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Learning through collaboration in the Swedish public transport sector? Co-production through guidelines and living labs

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ABSTRACT

The purpose of the paper is to analyse informal collaboration in the public transport sector. Two Swedish case studies, Living lab Uddevalla and Guidelines for Regional BRT are analysed and compared concerning what kind of learning occurred and what lessons regarding informal collaboration to draw from the two cases. For both cases the analysis indicates that individual, single loop learning is the most striking type of learning among the participants. The voluntary approach of the two cases has advantages and drawbacks. Advantages include that participants were truly interested in the issues of collaboration, which created energy and contributed to building trust. The main drawback identified was that in both cases the voluntary enthusiasm of the participants collided with the formal requirements of planning and decision making. This has stifled the possibility of the informal collaboration processes to induce change in prevailing practices.

1. Introduction

Collaboration is an essential characteristic of the public transport sector. Previous research has identified some critical areas in which public transport organisations need to collaborate, partially mapped the mechanisms used in practice, and developed the theoretical understanding of the essential qualities that make it possible for organisations to collaborate efficiently (Hrelja, Pettersson, & Westerdahl, 2016, 2017). Many aspects of public transport planning are conducted in formal arenas, where organisations are obliged to participate. This includes e.g. mandatory plans for services, procurement processes, and infrastructure planning processes where existing legal frameworks or planning directives effectively stipulates that certain organisations must collaborate.

While these types of activities are important formal arenas for collaboration they also have some distinct disadvantages. In the literature on collaboration it is for instance argued that a common problem is that public organisations forced to collaborate do so half-heartedly (Ansell & Gash, 2008). This in turn creates problems because engagement to the collaborative processes is important for building trust among partners and to realise the full potential of the collaboration (Thomson & Perry,

2006). Another problem with half-hearted participation becomes clear if collaboration is viewed as a step-wise learning process conditioned on the willingness of participants to achieve understanding of the roles and goals of other organisations (Hrelja et al., 2016).

Additionally, the formal collaborative arenas in the public transport sector are often restricted to include only certain organisations, whereas results from research on collaboration emphasise that a fundamental prerequisite for successful collaboration is to include a range of stakeholders that are broad enough to reflect the problem (Gray, 1989). The inclusion of a broad enough range of stakeholders is a particularly difficult issue in the public transport sector given the wide range of stakeholders influenced by, or influencing the development of the system (e.g. Lindau, Hidalgo, & de Almeida Lobo, 2014; Pettersson, 2018; Rye, Monios, Hrelja, & Isaksson, 2018).

Therefore, informal arenas including stakeholders normally not included in the existing formal collaborative processes could provide important opportunities. Opportunities could include both involving a broader range of stakeholders, and to develop and facilitate collaboration by way of bringing together public transport stakeholders in forums they are not forced to participate in. Such constellations of actors in public transport are rarely researched and the knowledge about

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their possibilities to solve problems, point to new solutions or facilitate learning is limited.

In this paper we will draw on the experience of two informal collaborative processes recently conducted in Sweden. They are both based on voluntary participation and involve a large group of stakeholders. Another common trait is that both public and private representatives have taken part in the work, and are exploring issues of collaboration in the interface between the municipalities, with a high degree of autonomy in Sweden, and regions that are influential and successful in transport planning.

The first example is Living Lab Uddevalla where public and private stakeholders are involved in a collaboration on municipal and regional public transport issues. The approach is explorative and experimental. Participants are encouraged to learn more on public transport and discuss its role in planning through workshops, try-public-transport-efforts and other research activities. Also commuters and others who regularly use public transport are involved in the project (Westerdahl, 2017).

The second example is the process of developing Guidelines for regional Bus Rapid Transit (BRT), involving around 35 representatives from various public and private organisations from different parts of Sweden. The purpose of the Guidelines process was to support the development of regional express bus services by adapting the planning philosophy of BRT to a regional scale. In the Swedish context this means that the concept of BRT, usually implemented in urban areas, is adapted to connect rural and urban areas (Hansson, Pettersson, Ringqvist, & Lindblom, 2016).

A first key characteristic of both collaborative processes is that they were conducted in a networked setting, meaning that stakeholders were participating in an arena or forum where governance mechanisms such as organisational hierarchies and market play less of a role than in formal forums (Poocharoen & Ting, 2015). Second, both processes included elements of co-production, i.e. the fundamental idea was that the participating stakeholders were expected to influence the outcome (Voorberg, Bekkers, & Tummers, 2015). As such we argue that the two cases are interesting to study from a learning perspective, since the key characteristics of both collaborative processes seem favourable to facilitate learning among the participants. Several previous studies focus on learning as a central aspect of collaboration between different stakeholders (e.g. Blatner, Carroll, Daniel, & Walker, 2001; Daniels & Walker, 2001; Innes & Booher, 1999), or collaborative learning within organisations (e.g. Marsick & Watson, 2003; Sidani & Reese, 2018). We have a special interest in the idea of loop learning (e.g. Argyris & Schön, 1974; Innes & Booher, 1999; Schein, 1985) where learning is discussed both in terms of learning within a limited frame of reference, and as a process where the existing conditions are questioned. The last type of learning is referred to as double loop learning.

