

Collective learning experiences in planning: The potential of experimental living labs

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Abstract

‘Living labs’ originate from an R&D environment, and intend to innovate commodities by experience-based knowledge, with a direct involvement of users. Meanwhile, the living labs approach has been shifting into a wider range of uses, and for instance also into the toolbox of actor- and action-oriented planners. The approach is (implicitly) promoted as a new and better way of combining capacities of different stakeholders by exploring and experimenting in real-world situations. In this paper, we attempt to critically discuss the use of the living lab approach. The first section explores the potential thereof for planning issues: How unanimous is the concept of Living Labs? How much do different interpretations and practices of Living Labs resemble in terms of actors involved, actions stimulated, processes promoted and criteria for good practices accepted? The exploration is based on the experience of two experimental living labs, which are compared to a range of international examples. The second section turns to a series of alternative approaches in spatial planning in Flanders: How do the aims and means of these collaborative learning experiences differ? What is the role of users and how important is experimentation? Which innovation is created in planning? How do the practices deal with path dependencies and uncertainties in complex multi-actor settings? We will answer these questions based on research seminars on ‘collective learning’, which are organized for the Policy Research Center Spatial Planning in Flanders, as a part of a work-package which focusses on methodologies for future explorations.

1. Introduction: future explorations, collective learning and living labs in one scene

Imagining the future of cities and regions involves a complex and at time fuzzy set of actors, disciplines, fields of expertise, interests and voices. The exploration of probable, possible or desirable futures is a challenge to all participants in a planning process: imagining a different here and now urges actors to leave known comfort zones, yet at the same time to bring in their knowledge and experiences in order to assess the plausibility and feasibility of proposals on future development. Then also, imagining plausible alternative futures is no non-committal exercise: it presupposes engagement of professional and social knowledge, as well as taking responsibility within a planning process. We here investigate how establishing different types of ‘living laboratories’ can support in the reflection on business-as-usual, in the search for innovative practices in spatial planning as well as in setting up of conditions for the implementation of novel practices. In this, we see an important role for collective learning, since “Consensus without collective learning simply reproduces what is, and does not open up the possibility of transformational change” (Brown, Lambert, 2013, pp. 250).

Current contribution reflects on the potential of living labs for planning issues and on the value, conditions and limitations of collective learning in spatial planning. The reflection is based on the experiences from two experimental living labs, which are developed by the Policy Research Centre for Spatial Planning, as well as on the analysis of a wider range of actor- and action-oriented initiatives in spatial planning in Flanders, which is based on interviews with project leaders for the different initiatives and on a collective and transdisciplinary methodological research seminar with practitioners and academics. We intend to critically assess how different approaches and heuristics in future explorations and collective learning could possibly alter contemporary planning practices, and the governance thereof.

The paper starts (and ends) with a reflection on the merge of living labs with spatial planning. The point of departure sheds a light on combining living lab approaches with planning, starting from a brief legitimation and rationale for this ambition. We then zoom in on the experiences with living labs in spatial planning in Flanders, and particularly on the development of guiding principles in setting up a shared methodology (i.e. ‘How is the living labs concept altered when applied to planning?’). The conclusion of section two intends to anchor few insights on the remodelling of planning practices through the living lab approach, which can be described as a collective learning experience to develop transformational change in response to contemporary and future challenges. The section attempts to reflect on whether and how planning could be altered through the use of living labs, in account of earlier experiences with participatory practices. The next section then presents the results from an analysis of different collective learning initiatives. The threefold structure starts from an outline of the analytical frame to study collective learning initiatives. It then turns to the preliminary results from analysis. We also present the next steps (and tracks for a wider, future-oriented research agenda) in the analysis of collective learning for transformational changes in spatial planning. The conclusions then continue the reflection on merging living labs (and –by extension- also other collective learning initiatives) and spatial planning: How could this merge potentially remodel planning practices – if at all, considering an already quite rich and versatile tradition with regard to inclusive approaches? How can these practices and indeed also changed modes of governance be valorised? What is the importance of experiments in this? The reflection here adds another bandwagon in a train of related methodological reflections¹.

2. Living Labs and Spatial Planning: effects of a ‘seemingly logical marriage’

Section 2 explores the potential of applying a Living Labs approach for spatial planning. The exploration is based on the experience of two experimental living labs, which are compared to a range of international examples. We here reflect on three consecutive questions: ‘Does it make sense to match living labs and spatial planning? (Why?)’, ‘Does the concept of living labs alter when being applied to spatial planning? (How?)’ and ‘Can planning potentially alter through the development of living labs? (How?)’.

2.1 A rationale to introduce living labs in spatial planning

Generally speaking, a living lab is “a user-centric innovation milieu built on every-day practice and research, with an approach that facilitates user influence in open and distributed innovation processes engaging all relevant partners in real-life contexts, aiming to create sustainable values.” (Bergvall-Kåreborn e.a., 2009, pp. 3). The concept of “user-centred environments for open innovation” (Schaffers e.a., 2010, pp.1) originates from R&D environments, i.e. to develop innovative technologies using rapid prototypes cycles. The main focus there is on “confronting the user with technology” (Veeckman e.a. 2013). Basic features of living labs can be summarised as follows:

- Different kinds of users are involved in an early stage, and on a continuous base, with the aim to result in a sustainable stakeholder partnership and agreements between partners.

¹ i.e. on the role of designerly research in actor-oriented planning (community development and forming coalitions) (invited lecture by Jan Schreurs on occasion of the AESOP Heads of Schools Meeting 2014, on connecting academia and local communities, University of Lisbon, March 2014), on the development of a shared understanding on peri-urban developments (Schreurs, Kuhk, Dehaene, 2014), on the potential of developing and using boundary objects (Schreurs, Kuhk, 2014; Kuhk, Schreurs, 2015), on the ambitions and inclusiveness of living labs (contribution from A. Kuhk to a workshop at the Polytechnico di Milano on living labs as socio-digital environments), on the valorisation of living labs (contribution from A. Kuhk to the SASUI-workshop in Helsinki), on the potential of self-organisation in and the use of social media in spatial planning (Schreurs, Kuhk, 2015), on the development of guiding principles for living labs in spatial planning as well as on an analytical frame to study collective learning initiatives (internal methodological seminars), on the relevance of the living approach as an alternative heuristic in innovative planning practices (contribution from A. Kuhk to a roundtable at the CORP-conference, Ghent, 2015) and on the valorisation of collective learning initiatives (methodological research seminar with external partners).

