Transition governance amid destabilising regimes: Operationalising transition space

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Introduction

Transition studies have historically focussed on the rigidity of socio-technical systems versus the innovative agency of niches (Fuenfschilling & Truffer, 2016). Indeed, Geels (2020) reminds us that transitions can initially be seen as an "up-hill struggle" by niches against "mainstream selection environments" (p. 6). Here, agency – the capacity to act – is most prominently situated in niches, and more constrained in regimes by incumbent institutional structures. Recently however, various publications address transition dynamics in the face of regime destabilisation and transition acceleration (e.g., Fuenfschilling & Truffer, 2014, 2016; Loorbach et al., 2017; De Haan & Rotmans, 2018; Avelino & Wittmayer, 2016).

In the so-called X-curve of transitions, Loorbach emphasises the gamut of transition dynamics – (regime) destabilisation, chaos, acceleration and emergence, and break-down, phase out, institutionalisation and stabilisation. De Haan and Rotmans (2018) explore how actors organise in networks that share ideas (discourses) and technology to strategically foster pathways to transition. This opens up a whole new set of questions: what happens when regime stability erodes, when incumbents' roles are no longer self evident, and when innovative practices emerge from niches and develop their own institutional structures?

We build on this work by proposing Transition Space as an integrative framework that can be applied in transition governance with three explorative research questions:

- How can we *conceive* of transition space?
- How can we *operationalise* it in practice?
- And how can we stimulate the opening up of transition space?

Transitions research beyond "niche vs. regime"

Looking back at the first "wave" of publications in transition studies shows that several conceptual frameworks have long dominated the field of transition studies. See the review by Markard et al. (2012), which described the field of transition studies by tracing the development of four such frameworks: Transition management (Rotmans, Kemp & Van Asselt, 2001), strategic niche management (Kemp, Schot & Hoogma, 1998), the multi-level perspective (Geels, 2002), and technological innovation systems (Hekkert et al., 2007). And while these frameworks have very different scholarly roots, they appear to conceptually share several ideas, such as the idea of dominant structures in societal systems that are aversive to radical change, the need of radical innovation for transition, and the idea to shelter radical innovations from wider systemic influences. This is what Geels (2020; also see Loorbach, 2017) pointed out when he wrote that transitions are usually conceived as up-hill struggles: the niches battle against the regimes, which in turn try to defend themselves against change. In our view, agency is mainly situated within the niches, whereas the regime is mainly seen in terms of structure, with relatively little space for agency (cf. Avelino & Wittmayer, 2016; Avelino, 2009).

A select reading of various empirical publications in transition studies, however, yields a different story. A clear and growing interest exists in transitions beyond the niche-regime dichotomy. This interest was already apparent in earlier publications. To begin, the number of systemic levels obviously is not fixed; between niches and regime might be other levels defined, for example niche-regimes as mini-systems between micro- and meso-level (Loorbach, 2007). Elzen, Van Mierlo and Leeuwis (2012) are another example in case. In their study of energy transition in the context of the Dutch greenhouse horticultural sector, they emphasise the importance of anchoring niche innovations in regime contexts, and the necessity of "hybrid" (i.e., bridging niche and regime) actors and forums in doing so. In their view, large, incumbent organisations may both participate in existing regimes, and engage in radically new practices. Hoes, Beers and Van Mierlo (2016), in the Dutch dairy sector, study a system innovation initiative of dairy processing companies. The initiative in question consisted entirely of incumbent actors. One might say "regime actors," to denote their role in stabilising dominant practice, but that would not do justice to their efforts in transforming systemic practice (cf. Geels et al., 2016). Bosman et al. (2018), in a study of energy discourse in the Dutch energy system, focused primarily on the role of incumbent players. Their findings indicate that the fossil fuel regime is not as stable and homogeneous as one would expect. Rather, while some incumbents remain stalwart defenders of fossil dominance, others are clearly repositioning themselves in order to become part of a transition to fully renewable energy, albeit with natural gas as a transition fuel.