The main purpose of this paper is to prepare the ground for future studies on learning in collaborative processes in the public transport sector. We ask the following questions: What type of learning did occur in the two informal collaborative processes? What lessons concerning learning through informal collaboration in the public transport sector can be drawn from the two cases?

By analysing how the two cases, Living lab Uddevalla and Guidelines for Regional BRT functioned as informal, voluntary collaboration processes, we identify key lessons, and suggest future research on collaboration as learning in the public transport sector. The main emphasis is on understanding the type of learning occurring in the two cases. We will focus on the functional characteristics and analyse the output and outcomes of the cases by assessing the learning processes. First, in section 2 we introduce theoretical concepts used to analyse the type of learning taking place in the cases. In section 3 we describe the methodology. The two cases are described in section 4. This description covers the actors involved, the processes, and the kind of activities undertaken. In section 5 we analyse the type of learning evolving in the two cases. In section 6 we re-contextualise the findings of the analysis

and discuss the lessons we can draw from the experiences, and suggest topics for future research on learning in collaborative processes in the public transport sector.

2. Theory

Theoretically this paper builds on literature that aims to consolidate overlapping strands of research revolving around concepts such as collaboration (Innes & Booher, 1999; Daniels & Walker, 2001; Blatner et al., 2001), network management, co-production and co-creation (e.g. Poocharoen & Ting, 2015; Voorberg et al., 2015) and collaborative learning (e.g. Watkins & Marsick, 1993; Sidani & Reese, 2018). While covering different research fields, rediscovering many different empirical cases, a common interest unifying studies of this kind is the challenges of producing public services answering to the needs of citizens in a context characterised by dispersed, fragmented and sometimes dwindling resources and complex governance structures (Voorberg et al., 2015). Moreover, the capacity to learn, and the impact learning has on changes in behaviour is a common denominator of studies in different fields (e.g. Innes & Booher, 1999; Daniels & Walker, 2001; Blatner et al., 2001; Poocharoen & Ting, 2015).

This means that there are high expectations for collaborative arrangements to deliver. It can also be argued that collaboration is an ideal where it is not only expected that the pooling of dispersed resources is a practical answer to a complex governance context, but there is also an intrinsic value in collaboration per se – achieving something together is valued higher. Conversely, this also means that failing to collaborate is viewed as inept at best and disgraceful at worst (Hrelja et al., 2016). For the individuals actually involved in collaborating, it can thus be very stressful. Nonetheless, there is no doubt that the concept of collaboration has gained a lot of traction in politics as well as research in recent years (Conteh, 2013).

Learning is crucial when a collaborative network is formed to deal with complex problems, there is a lack of knowledge on the impacts of interventions in dynamic systems, or where conflicts on the suitability of interventions are likely (Newig, Gunther, & Pahl-Wostl, 2010; Poocharoen & Ting, 2015). Similarly, Blatner et al. (2001) emphasise the importance of facilitating learning in multi-stakeholder processes where different participants may have conflicting views. Typically, various stakeholders also possess localised and contextual knowledge that are important to the collaborative process (Blatner et al., 2001).

This recognition of collaborative efforts and their importance is not followed by any intense theoretical discussion on the preconditions for such collaboration to take place within public transport, neither any extensive explorations of the nexus between learning and collaboration. One interesting point of departure for a possible rapprochement between the two strands of collaboration and learning is the work in the Connecticut Interracial Commission conducted by Kurt Lewin in Chicago in the 1940's (Burnes & Cooke, 2013). Lewin was approached in his capacity as a well-known researcher to organize workshop to work against racial and religious discrimination in housing, education and jobs. The target groups for these endeavours were white, black and Jewish community leader. The original idea was to find out feelings and attitudes among participants, and from their own understanding of the situation encourage reflections on their personal behaviour in their actions back home. By improving their interpersonal skills, the aim was to bring out change in their everyday community. It all became a project in cooperative action research, where the formal training consisted of lectures and group work, but where the feedback and more informal discussions with the leaders proved most fruitful. The essence was how the leaders needed to change their own behaviour before they were able to influence the actions of others in their community.

Some fundamental views on learning in this spirit unites the authors presented in this overview. The similarities are explained by the influence of the father of American pragmatism John Dewey and the ground breaking work on field theory by Kurt Lewin (Burnes & Cooke,

2013), the author introduced above. Dewey has been called the greatest American philosopher of education (Schön, 1992) and is mostly known for his revolt against certainty and the theory of inquiry. His intellectual work boils down to overcoming the dualism between the academy and everyday life or explained in other terms, between thought and action. Inquiry is characterised by the position of the inquirer, who is not standing outside the problematic situation, but located inside it and transacting with the problem: Dewey describes this as “Knowing in action” emphasising the importance of reflection as a result of this thinking. Scientific inquiry hereby becomes closely connected to common sense. Kurt Lewin is known for field theory, which brings learning into a wider context beyond the limited cognitive development of the individual. Learning is instead seen as a function of the total situation, both physical and social, and Lewin developed these theories through practical experiments. The concept Field Theory derives from the understanding of field in psychology, meaning the total psychological world experienced by a person at a given time, including history, actual and imaginary matters. Each person exists within a field of such forces, also called life-space. Learning becomes hereby a development of insights and a change in this entire life-space, as opposed to a mechanistic process where stimuli meets response within the frame of a biological unit or organism. Lewin also preferred to work in the action style the work with community leaders exemplify. Kolb (2014) and the theories of four learning styles is usually referred to the same line of pedagogic thinking. These theories on learning have influenced also the authors constituting the foundation for this article, where ideas on single and double loop learning (Argyris & Schön, 1974; Schein, 1985) are constitutive along with Marsick and Watson (2003) and their emphasis on merging learning of the individual with organisational learning.

