Examining the impact of transition initiatives on organizational change

Bögel, P.M.[1,2]; Pereverza, K.[2]; Upham, P.[1]; Kordas, O.[2]

[1]Institute for Environmental and Sustainability Communication (INFU), Leuphana University Lüneburg, Universitätsalle 1, D-21335 Lüneburg, Germany

[2]Urban Analytics and Transitions Research Group, Department for Sustainable Development, Environmental Science and Engineering (SEED), KTH - Royal Institute of Technology, Teknikringen 10b, 10044 Stockholm, Sweden

boegel@leuphana.de

paul.upham@leuphana.de

kateryna.pereverza@abe.kth.se

olga.kordas@abe.kth.se

Abstract

The paper illustrates the merits of drawing on the organizational change management literature to better understand some of the organisation-level issues involved in the match and mismatch of institutional logics that have previously been identified as important in sociotechnical transitions. Empirically we draw on the *Region2050* project, which aims at implementing future studies-based methods and approaches to strengthen capabilities for strategic planning in the regions. We confirm the importance of (mis)matching logics, identifying as important a clash between the conventional bureaucratic, administrative mindsets of the regional bodies involved, with the mindset required for the future studies and long-term future orientation that *Region2050* requires. Hence the mismatch is in this case not between organisations, who are collaborative, but between orientations. Given this, we draw on the organisational change management literature to help identify options for success factors, among which we identify boundary spanning individuals, change agents and organisational plurality as important in both theory and practice. In general, the study is intended to add to the body of institutional analytic work in the sociotechnical transitions literature.

1. Introduction

Modern society is confronted with major sustainability challenges that span not only those that are environmental, but also issues of inequality, public health and others. Addressing these in a coordinated way poses a significant challenge in itself: the uncertainties are amplified in a highly complex environment, collaboration among stakeholders with different or conflicting interests being a recurrent theme and problematique. Not surprisingly, organisations may not be prepared to address coordination challenges, let alone the other challenges, for which they may lack relevant knowledge and capabilities (e.g. Coenen et al., 2015). Moreover, the operational landscape for organisations seems to change at an ever-increasing and sometimes profound rate: emerging technologies and social innovations such as artificial intelligence, robotics, liquid democracy, the sharing economy and others create expectations, hyperbole and threaten to compound uncertainties over different but overlapping timescales. Anticipatory action and planning in such an environment is not easy.

Future studies provides a number of relevant methods and approaches to deal with this. These include, for example, technological forecasting, foresight, backcasting and their variants (e.g.

participatory backcasting (Quist, 2007). These approaches are intended to help manage complexity and uncertainty through scenario techniques that: explore the long-term consequences of different choices (Zivkovic et al., 2016; Amer et al., 2013); structure and analyse complex problems by the aid of e.g. morphological analysis (Ritchey, 2018; Pereverza et al., 2017b); develop joint desirable future visions through visioning techniques (Neuvonen and Ache, 2016; Upham et al., 2016); develop adaptive and flexible pathways (Birkmann et al., 2014) and so on. However, efficient use of these methods requires development of relevant capacities among individuals, including long-term and systems thinking, the ability to build consensus, work in transdisciplinary contexts, be action-orientation and problem solving (Kordas et al., 2013). Organisations themselves need the ability to develop robust and adaptive strategies (Malekorour et al., 2015), consider longer planning horizons in everyday activities, engage in collaborations and networks with other actors.

Given the above, there is a need for transition initiatives (TIs) that address individual and organisational learning that both supports responses to specific sustainability challenges and that supports inter-organisational collaboration in the design of new futures. Such initiatives will need to be participatory in their futures orientation, engaging the representatives of multiple organisations (Hassenforder et al., 2015; Pereverza and Kordas, 2017), as well as likely introducing methods and tools.

While several documented studies use such participatory methodologies (e.g. Tàbara et al. 2018), these studies have little evaluated the extent to which participatory processes actually help to implement (organizational) change. Findings from the few studies that have conducted evaluations suggest that their aims are often not achieved, in the sense of long-term changes towards sustainable development (Rushmer et al. 2014). Among the barriers identified are factors such as a lack of knowledge of how to implement change, inefficient group processes (Rushmer et al. 2014), issues of selection of representative and their and involvement (Pereverza and Kordas, 2017) and mismatches of institutional logics (Smink et al., 2015). Furthermore, relatively few studies framed within sociotechnical transitions perspectives deal engage with individual actor-level analysis, e.g. why and how actors engage in transition initiatives, particularly in ways that make use of psychological models (Rushmer et al. 2015; Bögel & Upham 2018). The same holds true for the meso-level; research on organizational psychology and group processes have been little researched within the frame of sociotechnical transition studies (Clayton et al. 2015; Upham et al. 2018).

With the above in mind, here we examine the role of individual and organisational psychology in a sustainability transitions initiative involving multiple organisations who need to collaborate to achieve their objectives. We develop a multi-level theoretical heuristic that comprises individual actor-level factors and organizational-level factors identified as important for successful organisational change management (Long et al. 2018; Lozano 2012), especially in regard to changes on the macro-level lof (in)congruent logics (Smink et al. 2015; Fuenfschilling and Truffer, 2016), highlighting the implications for the dynamics of regime change.

The Swedish transition initiative *Region2050* is used as a case study. *Region2050* aims at improving strategic planning in Swedish regions and to achieve this goal builds upon approaches for strategic planning from future studies: methods such as backcasting, technology foresight and scenario planning. These approaches are new for the regional authorities, who are motivated by the need to strengthen capacities for developing and implementing long-term regional development plans (Regional utvecklingsstrategi - RUS) in the regions. We argue that insights from the organisational change management (OCM) literature can be usefully brought together with the idea of institutional logics to help understand the coordination challenges that need to be overcome in sociotechnical

sustainability transitions, particularly contexts in which multiple organisations are working together to envision new futures and deploying futures studies techniques for the purpose.

The aim of the study is to examine how transition initiative based on the discussed in this study design of participatory processes could trigger and support these changes in organizations and systems. This study addresses the identified gap by exploring the following research questions:

- *Macro/meso-level:* Do institutional logics of transitions initiative and organizations are coherent and how does it influence the impact of the workshops on organizational change? Could institutional plurality leave room for changes?
- *Meso-level:* How do organizational characteristics influence the change processes?
- *Meso/Micro-level*: What enables individuals to act as change agents and maybe boundary spanners? Which qualifications do they need to obtain in the workshop/TI?

