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Evaluation of knowledge co-production for sustainable urban development

Part I: Experiences from project leaders and participants at
Gothenburg Local Interaction Platform 2012-2015



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Mistra Urban Futures is an international centre for sustainable urban development. We believe that the co-production of knowledge is a winning concept for achieving sustainable urban futures and creating just, green and accessible cities. The centre is hosted by Chalmers University of Technology and has five regional platforms. These are in Cape Town, Kisumu, Gothenburg, Skåne and Sheffield-Manchester.

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1. Introduction

The aim of this report is to evaluate how co-production processes are able to create usable re-sults through capturing learning and experiences from the first phase, 2012-2015, of Mistra Urban Futures at the GOLIP platform in Gothenburg. It builds upon previous evaluations of GOLIP from the start-up years, 2010-2011 (Hellström 2015, Westberg and Polk 2016) Phase 1 evaluations of the Center as a whole (Mistra evaluation 2015, Societal Outcome Report/The Academic Footprint Report)¹ as well as studies of how to evaluate transdisciplinary processes (Klein 2008, Walter et al 2007, Wiek et al 2014). To evaluate how co-production processes create usable results, this report will present and discuss how project leaders and participants at GOLIP understood and enacted co-production (the process), how they identified and implemented project-related outputs, outcomes and impact (usability), important conditions for the projects, and how process and usability are interrelated in the projects.

One of the most important cornerstones of the work that is carried out at Mistra Urban Futures is the use of methods and processes that work across both a variety of disciplines as well as in conjunction with policy-making and administrative areas of activity. We refer to this approach as *transdisciplinary research and knowledge co-production*. The underlying motivation behind both transdisciplinary and co-production approaches is that the complexity of current urban development problems cannot be grasped without a broad basis of knowledge and expertise or solved without engagement from different involved and responsible stakeholders. *Transdisciplinary* thus refers to a research approach where different urban actors, together with researchers from several disciplines, share knowledge and experiences to address challenges and create solutions for various societal problems. *Co-production*, when used in conjunction with trans-disciplinary research, refers to a specific way in which this engagement is undertaken. Co-production emphasizes the mutual and joint nature of TD research. It refers specifically to the problem definition, design, execution and implementation being achieved through in-depth collaboration, participation and joint ownership by different actor groups.

Because they focus on different sustainability related issues in specific contexts, co-production projects have no predefined sets of goals. While traditional evaluations often work against a clear set of objectives or goals, Center projects produce a variety of different types of results and outcomes. Results from co-production projects focusing on, for example, climate change adaptation, social segregation, and sustainable business models take many forms, engage a di-verse set of actors and have a wide variety of effects. The forms of results thus far from GOLIP include a variety of policy reports and input to policy processes, scientific articles, networks, seminars, workshops, internet resources, apps and computer programs and models, among others. The engagement is often across sector and decision-making levels, so the effects of such project results can be direct, indirect, tangible and intangible, and occur in the short, medium and long-term. Capturing the extent to which such project results are able to contribute to complex sustainability issues therefore entails understanding the project and how it is situated in a specific societal setting. This includes the project design, its participants and their involvement, how the projects are connected to the political and administrative spheres, how they were carried out to address a particular problem and context, and what impact the project activities and results had. To capture these aspects, this evaluation is based on an interactive approach where outcomes and impact of the projects are evaluated through an open assessment from the individuals who have lead and/or participated in the projects.

This evaluation focuses on four main topics. First, the project processes are assessed by their understanding and enactment of transdisciplinary co-production. This includes the involvement of participants, the integration of different knowledge sources, and their links to context. The quality of the project process is judged by the degree of involvement in and the sharing of re-sponsibility for project formulation, execution and implementation, as well as the learning that occurred in the processes. Second, the project participants assess the outcomes from their spe-cific practice-based setting, where practitioners both identify and attribute value to specific pro-ject results, outputs and impact.

¹ The reports can be downloaded from Mistra Urban Futures website <http://www.mistraurbanfutures.org/en/about-us/strategic-plan>

Third, information was gathered regarding the internal (Center related) and external conditions and factors that support or hinder the successful enactment of the projects. Fourth, a number of success factors were identified for both successful co-production processes and production of usable results. The relationship between the quality of the process and usability of the results is also discussed. The report ends with a summary of the results of the evaluation in the form of a list of recommendations for both supporting the process of co-production and for creating more usable results and outcomes for both the Center as a whole and for individual co-production projects.

2. Method

Interviews were conducted with project participants in six phase 1 Center projects at GOLIP at the end of 2015. The included projects were:

1. Business and innovation driven sustainable urban development (BISUD)
2. Cities as value networks (CAVN)
3. Well being in Sustainable Cities (WISE)
4. Knowledge about and Approaches to Fair and Socially Sustainable Cities (Kairos)
5. Governance and Policy for Sustainability (GAPS)
6. Urban Station Communities

In total we interviewed 23 project participants, 17 of which were project leaders. 12 individual interviews were carried out, 7 with researchers and 5 with practitioners. Three pair interviews were conducted with 6 practitioners. There was also one focus group with 5 participants, a mix of researchers and practitioners. The interviews were between 45 minutes and 2 hours. They were recorded and transcribed. Interviews were made primarily with project leaders, but also included subprojects leaders.

It is important to emphasize that interviews give access to how the respondents value the actions and results that occurred in the projects. By doing interviews with several actors in the projects, and with projects that have had very different conditions and experiences, we gain the ability to better assess the more general validity of the experiences and valuations made by the participants in the different projects.

3. Results

3.1 The co-production process: Understanding and enacting co-production

While co-production is a cornerstone of the work that is being carried out at the Center, it is also a term that can be interpreted and applied in a wide variety of ways. The experiences and needs of the project participants and their interest in co-production, as well as the issue under study, combine in an interactive, and to a great extent, dynamic and autonomous process. In practice, co-production results in a number of different degrees of participation, and types of collaboration and project organization. To evaluate how co-production was applied in practice at the Center platform in Gothenburg, we start by presenting how the project participants at GOLIP both understood and enacted co-production in their projects. They were asked first how they understood co-production. This was followed by questions regarding how co-production was enacted, for example, how different project members participated in the projects, what roles the participants had and what types of knowledge were used and integrated in the projects.