Single loop learning occurs when a mismatch between desired goals and the results of an action is detected. Corrective action does however not require any profound changes of behaviour, but resembles an everyday learning process within the frame of existing conditions. Double loop learning, on the other hand, is based on a more critical questioning of the learning process itself, the type of knowledge that is transferred along with a questioning of the role of both the individual and the organisation in this context (Innes & Booher, 1999). Such double loop learning leads to paradigmatic changes, which requires new rules of conduct and routines and a reassessment of goals and interrelations between actors. Following Schein (1985) and others (e.g. Argyris & Schön, 1974), who have discussed the principal differences between the two models of learning, such collective double loop learning often requires a type of de-learning of prevailing experiences and knowledge. When considering collective learning, such as in organisations, Marsick and Watson (2003) also identify different levels where change can take place, such as individual, team and organisation. According to Marsick and Watson (2003) learning has to take place at both individual and team levels to influence the whole organisation. This does not mean that learning at the individual and team level will result in organisational learning by default. The organisational context must also be one that affirms change. The ultimate result of double loop learning hereby becomes a change of mental models, as well as a reconfiguration of the relationship among the members of a group or a network (Innes & Booher, 1999; Newig et al., 2010; Poocharoen & Ting, 2015).

Building on the literature discussed above, Table 1 describes the types of changes following from single- and double loop learning at different levels ranging from the individual to the organisational. Single- and double loop learning are here seen as expressions of a wider tradition of learning, drawing on Dewey and ideas on inquiry and learning as tampering with problems rather than observing them and Lewin Field theory where the context is emphasised and learning is seen as developing insights (Burnes & Cooke, 2013). Table 1 will function as a framework for analysing the type of learning, and at what level it occurs, in the analysis in section 4.

3. Methodology

The method in the paper is inspired by researchers working with reflexive ethnography and ethnomethodology (e.g. Coulon, 1995), and autoethnography (Maréchal, 2010; Van Maasen, 1988). This means that the analysis is carried out from the perspective of the researchers. In an autoethnographic approach observation and reflexive investigation is used to explore anecdotal and personal experiences and connect the ensuing written story to wider cultural, political, and social meanings and understandings (Maréchal, 2010). A key reason for choosing this approach is that the authors of the paper were centrally involved in the two cases, and thus contributed to the co-production of learning. As will be described in more detail in section 4, all three authors were involved in all stages of the processes, including e.g. responsibility for practical arrangements, such as arranging workshops, setting up public transport trials for civil servants, and producing written output. As such, the roles we played in the two cases are rather different from the traditional role of the researcher. Rather than being passive observers, attempting to analyse events and processes in retrospect, we were key agents in the processes that constitute the two cases as they happened. An autoethnographic approach which affirms the subjective position of the researcher thus seemed fitting (Ellis, 2004). We acknowledge that the approach involves risks of bias, but we argue that the benefits of this unique inside perspective outweigh the disadvantages.

We draw on the experiences of participating in the two cases and use the framework described in Table 1 to analyse the characteristics of the learning processes in the two cases. The empirical material for the study consists of a combination of sources, such as written material produced in workshops, and ten semi-structured interviews (only for Living lab) including civil servants and politicians involved in Living lab Uddevalla. The most important source for the analysis in this paper is however the insights gained by the three authors through participating as researchers in the two cases.

4. The cases – context, actors and processes

The following sections will introduce the two cases, describe the context for the research, introduce the actors involved and outline the main events taking place in the two collaborative processes.

4.1. Living lab Uddevalla

4.1.1. Context and actors

Uddevalla is a city of around 55 000 inhabitants located on the west coast of Sweden, in the Region of Västra Götaland, where Gothenburg is the by far largest city. The Living lab focusing on public transport was initiated by the Region “Västra Götaland”, one of the founders of the K2, National knowledge Center on Public Transport in Sweden. When work in K2 was to commence in 2014, the representative of the region suggested a focus on the conditions in Uddevalla.

The municipality was open for initiatives motivated by an ambition to increase public transport use. The original idea with the Living lab was thus vaguely to initiate an explorative project to research collaboration and its role in enhancing public transport in a smaller town. A further aim was to work with unconventional methods in a trial-and-error type of project with consecutive steps. Collaboration was the main concern to start with, assuming simply that no single actor can achieve much on their own.