- Living labs aim at open innovation (Chesbrough, 2006): there is a basic openness towards various possible solutions forwarded by different partners, innovation can come from external resources as well.
- A ‘lab’ is not merely a test bed for innovations that have been developed in a closed expert laboratory and desktop research setting, it rather is an incubator for innovation in collaboration with (end-)users.
- Innovation is expected to be the result of collaboration and co-creation, it can also be widened towards ‘democratic innovation’ (Von Hippel, 2005) with a larger audience participating.
- Innovations from living labs start from a real-world setting, and intend to alter a relatively local setting. However, it can also lead to changes on a more systemic level, which mostly require then accompanying policy innovations in order to transfer novel practices.

Even if there is a series of basic features that are commonly recognized to be central characteristics of living labs, there is no standardized, generic methodology² (Veckman e.a., 2013). The notion refers to a range of possible approaches, such as a more business-oriented logic, a ‘lead user’ concept (cf. von Hippel, 2005) unto wide participatory approaches for ‘crowdsourcing’ (cf. Howe, 2008). The introduction of the living lab concept to spatial planning can therefore alter (or further stretch) the concept. Based on this broad definition of living labs, we could nevertheless discover three different possible entries to establish a relation between a rather generic approach of Living Labs and the specific environment to which we introduce the approach, namely spatial planning in Flanders. In fact, these entries can be read as legitimations to apply living lab approaches for spatial matters:

A first important link between living labs and spatial planning can be situated in the shared interest for adaptive, cyclical approaches -be it that the iterations and cycles in living labs are generally shorter than the ones in spatial planning-. As for the Living Lab concept, Chesbroughs description of ‘open innovation’ has been an important point of departure. ‘Open innovation’ assumes non-linear, cyclical innovation processes (cf. Chesbrough, 2003; Veckman e.a., 2013) with iterations, feedback loops and hands-on, formative evaluations. Also planning practice and theory has become increasingly sensitive to these kind of processes, i.e. as a response to the complexity of socio-spatial systems and the wickedness of problems (cf. Bertolini, 2010). This sharpened sensitivity is equally reflected in the mushrooming of actor- and action oriented approaches³, stressing the importance of collective learning. These initiatives are all attempts to deal with (rather than to reduce) the complexity of planning issues, the uncertainty over contextual factors or the multiplicity of actors involved, and therefore urge the development of similar approaches (cf. Boelens, 2009; Bertolini, 2010; Healey, 2006). For instance the Flemish administration has organised series of ‘partner dialogues’ and ‘working groups’ in the run-up to a white paper and Spatial Policy Plan. Then also, there are efforts to collaborate over so-called ‘Territorial Development Projects’ and for ‘Strategic projects’. Other examples of collective learning experiences are the ‘Labo XX’-collaboration with the Flemish ‘bouwmeester’-, or the unique project of the ‘Metropolaan Kustlandschap 2100’.

These diverse collective learning initiatives vary in the level of abstraction, in the number and variety of actors involved and in the sense of urgency of the core issues. Then again, they all subscribe to a desire to explicitly involve a larger group of users, mostly already from the start of an initiative. Some of these practices fit in a tradition of participation, and a demand for more direct forms of democracy, some of which have their roots in the late 1960s. They may represent a plea for shifting from representative democracy towards participative democracy, as has been equally supported in the white paper on urban policies (Boudry e.a., 2005). The explicit emphasis place on the early involvement of a variety of users constitutes part of the potential relevance Living Labs may have for Spatial planning,

² The ‘stretch’ in the concept of living labs results in a wide variety of initiatives that deploy this nomination. Then again, there are also initiatives that fit with main characteristics of the Living Labs concept, without being identified as a ‘Living Lab’.

³ Whereas the different initiatives generally recognise the complexity of planning issues and the need to equally involve a multiplicity of actors, they deal differently with the need to build a more adaptive, cyclical planning approach.

as has been equally recognised by Veeckman: “The idea of investigating the user as a scientific research object links the roots of Living Lab activities to different disciplines such as the usability approach (e.g. participatory design), domestication approach, adoption diffusion paradigm and design thinking.” (Veeckman e.a., 2013). The Living Lab approach does raise serious questions regarding the way in which actors are engaged. The emphasis seems functional and operational and seems less concerned with aspects of legitimacy, and political engagement. The adoption of Living Labs in spatial planning have the potential to help to articulate ongoing discussions regarding the distribution of roles between government, market and civic partners. They steer an ambiguous line between efforts to empower communities to regain control over resources and the construction of local capabilities on the one hand and the decollectivization of shared responsibilities or the offloading of public responsibilities on groups and individuals.

Thirdly, there is also a link between the Living Lab concept and designerly approaches – an integral part of the spatial planning approaches in Flanders - in a common focus on experiments (cf. Geldof, Janssens, 2007). The nature of a ‘laboratory’ is a systematic approach, yet also an open approach (cf. Chesbrough, 2003; Veeckman e.a., 2013). There is a set of rules, but the outcome is not known. A living lab creates an environment for ‘guided imagery’⁴ as a basis to articulate experiments. Also approaches of designerly research contribute to the creation of such a fundamental openness, e.g. in presenting and discussing potentiality maps, in fostering collective imagining through the co-creation of possible worlds, in depicting possibilities of creating shared value, in rendering abstract possibilities in a contextualized and specific manner and inviting stakeholder to take up concrete engagements, etc.

With these elements in mind, we see potential in matching a living labs approach to the domain of spatial planning. Given the search for iterative, evolutionary approaches with a fundamental openness for experiment and a thorough base in user-experiences, living labs can add a planning-heuristic that helps mediating between global or regional challenges and a common, ‘ordinary’ awareness of spatial misfits. A next question then would be whether a living labs approach would also be capable of introducing genuinely new ways of governing -instead of being old wine in new bottles-. Based on an analysis of examples in scientific journal databases, the Finnish researcher Sirku Wallin identified three types of urban living labs (cf. Wallin, 2015, pp. 2). The first type is a series of technology-driven living labs, for instance leading to city-wide experiments or pilots to enhance local mobility services. Wallin notices that the role of the users remains very limited in this constellation. The second type of living labs produces urban artefacts, e.g. through the co-creation of public spaces. The third type of initiatives that were described as an ‘urban living lab’ focuses on vision-making, mutual learning, deliberation and new models of local governance. Whereas the typology clearly illustrates the stretch of the living lab concept in a merge with area-based logics, it remains silent as to whether and how planning can be altered with the introduction of living labs: “Planning work is not just about the substance or specific context of issues... It is also about how issues are discussed, and how problems are defined and strategies to address them articulated. Questions of process as a result are as important to local environmental planning as questions of substantive content” (Healey, 1997, pp. 85). In order to better apprehend the usefulness and potential impact of living labs in spatial planning, we therefore explore two ‘living’ cases.