Similarly, recent theoretical contributions attempt to provide more explicit accounts of the role of agency in transitions. Geels (2020) does so by explicating the micro-level dynamics in the multi-level perspective – the relations between actors and context that can bring about the series of changes that together comprise a transition. De Haan and Rotmans (2018)

introduced a new perspective on transitions in terms of streams of actors and coherent sets of ideas. In their conception, networks and coalitions of actors change over time, doing away with the idea of stability inherent in the niche-regime distinction. Loorbach et al. (2017) conceive of transitions in terms of a series of dynamics, some of which still are still clearly indicative of the regime (optimisation) and niches (experimenting), but other dynamics – destabilisation, emergence, chaos, break-down, institutionalisation – suggest a departure from the narrative of transitions-as-struggle.

The common thread running through these examples – both the empirical and the theoretical – is that the relation between niche and regime does not need to be a struggle, and that regimes, over time, can lose some of their stability and exhibit clear signals of transformation. One might argue that the empirical studies highlight the importance of agency in the regime as well as the importance of emerging "rules" (structure) in niches. We read in these contributions a convergence on situations in which the niche-regime distinction increasingly loses its relevance, in which innovative practices become increasingly institutionalised while incumbent structures become subject to transformative action (institutional work, Fuenfschilling & Truffer, 2016). In such situations, we argue, transitions are not struggles, but co-constructive processes of transformative leadership in which radical innovators and concerned incumbents join their resources to effect systemic change.

Only now that landscape crises and pressures become tangible, that incumbent systems enter crises and destabilise, and that emerging transformative alternatives become realistic do people start to really appreciate the concept of sustainability transitions. As a result scholars and practitioners start to see beyond a dichotomous niche-regime divide and can identify nuances in-between change and non-change. We are in need of main-streaming concepts that can help navigate complexity, ambiguity and uncertainty. The first step then is to acknowledge that these ambiguities, uncertainties and complexities are inherent to sustainability transitions (Rotmans et al., 2001). While such situations indeed can be conceived of with existing frameworks, we argue that a more fruitful approach would be to develop a concept that forefronts collaborative transformative change. In this paper, we hope to contribute to this development with *transition space*, both as a conceptual lens for systems in which the niche-regime distinction has lost its explanatory power for understanding transitions, and as a governance principle.

Transition Space

We propose transition space as the context of destabilisation and emergence, when the nicheregime distinction loses its relevance for a system. A context in which previously dominant and evident routines, values and structures are delegitimised or failing but a new equilibrium is not yet evident or agreed upon. It is a context in which the relatively rapid structural shifts towards a transformed future regime take place that define societal transitions. Desirable or not. But when actors unsuccessfully navigate transition space and find contact points that help guide and facilitate such structural shifts and engage in institutional work, undesired

outcomes are much more likely (e.g. stalled transitions, niche-led disruptive or regime-led incremental).

The notion of space holds connotations of a meeting of actors, resources and ideas. In the context of transitions, one might conceive of an existing regime as a space, structured by rules, characterised by practices, in which actors meet. This is no different in niches, which each can be seen as a separate space. We define a space as a context in which a diverse set of actors, connected through (stakes in) practices, engage with each other and recognise each other's legitimacy as potential collaboration partner (treat this as a placeholder definition – we did not consult scholarly literature). A societal system then consists of a network of relatively disjoint spaces, one of which dominates the system, in a dynamic yet relatively stable relationship.

We introduce "transition space" as the context in which these relationships dissolve and space opens up for reconfiguration, entrance of new or the breakdown of existing elements and spaces. Transition space opens up when actors – both incumbents and new entrants – share concerns about systemic unsustainability and combine and direct their resources at institutional work in relation to strengthening innovative practices. In transition space, transition features as desired systemic reconfiguration rather than niche-regime struggle. Conceptually, it can be seen as a flat system ontology, distinguished by change dynamics instead of different levels of socio-technical systems. Below, we hypothesise about the transformative nature of transition space, developments that indicate opening up of transition space and about how one might contribute to transition space as governance.

Opening up of transition space

We primarily conceive of transition space as a combination of actors and resources that have the potential to both further develop innovative practices and to engage in the institutional work needed to shape a systemic selection environment that is advantageous for these new practices. While they still may differ about the right way forward, actors are united in their concern that a sustainability transition is necessary. This implies that a wide variety of stakeholders are part of transition space.

In terms of radical innovation, this suggests the presence of innovative businesses and similar networks that have shaped the practices that exemplify how a future system might function economically. In terms of incumbent power, this suggests the presence of actors that can influence wide parts of the system, that may be able to cater for widespread adoption of innovative practices, for instance through a strong market position (in the food system, think of actors such as Unilever or Nestle) or through influencing a large constituency (think of dairy processing co-operatives).