The actors involved in the Living lab represented a wide range of interests in local and regional public transportation: the municipality, the region, “Västrafik” (the Regional Public Transport authority), the sub-regional authority “Fyrbodol”, bus operators, the Swedish Transport Administration, the organisation for inner city trade, the Chamber of Commerce, and property companies building houses.

The ambitions with developing public transport should be studied within the frame of making the whole region a comprehensive “labor

Table 1
Framework for analysing learning outcomes.

Level of change/type of learning	Single-loop	Double-loop
Individual	Learning occurs without changes in mental models or behaviour.	Learning occurs involving changes of mental models and behaviour.
Team	New knowledge is attained at team level without challenging prevailing mental models and professional practices.	New knowledge is attained which alters the prevailing mental models and professional practices.
Organisation	New knowledge is attained at individual or team level, but no changes take place at the organisational level.	Learning at the individual and team levels induces a reconfiguration of organisational objectives, intra-organisational relationships, or other profound changes.

market region” with Gothenburg as the main engine and a total of 1,7 million people in 33 municipalities (of the entire 47 in the whole region). The aim is to increase public transport ridership to 40% of all travels by 2025, an increase with 100% within Gothenburg and 3–4 times as many trips to Gothenburg.

4.1.2. Process - setting up the living lab

The Living lab started with joint meetings and study tours to get acquainted with the city, its surroundings and general conditions. Representatives from the municipality and the region took active part in these introductory activities. The group comprised of researchers and local and regional public civil servants eventually agreed on the points of departure. The complicated situation for transfers in Uddevalla was highlighted. There are three nodes in the city: one for railway traffic, another for local buses and a third for a large part of the regional bus traffic. While the connection point for regional buses is located in a large shopping area 8 km outside the city center, the other two are closer or around 800 m giving a 10 min' walk. These two nodes at the city center are not visible from each other and it is hard to find the way between them. The three nodes make public transport difficult to coordinate, travels more cumbersome and the city center less attractive.

The living lab had several internal project meetings with researchers and civil servants before the first workshop in February 2015. The workshop was preceded by 10 telephone interviews with the actors expected to attend the workshop, such as civil servants from the municipality, “Västtrafik” and the Swedish Transport Administration. The main purpose of the interviews was to record the interviewees first views of the situation in Uddevalla. It also gave us the opportunity to establish ourselves as researchers and to have some results to present at the first workshop. The workshop, where results from telephone interviews were presented involved 23 participants and was setup was to facilitate personal encounters, emphasising the importance of interaction and discussion between the participants.

The telephones interviews and the workshop gave a concordant and clear picture of the views of participants. The node-issue was confirmed as a hot topic. Another clear conclusion was the low level of experience and knowledge on public transport among the actors. Most of them had not used local buses for a long time, and the regional traffic experienced was mainly the train to Gothenburg. Participants at the workshop were mostly driving cars and their experiences from public transport were hearsays from neighbors or relatives and friends. The prime focus was on commuter possibilities to Gothenburg, a connection deemed crucial both to make Uddevalla attractive for housing and to attract workforce to the town.

4.1.3. Process - setting up the living lab. Process - public transport trials and interviews

The conclusions from the workshop was to initiate two new projects in Living lab in order to focus on collaboration. The first was a “Try PT”-initiative where participants, politicians and other persons in a position to influence planning and public transport were offered a free two weeks pass to test buses and trains. The condition was that they promised to take notes of their experiences, be open to be interviewed

about it and to participate in a final workshop to collect the impressions. 10 people took part, and the trail was followed up by a special workshop with the participants and individual telephone interviews with them. The other new project was an interview study with 10 other actors from the workshop in February, to dwell deeper into the question of collaboration, the role of the organisation they represented and the experiences of collaboration. The interviews had also another emphasis: the three nodes in the municipality and the emerging suggestion for moving the railway station to make it visible and easier to reach from the local bus station. This idea also resonates with plans for a more attractive center in Uddevalla, now dominated by a large parking plot. The question raised in the interviews was the role for each of the public and private, local, regional and national organisations in the emerging plan for a new node in the municipality made possible with the new location for the railway station.

The interview study contains more compounded results. The partial focus on nodes for the 10 interviews was a reflection of the initiatives taken by the municipality to argue for moving the railway station closer to the local bus terminal. This 500-m's move would facilitate connections between buses and railway transport and also form part of the planned redevelopment of the city. The local ambition is to initiate the measure, but making the regional and national authorities to pay the bill.

As these ambitions were declared, two other crucial issues were raised with bearing to the suggestion. One concerned the closure of direct bus connections between the center of Uddevalla and Gothenburg decided by the regional authority for public transport, the other was a proposal for a new road to cater for increasing car traffic through Uddevalla. Both these issues took place unexpectedly on the agenda in Uddevalla, surprising both politicians and civil servants and also illuminating the conditions for collaboration aiming at improving ridership. We will return to the implications for learning of the unexpected turn of events in chapter 4.