2.2 Reinventing living labs in spatial planning: experiences from the Flemish fields

The Flemish Policy Research Centre for Spatial Planning is currently developing two experimental Living Labs, in order to test and to further explore innovative tools for collective learning. We focus on a suburban strip along the N16 regional road (i.e. connecting Temse to Willebroek Reinventing living labs in spatial planning: experiences from the Flemish fields, with vast industrial areas as well as polynucleated, spread residential fabrics and fragmented green, open spaces), and on the relatively dense Dender-valley at the West of Brussels (i.e. a river that flows into the river Scheld).

⁴ The term of ‘guided imagery’ was coined in health sciences and psychology. It refers to techniques to pull participants out of their comfort zone, and to actively help imagine a different here and now.



Figure 1: Schematic positioning of two living lab areas, in relation to the central axis between Antwerp and Brussels and Charleroi, (source of the basic map is the green paper for spatial planning Flanders, RV, 2012).

Structured research capacities

Whereas the capacity to develop these living labs is rich and diverse in its qualities (e.g. joining knowledge on designerly enquiries, on future explorations and on planning and public policies), it is limited in its means. The Living Labs are developed in a cooperation with researchers from the University of Ghent and Leuven with in total a 60% research assignment for two years, yet also the input of different supervisors. The capacity is substantially broadened with the input from students in three design studios, which each last one term. The partners in Ghent executed and evaluated the interviews, organised the workshops and studios and developed potentiality maps (i.e. Marleen Goethals, Luuk Boelens, Michiel Dehaene, Martin Dumont). The contribution from the Leuven partners focuses mainly on the documentation of processes and on the participation to some of the meetings/workshops, as well as on the reflection and development of shared methodologies (i.e. Annette Kuhk and Jan Schreurs)⁵.

For a more systematic documentation of the living labs, we develop a ‘state-of-the-art’-text on the issue setting, which also illustrate the progressive insights on the shared problematisation⁶, the articulation of project definitions, as well as the identification of actors, thresholds and limitations for the implementation. We also develop a ‘logbook’ to document the construction of a shared methodology⁷. Both accounts have been regularly also discussed at the ‘curatorium’, which is a scholarly reflection board for the living labs. This gathering of four professors and two senior assistants, recently also joint by an expert from the Flemish administration of spatial planning, was organised more or less every two months (i.e. the already mentioned researchers as well as Tom Coppens from the University of Antwerp and Liesl Vanautgaerden from the Flemish department of spatial planning).

⁵ For reasons of textual clarity, the following paragraphs refer to the living lab researchers as one entity, as ‘we’. The introduction to the cases made clear that specific tasks are executed by specific persons and/or research groups. Since the results are always also reflected upon in joint meetings, it seems reasonable to also refer to the project by use of an ‘editorial we’.

⁶ i.e. ‘shared’ between stakeholders, different local users and the research partners

⁷ i.e. ‘shared’ between researchers with different backgrounds and disciplines.

Guiding principles	Examples from different project proposals in the two living labs	References for the guiding principle
User-orientation and iterations		
To (pro-)actively and continuously reflect on the building of a shared methodology	e.g. through systematic documentation in a logbook as well as a by the frequently organised feedback on the subject of concern as well as on methodologies in a ‘curatorium’	with reference to designerly approaches, experiences with design processes
To consider a multiplicity and diversity of actor perspectives as of the beginning of the living labs: not only is innovation expected to emerge from co-creation, the development of novel coalitions can itself be an innovation in complex (spatial planning) issues	e.g. the building of novel coalitions on energetic woodlands with both local authorities (for supply); farmers (for maintenance); schools, a swimming pool and a hospital (as energy and heat consumers) and the setting up of an agro-maintenance group.	with reference to actor-relational approaches and Synoikos-workshops as well as to a shared understandings of living lab features
To develop the living labs as non-linear, cyclical innovation processes, with explicit attention for reiterations and moments of consolidation: in this, it is important to also identify gaps in the knowledge production, and to use progressive insights and/or the participation of other actors for a next iteration	e.g. with a methodological triangulation in the presentation of the ‘state-of-the-art’-text to local partners, which was based on interviews with those partners (i.e. to test whether the interpretations would be shared).	with reference to evolutionary planning, cf. also literature on uncertainties and on wicked problems, which are defined and redefined instead of being ‘solved’
To navigate through the complexity of spatial issues by means of tracing, mapping, diagramming and agencying	e.g. through sequences of document analysis and interviews to trace the current state, potentiality maps to show plausible alternatives and round tables to discuss responsibilities.	with reference to actor-relational approaches, based on Deleuze and Guattari, 1987
To foster a reflection on more continuous, dynamic, strategic and inclusive planning processes	e.g. in bilateral meetings with the commissioning authorities (i.e. spatial planning Flanders)	with references to hybrid combinations of images and narratives, as can be found in scenarios and designerly approaches
Systemic approaches and strategic development		
To reassess proposals for change with regard to effects in broader, dynamic socio-technical regimes and wide contextual changes (to avoid myopia on the local setting), and an assessment of the potential to innovate on a systemic level.	e.g. prepared in systematic documentation on the projects in living labs, in order to transfer information also on the conditions for alternative practices (e.g. driving forces such as demographic or economic conditions)	with reference to transition management as well as explorative scenarios and research-by-design (cf. Dehaene, Devree, 2014)
To particularly also consider actors from niches	e.g. novel practices in local energy production	cf. strategic alliances and transition management
To consider the potential of turning novel coalitions into strategic alliances	e.g. the scaling up of community supported agriculture projects into a broader logic of ecosystem-services and (urban) metabolisms.	in reference to the strategic alliances (i.e. proposed by the expertpanel for the Spatial Policy Plan Flanders; cf. Coppens, et al., 2014)
To study thresholds and path-dependencies for the development of novel practices	e.g. limits in economic feasibility in the exploitation of energetic woodlands	in reference to scenario-analysis and wider future explorations

Table 1: Guiding principles and shared methodologies for the development of Living Labs in Spatial Planning in Flanders (based on Kuhk, Schreurs, 2015).

Guiding principles ‘on the go’

Whereas there is no generic method for the development of living labs for spatial issues, we developed specific guiding principles for the area-based living labs. Table 1 provides an overview of these guiding principles, with examples of how these can be understood and/or realized as well as references to the inspirations, which served as a basis to formulate the guiding principles. The development of localised living labs for spatial planning in Flanders joins a wider array of experiences and methodologies, amongst which knowledge on actor-relational approaches (Boelens, 2009), experiences with future explorations and scenario-analysis (Kuhk e.a., 2011), reflections on evolutionary, cyclical or adaptive planning (cf. Bertolini, 2010), a view on transition management, systemic approaches and the need to build strategic territorial alliances (Coppens, Allaert, eds., 2014), knowledge on social innovation (Moulaert e.a., 2013) or on participant design- scenario workshops (Cox e.a., 2014) and dealing with uncertainties in research-by-design (Dehaene, De Vree, 2014). The link with actor-relational approaches and strategic territorial alliances have been explicit references as of the start of the area-based living labs, already in early negotiations with the commissioning authorities (i.e. the department of spatial planning in Flanders). The other frames of reference have been included only gradually and/or often more implicitly. It has been a process of progressively growing insights to develop a shared methodology for the two experimental area-based living labs. It is the result of negotiations, e.g. at the ‘curatorium’. The ‘logbook’, in which the process of building living labs is documented and reflected upon, has provoked discussions on specific methodological issues, e.g. about the level of ambition of the living labs, on the openness and/or the level of inclusion of particular actors, the valorisation objectives of the living labs, and so on. Each member of the ‘curatorium’ contributed to the building of a shared methodology based on own experiences, knowledge, backgrounds and interests. The appendix shows how this collective learning and co-construction of knowledge on the functioning of living labs in spatial planning developed. It illustrates the process of developing a shared, yet tailor-made methodology.