We hypothesise various signs that indicate an opening up of transition space:

- Incumbent actors actively voice sustainability concerns and the need for sustainability transitions.
- Innovative practices are embedded in new business models that enjoy growing niche markets.
- A public discussion exists about whether or not a sustainability transition is necessary
- Various transition pathways are becoming rather well-known among those in favour of sustainability transition

Transformative nature of transition space

In transition space, businesses are important carriers of new systemic practice. This in turn implies institutional changes to benefit those practices – market transformation. New practice may scale up or scale out in a transition. This may require new contractual arrangements between different businesses, new financial services to enable large-scale investment in innovative practice, and new insurance products to cover new types of risk that emerge as innovative business scales up and out. It follows that incumbent financial services (accountants, insurance companies, banks) can contribute to transition space through identifying leverage that may further innovative practice. This can be seen as an example of institutional work. Such co-evolutionary developments give rise to emergent new economic structures / markets emerge and new insurance logics.

Finally, since market failures in the end are the domain of government, the role of government stakeholders is to act upon (break down) incumbent structures that hinder the scaling of innovative practice and develop / institutionalise potential rules and regulations that benefit desired new practices. In that sense, one might say that future images act as anchorage for institutional work. In sum, transition space comprises actors with agency to further institutionalise desired practice.

Transition space as governance arena

Our conceptualisation offers some starting points for governance approaches for sustainability transitions. We build on principles for transition management, in recognising the importance of future visioning (backcasting exercises), coalition formation, experimentation and learning and monitoring (see Loorbach, 2007). Transition space suggests specific ways in which to work on transition management. For instance, future visioning is still important, but not in the sense of creating new visions, but rather in the sense of extrapolating the consequences of a transition pathway to one's own business or role in the system. In terms of coalition formation, it is important to foster hybrid networks that include both incumbent and more radically innovative businesses, to include financial services and NGOs and to include government actors. While, in transition management, participation is purely on personal basis, in transition space we seek for a combination of personal engagement and systemic position, in order to enable institutional work. Experimentation is

not aimed at developing new systemic practices, but at developing institutional structures that strengthen innovative practices.

In the remainder of this paper, we reflect on recent developments in the agrifood system within the Dutch province of South Holland.

Methods

We applied transition space as a conceptual lens to an on-going process of agrifood transition governance in the Dutch province of South Holland. Our work can be seen as 'action research', in the sense that we are actively involved in the South Holland agrifood transition in various ways. Each of these activities yields specific insights in the transition as it unfolds. Below, we describe our case, our involvement and the specific activities that we carried out, and how these activities informed our analysis.

Case

Our case is the agrifood transition in the Dutch province of South Holland. South Holland is the most densely populated region in The Netherlands, home to just over 3.7 million people with a land area of 2700 km² (Wikipedia), mainly in cities such as Rotterdam, as of this writing Europe's largest port, and The Hague, seat of both the provincial and the Dutch national governments. The province's agricultural sector is divided across roughly three main subsectors. The eastern part of the province consists mainly of peat meadows that are used for dairy farming, a sector that is also famous for its Gouda style cheese. The South Holland islands south of the river Meuse are used primarily for arable farming. Finally, the combined regions of the "Westland" and "Oostland" (Eastland) feature about 5000 ha² of greenhouses used for agriculture and horticulture, mainly tomatoes, cucumbers, and bell peppers.

Action research activities

In 2012-2015, we conducted research on learning processes and responsible innovation in the context of STAP, an initiative of greenhouse growers seeking to strengthen their market position. This work enabled us a good view of landscape pressures on South Holland greenhouse producers and their regime. While collecting data in their meetings, we helped STAP through reflexive monitoring (see Van Mierlo et al., 2010) and through conducting 5 interviews and writing a short analysis about current market developments among greenhouse growers.

