



<http://www.diva-portal.org>

Postprint

This is the accepted version of a paper presented at *International Research Society for Public Management (IRSPM)*.

Citation for the original published paper:

Lilja, J., Lilja, J. (2019)

Innovation Lab 2030: Finding out how to Move Towards the Agenda 2030 Together in a Complex Alliance of Swedish Authorities

In: *Innovation Lab 2030: Finding out how to Move Towards the Agenda 2030 Together in a Complex Alliance of Swedish Authorities*

Johan Lilja

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-391341>

Innovation Lab 2030: Finding out how to Move Towards the Agenda 2030 Together in a Complex Alliance of Swedish Authorities

Dr. Klas Palm

Department of Engineering Sciences, Uppsala University, Uppsala, Sweden
klas.palm@angstrom.uu.se Phone: +46-729999234

Dr. Johan Lilja

Department of Quality Management and Mechanical Engineering, Mid Sweden University, Östersund, Sweden

This work was supported by Sweden's innovation agency Vinnova.

Klas Palm's research focuses on mapping success factors and obstacles for innovative processes within service organizations involved in sustainable development. Klas is also project coordinator for the university-wide research development initiative; Uppsala University Sustainable Initiative (UUSI).

Johan Lilja is Associate Professor in Quality Management. Johan's research focuses on quality development with a particular focus on development processes in all its forms. A central research area has been 'attractive quality', that is, to develop understanding of what it is, why it is important and how it can be created.

Abstract

This article describes cooperation between authorities and universities in order to increase innovation capacity and thereby achieve change in performance and execution for better contribution to a sustainable future. Through action research, the authors have developed new knowledge about results, success factors and obstacles for increasing innovation capacity. The paper recognizes that administrative and adaptive leadership must work together effectively if organizations are to function properly. There is a need for a dynamic relationship between the formal and the informal in organizations – between top-down administrative forces and complex adaptive emergent forces. There is a need for a wider range and simultaneous use of management models adapted to different contexts and needs.

Keywords

Complexity; leadership; bureaucracy; sustainable development; innovation management

1. Introduction

The UN Agenda 2030 with its Sustainable Development Goals (SDGs) is universal. All countries are expected to implement the agenda at both the national and international level. The SDGs are new and constitute a unique and challenged goal for socially, economically and ecologically sustainable development in the world. This requires public organizations to be responsive, agile and develop structures to renew their service delivery. Many organisations today are not equipped for these changes. Bushe (2019 p1.) stress *'that conventional ideas about leadership are not adequate for responding to today's complex organizational challenges.'* The Sustainable Development Goals therefore become a challenge for interaction in new and relevant ways to address a sustainable future.

The Swedish Government decided in 2016 that Sweden should be a leader in the implementation of Agenda 2030, both in implementing the agenda nationally and in contributing to the global implementation of the agenda. The Swedish Government controls the authorities by means of regulation letters and instructions. However, in general, the government has chosen not to communicate or concretize the meaning of the high Agenda 2030 ambitions in either the regulatory letter or the instructions. (Except for a very short list of authorities, namely the authorities that naturally work with environmental issues like the Swedish Environmental Protection Agency and the Agency for Marine and Water Management). The result is that there are weak incentives for the authorities to make strategic decisions and to adapt their operations to SDGs.

Nevertheless, after the government proclaimed its high ambition, several of the Swedish authorities began to work with their own role. Many authorities began to talk about the need to work in new ways, to be innovative in order to deal with the need for change of what the authorities are doing and how they work.

Over 50 Directors-General for Swedish authorities, signed a letter in 2017 and 2018 stating that their respective authority want to contribute to the Sustainable Development Goals. However, what this letter of intent has led to regarding changes in the authorities' actions and decisions is uncertain.

The authorities' transition work in order to make a clear contribution to a sustainable development of society has on the whole come to be driven by a number of officials at different levels within the authorities. As part of this movement came, civil servants at three governmental authorities together with some universities to initiate 'Innovation Lab 2030.' A project where these three authorities and the universities in a common journey worked together in order to increase their innovation capacity, their ability to work flexibly and to use co-creation as a tool.