2.3 Living labs in planning: outlived subsidiarity and a challenging panarchy awaiting

Even if there is no generic method for living labs, few common elements are identified to be necessary to qualify as a ‘living lab’ approach. These are (1) operating in a real-world setting, (2) creating an environment for open innovation (i.e. early involvement of users, openness towards different solutions and innovations as a result of co-creation) and (3) as such, giving a chance to develop an incubator for change. Living Labs are an attempt to work on local, tangible, actual issues with a diverse setting of relevant actors. With the two research-based living labs that are currently being developed for spatial planning issues along the N16 and in the valley of the Dender, we explicitly also reflected on methodologies and on the potentials of this approach in contemporary planning processes.

The operational ‘real-world setting’ in the living labs departs from the local perspectives of the N16 and the valley of the Dender, i.e. including initial hypotheses that are based in early observations and consultations as well on earlier research). This leads to negotiations with one or more municipalities, as well as regional agencies and administrations - relevant to frame a *problematique*-, local businesses and/or representatives from international enterprises in local plants, local inhabitants and a variety of users (e.g. for specific questions about open spaces, mobility, agriculture, recreation, etc.). The local perspective brings in tangible cases, where actors are challenged to show commitment. The local focus equally adds a sense of pragmatism, reality and urgency to the proposals, which could otherwise be perceived as a non-committal reflection (e.g. if developed as a future exploration on the regional scale). These two heuristics – i.e. a regional perspective to better estimate systemic impacts as well as local cases to identify particular valorisations and tangible path dependencies- are complementary, yet also dependent: living labs can hereby challenge existing hierarchies in planning, and induce a panarchy instead (cf. Gunderson, Holling, 2001). In this, the interrelations between regional and local developments in socio-spatial systems are stressed to be mutually interlinked and continuously evolving. It emphasises that planning has no end, both spatially and temporarily. The outside-in approach of living labs adds concreteness in the application of regional laws, visions and conditions, but also openness

through reinterpretation (and critical questioning): experiments on a local scale can be the trigger to also invest in a more generalised innovative practice.

In other words, inserting local living labs in regional planning structures requires accepting that principles of subsidiarity have outlived their rhetoric: changes are cross-scalar, and can crystallise from different nuclei. The addressing of complex transformational change requires some form of collective learning across scales in order to join different kinds of expertise and to confront different value positions. Wicked problems defy strategies which try to make direct linear links between problems and solutions. They require processes of collective learning in which both the current understanding of the problem (i.e. multi-causal and interdependent issues, with unforeseen consequences, instability and social complexities) as well as the variety of possible approaches and means at hand are simultaneously addressed and redefined. Such processes require some form of collective imagination in which a new space of possible problem-solution combinations is opened up.

Not all that glitters is gold though: in developing two different experimental living labs, we detected a perpetual ambiguity in their functioning. Whereas living labs envision openness towards different possible solutions, the situating in a real-world local setting and the emphasis on operational processes potentially also reduces the bandwidth of solutions. In this constellation, proposed practices can be a reinforcement of solutions that are locally already available with a constant tendency to come to some sort of premature consensus on appropriate resources (cf. Christensen, 1985). The consensus can be called ‘premature’ because it appears without critically studying (the desirability of) systemic changes that can follow from a unique case if applied as a more generalized practice. It is therefore highly important to accompany the operational search with a thorough reflection over values. This can (or rather: should) be the ambition of a collective learning process: to explicitly also focus on value settings in order to better legitimize solutions with a strong operational focus.

3. Collective learning and transformational changes in spatial planning

Section 3 presents evidence for a variety of collective learning challenges and experiments in different actor- and action oriented projects in spatial planning in Flanders. It equally discusses the valorisation potentials thereof, and adds few thoughts to the reflection on planning approaches. Before discussing the (intermediary) results from the analysis of different collective learning initiatives, we first briefly reconstruct and motivate the analytical frame to study these initiatives.

3.1 An analytical frame to study collective learning initiatives

The study of collective learning initiatives is part of a wider reflection on methodologies for future explorations in spatial planning. Typically, the examination of probable, possible and desirable futures for issues as complex as spatial planning, requires input and interactions from different actors. Ideally, these processes can develop as a win-win for all participants, i.e. create a situation within which participants capitalise each other’s resources. In any case these processes generate at least new insights, and hopefully shared sense making and collective understanding. We study the orchestration of such processes, and particularly also their promises: what kind of direct and indirect valorisation is possible with collective learning initiatives?

In order to articulate these promises and valorisations, the analytical frame combines three foci:

- The first focus is based in public policy studies, where policy learning and change is conceptualised in different subsystem approaches (e.g. Kingdon’s Multiple Streams Framework, 1995; the Punctuated Equilibrium Model of Agenda Change by Baumgartner and Jones, 1993 or the Advocacy Coalition Framework by Sabatier and Jenkins-Smith, 1993). A central question here is: What are the strategies to induce change? In the analysis of collective learning initiatives, we mainly focus on two actor resources, i.e. mobilisation and knowledge production (cf. typology of policy-relevant resources by Sabatier and Weible, 2007, pp. 201-203, applied in: Kuhk, 2013, pp. 67-71). The

development of social resources and of knowledge resources can equally announce different types of innovations, and as such also valorisations of collective learning initiatives. For instance, the direct valorisation can be assessed in the creation of novel coalitions or in the progressive insights on innovative practices.

- The second focus addresses the (im-)possibility of finding a common ground in diverse actor settings. We study how ‘boundary objects’ can help in multidisciplinary, heterogeneous settings (cf. Star, 2010) to cope with diversity and to cooperate without a need for consensus. In the analysis of collective learning initiatives, we broadened the initial definition of Star, and focus both on the development of shared understandings and problematisations (cf. Star & Griesemer, 1989, pp. 410-411) as well as on the development of shared methodologies (cf. Schreurs, Kuhk, 2014), and the role of future explorations and experiments in this. Both can contribute to the development of innovative practices and as such be a direct valorisation of collective learning initiatives.