Understanding co-production

Most participants who were involved early in the projects refer to the initial seminars and discussions with Merritt Polk and Lotten Westberg when responding to how they understand and practice co-production. Some of the first projects in Phase 1 started with workshops and or seminars on what transdisciplinary co-production is and how it can be carried out. Such discussions seem rarely to have continued within the project groups, or at the Center headquarters during Phase 1. Participants who have entered the projects in later stages have generally not been involved in any such discussions. Continuous replacement of project members in some of the projects has meant that the shared conception of co-production has not been transferred to new project members. Participants who express a particular interest in knowledge co-production say that they, as a result of the project processes, have reflected individually on the knowledge co-production process.

Overall, the respondents generally express a good understanding of knowledge co-production, although they do not always articulate exactly what this understanding is based upon. For example, one participant said “[w]e carry an ideal image that it is really about

weaving science based knowledge together with experience based knowledge into something new. That they re-ally merge, that there is reciprocity in learning between the scientific and the experience based knowledge.... And that it leads to wider perspectives, deeper understanding of underlying cau-salities, that have effects on practice”.

The project leaders also define and discuss co-production in terms of different purposes. The most commonly mentioned purpose is shared ownership of knowledge production in order to learn something new and to create value in both academic and practitioner worlds. Respondents generally see co-production as an expression of a desire to make knowledge useful. From *practitioners* we hear the motivation of getting planning right from the start, and providing useful tools for planning. Addressing urban sustainability challenges requires interactions between different actors in order to better define problems. Practitioners also expressed the view that co-production allows researchers to identify questions that are of relevance to decision makers. *Researchers* expressed the importance of co-production for forcing them to think ‘outside of the box, to see new things, through new perspectives, asking questions that they would not have thought of otherwise. Certain projects further emphasized the democratic potential of co-production. However, according to project members, to fulfill this democratic purpose, co-production must also involve an analysis of power and address the crucial issue of who gets to define the problem.

In the answers to how co-production is understood, the respondents’ explanations range from how co-production is understood as transdisciplinary research, to expressing a desire to live democratically through knowledge production. However, while the participants in one project expressed the desire to increasingly let democracy pervade the project, such an understanding of co-production was not implemented. The project leaders who embrace a more limited version of co-production argue that in their field it is not realistic to think that the method will be used in a more enhanced way in the future. Others consider it important to strive for a deepening and de-mocratization of the use of the method.

To a few of the researchers, the co-production method does not differ much from how they usually work. However, these same researchers have a rather generic conception of co-production as working closely to empirical material. A few of the other researchers say that co-production is different, but that it is not un-

familiar to them. They can easily relate to it because they have a somewhat unorthodox relationship to academia and are concerned with making an impact. Most of the researchers emphasized that this way of working is rather unique in aca-demia.

Most practitioner participants emphasize how different this way of working is from their usual assignments and how much they appreciate it. Co-production demands a broader perspective and participants have to acquaint themselves with new issues and perspectives and meet people that they would otherwise not meet. These new meetings have been between researchers and practitioners, but also between academic disciplines and between different administrations that rarely otherwise speak. However, they also mention that there are a number of other initiatives that demand similar ways of working and that the Center is part of a broader trend.

Practitioners who have had more time in the projects are particularly enthusiastic over the possibility of learning and broadening their perspectives. Time is a crucial factor, as the projects have relieved some of the participants, primarily project leaders, from their ordinary work assignments. Co-production also gives a certain freedom in highly governed organizations to engage more freely with issues of interest to their work. GOLIP projects have provided the legitimacy to do so.

These different understandings of co-production are shaped by a number of different factors many of which are based upon the degree and timing of the collaboration that occurred in the projects. For example, participants in a majority of the projects see the importance of formulating the research question together as a central part of co-production. While some respondents are more hesitant about the possibilities of achieving an ideal type of co-production, others strive for an ideal version of co-production, although with varying degrees of success. Other perhaps more important factors seem to be the research group, the type of practitioners that are involved, and the constraints they face regarding the extent of their involvement in the project. For example, researchers in one project emphasize that they always work close to empirical data and that co-production doesn’t necessarily have to be about producing the results of individual research projects together; it is more about having a contextual discussion and grounding re-search in various discourses.

Enacting co-production

Since participation is inseparable from how co-production is understood, identifying how participants were specifically involved in the projects is crucial to understanding how co-production is enacted in practice. In this section we therefore look more closely at who participated in the initiation, planning and execution of the projects and how the different roles were allocated.

Mistra Urban Futures has required that projects be co-lead by one researcher and one practitioner. However, while some of the Phase 1 projects have followed this requirement, others have not. There are a variety of different combinations of project leadership in Phase 1. In several projects, for example, BISUD, Kairos and WISE, co-leadership has been in place since the beginning of the project. Overall co-leadership has contributed to creating dynamic, open and tolerant processes. In WISE, researchers had a head start on the issues but the shared leadership managed to create a balance between interests and inputs. In Kairos the experience of shared leadership is very positive. In BISUD there were initial problems with finding the right combination of project leaders, particularly as different institutional interests conflicted. It was solved as the project leader from academia invited a practitioner with whom cooperation has worked smoothly. In the other projects it took time to find a combination of researcher and practitioner that worked well together. Different researchers or practitioners have also led different projects, or parts of projects, by themselves or with other researchers and practitioners, respectively.