4.2. Process - setting up the living lab. Process - public transport trials and interviews. Guidelines regional BRT

4.2.1. Process - setting up the living lab. Process - public transport trials and interviews. Context and actors

The process for developing a set of guidelines for Regional BRT started in the spring of 2016, by initiative from Region Skåne (Scania county council). Since roughly 2010 Region Skåne has been involved in developing a “Regional superbuss concept”, which they view as a pilot project to meet the demand for sustainable public transport suited to, and adapted for, polycentric functional regions of small- and medium-sized cities. Essentially, the “Regional superbuss concept” is an attempt to adapt the BRT planning philosophy to the regional scale and the context of the region it serves. To provide a high quality public transport service for parts of the region with no railways, it includes a holistic approach to infrastructure, stations, ticketing systems, vehicles, branding and land-use planning.

Currently, nine regional express bus routes are considered for upgrading and the holistic approach emphasises the need for collaboration

between various levels of the political and administrative system and across sector boundaries. During the course of developing the concept a number of technical reports have been written, describing the idea from different perspectives (Trivector, 2010, p. 73; Trivector, 2012; Trivector, 2014a – g).

However, different stakeholders still had different views on what actions to include, and at what level of ambition. The views on the concept ranged from being mainly a matter of new vehicles and small infrastructure adjustments, to building segregated busways on the entire routes. Some thought that the number of bus stops must be left unchanged in order to retain public transport accessibility in rural areas, while others believed that only the busiest bus stops in towns and villages can be kept in order to reduce travel times and improve reliability. Another example is the different views on road alignment, where some saw sharp curves and speed bumps as a minor issue and others claim it crucial to reduce such elements (roundabouts for instance) in order to improve riding comfort. The different views on the concept were obvious, e.g. between different organisations such as the Swedish Transport Administration, Skånetrafiken (the regional public transport company), Region of Skåne (the regional public transport authority) and the municipalities serviced by the proposed routes. Additionally, there were also different views on the concept between different departments within the same organisation (e.g. the Swedish Transport Administration, Region of Skåne and the municipalities).

Common grounds are essential in this case, since each BRT line – operated by the regional authorities together with different transport operators – will pass through several municipalities and also include infrastructure measures on roads managed by the Swedish.

Transport Administration. With this in mind, Region Skåne initiated the process for developing a set of guidelines for Regional BRT as a basis for further planning along the nine routes.

The development of the concept had also gained interest from other parts of Sweden, and therefore the scope of the guidelines was widened to a national level. The Swedish knowledge centre for public transport, K2, was involved as process managers and a working group was formed with one representative from Region Skåne, two researchers from K2 and one consultant. The objective of the process was to gather a broad network of industry representatives in order to achieve a common understanding of the definition of Regional BRT in a Swedish context.

The collaboration involved around 35 representatives from various public and private organisations from different parts of Sweden in two one-day workshops. Civil servants (not politicians) represented the public organisations, as the output was not to be a politically strategic document but rather a description – based on knowledge from experts in the industry – of what is needed to create an advanced bus concept. The types of stakeholders involved were: academics, bus manufacturers, consultants, municipalities, regional public transport authorities, the Swedish Transport Administration, the Swedish Bus and Coach Federation, and transport operators.

4.3. Process - setting up the living lab. Process - public transport trials and interviews. Process-towards a definition of regional BRT

The results from the workshops made up the main source for the final report; the actual guidelines (Hansson et al., 2016). The working group mainly prepared the workshops and summarized the results.

The first workshop, carried out early summer 2016, focused on the purpose and general characteristics of Regional BRT. Apart from some inspirational presentations, the workshop consisted of two main sessions. The first workshop session was initially carried out individually, each participant listing a number of features for Regional BRT, and then as a plenary discussion, categorizing the features. In the second session the participants were divided into groups, given the task to discuss and formulate more precise criteria for the concept in different categories (urban planning, infrastructure, vehicles, and operations). Halfway through, the participants were asked to change groups in order to

stimulate group dynamics and to broaden the understanding of the complexity of each criteria. The first workshop was concluded by a poll on the importance of the criteria relative to each other, in order to make a priority list for the coming work.

After the first workshop, the results were summarized by the working group and sent out to all participants. During the summer and early autumn, a first draft of the report was prepared and sent out together with the invitation to the second workshop.

4.4. Process - setting up the living lab. Process - public transport trials and interviews. Process - anchoring the results

The second workshop, carried out mid-autumn 2016, aimed at more in-depth discussions on subjects that during the work on the draft had been identified as requiring more attention. Apart from some inspirational presentations, the second workshop consisted of three sessions: about denotations, about technical details in a few chosen criteria, and finally about the level of ambition in each criteria from workshop 1. The goal was to create a clear picture, among all participants, of the contents of the guidelines as well as an understanding of the considerations made throughout the process. The workshop sessions were carried out mainly in different group arrangements, but partially also individually as well as in plenary discussions. Once again, the different formats were chosen in order to stimulate group dynamics and to broaden the understanding of the complexity of each criteria.

Based on the results from the second workshop the guidelines were finalized. The report (Hansson et al., 2016) consists of a general description of the concept followed by sections describing important aspects of Regional BRT regarding urban planning, infrastructure, vehicles and operations, respectively. Each section is accompanied by a number of best practice examples. Finally, the report is concluded with a set of criteria and requirements for each criteria to be fulfilled to meet 'Regional BRT standard' (green level) or 'regional trunk line standard' (yellow level).