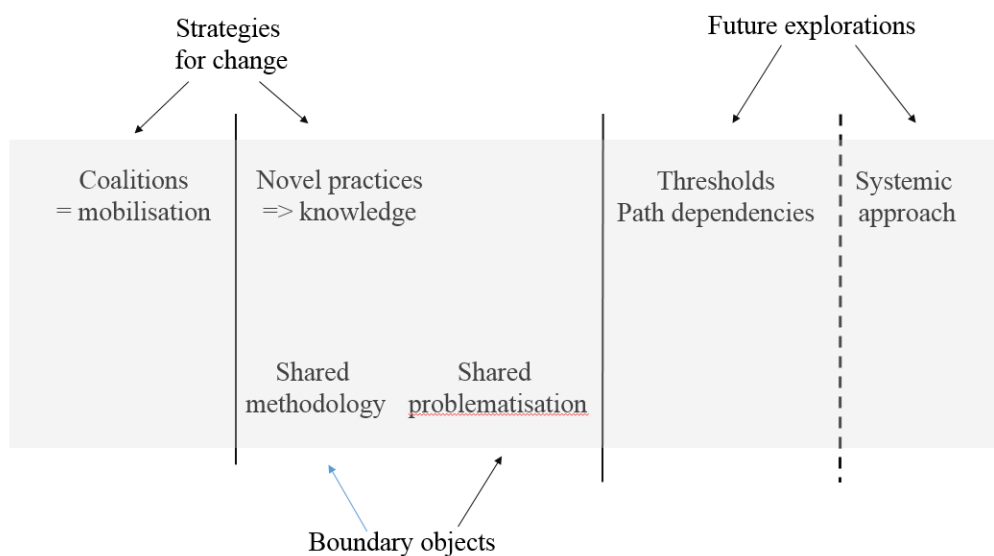


Figure 2: Analytical frame for the study of Collective Learning Initiatives

Whereas thinking about strategies for change, and also the reflection on building shared methodologies and shared problematisations are equally categories in the development of future explorations, the study of methodologies for future explorations has pointed at two more aspects that can be relevant to study collective learning initiatives for complex spatial planning matters (i.e. a third relevant analytical category). One question is whether the novel coalitions and practices experience lock-ins or path dependencies that limit the implementation or create a threshold to even have a single-case try-out (cf. Moulaert e.a., 2013). These can be legal constraints, values and political-institutional settings that hinder openness towards change, restrictions in financial means, or limitations in the cognitive creativity to develop a feasible experiment. Another question is whether the novel coalitions and practices can (or should) be generalised (cf. Checkland, 1990). It thus considered indirect forms of valorisation, beyond a specific initiative.

The analysis of collective learning initiatives attempts to better situate the conditions for such initiatives and evaluate the direct and indirect valorisation thereof. We⁸ selected six cases for analysis in the first stage of this investigation. All cases focus on complex spatial issues with accordingly complex actor settings. In these, the design of multiple iterations is desirable and/or necessary to develop a shared

⁸ The ‘editorial we’ is different than earlier in the paper: the analysis different collective learning initiatives is tied to work package 3/ Research on methodologies for future explorations with Annette Kuhk, Jan Schreurs, Michiel Dehaene and Martin Dumont. This is a relatively small team, which is fully comprised in the larger team for the living labs. Then again, the analysis of collective learning initiatives was enjoying vivid reaction too from the project leaders in the different initiatives that were studied.

understanding, to drill for innovative practices or to gather the necessary commitments to engage in implementations. With this in mind, we assumed that in all these cases, some kind of collective learning (i.e. capitalising on each other's resources) would develop to a higher or smaller degree.

3.2 Preliminary results from the analysis of Flemish cases

The Living Labs were one case. The other cases for now are: TOP Limburg, TOP Noordrand and Metropolaan Kustlandschap 2100, that were all initiated by the Flemish administration for spatial planning, as well as an initiative from the city of Antwerp, i.e. Labo XX, and the Dutch study 'Brabantstad'⁹. The analysis is developed based on document analysis, participant observation and in-depth interviews with project leaders. The results from this analysis were then presented for methodological triangulation to the respondents, at a joined methodological research seminar¹⁰. The latter was an occasion to reconstruct and to expound the analytical frame (introduction), to refine and to complement the intermediary results (part 1) and to further develop the strategy for analysis (part 2).

Collective learning curves

Each participant was challenged to critically reflect on a series of methodological issues in the development of the collective learning initiatives which they know best, in order to also reflect on or to articulate spaces for improvement. It was emphasised that the objective of this analysis is explicitly *not* to compare the cases to produce a 'ranking of practice'. Instead, apart from methodological assessment and improvement, the aim is to design the methodological research seminar in itself also as a collective learning initiative, where participants can capitalise on each other's resources, i.e. to exchange their experiences in the orchestration of a *prospective* in a complex multi-actor settings (cf. Gaston Berger on 'La Prospective', 1960, cf. Durance, 2007). In that sense, the seminar was a kind of *analogon* for the initiatives analysed.

In the first part of the workshop, each respondent received a résumé of output from in-depth interviews. Each initiative was represented in a table with a brief summary of general conditions, novel coalitions, innovative practices (i.e. new insights and understandings, but also shared methodologies), thresholds and potentials for future valorisations. The discussion on valorisation and innovation potentials (i.e. how do we change? / novel coalitions, *how* do we change? / methodologies, '*what if*' we change? / novel practices, and '*what if it changes?*' / contextual shifts) was prepared in the face-to-face interviews, then further explored in small group discussions with two project leaders and one moderator/reporter each, and finally discussed in a plenary session in order to identify a number of specific issues for further analysis.

We here briefly present a selection of examples that proved to be inspirational during the discussions:

- A relatively long 'stage zero' of the project 'Metropolaan Kustlandschap 2100' (MKL 2100), which aimed at creating alternative imaginaries for the Belgian coastal area, was dedicated to designing a protocol for collaboration between the main parties (i.e. the Flemish administration of Spatial Planning, the division 'Labo Ruimte' with the 'Bouwmeester', and the Flemish administration of mobility). The formal signing of such protocol triggers more explicitly a reflection on the role and capacities of each of the participants (which can both be enabling or prohibiting in an early stage).
- As for the uniqueness of coalitions, there are multiple remarkable examples: Brabantstad created a broad platform with both elected officials and public servants from 5 cities, the province of Brabant and the 'agencies for water'. The TOP Noordrand – Territorial Development Project for Flemish sites at the densely populated Northern fringe of the Brussels-Capital Region- managed to set up a cross-regional collaboration with a directing role for the department of Spatial Planning. The MKL 2100 project actively promotes the involvement of authorities from different regions and scales, with federal, regional and municipal partners as well as participants from France and the Netherlands. The novelty in these coalitions –in a Belgian context- is the openness to involve across

⁹ Online references to the different projects are provided in the bibliography.