Researchers initially managed CAVN. The lead researcher in CAVN was encouraged to apply when the Center was releasing research funds. Three researchers in dialogue with a range of practitioners conceived the project. Several practitioners have been involved in minor roles; however, practitioner participation has still been strong, particularly as a result of the significant participation by the City Executive Office. On the other end of the spectrum, practitioners from the consortium partners initiated Kairos because a project on social sustainability was lacking at the Center platform in Gothenburg. One researcher was invited to lead the project; he in turn contacted a practitioner project leader. In the case of GAPS, the project was conceived in Manchester, and the GOLIP project group consisted of two researchers and two practitioners. The work was divided and informally led by the researchers during large parts of the project. Urban Station Communities was initially practitioner led but has since 2015 inclu-

ded a researcher in process leadership. Urban Station Communities has, just as Wise, set up sub-project leadership due to the availability of committed participants and funds.

Some projects have struggled to find researcher participants. This is due to both funding limitations and to difficulties in actually finding researchers who are interested in a particular issue. Having just one academic participant in a project can be a limitation because there is value in having a plurality of academic perspectives and traditions. From the researcher perspective, this is important because of the need to discuss different theoretical perspectives on the problem at hand with other academics.

The projects have also balanced a perceived lack of certain actors or researchers and practitioners, respectively, in various ways. When the projects have been researcher driven, one solution has been to set up governing boards or reference groups. When the projects have been practitioner dominated they have, for example, tried to invite practitioners with research experience when researchers have been hard to find. Several participants emphasize the importance of continuously working to balance the relations between researchers and practitioners to find the right constellations of individuals who are equally interested in the research problem. Certain projects have dealt with the risk of reducing researchers to consultants, others with the risk of excluding practitioners through language or method. The respondents emphasize that if the relationship between practitioners and researchers becomes unequal, the project becomes less interesting for the underrepresented part. Several of the respondents also noted that the co-production process cannot be expected to be smooth; the challenging meeting between different actors is what makes the process valuable.

An important challenge that has been identified in several projects is the constant change of people, particularly regarding practitioners. This affects the projects both in terms of their process and results. This may be a difficult problem to solve since much of the success of the projects, in terms of both process and results, seems to be tied to specific persons and their cooperation and participation. An important limitation to participant commitment in some of the projects has been the allocation of time. In some cases, practitioners have had as little as 5-10% of their work time allocated to the project, which more or less covers going to meetings. This allocation of time has sometimes had the effect of reducing practitioners to discussion partners.

Involvement of project members, both practitioners and researchers, in setting the aims and goals of the projects occurred in different ways. In large projects, such as BISUD, WISE and Urban Station Communities, the goals of the project have mainly been set together by the participants. In some cases, one or a few researchers have driven this process, but it has occurred in dialogue with practitioners. There are also subprojects where other actors have predefined the problems or when goals have been adapted for attracting external funding. In one case, the practitioners in the subproject defined their specific goals. Researchers were brought in, but communication failed. According to respondents from the practitioner side, the two groups spoke completely different languages and the researchers were too narrowly focused. This happened in different meetings and workshops and eventually the research group had to be replaced. Natural scientists were replaced with economists and cultural geographers. This change made communication possible since the planners and researchers had similar academic backgrounds.

A few projects also placed emphasis on both collecting and analyzing data, and in writing up the research results together. In CAVN, this included the work with data at the City Executive Office. In Kairos, it was conducting the interviews, and analyzing the material together. Participants in projects with a focus on co-producing results express experiencing much stronger learning processes and changes of perspectives than participants in the other projects. One participant, who has taken part in two subprojects, one where everything was done together and one where participants contributed with their respective parts, argues that the first method is much more difficult but also much better for the co-production process, for learning as well as for the outputs and results. While this may lead us to conclude that higher degrees of collaboration lead to better learning, it may also be the case that participants in the projects with a higher degree of collaboration have been more committed to the method and therefore been more open to learning. Individual commitment to the projects is thus central to the learning that occurs.

Projects have also been set up differently in terms of where the boundaries of the project groups are set. Some projects have been focusing inwards on internal processes, mainly involving a smaller project group, while others have been more extroverted and involved a broad range of actors in open activities. This is related directly to results in the sense that participants in

the first type of projects have developed and learned much, but work on outcome and impact has been left to the end of the project. Projects with an extroverted focus already see significant impact on policy (although thus far more in discourse than in practice) but the participants do not emphasize the same degree of in-group learning and shared reflections about knowledge co-production. Participants in projects with an introverted focus see the specific organization of the project less as a conscious choice and more as a result of circumstances, and consider that it would have been desirable with more transparent processes that involve a broader range of actors.

Other projects enact co-production by focusing on engaging with practitioners who are influential in the problem setting. This strategy is seen as appropriate because the practitioners with whom the researchers work are either in high level positions or in the business sector, and have little time to invest in exemplary co-production processes. However these are also the practitioners who are considered most relevant to involve in the projects in order to have an impact. Co-production is therefore understood and designed into different parts of certain projects. Instead of doing different activities together, the co-production activities are limited to certain primarily consultative activities. Thought has also been given to other ways of getting practitioners to allocate time and influence impact, such as involving consultants who are closely involved in and have an impact on practice and can spend more time on knowledge production that they would engage in anyway. As compensation for lack of co-production in the research work, some projects have chosen, for example, to engage governing boards and reference groups to discuss and define problems and questions.

One respondent emphasizes the risks involved with only bringing in practitioners as a reference group. This risk lies in the clash between the slow process of research and the sometimes arbitrary positions taken in sometimes infrequent reference group meetings. For example, it is considered unsustainable that administrators who come to reference group meetings unprepared can challenge research that has taken a long time to produce. Some project leaders testify to lack of interest, commitment and time among reference group members. In cases where reference groups must be used their set up is therefore of core importance. According to several participants, the success of co-production relies on a creation of trust and shared commitment to the work that is being done.