From 2017 until now we were contracted, together with three other knowledge institutes, to carry out reflexive monitoring of the South Holland Food Families (henceforth: SHFF). The SHFF are an innovation network of farmers, entrepreneurs, NGOs, citizens, government workers and other interested individuals that strive for a more sustainable agricultural sector

in South Holland. The network was initiated by the province itself and took a transition management (Loorbach, 2007) approach from the outset. We collected information from over 15 different innovation initiatives, sometimes through Master's thesis projects of students, sometimes through conducting company visits and conducting interviews ourselves, and through document analysis. We focussed on the innovation goals of the initiatives and how their experiences were informative for furthering agrifood transition in South Holland. Furthermore, we attended, sometimes facilitated, and twice organised about four network meetings each year, in which participants applied the multi-level perspective to the agrifood sector, and in which they created future visions and transition pathway scenarios for agrifood transition. We documented those future visions and pathways and related them to the innovation initiatives. These activities gave us good insight both in current niches in the South Holland food system and in the variety of ideas about sustainable futures in the field.

Through our work within the SHFF, we were sometimes invited to reflect on other transition-oriented developments. Most important to our case are the Green Circles, a set of three collaborations towards circular economy in the agrifood sector, primarily by incumbent industry actors such as "Farm Frites", an international player in the potato market, Heineken, a beer brewer, and Royal Cosun, an international player well-known for its role in the sugar sector. The Green Circles were supported by the province. We attended two meetings that sought to specifically find connections between the SHFF and the Green Circles. Furthermore, in a series of ongoing meetings with provincial policy makers, we reflected on upcoming provincial agrifood policy. These meetings helped us understand how incumbents were oriented at sustainability transition in the agrifood sector.

Finally, we are conducting research about transition and identities in the Green Heart, a cross-boundary region which, in South Holland, is home to most of its dairy sector. We attended and documented a network meeting with farmers and other entrepreneurs from the Green Heart, and we conducted a transition-oriented workshop in which we analysed and shared business models of farmers in the Green Heart. Furthermore, we analysed documents and marketing materials of about eight different organisations and networks that aimed to contribute to sustainability. These activities granted us additional insight in the South Holland agrifood regime, some of its niches, the landscape developments and the transition challenge regarding the Green Heart.

Data and Analysis

Our empirical exploration is intended solely for illustrative purposes. While we have produced, from the above various activities, a wealth of meeting notes, reports, interview summaries, etc., we have not, for the purposes of this paper, structurally catalogued a data set or applied a formal analysis procedure. Rather, the current paper should be read as the synthesis resulting from our consolidated experiences of the past eight years.

In our synthesis, we take the following steps to apply our lens of transition space:

- We document the transition challenge
- We describe the signs that indicate an opening up of transition space:
 - Clear discussions about the need for transition
 - Participation of incumbents
 - Business readiness
 - Existence of various transition scenarios
- We describe signs of transformative capacity:
 - Institutionalisation of new practices in legislation
 - Abolishment of undesirable practices

Results

We first describe the transition challenge of the South Holland agricultural sector, through a regime and landscape analysis. We then describe signs of transition space opening up, and signs of transformative capacity.

Transition challenge

The agricultural regime in South Holland can be mostly equated to that of the whole of The Netherlands. South Holland farmers excel at increasing cost-efficiency in the production of good quality commodities for international markets. About 80% of Dutch produce is for the international market. All of the sector is intensive farming, with dairy farming being the least dependent on external inputs. The sector is highly mechanised and depends on chemical pest management and artificial fertiliser. Greenhouse products are mostly grown on substrates.

The sector experiences a host of landscape pressures. Economically, the dominant business model of cost-price leadership appears to be a losing game, given relatively high labour and land prices, and competition for land with the housing sector. The current sector causes emissions of chemicals to the environment as well as nitrogen, which both endanger biodiversity. Increasingly strict environmental legislation is further harming the sector's international market competitiveness, while international trade treaties appear mainly focussed on opening up Dutch borders for cheaper produce from abroad.

Climate change affects the sector in various ways. The greenhouse sector (in the whole of the Netherlands) is responsible for about 10% of the Dutch natural gas consumption, meaning that it has a tremendous energy transition challenge. Furthermore, climate change appears to be associated with an increase in extreme weather events, which, in the form of hail storms, can cause large-scale damage to greenhouses. Conversely, longer periods of spring and summer drought result in larger influx of salty sea water, with increasing soil salination of arable land in the South Holland islands. The dairy sector requires artificially lowered groundwater tables to prevent the peat meadows from getting too soggy. However, this exposes the top layer of the peat to the air, causing peat oxidation and associated CO_2

emissions. Furthermore, it causes soil subsidence, which increases risks of salination due to the emergence of fossil saline ground water sources.