The paper is organised as follows: section 2 selects from the transition studies and organisational change management literature in order to identify approaches relevant to supporting the introduction of future studies into collaborative organisational practice; section 3 presents a theoretical heuristic with which to explore mismatches across organisations and to identify strategies for overcoming these; section 4 describes the empirical case - the transition initiative *Region2050*, as well as the methods for data collection and analysis; section 5 presents and discuss findings of this study and their implications for the design of transition initiatives; section 6 concludes the paper.

2. Theory and practice of multi-organisation future studies

2.1 Challenges

Several frameworks that integrate ideas and methods from future studies have been suggested and demonstrated as fruitful for strategic planning in different contexts, including Regional Infrastructure Foresight (Truffer et al., 2010); Participatory Exploratory Modelling (Moallemi and Malekpour, 2018); and Modular Participatory Backcasting (Pereverza et al., 2017a). However use of such type of frameworks and their output presupposes a variety of conditions, ranging across supportive institutional contexts, internal capabilities, inclinations and extant planning processes, schedules and timescales. Hence Hughes (2013) comments on the disjunction between the time scales of policy makers and those of long range scenario planning, while Birkmann et al. (2014) comment on the misalignment of conventional top-down modes of planning, with future studies approaches of design as a learning process intended to build consensus among actors with different perspectives.

Thus, practice of strategic planning that is based on approaches and methods from future studies can be seen as a niche in the field of strategic planning. Previous studies suggest that it follows a new logic of planning that might differ from the current approach, e.g. regarding time-scales and hierarchy (Hughes 2013; Birkmann et al. 2014). A transition initiative aimed at capacity-building regarding such new type of strategic planning, thus, needs to go beyond capacity building concerning new methods but rather establish a new niche by uniting and empowering practitioners to implement the new strategic planning practice. However, such initiatives that are based on selection and involvement of individual representatives of multiple organisations have to potentially overcome several barriers relating to different levels, the macro-level institutional logics and the related organizational structure and barriers for organizational change. The following literature refers to both levels and connects insights from transitions studies (institutional logics) and organizational change management literature to examine how the barriers can be overcome. This also relates to the micro-level of the individual and its role in transitions.

2.2 Institutional logics

As Fuenfschilling and Truffer (2014) observe (see also Smink et al. 2015), despite widespread use of the 'regime' concept in the sustainability transitions literature, the latter has repeatedly been critiqued for lacking clear operationalization and, in particular, for not adequately reflecting what can be persistent institutional tensions and contradictions. These are, however, an important aspect of transition dynamics. Moreover, institutional logics provides insights into the agency that the MLP has been critiqued for lacking.

Remaining consistent with the structuration premises of the MLP, Fuenfschilling and Truffer (2014) draw on institutional theory to help characterize system structure and to reflect the tensions therein. The authors characterise a sociotechnical regime as the "highly institutionalized regulative, normative and cognitive structures, e.g. norms, standards, values, cultural expectations or regulations, which have evolved in accordance with certain technologies" (Fuenfschilling & Truffer, 2016 pp.298, drawing on Scott (2008)). Understanding sociotechnical change therefore requires understanding institutional change and the key role that institutional logics play in this regard. Logics are defined as "socially constructed, historical patterns of practices, beliefs, values and rules" (Hassink et al. 2018, p. 194). It is these practices and beliefs that are guiding actor's thinking and acting.

Differences between institutional logics can pose difficulties for organisational and individual actors seeking to effect change collaboratively. Smink et al. (2015) provide a case study of cooperation between biomethane producers and the operators of gas networks in which two organizational types follow different institutional logics: while the biomethane sector is characterized by an entrepreneurial logic, the gas network operators are in contrast characterized by hierarchy logics. The authors conclude that it is this mismatch of institutional logics that is main barrier to changes within this field.

In the literature, two approaches are identified that could help overcome the barrier of a mismatch between institutional logics: these seek *institutional plurality* and/or *boundary spanners*. *Institutional plurality* refers to the level of coherence of logics within a particular context. Dependent on the level of coherence, *"there is more or less room for alternative rationalities and actions"* (Fuenfschilling & Truffer 2016, p. 300); with low levels of coherence accordingly result in better opportunities for implementing change processes.

The concept of *boundary spanners* refers to either organisations (here also the term intermediaries is used, see Kivimaa, 2014) or individuals who act as a bridge between fields with different institutional logics. For example, a recent study examines the role of individuals as *boundary spanners* using the case of 'care farming' in the Netherlands (Hassink et al, 2018). Care farming is multifunctional agriculture that spans the agricultural, health and social service sectors in its purposes. The authors found that actors with dual identities in both care and health sector played an important role in overcoming the challenges. The boundary spanners "interact with other people inside their organization and negotiate system interchanges with another organization. A *successful boundary spanner* is a *leader* and *entrepreneur* who deploys effective *relational* and *interpersonal competencies* to develop mutual understanding, trust and respect." (Hassink et al., 2018, p. 188). Similarly regarding the interaction between producers and networks operators in the case of biomethane injection in the Dutch natural gas grid (Smink et al. 2015), the authors find that such actors help to *increase mutual understanding* and *achieve productive working relationships* between the niche and the regime actors. *Other characteristics of boundary spanners* suggested in Smink et la. (2015) include exposure to multiple or even contradictory logics as a prerequisite (Greenwood and

Suddaby, 2006); 'specific and dedicated actors' (Klerkx et al., 2010); good networking skills, effective interpersonal competencies, and ability to create trust (Williams, 2002).

Institutional plurality or boundary spanning are thus alternative ways of addressing the collaboration problem. Similarly, the concept of hybrid organisations reflects firms that have developed strategies in response to competing logics, Pache, (2011): "While early institutional research pointed to *decoupling* (Meyer & Rowan, 1977) and *compromising* (Oliver, 1991), more recent work hints at strategies involving *logics combination* (Greenwood et al., 2011; Lounsbury & Crumley, 2007; Tracey et al., 2011). These studies suggest that hybrid organizations may reconcile competing logics by enacting a combination of activities drawn from each logic in an attempt to secure endorsement from a wide range of field-level actors (Greenwood et al., 2011)." (Pache, 2011).

Overall, the roles of (mis)matching institutional logics and boundary spanners require (a) some form of practical response to support collaboration between organisations with differing logics; (b) a way of understanding and analysing some of the processes and issues involved; and (c) when working within a sociotechnical sustainability transitions framing, a way of connecting these different levels of phenomena without ontological problems. First, we deal with (a), regarding the types of 'success factors' that have been identified as relevant to the organisational changes required.