Knowledge integration in co-production processes

Linked closely to participation, the integration of knowledge from diverse sources, and how it is carried out in practice, is a crucial component of co-production projects. Overall, the meeting and integration of different types of knowledge and expertise seem to have worked well, although with much effort, in the projects. Much time has been spent on initial talking exercises to agree on the problem at stake and different ways of approaching it. In particular this process seems to work better when there has been a very strong commitment to changing perspectives within both the involved administrations and research communities, such as in WISE. In the successful processes, the practitioners also emphasize the researchers' attitudes as important, i.e. that they are committed to solving real world problems rather than theoretical refinement or critical distance, such as in CAVN. However, there are a few exceptions to these positive examples. There have been projects when communication has been difficult and others where it has been impossible. In some projects there has been an experience of researchers being very abstract which has annoyed practitioners. Practitioners have also been experienced some researchers as arrogant and not appreciative of the practitioner knowledge or their capacity for abstract thinking. Some projects have followed traditional divisions of labor between academics and practitioners, where the different actors make use of each other's knowledge and learning. This has either meant that practitioners have done more of mapping and managing relations with the administrations, while the researchers have theorized and systematized the work, and/or that practitioners have acted as discussion partners.

The question of integration of knowledge in co-production processes tends to assume that the line of distinction goes between the experience-based knowledge of practitioners and the theoretical/scientific based knowledge of academics. However, several of the practitioners in the projects have PhDs and others quickly catch up with academic debates. As a result, many of the practitioners do not express a concern with the status of their knowledge. While the lines of distinction need to be problematized, it must still be recognized that if co-production is to be of value to less academically grounded practitioners and street level/frontline

bureaucrats², the question of knowledge hierarchies must be addressed. Other respondents experience that practical knowledge has been given less space and recognition, both from practitioners and academics. In these cases, there is a risk that the researcher becomes a knowledge resource, a supervisor in terms of knowledge production. One project participant from the practitioner side emphasizes the need to both be constantly attentive to and work against imbalances in how project participants value experience-based knowledge in relation to scientific knowledge.

Knowledge integration also occurs in a variety of ways. For example, the need to read up on new knowledge areas is considered important by some participants, and has added significantly to their shifting perspectives on familiar issues. Several respondents highlight the importance of different perspectives for promoting creativity and the possibility of seeing things in new ways from new perspectives. Some projects consider different preliminary studies, such as research and practice overviews that identify knowledge gaps and provide learning material for the projects, as crucial.

Certain practices tend to stand in the way of a shared ownership of knowledge production processes. For example, the format of semi-academic seminars has been questioned because of how it has exclusionary effects on experience-based knowledge. One practitioner says that seminars have tended to have too much of an academic character and points at the power relations involved when practitioners glorify academic knowledge production. It is not about specific persons, the respondent says, but about discursive power and diffuse power structures that are difficult to address. This constitutes an obstacle for the experience-based knowledge to shape project results. Some respondents find it problematic that if the experience-based knowledge cannot be received and formalized in text, it will not be made available and used. However, one respondent comments, "*[s]till, these are short processes. If you return in ten years it may look differently*". The respondent is thus pointing at the question of what change to expect within what time frame. One way of giving experience based knowledge more impact is by starting earlier to test ideas and effect change in the projects, so that learning can be produced by doing, and practice

2. Front-line and street level bureaucrats refer to practitioners who interact directly with the general public

based learning can feed back into the knowledge producing process. There are also examples where legal issues stand in the way of co-production, such as obstacles to giving re-searchers access to statistical data produced by SCB, which makes it impossible to work with the same data.

One of the most important factors for integration of knowledge is meeting face to face. Several participants discuss and problematize the assumptions about a verbal culture of administration, and a reading and writing culture of academia. Practitioners frequently bring up the fact that they have little time for reading and writing, particularly considering the conditions under which they work, with high demands on reporting. This means that they have few possibilities to engage in the necessary work to prepare before meetings, and to process them afterwards. The fact that they do not have time to engage in writing also has, according to some participants, the effect that their knowledge to a lesser extent shapes the end product.

When it comes to academics, it is their ability to communicate outside of their academic discipline, not the theoretical or scientific advancement of their work that is decisive for knowledge integration. One practitioner explains: “*There are researchers who are not that interested in science, they are interested in making a difference*”. Different discussions emerge among re-searchers with regard to the need for and use of critical perspectives. Some researchers question overly critical research, which borders on sensation journalism, while others argue that too close cooperation reduces critical perspectives. These different views are to some extent reflected in the organization of the projects. For example, in one project researchers have kept a certain distance in the analysis and writing phase. Partly, this was the result of the rather traditional research design of the project. But the researchers also avoided making use of the reference group because it stood in such contrast to their traditional research approach. Moreover, the organization whose policies were the object of study was not a part of the project. One respondent argues that this was important because otherwise they would not have been able to make the critical analysis they made. On the other hand, he argues, it was negative since the results were not grounded and came as a shock to the receiving organization.

Responsibility for output in co-production projects

To a large extent, researchers have taken responsibility for output (writing reports). Exceptions are *Urban*

Station Communities and *Kairos* where some practitioners have had more time to write. Practitioners and researchers in several projects have agreed on a work order where re-searchers write and practitioners work as discussion partners through the analysis phase. This is considered rather natural by several respondents. One of the main reasons is time. It takes time to sit and reflect, time that practitioners do not have.

In some projects, researchers have kept the analysis and writing to themselves because the topic and indicative results were politically loaded, and could be sensitive in the participating organizations.

3.2 The usability of co-production process and project results

The respondents have different interpretations when asked about the direct and indirect results of the projects. They bring up three types of results in their answers: output in terms of written (or other) knowledge products, actual impact from project results, and impact from the knowledge production process such as learning and networking. Output can be clearly distinguished as a direct result, but the other two cannot easily be categorized as either direct or indirect. Impact can be directly attributable to projects but most of the time such causality is difficult to establish. Impact from the knowledge production process can be considered direct if it is a targeted outcome, otherwise it may be considered indirect, when the knowledge produced is considered the direct result. Here we will follow this categorization and present the following results as project output, impact from project results, and impact from the co-production process.

