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Transitioning Urban Experiments

Reflections on Doing Action Research with Urban Labs

There is a large diversity in lab approaches. We contribute to a much needed evaluation by reflecting on a specific transdisciplinary action research approach that transforms

a conventional innovation project into a transition experiment.

We show how the approach could be adapted in order to be applied to urban labs focusing on sustainability transitions in governance systems.

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Transitioning Urban Experiments. Reflections on Doing Action Research with Urban Labs

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Abstract

Urban labs have gained popularity throughout Europe. They are a manifestation of the search for new forms of urban governance capable of addressing the complex problems that cities are facing nowadays. These labs typically aim to create space for transdisciplinary research, co-creation and experimenting with potential solutions to sustainability challenges. In urban labs in four European cities, we applied a specific transdisciplinary action research approach labelled as “transitioning of (urban lab) experiments”. Our approach consists of four steps: co-design of experiments, setting explicit learning goals, evaluating what has been learned, and dissemination and embedding of lessons learned. Critically reflecting on the difficulties encountered in the implementation of the transitioning approach, we conclude that it must be adapted when applied to urban labs focusing on sustainability transitions in institutional and governance systems rather than in socio-technical systems. We provide recommendations as to how the approach could be adapted.

Keywords

transdisciplinary action research, transitioning experiments, urban governance, urban labs

Urban labs have gained increasing popularity throughout Europe. They belong to a dynamic family of experimental approaches, including living labs (Almirall and Wareham 2011, Bergvall-Kärebörn and Ståhlbröst 2009, Leminen et al. 2012), urban sustainability transition labs (Neuens et al. 2013, Forrest and Wiek 2015), real-world laboratories (Schäpke et al. 2015, Parodi et al. 2016), city labs (Scholl and Kemp 2016), and social innovation labs (Westley et al. 2014, Seyfang and Longhurst 2015). All these types of labs aim to create space for transdisciplinary research, co-creation and experimenting with potential solutions to sustainability challenges. They are an expression of an experimental turn in social and sustainability science (Evans et al. 2016, Schneidewind 2014). However, recent reviews of these experimental approaches in transformative research point toward the pluriform development of the field and the need for more coordination to enhance learning across experiments (Sengers et al. 2016, Voytenko et al. 2016, Luederitz et al. 2017). The current diversity of the field is also manifest in the approaches taken to (transdisciplinary) action research in urban labs. With this paper we aim to contribute to an evaluation of these various approaches by presenting a critical reflection on one specific transdisciplinary action research (TAR) approach: “transitioning of (urban lab) experiments”. In the project *Towards New Forms of Urban Governance and City Development: Learning from Urban Experiments with Living Labs & City Labs (URB@Exp)*, this particular approach was applied in urban labs in four European cities. By critically reflecting on the

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experiences gained we aim to provide a better insight into the conditions necessary for a successful implementation of “transitioning of (urban lab) experiments”.

The context of *URB@Exp* was the search for new forms of urban governance capable of addressing the complex problems that cities are facing nowadays (Sauer et al. 2016, Van der Heijden 2014). Urban labs are often presented as such a new form (EU 2011). However, urban policy makers and developers are struggling with the implementation of these labs and seek for guidance, in particular where it concerns the types of problems for which urban labs are most suited, how urban labs can best be organized, and whether and how they might be integrated into formal local governance structures. In *URB@Exp*, urban policy makers, lab practitioners and academic researchers jointly explored these issues by conducting action research in urban labs.¹

In this paper, we reflect on the implementation of our action research approach in urban labs in four cities: Maastricht (the Netherlands), Graz (Austria), Leoben (Austria), and Malmö (Sweden). These urban labs were chosen because they vary considerably in terms of ambition, thematic focus and stage of development, as well as in their social, cultural and political context. However, they all belong to the family of “city labs”, defined as collaborative platforms for local governments and other stakeholders to jointly learn about and be involved in new ways of dealing with urban challenges (Scholl and Kemp 2016). Four aspects characterize this form of urban governance: 1. the experimental approach: room to fail; 2. hybrid organizations with involvement of the municipality; 3. transdisciplinary and integrated approaches; and 4. co-creation of solutions and implementations. Most of the labs involved in our research have paid staff, a physical space, and provide infrastructure for the collaboration with other stakeholders. Those who do not, but still share the other features, we call here “lab-like initiatives”.