2.3 Organizational change management for sustainability

Organisational change management (OCM) concerns the factors that shape and influence processes of change within organisations. OCM for sustainability (e.g. Lozano, 2008; Lozano, 2014) is particularly focused on organisational changes for sustainability. It recognises a need in changes in technology, management systems and organisational cultures and emphasise importance of alignment between individual, group and organisation levels as well as congruence between informational, emotional and behavioural attitudes to implement changes (Lozano, 2008). An important assumption of OCM for sustainability is the nature of organisational learning through individuals and creating alignment of individual, group and organisational levels: *"Organisational learning needs to be consistent within and throughout the different levels, otherwise misunderstandings and even conflicts could arise; this is known as alignment"* (Lozano, 2008:505).

When discussing challenges related to organizational change, OCM for sustainability literature identifies numerous barriers for change including misunderstanding or lack of communication, group culture, attitude, conflicts, bureaucracy, and lack of commitment, organisational structures, lack of trained employees, on the individual level: lack of awareness, unwillingness to change, denial about operations' effects to the environment and societies, linear thinking, fear/despair about needed changes and how to deal with them, extra work added to day to day activities and others (Lozano, 2012; Lozano, 2009). Among the suggested strategies for overcoming those barriers are lifelong learning, better information through the company, educated workers. According to Lozano "Long-lasting CS changes requires, in addition to changes in mental modes, incremental changes in the organisational structure, operations, management, *the development of sustainability visions for the future and proposals how to achieve this*." (Lozano 2012).

Success factors for organizational change relating specifically to sustainability include organisational culture/organisational values, leadership competencies, economic benefits, fear or aspiration, external influences, awareness and ability to diagnose, existence of visible crisis, alignment with the existing budget (Long et al., 2018). Some of these factors relate to the individual-micro level, e.g. leadership competencies, while other factors characterize the organizational-meso level, e.g. economic benefits. Here we focus on individual-level factors relating to the role of education and training for organizational change for sustainability. Taking the example of fostering circular economy

as part of sustainability transitions, recent studies (de Jesus & Mendonça 2018, p. 82) highlight therefore the importance of acquiring relevant skills via education and training, "(…) education and training, so as to increase general awareness and create the required skill base, is another necessary condition of the CE." In this regard, one can note that there is a difference between skills/capabilities and motivations, the latter of which connect more directly to organisational logics. However while there are categorical differences between these constructs in the abstract, our results suggest that in practice the analytic distinction blurs.

OCM for sustainability literature recognise importance of collaborations for organisational change and establishing strategic teams or coalition to achieve common goals (Hamner et al., 2008). The potential of such coalitions depends upon so-called bridgers - individuals within organisations with high communicative and networking skills. Other characteristics of bridgers suggested by Hamner et al. (2008) include such as leadership position, networker with extensive contacts, prioritizes the needs of the group above their own political ends, likes to build both formal and informal relationships, takes risks and adapts to the political and cultural landscape, communicates well and others. Similarly, another important individual role often addressed in OCM literature is the one of *change agent.* Lozano (2011) stresses the importance of work with "change agents, innovators, and opinion leaders to push for change in an organization; hence catalysing and speeding up the adoption of new ideas".

In the context of TI aimed at capacity-building, an important aspect for process design is importance of multiplier effect. Thus, Lozano (2006:795) suggests that the multiplier effect in relation to sustainable development knowledge and skills can be achieved by "identifying and encouraging some of the individuals involved in small projects to share their experiences and knowledge" and by "educating educators to educate other educators" (Lozano, 2006:795). van Mossel et al. (2018) identify *factors that influence successful adaptations* (from the perspective of different organisation theories) as including "high organisational slack", meaning that resources have retained their value after a transition; strong dynamic capabilities; diverse resource bases; powerful enough to control the pace of the transition; forced to follow into a niche by other powerful incumbents; shape the institutions of a niche.

3. A framework for analysing organisational change in transitions experiments

Here we propose a theoretical framework that draws on the above literatures to make connections between individual, organisational and system-level processes specifically in relation to the types of organisational change issue relevant to sociotechnical change. The framework is structured according to the three levels of the MLP heuristic, namely:

- *Macro level* - the level of an overarching socio-technical system;
- *Meso level* - the level of transition initiative as an "informal/temporary" organisation with its own logics; and all kind of formal and informal organisations and groups involved in a transition initiative;
- *Micro level* - the level of individual representatives of organisations and groups involved in a transition initiative, and individual members of TI's project team.

The Meso level comprises issues defined as organisational, including those of the transition initiative (TI) and the participating organisations and groups. Barriers and opportunities for change can be identified both within each of three levels and between them. Thus, barriers caused by mismatches of institutional logics can be identified on Macro-Meso level, as well within the Meso level. Design and nature of TI itself might be associated with barriers on Meso level (e.g. objectives of participatory process, origin of team, selection of participants, degree of participation, participatory

methods and tools (Hassenforder et al., 2015; Pereverza and Kordas, 2017)). And for example, barriers related to boundary spanners and change agents have Micro-level nature. We are aware of the ontological issues and complications raised by the MLP's positing of three distinct levels of socio-cognitive rules, compared to, for example, an arguably more flexible, critical realist perspective (Sorrell, 2018), but given the structuration assumptions of Fuenfschilling and Truffer (2014), as an ontological framing we take the extended ('strong') structuration approach of Stones (2005). This allows the juxtaposition of multiple types of perspective via methodological bracketing. Figure 1 visualises the theoretical framework, showing only the core elements.