Project output

All of the projects included in our evaluation have continuously produced results in the form of written reports and research and practice overviews. These have also often included advice or recommendations, or as *Kairos* calls it ‘changes in perspective’ (*synväändor*). *WISE* and *Urban Station Communities*, for example, have produced modeling tools that are used in the different administrations, not least of all by the Swedish Transport Administration. Reports have also been written directly for other authorities and agencies, such as for the Swedish Environmental Protection Agency. Several projects have written opinion pieces in newspapers (*GAPS*, *CAVN*, *WISE*). In *BISUD*, for example, some subprojects have been conducted very closely to the needs of practitioners, to solve practical issues, and

output has been produced in the form of strategies for energy efficiency, with spin offs at the Swedish Energy Agency and their cooperation platform. A specific value of co-production is considered to be the possibility of spreading results through formal and informal practitioner channels. Some projects have had workshops and seminars as a central part of their continuous activities. These have been specifically important for outreach and impact. Certain projects have also led to meetings with decision-makers within and outside of the region, which can be counted as an output. The most important lesson learned from these activities is that there is a need to be proactive, in the early planning regarding what types of output and outreach activities are valued and seen as contributing to impact. At the same time, there is also a need to be reactive and open to new possibilities that emerge during the project phase.

One of the most important aspects the project participants raised that they felt affected the project output is time, both in terms of timing, and lack of time. The Mistra Phase 1 evaluation was made in the middle of some of the projects, in a project phase when few projects had produced outputs in terms of academic articles. Articles are often produced at the end of projects, and published after projects have ended. Evaluation of output in terms of academic articles must take this into account. Several respondents explain that they had not expected the initial activities of the projects to take so much time. Since co-production processes require investing much time in building trust initially in the project, there has to be time allocated for this investment to pay off in terms of publications and other outputs. The temporal needs of co-production projects therefore require better planning in order to safeguard that there is time left to write and publish academic articles within the time frame and funding of the project.

Other less direct factors that may have an impact on scientific outputs are also raised in the interviews. One factor is that high-ranking journals tend to prioritize interdisciplinary academic debates and have little interest in transdisciplinary research. Some respondents point out that the Center projects are problem oriented and less critical, and therefore render less interest in academia. Moreover, participants in two of the projects point at the local character of the co-production projects and the trade offs with linking up to international debates.

Impact from project results

Participants in all projects discuss the impact of their projects on policy and/or practice in the region and

beyond. However and as already pointed out, it is difficult to attribute change directly to Center projects, particularly as Center projects tend to be part of more general trends even if they are on the front line of collaborative research on urban sustainability.

Despite such difficulties in attributing influence, all of the projects state that effects on discourse are an important result of their projects. Other perspectives and questions are now on the planning and policy-making agenda, and the projects have been part of achieving this. Important and significant impacts on, for example, the Gothenburg Climate Strategy, and the Regional Climate Strategy are mentioned, as well as the spread of concepts such as BISUD and Urban Station Communities. (These examples are illustrative, since it is not the purpose of this study to evaluate impact.)

Center projects at GOLIP have also had impact on education. Project results have been used in teaching sustainable development at the Business School, at the University of Gothenburg (GU), and at the introduction of the Sustainability Days, at Chalmers. Project reports from Kairos have also been used as course material at the department of Social Work, at GU.

As we will see further below, several respondents express dissatisfaction with the ability of their projects to have an impact in their own and other organizations through the project results. This is sometimes a result of too much focus on the internal processes in the projects, as noted previously, but it is also seen as a result of a lack of receptiveness and interest from the host organizations.

Impact from the knowledge production process

While the above discussion focused on results in terms of the impact of the knowledge produced, the co-production process themselves also have impact. Many respondents mention how the project processes themselves influence their ways of thinking, learning, working and reflecting on knowledge production and power relations. The project activities have contributed significantly to learning, and in most cases, stand out in contrast to the usual ways of working, primarily in the practitioner organizations, but also in the academic ones. In particular, meetings are seen as expanding and deepening learning. For practitioners, time to do what they otherwise would not do, provides unique opportunities for such learning.

Related to learning is a broadening of perspectives and knowledge, and new understandings of coherence and the practices of urban planning. Such broadenings

have led to a capacity to connect different questions that may seem unrelated to ordinary areas of expertise. Some respondents (especially the practitioners) see a more positive view among practitioners to participate in seminars and educate themselves, as well as growing political interest. Due to the fact that co-production involves meetings across institutional or specific issue borders, in several cases the co-production process has led to a better understanding of the roles of other partner organizations and how they can cooperate and make use of each others expertise and networks. Some participants emphasize how the necessary cooperation involved has generated important networks, taught them and others to listen, rather than to preach, and to see that other things are more important than being right. As a result, the co-production processes have also contributed to a better possibility for integrated planning in and between administrations. Such networks are, in some projects, considered an important factor for successful funding applications. New ideas emerge in these networks, and relevant groups can easily be gathered to develop new grant applications.

Reflection over what happens in co-production processes is considered crucial in order to make double-loop³ learning possible, according to several of the respondents. They argue that together the projects constitute valuable material for producing knowledge about co-production. They also see the need to discuss a number of important questions relating to the co-production methodology: What happens when we work this way? How can co-production processes contribute to societal change? They consider that there is a lack of conversation between the projects within the Centre. As one respondent puts it, *“systematic work to make use of this opportunity for mutual learning could make Mistra Urban Futures an important arena for transformation”*.