5. Analysis of learning in the two cases

Here we analyse the two cases concerning what type of learning occurred, and the output and outcomes of the processes so far. For each case the analysis begins with a description of key features of the collaboration. This is followed by an analysis of the level, and type of learning taking place using the framework in Table 1. Each case analysis is then concluded with a chapter exploring important factors influencing the learning outcomes.

5.1. Living lab – a burgeoning learning process and unexpected events

A key feature of the collaboration in the Living lab was the open nature of the process as it was supposed to be guided by the joint efforts and interests of researchers and other partners. Other features, which arguably also influenced the level of change and type of learning outcomes in the process, were the extensive group of actors from different organisations getting involved, the unconventional research methods and the unexpected events unfolding. The two unexpected events, a sudden decision to discontinue the regional bus route from central Uddevalla to Gothenburg, and the Swedish Transport Administration's plan to upgrade the capacity of roads leading in to the city centre, reveal important conditions for learning in informal collaboration.

5.1.1. Level, and type of learning

The ambition to bring in a broad range of private and public-sector representatives from local, regional and national level made the work more challenging and also placed public transport discussion in a new setting: actors with competing interests had to meet other arguments. The efficient running of bus traffic to make the business profitable for the operators met the ambitions of holding the city together and

sustainable as expressed by the municipality. In addition, the inner-city trade representatives were anxious that initiatives to prioritize public transport would hinder customers coming in cars to visit their shops and how they discussed with municipal planners carrying ambitions to increase ridership and property developers interested in central locations in the city. These types of interactions become visible when the group of participants is wide.

The outcome of the first workshop showed that participants had vague ideas of how buses and trains operated, which indicated a potential for learning. The evaluation made after the two-week “try public transport” trial showed that most of the participants found the experiences valuable for their professional or political work. Some of them explained how it was easier to understand and meet ordinary citizen's reactions to public transport when they had their own fresh impressions and experiences. Much of the discussion at the final workshop also touched problems with the experienced lack of reliability due to train delays and missing buses. It was obvious how the experiences had been fruitful but not always positive. Some also said their critical or constructive impressions had been forwarded to political colleagues at the regional level.

Another finding is the link between public transport and how the city is to be developed – the crucial role for public transport in land use planning emerged among some of the participants as a result of their travels. The linkages in Uddevalla between the municipal ambition to create one hub for all public transport and the wider issues on land use were not obvious at the outset. The problems with the current situation for local buses as well as regional buses and trains were namely immense in themselves. But the suggestions came in a new light when plans to improve the physical status in the city center got connected with the expressed interests among property developers to build new housing. It proved real estate companies appreciate the importance of transport services for potential tenants or purchasers, making transport interesting for property development. The link between transport and land use planning might be obvious in many respects, but the implications are hard to grasp due to all complexities. This finding goes hand in hand with how some of the participants in the “try public transport” trial explained they had gained an insight into links between land use planning and transport in a more practical, some would claim bodily, way when they were actually traveling on buses and trains.

A possible interpretation of these findings is that learning did indeed take place, certainly at individual level, and possibly also at team level. The gained experiences and insights of some of the participants could even be interpreted as double-loop learning at the individual level. There is however scant evidence of any significant changes of mental models, or professional practices at team, or organisational levels. This indicates that to the extent learning at team and organisational level did take place, it was single-loop.

5.2. Unexpected events

The decision by the regional public transport authority to discontinue the bus route from central Uddevalla to Gothenburg, and instead to route more of the bus traffic via a hub in an external shopping area was one unpredicted event that overturned the foundation of the learning processes begun within the Living lab. The discontinued bus line supplemented train traffic in rush hour, making possible a connection to Gothenburg each 30 min during peak hours. The discontinued bus route was the result of the public tendering process between the regional public transport authority and the private bus operators. The winning bid was based on the operator's idea that re-routing to the external shopping centre would provide a basis for more passengers and make traffic planning easier for the operator. But it created at the same time problems as passengers from central Uddevalla were required to shift bus and get a more uncomfortable ride. This major change was never communicated to the municipality, since all preparations of documents and the information contained in the tender are closed due

to business secrecy. The withdrawal of the bus traffic met hard resistance from the municipality, the politicians and local people in general. The press wrote extensively on the question, and the decision was partly stalled after a few weeks. Some, but not all, of the bus traffic was reinstated along a partly new stretch in practice shortening the travel time. The retracted bus line decided within the public tendering process beyond the reach of municipal planning hereby unexpectedly came in conflict with the ambitions of the actors involved in the Living lab to provide more housing in central Uddevalla and the idea to improve the linkages between the existing public transport nodes in the city centre.

The interview study following the public transport trial campaign also showed how other plans were emerging, which further complicated the ideas about merging public transport issues and housing development in central Uddevalla. Car traffic in the central parts of the city has increased in recent years, and the Swedish Transport Administration estimates that the plans for more housing will increase car traffic further. Based on these projections and the present light congestion the Swedish Transport Administration claims that it is necessary to upgrade the capacity of main roads in the central parts of the city. Upgrading the capacity of the main roads will require funding from national and regional level infrastructure plans, and clash with the intention of the municipality to get funding for moving the railway station. According to the municipal level civil servants involved in Living lab, the possibility to secure for both investments were highly unlikely.