Given the current regime, these combined landscape pressures can be seen as necessitating a transition in the agricultural sector.

Opening up

We have identified several signs of transition space emerging. Let's first establish the existence of a variety of transition-oriented spaces. The SHFF is an innovation network, with a clear avowed aim to contribute to food transition. And although it encompasses a variety of ideas about what transition is necessary (e.g., technology driven or based on local food chains), it also acts as a space in itself, through its network meetings. Likewise, the Green Circles also act as transition-oriented networks, with an avowed goal of a transition towards "sustainable use of space" (from their website). Thirdly, while speaking of system innovation, the province itself can be seen as a government space that already gave rise to a transition perspective, through the policy that spawned the SHFF. These examples clearly illustrate that a wide, public discussion about sustainability transition is present in several spaces. Indeed, it would appear that the necessity of such transition is clear in all these spaces.

Especially the Green Circles are a clear sign that incumbent organisations are acting on their own concerns about sustainability transition. In a sense, they are defecting from the regime. For Heineken, this is apparent in their goal of a climate-neutral brewery in a climate-neutral beer chain. We recognise similar sentiments among represents of incumbent farmers in the SHFF, for instance, in Duijvestijn Tomaten, an innovative tomato grower that moved their energy sources to geothermal. Finally, increasingly the province itself takes transition as a policy goal in and of itself. Whereas the SHFF were initiated as part of a policy programme called the Innovation Agenda Sustainable Agriculture (note how sustainability is connected here to innovation and not necessarily to transition), the province are now moving towards agrifood policy that more explicitly recognises the need for transition. A policy document to the provincial parliament to that end, dated May 26, speaks of "... huge challenges, for instance regarding climate, nitrogen and soil subsidence. A transition of agriculture and the food system is therefore necessary" (p. 2; Province of South Holland, 2020).

Various potential transition pathways appear to be on the table as of this writing. From the SHFF emerged a future vision of South Holland having a local food system that is self sustaining for 80%, with short food chains and good connections between farmers and citizens. As an attractive vision for inspiration, it received some media attention through SHFF members, such as greenhouse grower Jan Varekamp, in a weblog for a greenhouse sector magazine (Varekamp, 2018). But more importantly, it was also advocated by the provincial Executive for agriculture, Han Weber, in the context of one of the SHFF meetings. We conclude that this local-for-local transition pathway is fairly widely known among many stakeholders in the agrifood sector.

The Green Circles conform in part to this local-for-local vision, but they also appear to constitute a direction for transition in and of themselves, based on a vision of circular agriculture that minimises emissions to the environment, minimises inputs, and maximises closing nutrient loops. This vision is mainly rooted in technological solutions, but it might still represent a rather fundamental departure from the current regime. Various innovation initiatives within the SHFF seem to share such a vision to at least some extent, for instance in one project that aims to establish hydrogen and fertiliser production using photovoltaic energy. While not as clearly known as a separate transition pathway specific to South Holland, we have noticed ideas like these emerging throughout the Netherlands (see Transitiecoalitie Voedsel, 2020).

With regard to associated businesses, we see successful businesses in the SHFF that embody the local-for-local transition pathway. However, market / institutional conditions are currently unfavourable for further upscaling, although we did see a rise in local consumption throughout the covid-19 crisis. Similarly, many businesses already are making their production processes more circular. However, current legislation is, for instance, still relatively favourable for large users of natural gas, through tax advantages, which render investments in sustainable energy unattractive.

We witness in South Holland clear cries for agrifood sustainability transition, both from incumbents and niche innovators. We see that businesses are successful in changing their practices or even their whole business models to actively work towards sustainability transitions. These changes appear to be aligned with two relatively well-known transition pathways. In sum, all the conditions are there for an opening up of transition space.

Transformative capacity

Our results are rather thin on transformative capacity. Monitoring the SHFF did yield insight in various aspects of rules and regulations that were in the way of agriculture transition in South Holland. For instance, we found that government policy with regard to government-owned land favoured mostly regime practices, while it could be used to facilitate transition-oriented businesses instead. In a similar vein, we found that official land zoning legislation provided an obstacle through its relation to land prices. If land is designated "nature", its price drops. This becomes prohibitive for conventional farmers who want to switch to "nature-inclusive" forms of farming. If they have mortgaged their land, then they cannot afford a drop in land value, even when cash flow remains the same.