In the following, we first sketch our TAR approach of “transitioning (urban lab) experiments”. We then briefly describe each lab, as well as the experiment(s), including the participants and their roles. Subsequently, we present a critical cross-case reflection on the implementation of the TAR approach in the four urban labs. We end with summarizing our findings in a set of conclusions on the applicability of “transitioning” as a TAR approach in urban labs.

“Transitioning (Urban Lab) Experiments” as a Transdisciplinary Action Research (TAR) Approach

In *URB@Exp*, a TAR approach was taken to combine knowledge generation about urban labs as a new form of governance with effecting real-world change by embedding of lessons learned from experiments in urban governance structures and practices. The action research was participatory in nature, with the researchers participating in the urban labs and supporting joint reflection of all participants on change processes and their roles in these pro-

cesses (Whyte 1991). The role of the researchers in this process will be discussed later in this paper. The research method followed a process-oriented approach to sustainability science with a strong focus on implementation, participation and conducting research on societal change processes towards more sustainable practices (Kemmis 2010, Miller 2013, Wittmayer and Schöpke 2014). More specifically, the TAR approach chosen was by “transitioning of urban lab experiments”, in which “transitioning” represented the intervention. Transitioning means to transform a conventional innovation project into a transition experiment through a number of focused interventions that maximize co-creation, strategic learning and embedding of lessons (Van de Lindt and Van den Bosch 2007, Van den Bosch 2010).

The concept of transition experiments originates from the literature on strategic niche management (Hoogma et al. 2002, Raven et al. 2010) and transition management (Rotmans et al. 2001, Kemp and Loorbach 2006). Transition experiments differ from “classical” innovation projects in various ways. They are focused on exploring and learning about a societal challenge rather than on testing and demonstrating preconceived solutions, involve a broad range of actors rather than specialized technical staff, and have a more long-term perspective, aiming to contribute to a sustainability transition (Kemp and Van den Bosch 2006, Van den Bosch 2010, Nevens et al. 2013). “Transitioning” denotes the attempt to transform a project’s approach into a transition experiment. This should lead to an open process rather than achieving predetermined results with limited user involvement and an over-emphasis on technical improvements (Hoogma et al. 2002). The TAR approach of “transitioning experiments” has been successfully applied to innovation projects in the field of energy and transport (Van den Bosch 2010).

We aimed to achieve transitioning in the urban labs involved in *URB@Exp* by changing the traditional approach to innovation projects typically followed in urban (living) labs (such as real-world laboratories). In each lab, researchers and lab practitioners agreed to design and implement one or more experiments according to the following four steps:

- co-designing the experiment to achieve a high level of involvement of multiple actors;
- setting explicit learning goals to focus the participants on strategic learning;
- regular reflection and evaluation of learning to capture the lessons learned;
- dissemination and embedding of lessons learned to integrate new practices in local governance structures.

The critical reflection on this TAR approach presented in this paper focusses on the implementation and applicability of the approach.



¹ For knowledge that was generated in *URB@Exp* concerning these types of issues, the reader is referred to the *Guidelines for Urban Labs*, see www.urbanexp.eu/guidelines.

TABLE 1: Overview of the four urban labs, their central focus and the experiments included in the reported action research.

URBAN LAB	CENTRAL FOCUS	EXPERIMENTS
<i>The Maastricht-LAB</i>	new forms of urban development and spatial planning	two experiments with new ways of urban green space governance
<i>Governance Lab Graz</i>	citizen participation in urban planning and development	several experiments (pilots) with implementation of a new guideline for citizen participation
<i>City Lab Leoben</i>	new forms of citizen participation in urban development	experiment with a new way of collaboration between the City and citizens, in this case in refugee care
<i>Malmö Innovation Platform</i>	innovation for sustainable development in social housing	experiment with structural reflection and learning sessions concerning platform governance

Implementing the TAR Approach in Urban Labs

An overview of the four urban labs in Maastricht, Graz, Leoben, and Malmö is presented in table 1.