¹⁰ Referred to as 'MOS' (Methodologisch OnderzoeksSeminarie in Dutch).

political-institutional borders. Another type of innovative practice is realised in the living labs, where municipalities, organisations with a high energy demand, farmers and an agro-management group collaborate in a project of energetic woodlands; or the example of the Labo XX project, which explicitly also attracted sound expertise on financial conditions in the development of alternative urban renewal to redefine the 20th century belt around the city of Antwerp. The novelty in these two cases resides in the tailor-made combination of expertise (i.e. a ‘novel coalition’) to explore potentials of innovative practices.

- With regard to how the processes of change are orchestrated (i.e. shared methodologies), we already extensively explained the (process of formulating) guiding principles for the living labs. Another noteworthy example is the Labo XX project, within which steering and policy capacity as well as design capacity are to be developed simultaneously.
- There are numerous examples when it comes to innovative practices and experiments, e.g. the explicit multi-scalar perspective in the TOP Limburg project to combine local development with Flemish perspectives and European ambitions. When discussing novel practices in the in-depth interviews, the search for collective imaginaries seemed to come naturally to the foreground. Whether it is a description as a ‘carpet’, ‘dispersed urbanity’, ‘landscape-metropolis’ (cf. Brabantstad, TOP Limburg, TOP Noordrand), the focus on the 20th century ‘belt’ (cf. Labo XX), the focus on ‘interfaces’ and on development along both sides of a ‘border’ (cf. land-use relations in MKL2100 and cross-regional relations in TOP Noordrand), or the nomenclature of a ‘plantation’ that is used to indicate the experimental character of ‘Living Labs’, the here forwarded concepts all demonstrate a desire to better articulate the observed evolutions as well as the intended interventions.
- The thresholds and path dependencies that would keep from actually implementing the planned interventions, are versatile, with for instance a lack of political mandate, determining institutional-administrative frames, the conservative nature of existing discourses (i.e. ‘worldviews’), limitations in physical structures, historically grown and relatively rigid interpretations and uses, the necessity to receive time-consuming feedback from other actors, the estimations about the potential impact on a systemic level, all kind of ‘syrupy’ processes, etc. (cf. Hendriks, Toonen, 1998). With many thresholds related to the slowness of mental ecologies, we specifically also searched for examples in which a liberating climate was created. For instance, a mental *terrain vague* can be formed with a wide temporary perspective (e.g. the coastal study, which calibrates its explorations on the year 2100). In this, another important artifice has been the explicit reference to a long history of the ‘hold the line’-discourse with at the same time an increasingly rapid changing context in terms of climate conditions, demographic challenges or economic aspirations. As contradictory as it may sound, also a principle of limitation can create liberties and overcome mental barriers: with a framing of interventions as ‘experiments’, it is clear that a (temporary) commitment is asked for, whereas it remains open as to whether the experiment naturally would state an example and pilot for generalisation. The question of systemic changes and magnified transitions was rarely explicitly stated, although all collective learning initiatives regularly and/or implicitly refer to a wider context of changes and disruptions.

3.3 Next steps in the study of collective learning initiatives

One important outcome of the methodological research seminar is the *collective* decision to organise at least one more session of meta-learning in August 2015, as well as additional in-depth interviews (on known and new collective learning initiatives) to prepare this. The focus for the next session is provisionally fixed on the following issues:

- The representations of the collective learning initiatives are rich, but still too simplistic since the schemes do not show *relations* between different analytical categories: Can hindering factors (i.e. thresholds) be countered in a widened coalition? Would the exploration of future potentials add a substantial footnote to the proposed innovations? Can the current coalition – even if positively perceived – become a threshold for the implementation? Which methodologies are required to produce progressive insights and the support of a wider community of practice to innovative

practices? As with the previous session, the participants will again receive a scheme with the outcome of in-depth interviews for methodological triangulation.

- The session will also focus on few specific issues, such as the importance of consolidation and the cumulative knowledge in iterative processes of planning, conditions for the development of collective imaginaries, the role of authorities and different other participants in collective learning processes, the role of design and future exploration and opportunities for ‘potentiality mapping’ up to the possibilities and limitations of collective learning as a socio-*digital* environment.

Then also, the focus for further methodological reflections – which are the last stage in the research project of the Policy Research Centre for Spatial Planning- will concentrate more on the explanatory levels and on policy-relevance: whereas the analytical frame allows gaining rather detailed accounts on different collective learning initiatives in terms of direct and indirect innovative practices, the next steps would more closely also focus on qualifying the processes of collective learning as such. With this, we intend to move from the exploratory and more descriptive level of research to an explanatory level, i.e. to better explain the conditions for collective learning, to qualify the nature of collective learning processes, and to interpret the potential of different collective learning initiatives for future explorations on complex socio-spatial developments. The latter is central for the formulation of policy recommendations, i.e. to critically discuss planning approaches in the light of contemporary challenges.

4. Conclusions: Can living labs remodel planning approaches?

Based on the experiences with the two experimental living labs and the wider analysis of collective learning experiences in spatial planning in Flanders, we here want to forward few concluding reflections. These intend to feed the debate on how different approaches and heuristics in future explorations and collective learning could possibly alter contemporary planning practices, and the governance thereof.

Living Labs typically start from a real-world setting. The ambition of this approach is to create an environment for open innovation through early involvement of users and an open agenda. The merging of living labs with spatial planning can possibly bring new elements to a debate on participative practices that has been ongoing for almost six decades. Nevertheless: the so-stressed user involvement is a virtue of living labs, it is no novelty for spatial planning though. Then also, the explicit addressing of a specific location as a non-human actor is no novelty in planning practices: site visits, walkthroughs and the staging of a joint ‘choreography’ with different actors on site, the use of photographs and impressions,... all these elements as a form of situated learning have been included in design and planning practices for a long time already.

How then did the experience with research-based living labs for spatial planning and the reflection over different collective learning initiatives add to a discussion on remodelling planning approaches? The explicit focus on methodologies has led to discussions on for instance open agendas in planning, on the role and potential of explorations and of experiments, as well as on the consolidation of collective learning processes.

The condition of openness that is typical for living labs is potentially threatened in an area-based focus that departs from a local, tangible setting. In this, the myopia for ongoing, familiar practices can lead to premature consensus and potentially prevent from considering alternative positions. The challenge then is to purposefully create a kind of ‘estrangement’ (cf. Halse e.a., 2010, pp. 66). This can be achieved through different heuristics: we see a potential and value in using future explorations to question what is taken for granted, to open up agendas and to challenge deep core assumptions. Openness as a condition would also allow accommodating dissensus on spatial claims and in discourses on spatial issues, based in different expertises and interests. It is a quintessential condition for collective learning, since capitalising on each other’s resources requires some sort of (accepted) complementarity.