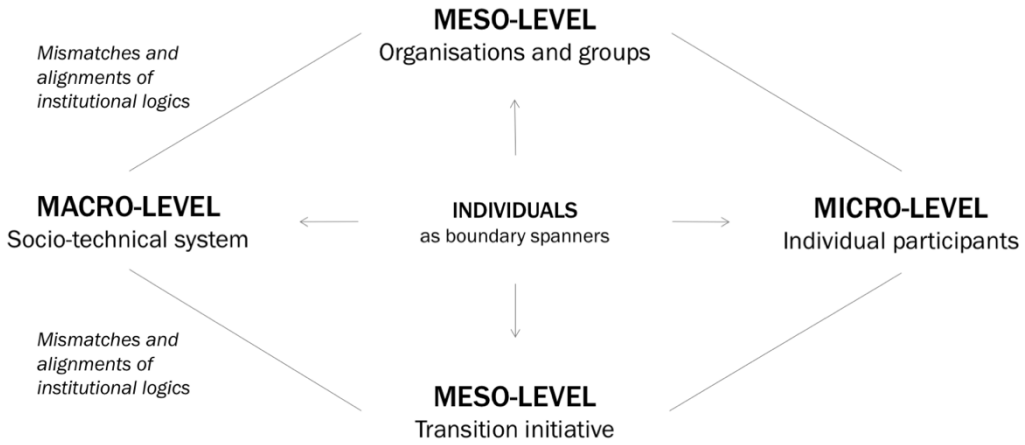

Figure 1. The theoretical framework

Table 1 exemplifies the influencing factors for transitions and related organisational change identified in the literature. The factors are allocated to the three levels of the framework as described above. While the macro-level factors relate to the regime-level, the meso-level factors focus on the organizational level. This includes (1) factors that focus on the design and nature of TI and (2) factors that influence the possibilities for organizational change on the level of the participating organizations. The micro-level relates to factors originated in psychology of individuals participants, both representatives of organisations and members of TI project team. Definition of factors are based on the literature from transition studies and OCM but adapted to the specific aim of understanding organizational change in the context of transitions.

Table 1. Examples of organisational change factors relevant to collaborative transitions initiatives

Level	Factor	Description	Reference
Macro	Regime-level factors	External in relation to involved organisations and TI factors that influence their practices and logics	Long et al., 2018
Macro-Meso	Institutional plurality	Presence of different rationalities within an organizational field	Fuenfschilling and Truffer, 2016
Meso level: A transition initiative (TI)	Process design	Design of TI including structure and number of activities; strategies and challenges taken into account; involved in the design actors; etc.	Hassenforder et al., 2015; Pereverza and Kordas, 2017

	Methods and tools	Different types of methods and tools used in TI, e.g. analytical, creativity, participatory and other types of methods	Hassenforder et al., 2015; Pereverza and Kordas, 2017
	Representatives selection and involvement	Principles and process of selecting and involving representatives of organisations and groups into TI's activities	Hassenforder et al., 2015; Pereverza and Kordas, 2017
Meso level: Organisations involved in the TI	Awareness and ability to diagnose	Self-awareness regarding challenges and problems within participating organisations and groups	Long et al., 2018
	Collaboration	Collaboration among organisations and groups involved in TI and beyond/external to TI	Lang et al., 2018
	Structures for implementation	Supporting structures in participating organisations that facilitate implementation/incorporation of new methods and approaches learned in the process of TI; also conditions for implementation	Lozano, 2012; Long et al., 2018
Micro	Boundary spanners	"Boundary spanner"-skills of an individual participant of a TI, including ability to create connections between own organisation and TI and to overcome difficulties related to implementation of TI's method and logic in own environment	Hassink et al., 2018; Smink et al. 2015
	Power	Formal and informal power in own organisation of an individual participant of a TI	Lozano, 2012
	Trust	Ability to create trust by an individual participant of a TI	Hassink et al., 2018;
	Interpersonal competencies	Interpersonal competencies of an individual participant of a TI and role of such competences in initiating and implementing changes in participating organisations	Hassink et al., 2018; Williams, 2002
	Leadership	Leadership skills of an individual participant of a TI and role of such competences in initiating and implementing changes in participating organisations	Lang et al., 2018; Hamner et al., 2008
	Networking skills	Networking skills of an individual participant of a TI and role of such competences in initiating and implementing changes in participating organisations	Hamner et al., 2008

4. Method

The paper points out the merits of drawing on the organizational change management literature to better understand some of the organisation-level issues involved in the match and mismatch of institutional logics that have previously been identified as important in sociotechnical transitions. The transitions initiative *Region2050* is used as an empirical case to illustrate the theoretical contribution of connecting transitions studies and OCM.

Region2050 is a Swedish transition project that aims at developing the strategic planning in the regional authorities in Sweden, namely the use of future studies-based methods and approaches to strengthen capabilities for strategic planning in the regions. We treat these authorities as a specific form of organizations which are, so far, under researched in transitions studies. Indeed to date few studies have examined how sustainability in relation to future studies can be integrated in public sector management (Plawitzki et al. 2015). Accordingly, we examine to what extent participation within *Region2050* has led to changes within the regional organisations, particularly their strategic planning processes, and what drivers and barriers to change can be determined. Particular emphasis is given to the connections between the micro-, meso- and macro-level.

4.1 Regional development planning in Sweden and the transition initiative *Region2050*

Historically, different regional authorities had different responsibilities but, ongoing reform of regions in Sweden are intended to add new functions to the regional authorities and to make their responsibilities more homogenous. More recently, there were even more ambitious plans to reduce number of regions (from 21 to 7), but this did not happen. However, this experience was one of the factors influencing the context in which *Region2050* was initiated - the expectation of major changes in governance on the regional level. Another influencing factor are expected legislative changes for the regional development strategies (regional utvecklings strategie), short RUS. The strategies are published all four years by regions. So far, the time horizons for the strategy can vary, including short-term plans but it is supposed to switch to more long-term planning.

Within this context the regions decided to implement a new transitions initiative which had the goal to implement future studies bases approaches in regional planning. Their choice was motivated by the need to strengthen capacities for developing and implementing long-term regional development plans in the regions. The organization asked to implement this transitions initiative was RegLab, member organisation that includes 21 Swedish regions and three national authorities. Following the concept of a member organisation, the idea of *Region2050* was initially suggested by two Swedish regions and then decided on in a democratic vote among RegLab's members. Likewise, the design of *Region2050* was co-created by the representatives of the Swedish regions (Figure 2).

Region2050 is intended to last three years - from 2017 to 2019. It is not limited by particular thematic area but tries to cover all topics relevant for regional authorities, from transportation to healthcare. It aims at screening various trends in future studies and initiating important discussions about the social consequences of e.g. innovative technologies such as autonomous cars, AI and advancement in healthcare. The program includes, among others, four workshops with representatives from 21 different regions. Between the workshops, regions are supposed to implement so called "home work" - to try to use the methods and approaches presented in the *Region2050* with colleagues at home organisations. Furthermore, every year a conference is organised to disseminate interim results and to include a larger number of regional representatives from different sectors, departments and positions in the regions and also other interested actors. The initially planned seminars with politicians, designed to align new learning among the regional planners and politicians, have not at the time of writing yet been implemented.

The study presented in this paper has been undertaken in the middle of *Region2050*'s implementation period - from November 2017 to May 2018. Figure 2 present the overall process design of *Region2050* and mark a timeframe of this study in relation to *Region2050* activities.