The Maastricht-LAB

The Maastricht-LAB (M-LAB) was established by the municipality as a temporary governance platform with the aim to learn about new modes of urban development and spatial planning, thus stimulating the transition towards a different type of urban governance. *M-LAB* is placed partially outside of the municipal government: institutionally by having an external partner as one of the two project leaders, and physically by being accommodated in a separate building. Political responsibility resides with the alderman responsible for spatial planning and environment. In the first phase (2012 to 2014), *M-LAB* experiments had a spatial focus and an innovative or experimental aspect which could not be dealt with by the municipal authorities alone or within the current governance structures. The experiments were mainly driven by municipal authorities. For the second phase (2014 to 2017), the decision was made to change *M-LAB*'s mode of operation by transferring the initiative to citizens and local organizations through a permanent open call for project ideas. During the second phase, researchers of Maastricht University participated in two experiments with governance of urban green space. They joined and co-organized many meetings and organized evaluations with the *M-LAB* team and other involved actors. The researchers also co-organized two workshops involving organization and governance specialists to reflect on the case of *M-LAB* and the potential to embed its way of working more broadly in the municipal apparatus.

The first experiment (April 2015 to October 2016), *Operatie Steenbreek*, was part of a national campaign aiming to reverse the trend of paving of private gardens. Initiated and first also coordinated by a local activist-scientist, *M-LAB* motivated its participation in the experiment by its potential contribution to mitigation of heat stress and urban flooding, and by the prospect of learning how to mobilize citizens to take action on their private terrain for serving a public good. The first step in the experiment was an open call to individual Maastricht-based house owners (and tenants) with gardens, to (partially or wholly) “unpave” their gardens. Despite considerable efforts to spread this call through local and regional media, social media outlets, and two gardening informa-

tion markets, there was hardly any response from individual house owners or tenants. However, several ongoing urban gardening and greening initiatives expressed interest to collaborate with *Operatie Steenbreek*, including a local housing corporation, which collaborated in two “example unpavement” actions on their properties. Because of a lack of time on the side of the initiator, *M-LAB* had increasingly been taking on the role of coordinator. However, in this role *M-LAB* felt as an unnecessary by-pass in a local network of urban greening initiatives sufficiently connected to each other. Therefore, during a final evaluation, *M-LAB* proposed to give the local centre for nature and environmental education organization (CNME), through structural funds connected to the municipality, a more central role in the further coordination of the campaign.

The second experiment (December 2015 to June 2017) concerned a *Round Table on Urban Nature (Round Table)*, organized by *M-LAB*, researchers of Maastricht University and a local NGO for nature education (IVN). The initiative was driven by an experienced retired project manager working as a volunteer for IVN. The aim of the *Round Table* was to develop a vision for urban nature in Maastricht as a societal co-production. The *Round Table*, consisting of 13 citizen-participants with different professional backgrounds, met eight times on a six-weekly basis to discuss each time one aspect of urban nature prepared by one of five thematic working groups. Before each of the first five sessions, an expert from the world of policy or public administration addressed this particular aspect in a public lecture which attracted about 60 to 80 visitors. The last three sessions of the *Round Table* focused on developing the actual vision document, with increasing involvement of the thematic working group members. The vision document was completed in the autumn of 2017 and presented to the city council in January 2018. The municipality already is using some of the results and insights for a new policy document on Maastricht's “green infrastructure”.

Governance Lab Graz

The action research activities in the City of Graz were carried out in a transdisciplinary setting labelled as *Governance Lab Graz*. This facilitating space for integrated urban development projects involved representatives of the municipality and researchers of the University of Graz, and focussed on the interaction between citizens, NGOs, administration and politics. The main experiment concerned the *Guidelines for Citizen Participation of the City of Graz*

(*Guidelines*), a new approach for systematic citizen's participation in municipal urban development projects. This structured administrative procedure of the city allows citizens to join in the discussion about decisions already at an early stage and to contribute their points of view and concerns. The researchers took actively part in the co-creation process of the pilot phase of implementing these *Guidelines*. This included weekly exchange meetings with the goal of establishing systematic cycles of action and reflection between civil servants responsible for citizen participation and researchers. Additionally, social research methods (interviews with politicians, civil servants, citizens; observation of citizen participation events; quantitative interviews with participants of a participation process), and the organization of workshops supported the reflection on the first experiences with the application of the *Guidelines*. Also students were involved in these activities by hosting focus groups, participating in excursions, as well as by carrying out interviews and writing research papers about the topic. Moreover, a bilateral city exchange was organized between lab practitioners and researchers from Graz and Heidelberg (Germany), the latter having relevant experience with similar participation guidelines.