5.3. Guidelines for regional BRT– collaboration between enthusiasts

In the Guidelines process the expected output was clear already from the start of the process: a report describing a set of guidelines for regional BRT in Sweden. While producing Guidelines for regional BRT at first can seem like a rather limited ambition in terms of output, the expected long-term outcomes, i.e. the possibility to implement a new regional bus based public transport concept is no small feat. Indeed, if long term ambitions are fulfilled the introduction of regional BRT concepts could have important repercussions for the transport policy agenda. If “train like” characteristics attracting users on regional routes, such as comfort, reliability, and punctuality can be achieved with buses, and if this results in increased public transport use – there could be large efficiency gains for society. Even if regional BRT would imply a more costly solution than traditional regional express bus services, the difference in investments required for regional rail compared to regional BRT are huge. However, embedded in the regional BRT concept is the need for paradigmatic changes which requires new rules of conduct and routines and a reassessment of goals and interrelations between actors – i.e. to actually implement the concept requires a need for double-looped learning at the organisational level in many different organisations. The experience of the Guidelines process as collaboration highlights important issues concerning who to engage, how to disseminate knowledge to relevant actors, and how to actually facilitate change.

5.3.1. Level, and type of learning

As the invitation for the first workshop was sent out it became apparent that the subject was of interest to many practitioners from different organisations. Both workshops were characterised by enthusiasm, and the participants' level of competence concerning the specific issues deliberated at the workshop was high. While discussions at times were lively, it was not very difficult to achieve consensus among the workshop participants on the various technical and operational criteria for the regional BRT concept. That consensus was quite easy to achieve amongst the workshop participants does however also point to a problem with voluntary collaboration of this kind.

Parallel to the second workshop, the draft was sent to a group within the Swedish Transport Administration working with road design

regulations and guidelines. No representative from this group had been able to attend the workshops. Their comments on the draft, mainly regarding road alignment and station design, clearly showed a lower level of ambition than what had been agreed among the workshop participants. Although there was consensus among the workshop participants (including representatives from the Swedish Transport Administration), there still was not a common view on the concept throughout the participating organisations.

This issue highlights that the need for double looped learning is probably greater in other positions in the political and administrative system. Indeed, the participants in the Guidelines process are likely to have had a pro-public transport view from the outset. As such it would be hard to argue that the Guidelines process amounted to more than individual, single loop learning among the representatives from the different organisations. Possibly, the learning has also been spread to colleagues working near the workshop participants. In that case, learning has occurred at team level, and possibly at least for smaller organisations, also at organisational level. In larger organisations, such as the Swedish Transport Administration, and the regional public transport companies, this is most likely not the case.

5.3.2. Learning that facilitates change?

Even if individuals involved in the process may have developed a new understanding of requirements necessary to implement regional BRT concepts, the outcome of the process has, at least so far, only had a limited impact on practice. None the less, in recently conducted and currently ongoing planning processes for implementing regional BRT in Skåne (called Åtgärdsvalsstudier in Swedish planning terminology) the guidelines could play an important role and may thus have an actual impact on planning practice. To determine if this is the case does however require further studies. What can be said with certainty is that the results of the process gained a lot of attention, and that the report (the Guidelines document) is widely spread. However, as the example with critique from the Swedish Transport Administration shows (in 4.2.1), it is hard to argue that this really has led to a common understanding of what regional BRT is, and more importantly, what needs to be done to implement the concept.

As stated previously, actually implementing the regional superbus concept as envisioned in the Guidelines for regional BRT is conditioned on achieving multi-organisational double-loop learning. A key paradigmatic change required concerns the need to implement bus priority measures in critical points in the road system, typically located at junctions near, or in major cities. To actually prioritize buses at these critical points will undoubtedly lead to conflicts with motorists over the use of road space. Alternatively the solution would require very expensive infrastructure solutions, such as grade separated bus lanes (e.g. flyovers) which would greatly increase costs for implementation. Both potential solutions point to that what is conceptualized as a matter of defining technical and operational standards in the Guidelines process are indeed highly politically sensitive issues. Using the whip on motorists (i.e. inducing time punishments for car users by prioritizing buses), or alternatively, to decide on large infrastructure investments, are clearly decisions located in political arenas.

6. Discussion & conclusions

The main purpose of the paper was to prepare the ground for future studies on learning in collaborative processes in the public transport sector. This was done by analysing how the two cases, Living lab Uddevalla and Guidelines for Regional BRT functioned as informal collaboration processes, and to identify key lessons from the two cases.

A comparison of the cases highlights the different characteristics concerning the context for learning. Living lab Uddevalla was an open ended process, where the expected output and outcomes was unknown at the start. Indeed, the approach in itself was based on the very idea that an unconventional approach to collaborate on public transport

issues would bring about something unexpected. Implicit in this approach was also the ambition that the Urban Living lab would contribute to changing a situation with dwindling local public transport use, into a situation where public transport use increases.