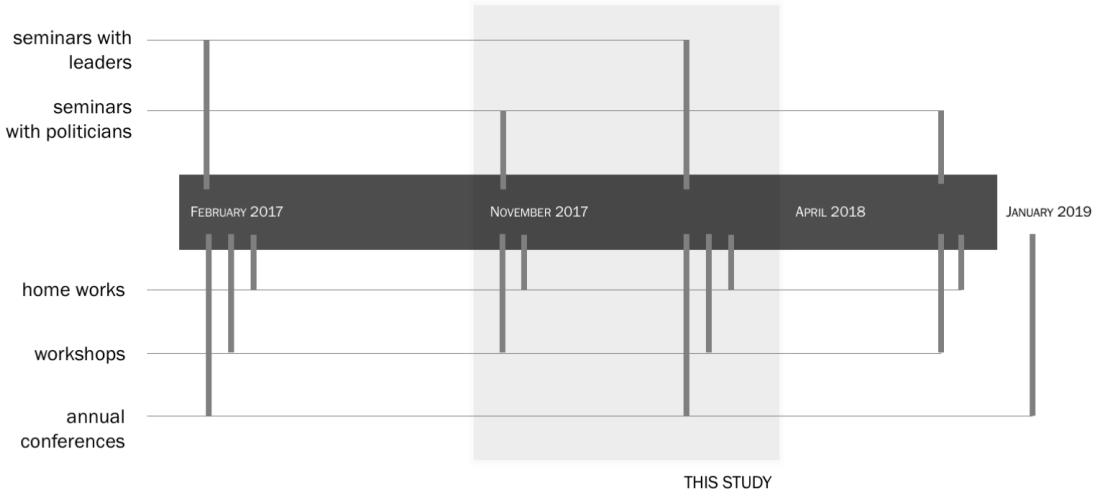

Figure 2. Process design of *Region2050* / timeframe of this study
(based on Region2050 project documentation[1])

4.2 Data collection and analysis

The case study is based on the triangulation of different methods; this includes

- semi-structured interviews with participants from Region 2050 (different regions) and members of Region 2050-project team;
- observation protocols from the 2nd Region 2050-workshop in November 2017 and from the annual conference in March 2018.

Eight in-depth interviews were conducted for the study; including interviews with representatives of regional authorities and members of the *Region2050* project team. Choice of interview partners took into account the need to include regions with different characteristics, e.g. regarding geography and economy. Most individual interviewees did not perform only one role and indeed we choose participants with multiple roles and/or expert knowledge about cross-sectoral issues. For example, one regional representative was an expert on strategic planning on regional level, which helped us to understand the context - and logics - better. Another interviewee was part of the project team but also worked in other contexts with innovation and future studies, especially on designing and implementing participatory processes. All but one interviewee has participated in one or several activities within *Region2050*. A full list of interviewees and their background is presented in Table 2.

Interviews were undertaken in the spring of 2018, all but one in person, with one by skype, all on condition of anonymity. For the interviews a semi-structured format, consistent with the need for rich and in-depth data, was chosen. Participants were first asked about the background of their region. They were then asked about their first contact with the *Region2050* and initial expectations, followed by discussion of actual experience related to the *Region2050* and later the process of developing RUS documents. The final set of questions concerned current expectation regarding the next step of *Region2050* and suggestions for improvement of similar participatory processes. The full interview protocol is presented in Appendix 1. While the overall structure was the same for all interviews, the questions were varied somewhat for different participants, depending on their role and background. Interviews were recorded and transcribed.

[1] Available at http://www.reglab.se/projekt/region-2050/

Observation protocols from two events with different formats in *Region2050* were also developed and applied, with two observers for each event. This includes first, observation at the second workshop within the Region2050 process which took place in November 2017 and second, observation at RegLab's annual conference (*Årskonferensen*) in March 2018. The workshop focused on the development of future scenarios and included element of backcasting, trend analysis, and scenario planning. The conference was dedicated to presentation of the interim results of Region2050 and presented future visions developed by the regions. The conference was attended not only by the participants of the workshop in November but also by broader range of different actors, including top-level of regional governance and representatives of various networks and organizations working with the regional level in Sweden.

Qualitative content analysis (Kuckartz, 2014) was used for data analysis. The interviews and observation studies were coded using codes based on the theoretical framework (deductive coding) and refining codes, with new codes added during the process (inductive coding). The qualitative data analysis software MAXQDA was used and in addition to thematic coding, we have selected quotations to illustrate the value of our theoretical framework that aims at connecting the micro-, meso- and macro-levels. Quotations were sometimes lightly edited for clarity, for example, via correcting constructions or deleting fillers.

Table 2. List of interviewees

#	Interviewees	Date	Place
1	Representative of a region - Central Sweden; coordinator of a network of five Swedish regions	21.02.18	In person
2	Representative of a region - Central Sweden; experienced strategist on the both municipal and regional levels	23.02.18	In person
3	Representative of a region - Northern Sweden; regional director	14.03.18	In person
4	Representative of a region - Northern Sweden; development planner; member of the planning group set up by RegLab for Region 2050	15.03.18	In person
5	Representative of a region - Central Sweden; coordinator of the regional strategy development	15.03.18	In person
6	Member of the Project team; consultant for several regions, specialised in participatory processes and storytelling	23.03.18	In person
7	Project team leader Region2050, coordinator RegLab	18.04.18	In person
8	Representative of a region - Southern Sweden; coordinator of the regional strategy development; member of the project team; member of the planning group set up by RegLab for Region 2050	24.04.18	By skype

5. Results and Discussion

In the following section results on the barriers to transitions in strategic regional planning and approaches on how to overcome these barriers are outlined according to the three levels introduced in the theoretical framework. On the macro-level we have the regime and its specific institutional logics; the public sector in general seems to be likely to follow hierarchy logic such as the gas network operators in the study by Smink et al. (2015). These logics are found to be defining for the organizational culture on the meso-level. The logic beyond Region2050 and in more general terms for all transitions initiatives is one that emphasises the importance of innovation and change. Thus, a mismatch between institutional logics becomes a barrier to the aspired target of organizational- and related system-level change. We suggest three different theoretical concepts from transitions studies and organizational change management that can help to deal with the mismatches of organisational and institutional logics: (1) the macro-level of institutional plurality and its connection to the meso-level; (2) collaboration as a key success factor on the organizational-level; and (3) at the micro-level, the roles of individuals as change agents and boundary spanners.