The overall goal of these activities was to foster shared learning and to raise awareness about new forms of urban planning and governance in the City of Graz. The co-creation process for piloting of the *Guidelines* stimulated a knowledge exchange between civil servants who have to implement them. The action research contributed to a process of reflection and promoted capacity building for organizing participation processes within the city administration. As a result, the pilot phase of the implementation of the *Guidelines* was extended in order to deepen the co-creation process. The *Guidelines* were slightly adapted to make them more feasible and the application of the *Guidelines* was extended to the cities' public-sector companies.

City Lab Leoben

The TAR activities in Leoben involved a close collaboration between researchers from the University of Graz with local civil servants and other local stakeholders. Although the City of Leoben had experimented with various forms of citizen participation in the past, the city government realized that new urban challenges require innovative and exploratory forms of participation. Since Leoben did not have an urban lab yet, the establishment of a *City Lab Leoben* was part of *URB@Exp*. As a first step, the researchers conducted a mapping and analysis of the city's governance structure applying social research methods (content analysis of projects reports, official city documents, policy papers and local media articles, interviews with city representatives). Next, a co-design process of the concept for the *City Lab Leoben* was initiated by organizing joint meetings, workshops and focus groups with civil servants, local stakeholders and scientists. This was complemented with site visits, expert interviews and an international city exchange program for practitioners. These activities led to the establishment of *City Lab Leoben* in spring 2017.

Parallel to these activities, the action research interventions by researchers of the University of Graz focused on fostering coop-

eration between the city administration and initiatives in Leoben, developed and carried out by citizens. One example of such an initiative is the civic support for refugees in the city starting in fall 2015, when large numbers of refugees from Syria and Afghanistan crossed the Austrian borders. In Leoben, more than 500 refugees were accommodated by the provincial and federal government. Despite widespread opposition to the hosting of refugees among local residents and politicians, several volunteers took the initiative to organize different types of support, such as food and clothes donations, German language courses, sports activities and events for an intercultural dialogue. The City of Leoben acknowledged their efforts and started to work with them, to support them, and also to inform the public about the situation of refugees.

The researchers first conducted a stakeholder analysis. Based on that, a needs analysis was carried out by applying social research methods (expert interviews; participatory observations of internal working meetings of stakeholders, information events for the local community and intercultural events; discourse analysis of local media). The results fed into a collaborative reflection and evaluation process of the refugee dynamics in the city with researchers, city administrators and citizens involved in the refugee initiatives as participants. Based on this process, the research team organized a series of stakeholder workshops for co-designing future strategies and elaborating learning goals. This was supported by organising focus groups and an online survey on values, communication and networks among people working with and for refugees in the city. These action research activities contributed to the successful implementation of a variety of social inclusion projects for refugees and a platform and network for exchange between those involved in these projects. This process fostered trust between citizens, stakeholders and city officials. Although some critics attended information events to get insight in the work of the volunteers, the researchers were not able to involve the opposition in the activities, which can be considered a shortcoming. Furthermore, at the beginning of the process, refugees were not directly included in establishing local support structures.

Malmö Innovation Platform

The action research in Malmö was conducted in the context of a lab-like initiative – an “innovation platform”, – and built upon long-term collaboration of researchers from Malmö University with many local civil servants and other stakeholders. The *Malmö Innovation Platform* was initiated in 2013 by the City's Environmental Department with national funding, and aimed at supporting sustainability-oriented innovation projects run by different partners in social housing districts in the periphery of the city. Malmö University was involved as an official partner, with one senior researcher in the steering group and another maintaining close contact with the management team. In the period 2015 to 2016, the platform went through three phases of funding, involving renaming and reframing of the organizational structure and purpose. To support the transition between the first two phases, the main intervention was an event-driven reflection process (called *Co-Lab*) with the management team and sometimes also with the steering



group including different partners of the platform. The *Co-Lab* process consisted of monthly half-day workshops, initially organized by the researchers and gradually by the platform managers, with the goal to support reflection and mutual learning.