3.3 Communicating the results of co-production projects

The projects have worked in different ways when it comes to reflecting upon and working with how the project results should be communicated, and used. In some cases, participants in the same project give different answers to this question. In two projects, such views di-

verge greatly. The reason seems to be that the question is interpreted differently. In these two projects, impact has not been discussed in a systematic way, although there have been conversations about how the knowledge produced will be received and how inroads will be made into certain organizations and environments. In one of the projects, there have been extensive discussions on how the results would be received because of their sensitive and critical nature. Participants in these two projects have reflected much on impact in hindsight, both in terms of what the possible obstacles are (to be further discussed below) and what they could have done differently. The other project worked (although not systematically reflected upon) with communication and outreach, but the project members were not satisfied. They wanted more relations and inroads into the relevant organizations. Holding talks does not lead to change, they argue. Instead what are needed are on-going relationships with actors who have a stake in the issues.

Two projects worked strategically with communicating processes and results, both within the participant organizations and externally. Communication has mainly been through seminars, workshops, presentations, conferences and webpages. The projects have worked with implementation within the project time, rather than afterwards. These projects have tried to directly relate the research to ongoing processes in the practitioners' organizations.

The seminars and workshops external to the project group give both input to the process and help spread the new knowledge in different phases of the projects. One group specifically mentions coordination meetings with the consortium partners, for both of the above given reasons. The project members identified a rather broad range of activities as crucial for achieving project goals. Most prominent are activities that contribute to creating relevance to all participants in the projects. Meetings, seminars and workshops stand out in most of the interviews. Meetings provide an opportunity to find the right people and to see where creative relations can emerge. Such activities most importantly provide opportunities for shared reflection and learning, for creating a specific knowledge environment and getting all participants to speak the same language.

³ Double-loop learning refers to questioning the values and assumptions that underlie accepted strategies and ways of working, in contrast to single-loop learning which focuses on increasing efficiency within accepted strategies and ways of working (Argris and Schön 1996).

Interest from partner organizations

Many respondents experience a limited interest from their direct work place. Researchers testify that they experienced little interest from their home departments and colleagues regarding their work at the Center. In the practitioner organizations co-workers ask questions about their projects, but they rarely have time to engage further. Interest from leadership at the workplace differs significantly between projects and seems to be related both to personal and to institutional factors. In two cases, the refugee situation and a restructuration of the organization have over-shadowed all other activities.

Most project participants from the City and Regional administrations work in mid-level positions. Many of them, as well as many of the researchers, complain about a lack of interest from higher up in the hierarchy, particularly at the highest administrative level and among politicians. One participant points at an administrative culture, where high-ranking administrators work as gatekeepers and only let through what they know politicians want to hear. The participants in one project say that it has been a struggle to reach out to the organizations, which is why they have not achieved as much as they would have wanted to in terms of building continuous, in-depth relationships.

Some projects also express concern that there is no coordination with other related activities within the City or the Region. For example, directly related activities have appeared in other administrations, guests have been invited in the City, without getting in touch with the relevant project, and with no expressed interest in collaboration or sharing experiences.

Making use of the results of co-production projects

Despite different approaches to how the project results should be communicated and implemented, all of the projects have communicated their processes and results extensively, and show a variety of different effects in their respective organizations as well as in their broader societal context. A few issues that the respondents reflect upon deserve further mention.

Although the projects have communicated their results, some of them also emphasize that *“you can lead a horse to water but you can't make her drink”*. The projects can produce and communicate knowledge, but the administrations have to apply the results through their political processes and practices. As mentioned above, some participants stress the need to involve more people to spread the knowledge further in their

respective organizations. However, time and institutional constraints are often overwhelming. The results must also be communicated in a format that can be received and digested by the recipients. One project has worked specifically with a format for communication. They provide tools for how the receiving organizations can work with the communicated results. Several participants suggest that it is important to not just communicate results once, but to create lasting relationships in order to make sure there is an impact.

It is also necessary to reflect upon what level of administration must be involved in order for impact to be possible. Mid-level administrators are often directly engaged in the projects. Several respondents argue that mid-level agents can more freely engage with issues creatively and think that another world is possible, as they are less constrained by politics. However, for strategic issues to have a wider impact, higher-level administrators or the political level also needs to be involved.

The political and administrative context of implementation seems to be more open to certain substantive issues than to others. Projects that deal with social sustainability and governance issues consider the door to the political level closed, while projects that deal with business, infrastructure, growth and investment do not seem to have this problem. The former projects draw the conclusion that their issues are too politically sensitive and ideologically loaded. They also complain that the higher-level administrative leadership constitutes gatekeepers to the political level. One practitioner says that part of the problem is that for administrators it is not natural to knock on the door of the municipal executive board, or even the politicians in the borough. Only the director speaks to the politicians. This constrains the administrative participants in the projects. One respondent said: *“administrators are structurally prevented from doing good. Top-down management prevents them from acting as thinking beings”*. One respondent from a smaller municipality agrees, but argues that it is a problem that mainly concerns the City of Gothenburg and is less valid in the smaller municipalities.

3.4 Important factors that influence projects working with co-production

The final group of questions in our interviews asked about the most important conditions and factors for the projects to work effectively. Answers focused both on positive and negative aspects. Three main themes emerged: funding constraints, and the need for a broad

array of perspectives, and systematic exchange and reflection between Center projects.

Funding constraints

Some projects had their funds significantly reduced early in the project and experienced great instability and changing work conditions. This effected the work that could be executed, the people who could be engaged in the projects, and how much they could participate. The reduction of funds caused significant stress on the projects. One year funding arrangements has also created insecurity in certain projects. The possibility of attracting external funds has, to some extent, compensated for this, and created interesting cross-fertilization between projects. However, it has also involved compromises with co-production design, as it has not been a core concern for external funders. Funding is also related to the allocation of time to participants, particularly practitioners. Too little time for practitioners to engage has constituted a significant constraint on certain projects.

Several participants agree that there needs to be sufficient funding from the Center to create a base to work from; otherwise the Center loses its function. Projects will then constitute cooperation on paper while participants follow the money from external funders with the risk of fragmentation of projects and loss of continuity. To build knowledge environments and lasting co-production arenas in the long term requires significant funding. The prevalent project funding within academia is a problem that the Center can help to alleviate.