5.1 Mismatch of institutional logics

When *Region2050* was initiated, the *Bureaucracy Logic* was dominant in strategic planning in the Swedish regions. To describe it as a prototype - while keeping in mind the concept of institutional plurality and referring to it later - the key characteristic of the *Bureaucracy logic* is the short-term time span for planning, which is usually between three and five years. Planning is based on analytic processes, often in combination with extrapolation, while methods of future studies are often critiqued for being speculative. The management of planning in particular and the organization in general follows Weber's idea of bureaucracy. Thus, there are strong processes and routines for all workflows and clear hierarchies. The organization is functional with departments organized according to different areas, e.g. health and mobility.

Table 3. Differences in institutional logics in regional planning

	Bureaucracy logic	**Future studies logic**
Time span for planning	Short-term	Long-term
Art of planning	Analytics & extrapolation	Future studies & forecasting
Management	Bureaucratic processes	Agile development
Organizational structure	Silo/functional	Cross-functional

The *Future studies logic* that is deemed necessary for sustainability transitions and which *Region2050* wants to facilitate in strategic planning in Swedish region is, conversely (see Table 3), characterized by long-term planning and involves the use of several methods to achieve this such as technological forecasting or backcasting. It requires agile developments and system-thinking approach with related cross-sectoral planning. In line with previous studies the study shows that different institutional logics are a key barrier to transitions (Fuenfschilling & Truffer 2016). For example, the following quote illustrates how the mismatch of logics causes difficulties for the implementation of the *Future studies logic* with regard to the characteristics of agile development:

" (...) the public sector is slow and it cannot really respond to the development and such. But sometimes I think what should be the role of the public sector. People tend to forget why the process are slow, because it's not a company. And it's some values of the public sector should perhaps still be concerned (...) we have all responsibility for people's money." (I4)

While the mismatch of institutional logics on the macro-level are recently discussed in several studies (Fuenfschilling & Truffer 2015; Smink et al. 2015), findings from this study highlight barriers on the meso and micro-level, too, well as strong interrelations between the different levels. Regarding the connection between institutional logics and the meso-level of the organization, the quote above illustrates this strong interconnection: A new logic for strategic planning implies significant changes to the organizational structure, e.g. cross-functional approaches in contrast to functional management, as the following quote illustrates:

"(...) further away from the present system which still is driven from departments and money coming from different kind of institutions. So it is more a question of how do we handle this new kind of perspective into plans of action?" (I1)

Taking into account this relation between transitions towards new logics and organizational change, the role of the micro-level becomes obvious. To be successfully implemented, organizational change requires changes on the level of the organization and its structure but likewise on the individual level (Lozano, 2012). Findings from the study support this connection between micro and meso-level also for the field of transitions. In a panel discussion at the annual conference, a panelist describes that the change to the *Future studies logic* requires one to *"rewire"* their brain, which one of the organizers interprets as one of the main challenges in changing the logics of planning:

"(..) I would not say it is easy for them [participants of Region2050]. They have all sorts of barriers or mind-blocks to think-about, especially their long-term future."

5.2 How to deal with the mismatch of logics: organisational change options

We suggest that three different theoretical concepts from transitions studies and organizational change management can help to deal with the mismatches of organisational and institutional logics: (1) the macro-level of institutional plurality and its connection to the meso-level; (2) collaboration as a key success factor on the organizational-level; and (3) at the micro-level, the roles of individuals as change agents and boundary spanners.

1. The macro-level: Institutional plurality as a chance and challenge

Strategic planning in the regions is characterized by high institutional plurality:

"(..) the regions really work differently when it comes to their strategic practice" (I8)

In the context of this study, there are differences in the process of the regional development strategy, the so-called RUS. At the moment, the regions choose their own time horizons for the RUS, with differences between strategies ranging from seven to 32 years. While all regions have in common that they publish updated RUS every few years, the starting points differ. For example, two

regions (I5, I2) have just completed RUS in spring 2018; one region (I8) was at the beginning of RUS and one region (I4) will start a new RUS in autumn 2018. There are plans for tighter structures in the coming years but, as yet, several other differences between the regions and their planning will remain; not least, because they consider their sovereignty to be very important.

Other key differences relate to geography and related implications for regional planning. For example, in regions with big municipalities such as Stockholm region, (lack of) space is a main issue in planning and accordingly built environment planning highly influences the regional development strategy – even resulting in different regulations and mandates for the role of physical planning. In the Northern regions, space problems and corresponding planning are of less importance. This often also goes along with differences in methods for planning, with bigger regions and/or those with big cities having more staff and using more advanced techniques, such as IPM/GIS, while other regions need collaborations among each other for this.

Institutional plurality is discussed in transition theory as a chance to deal with mismatches of logics (Fuenfschilling & Truffer 2016) and findings from this study support this assumption. The high institutional plurality gives regions the chance to experiment with the *Future studies logics* and related changes on the organizational level. For example, one region has developed an own division for innovation in the region which allows for a cross-functional structure and testing of new methods. However institutional plurality also brings challenges, especially in terms of organizational change. While organizational change management usually refers to changes within an organization, *Region2050* deals with 21 different regions and hence involves considerable organizational difference, e.g. in terms of organizational culture and structure. As mentioned, the different starting points of RUS within the regions influenced the participations in the process; some regions were less interested in *Region2050* because they were in the middle of RUS development cycle and the input of future studies methods was too late for them to accommodate:

"(..) We had already started [RUS] and we have a tight schedule so I couldn't just wait for the [Region]2050 project to be finished before I finished this (…)". (I2)

2. The organizational-level: collaboration as a success factor

While organizational change management literature usually does not refer to collaboration as a success factor, specific studies on organizational change towards sustainable business models identify collaboration as a main factor for successful transitions (Long et al. 2018). In line with these studies, findings from the case study of *Region2050* find collaboration to be a key concept for transitions towards new logics of strategic regional planning. This includes first, collaboration within the process of *Region2050* and second, collaboration within the regions as a way of implementing new logics.