In comparison the collaboration on Guidelines for regional BRT was a more closed, and ordered process. Here the objective of the process was to gather a broad network of industry representatives in order to achieve a common understanding of the definition of regional BRT. In terms of expected output it was clear from the start that the actual guidelines document was to be the result of the process. In turn the expectation was that the guidelines will contribute to implement regional BRT concepts in Sweden.

The first question was: *What type of learning did occur in the two informal collaborative processes?*

Admittedly, the methodological approach in this paper is not suited for making exact claims regarding what kind of learning actually took place in the two cases. To do this a different research design including surveys, interviews or focus groups would be necessary. The approach in this paper does however bring to the fore important insights, and a way of thinking, about learning in collaboration that is useful for future studies. With this caveat in mind, the following points can be made.

In both cases the participants were required to learn about the process itself, get insights about factual conditions and learn about the other stakeholders involved in the work. The technical and administrative complexity in public transport make these and similar endeavours a demanding task. It takes a lot to become a competent discussion partner and represent your organisation in groupings as the two cases presented here. But with the exception of some indications of possible double-looped learning at individual and team level from Living lab Uddevalla it seems like individual, single loop learning is the most striking type of learning in both cases.

In terms of learning, both cases paint a picture of complexity where many actors are involved, each with its own interests and aims. Bus operators' has to run the traffic and make it both functioning and profitable. The regional public transport authorities balances the supply of public transport through a legally complex purchasing process, where regional political intentions on sustainability and increased ridership provides a backdrop. The municipalities' work with plans for more housing, something attractive also to property developers, and they also have the responsibility for the local road networks. The Swedish Transport Administration has a primary focus on the development of the national transport infrastructure. The view of learning in this paper, where the level of change ranges from the individual, via the team, to the organisation and the type of learning is either single- or double-looped, highlights the complexity of achieving learning outcomes above the individual level. On the other hand, this does not make individual single-loop learning irrelevant; it must be seen as an initial building stone for reaching other learning levels. Separate insights for individuals is the starting point for profound changes at the organisational level. However, to go from this level of individual single loop learning and advance to more collective forms of learning, as envisaged in the framework on learning in this paper, probably takes much longer time than the period these two processes lasted.

The second question was: *What lessons concerning informal collaboration in the public transport sector can be drawn from the two cases?*

A main point to be made from the two cases is that informal collaboration has advantages, but there are also obvious shortcomings. To make participation open for those truly interested can create more energy in the process and the commitment can grow stronger. The problem is to identify when this voluntary enthusiasm collides with the formal requirements of planning and decision making. This effect was visible in both cases. In Uddevalla some of the most crucial participants were hard to engage in the work: the unexpected events unfolding due to decisions made by the Swedish Transport Administration and Västtrafik (the regional public transport company) shows that these

organisations had a weak connection to the process. Interestingly enough, these are also the actors with most knowledge and financial strength and having little to gain from participating.

The living lab as a method for collaboration also bring to the fore fundamental questions on conditions for various partners to participate under marketization. Such experiences have also implications for our understanding of learning in public transport. The sudden, and unexpected suggestion to discontinue services on some bus routes, and effectively move the node for regional bus services from the city center, did not fit well with the intentions for developing the central parts of the Uddevalla.

The Guidelines for regional BRT-process showed that the approach with voluntary participation succeeded in bringing together a broad range of stakeholders, which reflected a genuine interest in the development of regional BRT. One possible explanation for the interest was the opportunity to influence the development of the guidelines document – it gave an air of importance to the process. None the less, the critique from the Swedish Transport Administration on the draft version of the guidelines highlights one problem with the voluntary approach in that it will most likely entail a problem with self-selection. The individuals that allocated time to participate probably had a strong professional and/or personal interest in establishing the Guidelines for Regional BRT. It could thus be argued that the process was akin to preaching to the already converted.

A related issue thus concern who is the right person to include. In large organisations as for instance public agencies it is very difficult to identify the “right” persons to involve. In fact it may even be virtually impossible to identify the key person or persons, due to for instance staff turn-over or unclear organisational mandates and boundaries. None the less – the inclusion of the “right” persons arguably remain essential for any informal collaborative process to actually entail double looped collective learning outcomes.

A special challenge for the public transport sector concern the inclusion of the users and how to ensure that the persons involved (users or professionals) represent the “public interest” and not themselves or some special interest.

One conclusion could thus be that if collaboration is mandatory, some actors will feel compelled to take part but do so with little enthusiasm. If the collaborative exercise is voluntary, some actors will minimize their work, or partly abstain, or the self-selection problem discussed above could stifle the learning potential. To choose between voluntary and compulsory approach is one of the important but difficult choices to make balancing the pros and cons.

A final conclusion is about the responsibility we have as researchers. Learning was not an explicit point of departure for the two projects described here. The idea was rather to study collaboration within public transport in voluntary and informal settings. When analysing the cases in a comparative way, it became clear to us that learning aspects were far more salient than we initially assumed. Our role as participatory researchers would probably have been different if we had seen these potentials at an early stage. Our interventions could have been adapted to facilitate the type of reflections needed to develop a double loop learning. That becomes hence yet an essential lesson from the two case studies on learning in public transport.

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