The above findings clearly showcase how transition space and institutional change might relate. However, we did not find signs of transition space operating in the sense that such directions for institutional change were actively pursued.

A different finding concerns the institutionalisation of transition-oriented spaces itself. First, we did already attend two meetings at which policy makers active in both the Green Circles and the SHFF participated. Those meetings can be seen as instantiations of transition space because of the specific mix of participants. Of note, the one policy maker most specifically involved in the Green Circles indicated that he was interested in the SHFF future visions and that he sought after similar future visions for the Green Circles.

Furthermore, in their document towards Food Policy, the province now speaks of a "sectoral table" to further work in agricultural transition, with a place for representatives of the Green Circles, the SHFF as well as several representatives of several incumbent organisations. In subsequent conversations, policy makers confirmed that this should be a transition-oriented network, and that perhaps a different name (the "provincial food table", for instance) might better evoke this purpose. In our view, such a "table" would constitute a transition space, and its establishment can be seen as institutionalising transition space.

Governance

Looking forward, the current situation lends itself for some further hypothesising about governance approaches for transition space. Let's first reflect on the potential agenda of the provincial food table. With its specific mix of participants, it offers direct access to a wealth of experiences that innovating niche and incumbent actors acquired through their innovation efforts. These efforts often relate to existing legislation. We noted before how existing rules and regulations were unfavourable for scaling up and scaling out of more sustainable business practices. Therefore, innovators' experiences can be used for identifying obstacles and opportunities in term of rules and regulations, and offer starting points for institutional work.

In a related vein, other actors who have power over parts of the market structure can identify leverage points for themselves to contribute to transitions. This could come, for instance, in terms of developing new insurance and financial products for local food chains or for the development of financial services aimed specifically at making new business practices possible.

Conclusion

From our analysis, we conclude that the transition space concept can be used as a sense-making device for understanding transitions. It appears especially useful for making sense of stages of transitions in which incumbent structures start to give way and in which innovative agency gets increasingly linked with power to further transform market and institutional settings. We may further conclude from reading our results that, in transition space, there appears to be a balance between structure and agency, this in contrast to niches and regimes.

With regard to our operationalisation of transition space, the analysis presented here at least indicates that we have found some ways in which to positively operationalise transition space as a concept, while our original approach was more negative, focusing on the falling away of the niche-regime dichotomy.

In sum, our study suggests that transition space can be a productive heuristic to understand on-going transition governance processes beyond regime destabilisation. The novelty in our approach is in part conceptual, since it builds on and integrates existing conceptual frameworks, but most importantly resides in its operationalisation for transition governance.

Discussion

Our study offers some starting points for further development and use of the transition space concept. First and foremost, for the further development of the concept we should apply it to different cases that resemble ours in terms of transition dynamics. Especially the energy transition might currently be interesting for this, since it has generally been destabilising more than the agri-food transition and might therefore offer more insight in how transformative capacity of transition space emerges.

Second, we think that transition space holds promise for exploring new perspectives for transition governance. Our results lend some opportunity for further hypothesising. We propose that the emergence of transition space can be fostered through arena-like processes, but with a different agenda than in transition management (Loorbach, 2007). To some extent, it may be possible to engage a selection of incumbent and niche innovators and intentionally gather them with the end of a transition in mind. We have been effective in doing so for niche experiments, and the current analysis, especially the idea of establishing a provincial transition table, suggests that similar approaches might help elsewhere as well.

We can also hypothesise about an agenda for the stakeholders in the transition space. We would treat existing future images and potential transition pathway scenarios as a reference for institutional work. Existing new practices that act as potential carriers of transition can then be used to identify institutional opportunities and impediments – in transition space, we can use the incumbent and niche innovators' experiences to identify candidate rules and regulations, either for development or abolishment.

Perhaps the main difference of transition space with other frameworks is in its government implications. Whereas Strategic Niche Management and Transition Management are very much focussed on creating and strengthening niches to afford experimentation with transition-oriented practices, the transition space concept assumes that such practices have already established some economic success, either in the form of different production practices or in the form of new business models. In that sense, it presumes that the main obstacles inherent in the "valley of death" of innovation have been addressed, but that further

transition may be hampered primarily by incumbent institutional structures. In transition space, we stop protecting niches. Rather, we mainstream new practices through institutional work.

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