With regard to collaboration within the process of *Region2050*, it should be noted that Swedish culture in general highly appreciates collaboration and participation, which also influences the work of the Swedish regions: the latter is characterized by good relationships and intense exchange between regions. For example, already before the start of *Region2050* there was an RUS network that the regions used for exchange on development practices of RUS. It is also noteworthy that the

RUS network is organized by RegLab, the same organization that arranges *Region 2050*. This illustrates the particular role that RegLab has for the regions:

"RegLab has been a very important platform, actor for learning and for exchanging experiences and learning from each other." (I4)

The results indicate that it is this longstanding collaboration that was the main factor for the (so far) success of *Region2050*; this long-term experience both made the organizers aware of mismatches of logic at the beginning of the process and the trust they have earned over years give them the chance to work through this together with participants. One of the organizers remarks regarding the first year of Region2050:

"(...) last year [first year of Region 2050] was a time of bewildering really (...) and that's not strange. That is exactly what we knew was going to happen (...)"

but also highlights the role of the longstanding collaboration and deal with implementation of new logics in collaboration with the regions:

"(…) this group [Region2050], they have had a really high tolerance for, or awareness that this is a journey. We're doing a journey together and we are all learning."

It is this long-standing experience and the resulting awareness of the two "different worlds" (Smink et al. 2015) that allows RegLab to act as boundary spanner on the organizational level.

Collaboration and participation is also the way that participants use to try to implement the new input in their regional organizations. Using a bottom-up approach, they start with small seminars or work groups with colleagues and some offer even bigger seminars later:

"Some of these things are really big regional seminars with politicians but most of them are small things which is in my theory or ideology that's how change happens. It starts with small things." (I7)

With regard to bottom-up implementation of new logics and methods for planning, a key challenge on the meso-level is the (lack of) structure for implementation. This refers to smaller challenges such as lack of time and adapting the program of Region2050 to short meetings but also bigger issues such as organizational structure, e.g. functional organizations that hinder cross-functional planning. One interviewee mentions this explicitly with regard to sustainability issues:

"Now we come to collaborate. And in the same time we can see that the lack of such supporting structure actually is so important. We have not reached our goals when it comes to CO2-emissions because there is no such structure in place. There is no capacity to receive the money. (…) That is for example one area where we see the meaning to invest in good supporting structure in the long run." (I1)

The contrasting - or complementing approach – to bottom-up implementation would be to implement organizational changes top-down, e.g. by the State developing new organizational structures. While the initial program planned to offer seminars for politicians (see Figure 2), the lack

of a top-down emphasis has posed a challenge to collaboration in terms of a deficit of participants who are both relevant and powerful. Politicians who would have the power to initiate top-down changes do not participate in *Region2050*; the planned seminars have so far been cancelled. While contextual factors are one reason for this, e.g. lack of time and upcoming elections in autumn 2018, another reason refers to the issue of power itself. Some potential participants were not involved in the program planning itself and when they learned about it, they misunderstood the goals of *Region2050* and saw it as a threat to regional sovereignty. One of the interviewees assumed that they thought that:

"This group is going to make decisions for the Swedish regions. That is our job." (I7)

3. The role of individuals for organizational change: change agents and boundary spanners

The bottom-up, participatory approach to organizational change that characterizes the case of *Region2050* allocates a key role to individuals. Accordingly, the concept of participants as change agents is a main design factor in *Region 2050*; one of the organizers describes participants as *"ambassadors" (I7)*. The learning process is designed according to this approach and is given particular attention by the organizers, as the following quote illustrates:

"Communication, learning and change management: that is very close. It is interconnected (…)" (I7)

The educational goals identified in the empirical study are twofold: (1) mind-set changes with regard to logics and (2) knowledge on methods for future studies (e.g. backcasting, forecasting), to be able to implement a strategic planning that follows the logic of Future studies. The first goal of mind-set changes is a particularly difficult process for participants. One main barrier for participants is to learn to accept and deal with the high level of uncertainty that characterizes future studies. This challenge is addressed several times during the annual conference and one of the organizers also refers to how participants complain to them:

"These people themselves who are in this process are very insecure. 'What are we doing? What is happening? Are we doing the right thing?'"

The insecurity is increased if participants have reasons to doubt the legitimacy of the presented input. Triggers for this are (1) if participants miss the theoretical background of the new approaches and/or have difficulties following academic models (for example, Geels' MLP (2002) was introduced to them at one point); and (2) if the approaches are not in line with their personal attitudes towards strategic planning. The latter is an issue raised by several participants during the annual conference and during the conference. The key mismatch that arises here concerns the balance between taking into account technological forecasting but also societal change. The results indicate that several participants in *Region2050* feel that the technological aspects have been given too much weight and that not enough attention is given to human behaviour and societal development. Observations from the two events attended support this assumption; e.g. at the annual conference five regions presented poster with future visions, which mainly refer to technological developments.

However, in many ways *Region2050* also offers participants support in reaching educational goals. For example, participants refer to the design of workshops as containing inspirational talks and group

discussions, which, as well as the homework, they claim has help them in their learning. The same holds true for the material provided on the website (e.g. presentations of speakers) and the advice provided by RegLab upon request, including contact information for external consultants. The attempts by participants to implement new approaches and methods in their organizations, overall, indicate that the design of the concept of educating change agents within Region2050 is working well.

Connected to learning and achieving educational goals, the role of organisational boundary spanners can be interpreted as a specific form of a change agent with the key difference being the progress in learning. The boundary spanner has an in-depth knowledge of multiple organsiational logics, has reflected on their similarities and differences and has developed their own approaches regarding how to bridge these logics. An example is Interviewee 7, who works as a regional planner but also for year as an organizer of *Region2050*. Another organizer illustrates her specific role as a boundary spanner in the process:

"She was good help for me because I am not a regional developer and when some of the regions said 'We don't understand it, how should we use these methods' she kept saying 'What! They could use it anyhow, they could use it like this, they could use it like this. I could use it in the beginning of the process or at the end of the process." (I7)

Another participant, also one involved in Region2050 at an early planning stage, shows a development towards a boundary spanner. While he reflects during the interview on differences between the public sector *Bureaucracy logic* and the *Future studies logic* that go along with agile development (see full quote above) he also start to consider ways on how to bridge the two logics:

"(...) the public sector is slow and it cannot really respond to the development and such (…) if I pay my taxes I expect the government to be professional knowledge base and like evidence based. But perhaps it's not as easy to be there in the future."(I4)

As an example on how this switch of logics could look like, or rather in which parts he could imagine them to be compatible with the mandate of regions, he mentions the knowledge generation phase:

"We cannot do experimentation (...) but I think that perhaps in the knowledge creation phase that is today very very slow - usually it is a government investigation two years and then enter the legislative process- (...) I think we should implement like experimentation phase and prototype earlier in the process (...)" (I4)

