge creation in regional sustainability transitions?
- How should we understand "transformative" knowledge? Which types and drivers of knowledge, knowing and learning are involved in regional sustainability transitions? Which (new) conceptualisations are required for understanding and studying the knowledge dynamics involved in multi-level system transition?
- What types of regions perform well in terms of sustainability transition? Are advanced metropolitan regions more transformative than peripheries

and less developed areas? Do policies and initiatives targeting sustainability transition enhance or reduce the existing socioeconomic divide between metropolitan and less developed areas?

- What are the distinctive features and capacities of the "knowledge ecosystem", driving sustainability transitions in different types of regions?
- What is the role of and contribution of specific industries and sectors for transformative knowledge creation and broader regional sustainability transitioning?

The table below contains some proposed features of the contrasted paradigms of "Knowledge-intensive regions" and "Transformative knowledge regions", which will form the basic starting points and research avenues for the network.

From knowledge-intensive to transformative knowledge regions (research scope and issues)		
	Knowledge-intensive regions	**Transformative knowledge regions**
Socio-economic paradigm	Knowledge economy/society Knowledge-based development	Grand Challenges Challenge-based sustainability transition
Development paradigm	Economic development achieved through competitive innovations	Sustainable societal development achieved through transformative innovations
Knowledge paradigm	Intensive knowledge (researched in the Lisbon Strategy)	Transformative knowledge (to be researched in the RSA network)
Research and policy matter	Knowledge as an explicit research and policy matter to foster competitive innovation	Transformative innovations as a focal research and policy matter that implicitly build upon knowledge
General research and policy question	How to make knowledge more intensive? = How to generate and use more knowledge in economic processes	How to make knowledge more transformative = Why and how does knowledge matter for transforming economy and society?

Public direction of knowledge generation and use	No explicit public direction · Scientific curiosity, exploration · Economic competitiveness driven by external market selection mechanisms	Explicit public direction · Solving an existing problem · Societal transformation e.g. reaching the UN's Sustainable Development Goals, challenge-based
Mode of knowledge generation and use	Scientific discovery Research and development (R&D)	Mission-oriented Experimentation (living labs, real laboratories), open-ended
Forms of knowledge interaction	Cooperative Cumulative ("smart") specialisation Basic / Applied research	Inclusive and participative Experimental combination Implicated / Implemented knowledge
Knowledge actors	Universities and industry with public catalysts (Triple Helix) Knowledge-intensive (public and private) services and intermediators	Research, higher and lower education, firms, public bodies, consumers, civil society Diverse (also without science)
Territorial knowledge dynamics	Territories, regional level, global pipelines, local anchoring, multi-scalarity	Placed-based emergence and diffusion as a simultaneous process, multi-scalarity? Global networks?
Regions	Regions as local-global innovation spaces	Regions as local-global arenas of change

Source: Butzin, Carvalho, Jeannerat and Manniche 2022.

Network activities

The TRAKR research network will organise the following activities:

- June 2023: A special session at the RSA-Annual Conference Ljubljana: *From knowledge-intensive to transformative knowledge regions: Introduction to the general research issues*.
- October 2023: Event 1 – Thematic workshop at the IAT in Gelsenkirchen: *Conceptualising Transformative Knowledge Regions*.
- March 2024: Event 2 – Online thematic workshop organised in the

framework of the RSA City and Regional Sustainability Transitions Webinar Series: *Methods to study transformative knowledge*.
- October 2024: Event 3 – Thematic workshop organised at CRT in Bornholm: *Empirical results and case studies.*
- October 2025: Event 4: Policy forum in Brussels: *Policy implications*.
- November 2025: Special Session 2 at the RSA-Winter Conference London: *Conclusion*

In June 2023, 35 participants attended a first TRAKR special session at the annual RSA Conference in Ljubljana. 12 research presentations were given in four sub-sessions. More recently in October 2023, 25 researchers from twelve different countries participated in a first dedicated workshop in Gelsenkirchen to address the potential conceptual fundaments of the idea on transformative knowledge regions. Three keynote talks were given by Lars Coenen, Mohn Centre for Innovation and Regional Development, Western Norway University of Applied Sciences, Oliver Ibert, Leibniz Institute for Research on Society and Space, and Kerstin Meyer, Institute for Work and Technology, Westphalian University of Applied Sciences. These contributions raised general questions and conceptions and were complemented by 11 short presentations including Pecha Kuchas that provided additional insights for future theoretical and empirical issues to be addressed by the framework of research network. Further discussions also took place informally during a study visit at Thyssen Krupp Steel.

The reflexions born at these first two TRAKR events in Ljubljana and Gelsenkirchen have raised promising research directions for the future work around the following assumptions:

- Transformative knowledge is entangled with action and bridges the presence and the future. It forms a basis on which to create future imaginaries and is a driving force of new development paths and solutions.
- Transformative knowledge evolves in multiple arenas at the interface of humans and nature, within and between different communities of practice, in fundamentally place-based everyday-life contexts as well as in world-wide scientific contexts, in combinatorial dynamics ranging from radical innovations to fine-tuning of practices and institutions, and it engages individual as well as collective socio-technical imaginaries.
- All regions can become transformative knowledge regions (TRAKRs). In

TRAKRs, actors act with the same sense of urgency for a sustainable future, and yet consensus for a common endeavour cannot be awaited because of the great urgency.
- Regional sustainability transformation is a place-specific process in which regions are sites for experimentation, contestation, and deliberation. TRAKRs are a political, economic, and social action and opportunity space. They are at the same time starting points, transit stations and receiving ends of innovation.

The organisers will be happy to welcome new participants from all horizons to the TRAKR network and are looking forward to the exciting coming events of 2024. The spring webinar on methods and the autumn workshop on empirical case studies in Bornholm are already being prepared.

Co-organisers of TRAKR

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Further information about the TRAKR network can be found at: https://www.regionalstudies.org/network/transformative-knowledge-regions/

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