At the same time, the living labs have the ambition to be an ‘incubator for change’. The initial openness is therefore challenged with every articulation of proposals for innovative coalitions and practices. This

limitation and zoom-in is a precondition though to develop operational or strategic interventions. The focus on specific proposals rather than others (e.g. when selecting from a description of several ‘experiments’ to continue with 2 or 3 of these) is motivated in the commitment of partners, in estimations over the feasibility of a proposal as well as a reflection on the relevance of an intervention. The defining of a specific focus in living labs is *critical*. Then again, a more generalised practice of living labs in spatial planning – comparable to the regular developing of for instance neighbourhood projects in the Brussels-Capital Region- would allow a *series* of try-outs.

In this, the development of ‘experiments’ can possibly present a balance between ‘strategic’ proposals (i.e. proposals for interventions that are –as of the introduction- intended to lead to a generalised practice) and ‘non-comittal’ explorations. Whereas the proposing and the implementing of an experiment requires the commitment of specific, local actors, it is still labelled as an ‘experiment’. Experiments are the natural answer to a situation in which uncertainty is high. In such settings experimentation may constitute a valuable way to recognize complexity, make it subject of a concrete sociocratic process, and resisting the temptation to trade complexity for concrete action, and a narrowed rhetoric of entrepreneurship. Even if these kind of interventions zoom in on a single project, there remains a fundamental openness with regard to the evaluation of results. Experimentation might be a way to maintain openness to dissenting views, and avoid the side-lining of parties that cannot or do not want to take up a practical engagement in the early stages of the project. An experiment can -but does not have to- lead to strategic changes. It is a try-out, and the evaluation of the results is part of an iterative process. An experiment allows rehearsing an alternative approach, and as such also rehearsing new roles or relations of actors.

In these iterations, it is important to actively define moments for ‘fixation’ in order to consolidate the processes of collective learning. ‘Openness’ and ‘fixation’ are complementary in this: whereas a *terrain vague* - or at least some form of questioning of familiar practices- paves the way for innovative practices, the articulation and indeed confirmation of earlier achievements, proposals or decisions is necessary to actively build a shared understanding and to move a step closer towards implementations.

In order to consolidate the collective learning processes, it is therefore vital to document these practices, which otherwise remain rather ephemeral. Documenting can take different forms, but it should look for some kind of triangulation (i.e. to close a loop in an iteration, to actively create a shared understanding). The interviews and methodological research seminar on different collective learning initiatives added to this practice but occurred so far in a policy making arena and should be expanded to include direct feedback-loops with all stakeholders.

With serious doubts over strictly instrumental ‘one size fits all’-methodologies (e.g. as seems to be expressed in the ‘living labs harmonization cube’, Mulder e.a., 2008), we hereby attempted to document and elaborate tailor-made approaches of different collective learning initiatives for spatial planning. It is an attempt to build capacities for different possible ‘orchestrations’ of such processes. The analysis focuses on the direct valorisation in novel coalitions (i.e. ‘rehearsing new roles’) and on novel practices (i.e. ‘rehearsing new futures’), with a reflection on thresholds (i.e. ‘path dependencies’) but also on the potential of future valorisations (i.e. ‘rehearsing transitions’). The methodological research seminar is in itself also a moment of collective learning. The exchange with different project leaders and professors on methodologies was a novelty, which required an intensive time of preparation. The initiative has been and still is fragile though: it has been difficult to gather these high profiles, and it is equally difficult to transcend from a short-lived reflection to an ongoing and continued practice, also beyond the duration of the Policy Research Centre (i.e. to anchor explicit methodological reflections as a generalised practice in the spatial planning department). The required high levels of engagement (including the high mounting transaction cost and the needed time) also put in question the extent to which such initiatives can easily be replicated. Whereas the outcomes of this analysis are relevant in a reflection on planning practices in the light of uncertainties (i.e. dealing with wicked problems), the analysis does not reveal much (yet) on conditions for collective learning, apart from the discussion on the need for consolidation. This will be the subject and focus for the next steps in the analysis.

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Appendix:

Guiding principles for the Living Labs on spatial planning in Flanders

User-orientation and iterations

The logbook served as a reminder to also situate the particular experiments in Flanders in a wider range of living lab experiences. In this, Chesbroughs description of ‘open innovation’ has been an important point of departure for the Living Lab concept. ‘Open innovation’ assumes non-linear, cyclical innovation processes (cf. Chesbrough, 2003; Veeckman e.a., 2013) with iterations, feedback loops and hands-on, formative evaluations. This can for instance be realised through ‘open innovation platforms’ (Feldman, 2007). The complexity of planning issues, the uncertainty over contextual factors or the multiplicity of actors involved urges the development of similar processes, which translate into a series of actor- and action-oriented approaches, stressing the importance of collective learning. This is equally emphasized in the publication “The Urban Connection, An actor-relational approach to urban planning” (Boelens, 2009), in which the author advocates for planning approaches that explicitly consider a multiplicity and diversity of actor perspectives. The reasoning and legitimation for such efforts is based in the observation that contemporary planning practices often experience path dependencies and lock-ins, whereas at the same time, alternative practices emerge as a response to a significantly revised social context. However, these novel practices often stand little chance to be implemented, valorised or transferred to a greater scale (cf. Boelens, 2009, pp. 8-9). Another argument to promote investing in multi-actor collective learning initiatives is the observation that scientific theories on spatial planning seem to develop at a large distance from daily practices (ibid., pp. 183-189). A series of case studies in the publication illustrates the relevance of the actor-relational approach (ARA): “Space is always relational (...), it is constantly co-structured by the reciprocal interaction between (leading) actors and their networks, e.g. strategies and (institutional) settings” (ibid.:11). The author concludes that the examples from practice are promising in order to develop a novel and more robust form of urban planning with flexibility and a strong practice orientation (Boelens, 2009: 197). Such an ‘outside-in’ approach that starts from stakeholders (as opposed to an ‘inside-out’ approach that starts from governments) could be developed in different stages (ibid., pp. 193-197), e.g. starting from a first inventory of actors and values, development of potentiality maps, bilateral talks and round tables, development of business cases or pilots, according coalitions and possibly also the widening of new practices. The use of maps is essential here since it enables to represent territories related to interpretations of different spatial uses, i.e. shaped (and shaping) actor relations to physical spaces. Mapping is one of four ways to navigate through the complexity of spatial planning issues (ibid., pp.