Being hosted within the City's Environmental Department and focusing on collaboration with the platform's various external key partners, the managers only at a late stage acknowledged their lack of anchoring and credibility within the wider city administration and amongst politicians. The *Co-Lab* process was supplemented with interviews with civil servants and managers of other departments. However, it can be considered a weakness of the action research that it did not achieve to bring these stakeholders together in a joint learning process.

The experimental and dialogue-based collaborative practice involving the researchers, the platform managers and different steering group members in the *Co-Lab*, established a space for asking critical questions and supported the development of shared ownership of the platform, challenging the conventional management and steering group governance practices in Malmö. As such, the *Co-Lab* was an experiment with – and repeatedly addressed the need for – a more structured learning process across departments within the city administration as a challenging yet important part of a transition towards collaborative urban practices.

Critical Cross-Case Reflection

Critically reflecting on the implementation of the four steps of the TAR approach in the urban labs, we focus on repeatedly encountered problems that formed obstacles to implementing the approach as intended. The outcomes are summarized in table 2.

Diverging Stakes in Co-Designing the Experiment

In all experiments except in Malmö, citizens or representatives of local organizations were involved in one of more stages in addition to local government officials and researchers. A balanced participation of these various actors in co-designing the experiment turned out to be difficult to achieve, however. In Graz, the experiments were driven by the civil servants and the researchers, with the other actors being invited to participate after the design phase. In contrast, in Maastricht and Leoben the experiments were based on citizen initiatives, with civil servants and researchers joining later. The efforts to implement this step of the TAR approach revealed the asymmetrical stakes in and expectations of the urban lab experiments among the actors. The city officials were more inclined to embrace the open-endedness required for a transition experiment relevant for learning about new forms of governance. In most cases the nongovernmental stakeholders engaged to implement their own, undiluted, preconceived ideas, and not to experiment and learn about new ways of working with the local government. Obviously, this left little room for co-designing the experiment. Most of them did not see their proposal or initiative as an experiment, and the more passionate they were about it, the less room there was for co-design.

Lack of Shared Focus on Strategic Learning

Working with explicit learning goals proved to be difficult in all experiments. Many actors find it hard to define on beforehand what they want to learn from an experiment. The difference was especially stark between lab coordinators and other urban stakeholders. Since their main interest was to implement their initiative or project idea, the latter often showed no real interest in strategic learning, and certainly not about “new ways of working”. It is likely that previous implementations of “transitioning” (cf. Van den Bosch 2010), which focussed on substantive socio-technical sustainability issues (e.g., mobility, energy), did not encounter the same problem because the interests of the governmental and non-governmental actors involved were not as divergent as in our cases. It is crucial, then, to make these different stakes in the experiment explicit at the start, and to consider jointly who should be learning from the experiment, what and why. In the labs with a focus on learning about new forms of urban development and governance, efforts should have been made to involve more relevant stakeholders from the local government in the experiments, to broaden the learning experience. Those governmental stakeholders, for example, civil servants from different departments or political decision-makers, should then have been involved in the experiment from an early stage on. Not doing so has led, in the presented cases, to new challenges for the fourth step of the TAR, which concerns dissemination and embedding of lessons. Involving key actors from the local government only in the fourth phase proved to be too late to make them part of the learning process.

An additional obstacle to the intended implementation of this step was that an operationalization of what “strategic learning” entails was lacking. In fact, the literature on transition experiments does not use the term “strategic learning” as such, but recommends in general terms to connect the learning goals to a long-term vision on sustainable development and the societal sustainability challenge that forms the context of the experiment (Kemp and Van den Bosch 2006). In all our cases, a clear operationalization of “strategic learning”, for example, as learning about new forms of urban development and governance, would have been helpful.