While the empirical study hereby confirms a key competency needed for boundary spanners, namely the knowledge and reflection of the different logics (Smink et al. 2015), it also adds to the literature by deriving further insights on competencies for both change agents and boundary spanners. With regard to knowledge levels, the results show that the transfer from individual to organizational learning requires also an in-depth knowledge on new methods. An insufficient knowledge level not only results in wrongly presented information to other colleagues but also hinders the exchange in general as the following quote from a participant illustrates:

"We don't master this technique yet, and we are also learning so I think that when we start involving our politicians a bit closer this kind of thing, I think we have got to have more knowledge, feel more safe in that." (I4)

Two other competencies of change agents and boundary spanners are confirmed: (1) the ability to create trust and (2) networking skills (Smink et al. 2015). Regarding the latter, the findings also show overlaps to the concept of leadership in OCM (Long et al. 2018; Hammer et al. 2008); one of the organizers describes it as follows when it comes to competencies that participants need to later become change agents:

"You need people who have some kind of platform and some communication skills, in some way communication. And that might be that you have a big network or you're an important informal leader or (…) you are a really good communicator when you are distributing things and telling everybody." (I7)

In addition, the findings shed lights on the, so far, broad concept of "interpersonal competencies" (Smink et al. 2015). A key competency mentioned by interviewees in this regard is some kind of empathy and context-related knowledge, namely the ability to understand people's' situation and support them in their further development based on this, e.g. help them make small steps out of their comfort zone. As previous studies suggest this competence as well as other competencies listed above are highly influenced by the personal background of the person (Hassink et al. 2018). For example a member of project team is also development planner in regions and understand challenges in implementation and can advice in how new methods can be applied within RUS development. Another interviewee has an educational background that is helpful in providing structure and support for regional employees to try new concepts.

As all this competencies are difficult to find with one person some regions decided to send several representatives to the Region2050 process:

"(…) when you have only one person from our organization (…) the project gives a lot back to that person but it's also a huge task for an individual to bring all that back to the whole organization. That's not easy to do." (I3)

In addition, even the boundary spanner identified in this study refers to the need for additional help of consultants to implement organizational changes:

"(…) we could use some coaching in the everyday work. For instance if we are planning to have a workshop of some kind that are connected to the sustainability program or whatever it can be we're working with, then it could be really good to have like a coach: What do we need to think about? What kind of questions do we need to work with during a process? (…) (I8)

6. Conclusions

With (mis)matching institutional logics having been previously identified as important in sociotechnical transitions processes, we have taken this premise as our starting point for our analysis of a large Swedish transition initiative that we knew was experiencing mixed progress. Indeed, in line with previous studies (Smink et al. 2017; Fuenfschilling & Truffer 2016) the present study does reveal a mismatch of logics as a key issue in the strategic planning process in Swedish regions (*Region2050*). One the hand, there is the dominant *Bureaucracy logic* characterized by short-term planning spans,

based on analytics and extrapolation, bureaucratic processes and functional organizational structure. On the other hand, there is a *Future studies logic* that the transition initiative aims to implement and which is defined by long-term, cross-functional planning, using methods of future studies such as foresight and backcasting and related agile development.

In this regard, the study builds on previous findings on challenge for future studies thinking in planning (Hughes 2013) and contributes by illustrating these in more detail. Regarding the latter, the study identifies the relationships between macro-level institutional logics and the organizational level, e.g. the influence of functional planning on organizational structure. This implies that a change of logics in planning is inseparably linked to organizational change and emphasises the merits of connecting transition studies and the literature on OCM.

The paper confirms the importance of institutional logics hypothesis and draws on the OCM literature to propose directions for thought regarding the problems raised by logic mismatches. To this end, we draw on three core concepts: institutional plurality; organisational collaboration; and change agency and boundary spanning (Fuenfschilling & Truffer 2016; Long et al. 2018; Smink et al. 2015). While the study confirms the opportunities that institutional plurality offers, the OCM literature also reveals its challenges: the high plurality in regional planning makes coherent organizational change management nearly impossible. Overall, the study shed lights on the importance and competencies of boundary spanners: knowledge and reflection of different logics and expert knowledge, here in the form of in-depth knowledge of methods and tools for future-oriented strategic planning, ability to create trust, networking skills, leadership and empathy.

While these results focus on a bottom-up approach to organizational change, further studies should also develop the connection to organizational studies further by addressing top-down changes such as new management approaches. The study points out the merits that OCM literature could have in this regard but also reveals that concepts from this research field will need adaptation for the specific context of transitions studies; e.g. transition initiatives usually deal with several different organisations which is in contrast to the usual approach of OCM to develop a tailored approach for each organization.

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Appendix 1

Interview questions

1. **Organisation/region/work**

- Could you tell us about your region?
    - and your role in the region?
    - and strategic planning in your region? Is strategic planning a new practice? Differences between departments?
- How do you interact with the top-management/ politicians regarding strategic planning?

2. **Past/Involvement and initial expectation regarding *Region2050***

- Could you please tell us how you first got in contact with *Region2050* project?
- Were you involved in planning the project? If yes, how was it done? What was your role?
- What were your expectations when the project started?

3. **Present - actual experience of participation in *Region2050***

- Could you describe the workshops in *Region2050* that you have so far attended?
- How were you (concretely) involved in the workshops/process, e.g. discussions with other participant? What parts worked well? Where were problems?
- What information or contacts etc. were helpful for your work?

4. **Present - connection with the process of developing Regional utveckling strategie (RUS)/regional development strategy**

- At what stage of RUS development is your region at the moment?
- Have you talked to your colleagues in your organization/region about your experiences with *Region2050* (both the ones who attended, too, and others)?
- Have you talked to the top-management/politicians in your region about your experiences with *Region2050*?
- In which other ways have you/could you use the content of the workshops for your work?
- How was it connected to the RUS process? How will the RUS-process continue?
- Have/will you take part in other workshops on strategic planning/regional development?

Sub-questions

- How have other participants experienced this? Which differences between the participating regions have you experienced? Differences with regard to collaborations between civil servants and politicians?
- How much were the techniques for strategic planning presented at the workshops in line with the current practices in your region?
- How much collaboration is there in strategic planning between regions/how much do they learn from each other? Influenced by *Region2050*?
- What were the most important learnings for you from *Region2050*? Has it helped in another context, e.g. NGO work?

5. **Future - both for *Region2050* and RUS development process**

- If you think of the future what would need to happen for the RUS-process to be successful?
- How do activities like *Region2050* or other participatory/collaborative processes can be of help?