172-177, based on Deleuze and Guattari, 1980). The process of mapping is preceded, yet often also accompanied by an unravelling and a reconstruction of the existing, which is a process of ‘tracing’. Then again, potentials cannot be realised unless matching partners can be found. The relevant structure to navigate through complexity here is a ‘diagram’, e.g. to represent relationships and transformations thereof. Last but not least, the realising of novel practices equally requires knowledge about a wide field of ‘agencements’ such as laws, regulations or institutions (and the potential to change these) to be able to estimate the likelihood of potential developments in spatial planning. The fourfold Deleuzian cartography –traces, (potentiality) maps, (actor) diagrams and ‘agencements’- has become a shared fundament in the methodology for the experimental living labs.

Other references in the methodology of the experimental living labs have been experiences in research-by-design and particularly also the ‘synoikos scenario workshops’, e.g. in the European ‘Thought for food’-project (T4F) with a case in Roeselare Hoogleden (cf. SPINDUS-project, Segers e.a., 2013). The aim here was to test ‘participatory urban design’ in a real-world setting, as a method for social innovation (i.e. approaches to enhance social interactions and basis needs for specific social groups). A significant resemblance to the actor-relational approaches is the starting point, which are, in both approaches, local actors. Then again, the SPINDUS project has an explicit focus on social innovation, which seems to be no sine qua non condition for the ARA approach. The observation of this difference with regard to taking an explicit normative position has equally been discussed in the ‘curatorium’.

The ‘architecture’ for the T4F project is based on synoikos processes and on the ‘Netzstadt’ approach (cf. Oswald Baccini at ETH Zürich; Oswald, Baccini, 2003). The aim is to create strategies for development and to launch project ideas based on the contribution of a multiplicity of actors, similar to the ARA. The project started from a morphological and physiological research, which is partly comparable to a process of ‘tracing’. The results of this were presented in a first workshop, which lead to ‘scenarios’ (comparable to the stage of ‘mapping’). These are hypotheses about possible pathways for more sustainable spatial development over a period of 50 years, with an indication of the ‘change agents’ (similar to a process of ‘Diagramming’). The experience from this participatory urban design approach as well as from a variety of research-by-design projects has been valuable in developing potentiality maps for the living labs. The multi-valence of such design-scenario hybrid, which integrates images and narratives, is expected to also contribute positively to a more continuous, dynamic, strategic and inclusive planning process (cfr. Schreurs & Kuhk, 2011, p. 346). Vandenbroeck agreed with the expectation of added value, but stresses the need to use strong boundary objects to integrate approaches from planners and designers, in order to also operationalize the use of both scenario analysis and designerly research in planning practices.

The T4F experience equally sharpened the focus on the importance of iterative and cyclical developments: building a shared understanding requires a methodology that structurally builds on reiterations. Neither the Deleuzian ways to navigate complexity (i.e. tracing-mapping-diagramming-agencying) nor the architecture of synoikos workshops (i.e. inventarising- scenarios and scanning directions for development – indicating change agents) should be read as linear processes: it requires many iterations with local and regional actors to sail across the complexity of spatial planning issues (cf. evolutionary planning, Bertolini, 2010).

The experiences from actor-relational approaches, participatory and designerly approaches (with their emphasis on future-orientation and on experiment), which are at times combined to scenario-thinking, are moulded into a methodology for two experimental area-based living labs on spatial planning in Flanders.

Systemic approaches and strategic development

Prior to the living labs, there has been another ad hoc, short term assignment at the Policy research Centre for Spatial Planning, i.e. the ‘expertforum’. The group of experts accompanied the writing of the white paper on spatial policies during two years. In this, Coppens and Allaert pointed at a central dilemma in spatial planning: whereas several aspects in the business-as-usual are fiercely criticised for their negative impact on for instance traffic congestion, water management, bio diversity, food- and energy facilities or effects on health and environment (Coppens e.a., 2014: 40), it seems to be increasingly difficult to actively steer societal systems and as such also the development and the use of spaces. The members of the expertforum expected that transition management could potentially offer a

way out of this impasse. The starting point is an analysis of broader socio-technical regimes which focus on (1) tangible and intangible structures (e.g. network infrastructures or systems of regulation), (2) on the dominant images, values, paradigms and discourses (e.g. the importance of juridical stability, or the strong individualization in spatial development in Flanders), and (3) on routinely system behaviours (e.g. discrepancies between permits and enforcement). With a certain number of similarities to this approach, the analysis of dominant images or worldviews has also been the subject to explorative scenarios (cf. Kuhk e.a., 2011), as well as to the ‘theories des cités’ (Boltanski, Thevenot, 1991) or to subsystem approaches in public policies (cf. Kuhk, 2013, pp. 42-44).

A common assumption in the literature on transition management is that the measures to resolve systemic conflicts are generally conformist and only rarely innovative on a systemic level. Measures may temporarily appear to be functional, whereas they essentially reinforce an existing lock-in (which is, from a systems perspective, essentially a dysfunctional evolution, e.g. using breakdown lanes as a measure against congestion and/or other symptom control). Another example is the exuberant regulatory framework in spatial planning, which attempts to summarize even complex conflicts in high density areas in an encompassing regulatory context. In an attempt to adjust regulations for every combination and variation, the regulatory systems becomes rather dysfunctional than facilitating (e.g. creating ‘exception decrees’ and ‘repair laws’, *ibid.*, p. 47). Transition management argues that socio-technical regimes have a persistent stability, with little possibility to actively steer the regime. In future explorations and scenario analysis, a closer analysis of thresholds and path-dependencies is expected to shed a light on these kind of syrupy processes (cf. Hendriks, Toonen, 1991).

At the same time, there have been also numerous examples of socio-technical regimes that change quite radically, often at relatively short notice and starting from small-scale innovations. Niche changes can, under certain conditions or so-called ‘windows of opportunity’, be applied on a larger scale. Transition management does not aim at steering towards one specific ‘optimum’, but it is primarily striving to accelerate the process of change in the direction that is more sustainable. Solutions are a priori not determined, but found in the course of the process (cf. Coppens e.a., 2014, p. 45).

The living labs depart from a similar logic: the issue setting (or ‘problematization’) and the possible approaches (or ‘solutions’) are both defined by all relevant actors involved, from the beginning of the process. The expertforum expected innovations to develop in new and unexpected connections of actors, including actors from niche networks. The novelty then would be a result of unexpected linkages between actors who previously were in relatively separate worlds, e.g. social organizations with private operators, energy suppliers and food producers, hobby farmers with water companies, etc. If these innovative coalitions evolve into a system level, they can turn into ‘strategic alliances’ (*ibid.*, p. 49). Innovative practices in space can then also result in a system-wide transition. There is an important flipside to this coin though: even if novel practices function well in particular niches and particular locations, the effect on a larger scale needs to be considered carefully. The reassessment of systemic levels both considers potentials as well as possible negative externalities with a generalised application of novel practices.