Evaluating Learning Hampered by Too Much Focus on Operational Issues

In all experiments, our TAR approach has contributed to the identification of lessons learned. Here, the joint efforts of the researchers and city officials were productive in co-designing suitable and tailor-made forms of summative and formative evaluation to reflect on processes and achievements. The formats varied from individual interviews to surveys, and from reports to joint reflection workshops. Especially the involved city officials experienced it as useful to have an explicit focus on lessons learned and to capture these in a more formalized way. This formalization of learning and lessons also supported the dissemination process beyond the urban lab. It also helped to start asking new and more focused questions for future experiments.

The problems encountered with the previous two steps of our TAR approach, however, had their consequences for capturing the

TABLE 2: Steps in TAR approach “transitioning of (urban lab) experiment”, with per step goal and key problem encountered in implementation.

STEP IN TAR APPROACH	GOAL	KEY IMPLEMENTATION PROBLEM
co-designing the experiment	high level of involvement of multiple actors	different stakes in (the goal of) the experiment
setting explicit learning goals	focus on strategic learning	no clarity or shared focus on strategic learning about new forms of governance
evaluating learning	capturing lessons learned	too much focus on operational issues
dissemination and embedding of lessons learned	integration of new approaches in local governance structure	missing links between urban labs as experimental niches and formal local government structures

lessons learned. The lack of an open design of the experiments and of jointly established strategic learning goals frequently resulted in a superficial focus on operational issues concerning the success of the experiment in its most immediate sense. Wider issues concerning urban governance and new ways of working together were less frequently addressed.

Missing Links between Urban Labs and Local Government Hamper Integration

Finally, our TAR approach included also support for the dissemination process, above all by asking critical questions and keeping a sharp focus on what needed to be spread, to whom and how. The dissemination of lessons learned and the integration of urban lab approaches in local governance structures has become a strategically important issue for the urban labs involved in the project. However, this was not an easy endeavour. In trying to disseminate and engage actors beyond those immediately involved in the experiments, the urban lab teams became aware of the missing links between the urban labs as experimental niches and the existing local governance structure. These missing links were a consequence of the problems encountered during the implementation of the previous steps: the different stakes in the goal of the experiments, the lack of clarity and shared focus on strategic learning about new forms of governance, and too much focus on operational issues when capturing the lessons. Ultimately, when trying to disseminate and embed the lessons learned, the urban labs were confronted with the consequences of their outward-looking approach to involvement of urban stakeholders, which, more often than not, resulted in a lack of involvement of and embedding of lessons with key local governance stakeholders.

Conclusions

With regard to the current diversity in TAR approaches in urban labs, an evaluation is needed to enable better coordination and possibly convergence. We contribute with a critical reflection of the particular TAR approach applied in the *URB@Exp* project: transitioning of (urban lab) experiments. In the following we summarize our findings and argue for rethinking of the original framework of Van den Bosch (2010).

From the previous section it will be clear that it was difficult to implement our TAR approach as intended, which was mainly due to the divergent interests and goals of the various actors participating in the experiments. This divergence was primarily root-

ed in a substantive focus on implementing preconceived ideas on the side of the urban stakeholders (citizens, civic organizations), and in a process focus on experimenting with new ways of working on the side of the local government officials.

Whereas the transitioning approach may work well when the focus of urban (living) labs (such as real-world laboratories) is on sustainability transitions in socio-technical systems such as transport, water or energy (Van den Bosch 2010, Porter et al. 2015), it requires rethinking when applied to urban (living) labs with a focus on a transition in institutional systems such as local governance. In particular, rethinking of the first two steps of the transitioning approach is needed, as the problems we encountered in the third and fourth steps followed from problems in the first two.

For the first step, we recommend that the different interests and expectations of the participants are made explicit and to try to accommodate both substantive and process oriented interests in the design of the experiment. Our recommendation for the second step is not to try to involve all participants in the experiment in a joint learning process, but rather to include only those who aim to learn about the (institutional) sustainability challenge that is the focus of the urban lab. We therefore recommend ensuring that key actors from the governance system are involved.

Finally, we conclude that, despite the difficulties encountered in the implementation of the transitioning approach and the need to adapt this approach when applied to urban labs that do not focus on socio-technical transitions, the approach was nevertheless useful in bringing to light the tensions that exist in these urban labs between the interests and goals of the lab practitioners and those of other urban stakeholders, an aspect that thus far did not receive attention in the literature on sustainability transition experiments (Weiland et al. 2017).

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