In other projects, funding is mentioned as a positive factor when it has been generous and created stability. Adequate funding also tends to make communication easier and provides legitimacy for practitioners in relation to their home organizations.

The need for a broad array of perspectives

Almost all of the respondents emphasize the possibility of new meetings and connections across organizations and disciplines as one of the most important factors influencing the projects. Some participants highlight the particular set up of the group as conducive to creativity and providing energy to the work. Meetings across disciplines are what make new learning and understandings possible. Several respondents, both researchers and practitioners, particularly in CAVN and Kairos highlight how the meetings have had a significant impact on how they understand the problem at stake. The respondents also emphasize the need for contact across

sci-entific areas, for example between the natural and social sciences. Since such interactions are not always possible or needed in the projects, they need to occur in other forums.

In some cases individual participants or individual meetings are stressed as essential for the project and the results as they bring specific questions, perspectives and knowledge to the group. Specific combinations of competencies and experiences raise new questions and contribute to new understandings and insights.

The need for systematic exchange and reflection between projects

Many of the project participants would have liked more substantive exchange with other projects, particularly to talk about the experiences and challenges of co-production. They would also have liked to share experiences on how they work within their administrations, particularly to find ways to allow for new ways of working to spread and shape their institutional norms. Participants generally ask for better communication within the Center, both between projects and with project leadership. Project participants consider formative evaluation a potentially effective way to support both the projects and learning between the projects. In this sense, formative evaluation should not be a separate function but integrated into Center activities and an integral and supporting part of research and communication in projects and networks. The Centre should strive to be a cohesive force for such a reflexive process.

Because of the rewards of this type of research (not individual career oriented), and the rather high work input, it is a challenge to maintain the commitment and the enthusiasm of the involved actors in co-production processes. Many are involved because they are interested in transition processes and societal change. However, there is a shared experience of lack of participation of center governance, lack of information and a feeling of being controlled; all destroy energy, commitment and creativity. Co-production, one respondent argues, must also involve co-production in building the Gothenburg platform. Co-production is asked for at the governance level of the Center as well.

4. Success factors for process and the usability of results in co-production projects

As noted by way of introduction, co-production processes, through in-depth participation of a variety of societal actors in knowledge production, are seen as having the potential to create more useable outputs and results. Our initial question with this evaluation was to see if this could be affirmed empirically through analyzing a selection of projects at Mistra Urban Futures. Overall, we found no clear link between a certain type, method or design of co-production processes, which varied greatly, and the usability of the project results. However, we did find a number of success factors that clearly impact both co-production processes and their ability to effect change.

Overall, what we see in our evaluation is that some of the projects in Phase 1 have had stable funding, structured processes, and continuous reflections on communication of results. Others have had unstable funding, unstructured and difficult processes, and little reflection on communication of results. Despite these significant differences, both types of projects have produced important, relevant and usable results. From this we could conclude that there is no link between quality of process and usability of results. However, this is not either the case. What this tells us is that there is no ideal co-production project design that leads to the production of usable results. There are instead, other success factors, for both co-production processes and impact. From the interviews, we find that the quality of the process should be measured in terms of learning, in the emergence of new understandings and perspectives, in new networks and collaborations and in new ways of working together. It is these factors that are clearly linked to the production of usable results. While operational factors such as funding, structured support and communication can be governed top-down by the Center, learning and the emergence of new perspectives requires a different kind of governing. Unstable funding, unstructured processes and lack of continuous reflection on communication have negative effects on the projects, but despite this, projects with such experiences have also managed to produce usable results. The important question for the Center is how it can provide structured support for sometimes unpredictable processes, without limiting the projects' autonomy and room for maneuvering. Based on what we have learned from the interviews, a creative and productive co-production process will lead to knowledge that is

useful for sustainable management of cities. The focus here is therefore upon what matters for increasing such qualities of co-production processes. In addition, the production of useful results does not necessarily mean that those results will be used in policy and practice. We will therefore also focus on the success factors for results actually being used within city administrations.

Success factors for co-production processes

- Stable funding is needed to ensure that Center projects have an adequate degree of continuity and possibility for long-term planning. This is especially crucial for ensuring the necessary degree of participant engagement from the Consortium partners and other involved actors.
- Strong practitioner participation is essential. Stream lined public and private organizations and reporting provide little room for engagement. It is therefore crucial that practitioner participants are provided with the possibility to engage fully in the projects.
- Sufficient time allocations are needed for all key participants to engage in all phases of the co-production process. Most importantly time must be allocated to preparing for and processing seminars and workshops, to participating in shared meetings at the Centre, and for writing academic output.
- Consistency in project participants is important. A change of participants in projects is counter-productive to co-production processes. This pertains particularly to practitioner participants. Building the necessary trust and shared understanding between diverse actor groups is very time demanding. This is exacerbated when there is no continuity of participants.
- Multiple perspectives are decisive for co-production projects. The most important factor does not seem to be that there is one project leader from academia and one from practice in every sub-project. What seems to matter is the group composition, that there is a significant

diversity of both researcher and practitioner perspectives for creative meetings and new ideas to emerge.

- Individual openness and commitment are strongly linked to in-depth learning. Given the demands of co-production processes, it is important that the participants are committed to the problem at stake, that they are open and prepared to learn new ways of communicating and working together, and that they have sufficient time to engage in the project.
- Sufficient space to set goals and process as well as to change questions, perspectives and working modes must be ensured throughout the process. Although unpredictability is difficult to handle it is a precondition for creative processes, projects need to be allowed to develop organically rather than being prescriptively governed. The ability to adapt to ongoing societal processes and change increases the relevance of the projects. Certain mechanisms should be developed to support and follow up such autonomous and dynamic processes.
- Balance is needed between internal and external processes and goals. There are clear tensions between a focus on engaging in internal, dynamic learning processes and reaching out broadly to a wide group of participants and recipients. Dynamic internal processes are important for in-depth learning and gaining broader insights, while extroverted strategies are important to ensure a plurality of perspectives, and for broad outreach and input on the potential of the project to make substantial contributions to societal problem solving.
- Successful co-production entails learning by doing. Continuously testing and communicating results and ideas throughout the process, and allowing practice to influence knowledge production are essential for successful co-production processes both regarding the process, and their ability to create usable results.
- Co-production in Center governance must support co-production processes. Shared learning between projects and the Center are important

for creating joint ownership and trust as well as learning within the Center and between the Center partners and platforms.

