

ACUTE - Accessibility and Connectivity Knowledge Hub for Urban Transformation in Europe

WP2 – Research synthesis

D2.2 Analytical framework and methodology

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Research Institutes of Sweden RISE	SWEDEN
University of Westminster UoW	UNITED KINGDOM
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Grazer Energieagentur GmbH, Graz Energy Agency GEA	AUSTRIA
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1. Motivations and objectives

The underpinning motivation for work package two (WP2) in the ACUTE project is twofold. Firstly, the need for policy actors, such as the Driving Urban Transitions (DUT) program, to better understand the research and development (R&D) landscape and how it reacts to calls for R&D projects on the transition towards more sustainable cities. Secondly, an overall need to better understand the prospects and limitations of collaborative, experimentation-oriented R&D projects in addressing urban sustainability problems.

WP2 has three objectives. Firstly, to synthesize what kind of research is encouraged and developed within the ERA-NET Cofund Urban Accessibility and Connectivity (ENUAC) portfolio by providing a high-level overview of scopes, activities, and outputs of the projects. Secondly, to identify research and implementation gaps by describing what the current portfolio is not doing although either requested from involved practitioners and/or needed to facilitate systemic transformations according to the literature on sustainability transitions. Thirdly, to explore what the DUT could do to improve the transformative capacity of the ENUAC portfolio by analyzing how their actions shape the projects.

The ambition is to produce a report (D2.3) that provides the DUT program insights on what to consider when formulating the content of the calls and adverts for future research funding, how it can support future projects regarding lessons learned from setting up collaboration with external stakeholders, and what to take into consideration for the researchers and research institutions engagement with external stakeholders.

2. Theoretical point of departure

The study employs a multi-level perspective on sustainability transitions, suggesting that for innovations to reshape socio-technical systems, there must be aligned and synergistic changes at three socio-technical levels: landscapes, regimes, and niches, as described by Geels (2002). The landscape encompasses elements outside the direct control of the actors at the regime and niche levels. At this level, external changes like climatic shifts can, according to the theory, destabilize regimes, such as the institutional frameworks that lend stability and context to urban mobility actors (Fünfschilling & Truffer 2014), thus creating opportunities for niche innovations to emerge and potentially, over time, replace or transform the existing regimes (Markard et al. 2012). Niches are viewed as the birthplaces of disruptive innovations and are theorized as protected environments where innovations can evolve free from the competitive pressures of established regimes (Kemp et al. 1998). An example of a move to create a conducive condition for niche innovation is a strategic R&D investment, such as the ENUAC portfolio (Raven et al., 2016).

Following Rogers (1995) and Baregheh et al. (2009), this analysis perceives innovation as a multi-stage process in which ideas are converted into products, services, or processes that are adopted, utilized, and recognized as novel within a specific context. These processes are embedded within institutions (Geels & Schot 2007), which are loosely defined as “a relatively stable collection of rules and practices, embedded in structures of resources that enable action” (March & Olsen, 1989, p. 39). Thus, the study takes an institutional perspective, recognized as crucial for understanding both innovation and sustainability transitions, highlighting the role of organizational and cultural contexts (Hartley et al. 2013) and tackling questions of societal transformation with an emphasis that extends beyond technology alone (Fünfschilling 2014). Special attention in this analysis is given to how research and innovation activities are organized into projects.

Lastly, drawing on poststructuralist theory (Bacchi & Goodwin 2016), the study conceptualizes writing as “the process by which human agents inscribe order into their world” (Gottweis 2003, 250). Therefore, to fully comprehend artifacts like calls for applications or project reports, one must explore both the object itself and the assorted systems of knowledge and practices that shape its creation (Smith & Sorensen 2023).

3. Conceptual model

The novel ideas and concepts that the ENUAC projects attempts to nurture are here conceptualized as niche innovations that aim to change urban mobility and land-use regimes, i.e. the institutional environments that structure and coordinate actors and activities in urban mobility and land-use systems. The ENUAC portfolio is, in turn, conceptualized as a collection of interrelated projects that are shaped by the interactions between application calls, project proposals, and funding decisions, and which aim to contribute to transitions towards improved urban accessibility and connectivity in Europe by nurturing the niche innovations, see Figure 1.

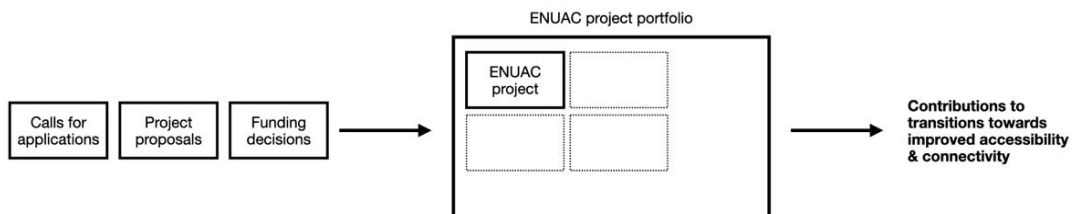


Figure 1: Overview of the conceptual model (further developed in Smith & Lindkvist forthcoming).

Inspired by the transition management framework (Loorbach 2007), the ENUAC portfolio’s potential to contribute to sustainability transitions is operationalized as how well the totality of the 15 ongoing projects firstly challenges existing rules and practices within urban mobility and land-use regimes and secondly:

- Structure problems and establish transition arenas
- Develop transition agendas, images of sustainability and derive the necessary transition paths
- Establish and carry out transition experiments and mobilize the resulting transition networks
- Evaluate the transition experiments and, based on lessons learned, make adjustments

4. Analysis process

The analysis builds on six sets of data and three analysis activities, see Figure 2: a parallel project analysis, to be conducted in collaboration by all the partners that have dedicated time in WP2, will utilize the outcome of analyses performed in WP1, WP3, and WP4 to answer Q1-Q6 for each project; an analysis, to be conducted by RISE, Malmö University, will use the calls for applications and other documents that describe DUT’s intentions with ENUAC to understand the scope and action space (Q7); and a comparative analysis, to be conducted by RISE, Malmö University, and those actors who wish to be involved in synthesizing and publication (i.e. as co-authors of the final report and potentially an academic paper), that aims to synthesize findings and address Q8.

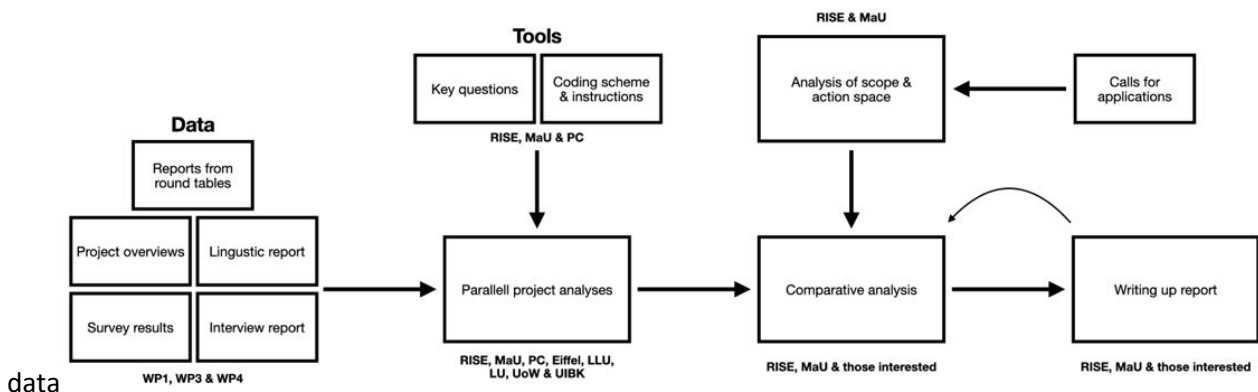


Figure 2: Overview of analysis process (further developed in Smith & Lindkvist forthcoming).

5. Key questions and detailed instructions

To fulfill the objectives stated in the first section, WP2 set out to address the questions outlined in D.2.1. These questions as well as detailed instructions, a coding scheme and a timeline for the analysis activities were distributed to project partners via a project internal document 22.12.2023. The analytical framework and methodology have also been presented on several occasions, such as in Bucharest (16.05.2023) and Malmö (15.11.2023).

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