- Initial and continuous reflections on process and learning within and between projects are fundamental for successful co-production process. The Centre can function as a cohesive force for reflection, both practically and scientifically, on the different types of learning that occur in co-production processes. Additionally, bringing such practice-based results together are an important basis for promoting sustainable change.

Success factors for impact: Creating usable results from co-production projects

- Stakeholder involvement needs to start at the beginning of the project. There needs to be initial interest within the administrations (leadership in particular, but also among those who have a mandate to implement) in order for project results to land in an environment where impact is possible.
- The level of the involved city administration matters. While lower level administrators often reflect upon and are able to critically question their professional practices, they face institutional constraints. Organizational hierarchy prevents them from introducing alternative approaches and ways of working. Higher-level administrators have more influence, but are more bound by political considerations and therefore tend to function as gatekeepers.
- Internal institutional conditions constrain impact. Slim organizations, time constraints and reporting requirements provide little room for reflection. There is a lack of "receptive competence", both in terms of time, resources and competence.
- Build lasting relationships rather than single communication events. One off presentations and seminars provide outreach but do not guarantee any effects in practice. Long term relationships, however, promote more continuity and on-going contact channels for projects results.

- Different types of questions elicit different interest from the wider administrative organizations. Planning, infrastructure, and growth issues are prioritized in City administrations. Governance issues and social sustainability are seen as more politically charged. It is more difficult for projects focusing on these later issues to be received in the administrations and on the political level.
- Ideological positioning regarding sustainability issues (particularly social sustainability) makes it difficult to influence already fixed positions. Politically there are often blockages between ideological positions.
- Political timing is essential. There are certain times in the election and policy cycles when the possibility for change is greater and the barriers to change are less firmly established.
- Critical mass is important. The more people who are involved in projects (even if at the fringes) the broader the impact (provided the people involved are engaged in the issue). A greater number of projects will lead to a broader impact on how the administrations are working.
- Distance and proximity effect impact. Close relations between research and practitioner organizations provide the basis for usable results, but may have negative effects on the capacity to express critique. Therefore, how the projects deal with the question of critical distance has effects on impact of project results.
- Connection and funding from Mistra Urban Futures give projects and involved participants legitimacy. The Center allows particularly practitioner participants to engage in projects, to think more freely (because MUF is neutral ground), and it promises support since the administrations are committed partners.

5. Recommendations to the Center and Center Projects from GOLIP

Recommendations to the Center regarding Center governance and the co-production process

- Support quality processes rather than results. Quality processes based upon in-depth learning between diverse actor groups lead to usable results.
- Ensure that funding is stable and predictable. Initiate funding processes early.
- Move the co-production process up to all levels of the Center. Increase the participation of projects in Centre and process governance, development and learning.
- Improve support and routines for early and continuous reflections within and between projects on problems, goals, learning, method and impact.
- Measure process outcomes in terms of new questions, new perspectives, networks and learning, not in terms of the number of workshops, presentations, etc.
- Find new ways to enable mobility of people between academia and practice.
- Increase the use of students, both undergraduate and graduate, in Center projects.

Recommendations to the Center regarding the usability and impact of project results

- Create a network within the consortium partners for promoting organization learning. Cultivate a concern with learning how to receive and work with new initiatives and forms of knowledge in the Consortium partner organizations.
- Explore strategies and ways of opening the door to the political level. Invest resources and people.

- Share learning between projects on how to work with communication, implementation and impact.
- Make formative evaluations part of internal governing processes at the Center.

Recommendations to Center projects regarding co-production processes

- Take care with the selection of participants. Time needs to be allocated to initial meetings to finding the right combination of people who can work together. Openness for balancing actors in different ways, safeguards broad representation.
- Improve routines to deal with continuity of participants as well as for introduction of new ones.
- Do not set specific goals too early in the project process.
- It is specifically important to make expectations explicit, and to balance the roles of different actors.
- Plan for and safeguard time allocations for participating in shared activities.
- Improve methods for giving experience-based knowledge due attention in process as well as written output.
- Safeguard time for reading and writing, share examples of other forms of written output.
- Experiment with different forms of seminars (without allowing the form of the seminar to overshadow the substance issues to be discussed)
- Develop forms to support continuous activities in the projects.

Recommendations to Center projects regarding the usability and impact of project results

- Work explicitly with grounding projects in public bodies and other involved organizations. Create continuous relations and links to make change possible.
- Improve and use methods for early implementation and testing to enable continuous relations, learning and impact.
- Make sure to allocate time for writing academic articles.
- Pay particular attention when using and presenting projects and results that can be considered ideological or provocative to different interest groups.
- Create forums where project participants from finished projects can continue to both contribute to the Center through their experiences with co-production, and learn from Center activities.
- Ensure that the relationship between practitioners and researchers is as equal as possible throughout the project.
- The challenging meeting between different actors is what makes the process valuable.

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Mistra Urban Futures is a research and knowledge centre which locally and globally promotes collaborative approaches and co-production of knowledge supporting a transition towards sustainable urban development. All projects are designed and carried out in collaboration between practice and academics.

The Centre's on-going and finished projects contribute to the vision of sustainable urban development, for fair, green and accessible cities. The vision is translated into the objective: 'Realising Just Cities'.

Mistra Urban Futures has five Local Interaction Platforms, in Gothenburg and Skåne, Sweden; Sheffield-Manchester, UK, Kisumu, Kenya; and Cape Town, South Africa.



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