The research behind this article provides new empirically-based information about co-operation at the governmental level with the purpose to increase governmental authorities' innovation ability. This in order to develop their capacity to better contribute to environmental, social and economic sustainability. In order to contribute to the purpose, the paper is focused on two related research questions, as illustrated in Figure 1.

RQ1: What results can the participants see out of the project Innovation Lab 2030?

RQ2: Looking back at the process, what factors are perceived as being the most important in reaching the achieved results?

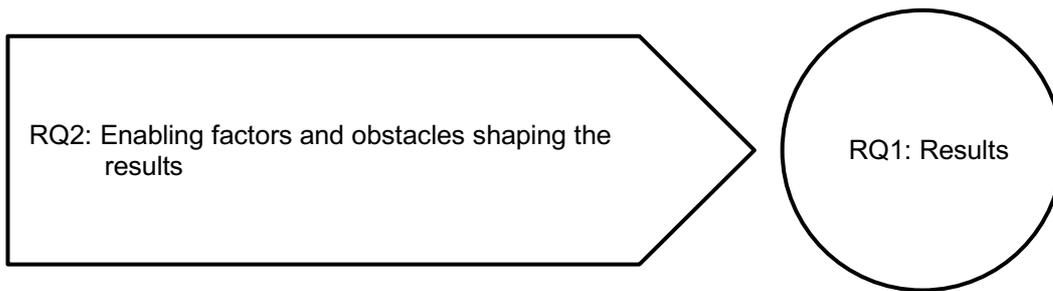


Figure 1: The relation between RQ1 and RQ2.

2. Theory

In this chapter, some of the core concepts and related theories are presented.

2.1 Complexity leadership in bureaucratic organizational forms

As described by Cilliers (1998) complexity is about rich interconnectivity, meaning that when things interact, they change one another in unexpected and irreversible ways. If a system can be given a complete description in terms of its individual constituents, it is merely complicated - e.g., jumbo jets or computers are complicated. If relationships in a system cannot be fully explained by analyzing its individual components because they are not fixed but instead tend to shift and change, it is complex (e.g., the brain is complex). Complexity results in novel features such as self-organization, usually referred to as emergent properties. For example, the rainforest and social systems are complex because they are richly interactive, emergent, nonlinearly dynamic, and unpredictable (Cilliers, 1998; Snowden & Boone, 2007).

From a leadership perspective, knowing the difference is vital. For example, Snowden & Boone, (2007) argue that simple, complicated, complex, and chaotic contexts each call for different managerial responses, or 'leader's job,' as seen in Table 1.

Table 1: Decisions in Multiple Contexts: A Leader’s Guide illustrating how effective leaders learn to shift their decision-making styles to match different business environments. From Snowden & Boone, 2007, p.7)

	THE CONTEXT’S CHARACTERISTICS	THE LEADER’S JOB
SIMPLE	Repeating patterns and consistent events Clear cause-and-effect relationships evident to everyone; right answer exists Known knowns Fact-based management	Sense, categorize, respond Ensure that suitable processes are in place Delegate Use best practices Communicate in clear, direct ways Understand that extensive interactive communication may not be necessary
COMPLICATED	Expert diagnosis required Cause-and-effect relationships discoverable but not immediately apparent to everyone; more than one right answer possible Known unknowns Fact-based management	Sense, analyze, respond Create panels of experts Listen to conflicting advice
COMPLEX	Flux and unpredictability No right answers; emergent instructive patterns Unknown unknowns Many competing ideas A need for creative and innovative approaches Pattern-based leadership	Probe, sense, respond Create environments and experiments that allow patterns to emerge Increase levels of interaction and communication Use methods that can help generate ideas: Open up discussion (as through large group methods); set barriers; stimulate attractors; encourage dissent and diversity; and manage starting conditions and monitor for emergence
CHAOTIC	High turbulence No clear cause-and-effect relationships, so no point in looking for right answers Unknowables Many decisions to make and no time to think High tension Pattern-based leadership	Act, sense, respond Look for what works instead of seeking right answers Take immediate action to reestablish order (command and control) Provide clear, direct communication

What is even more challenging to cope with is when several of these contexts - such as simple, complicated and complex - occur simultaneously or in parallel within the same organization. Such a mix of contexts appears to be common in bureaucratic organizational forms that strive to be adaptive and creative. A typical example of such a context is when Swedish Agencies, typically bureaucratic organizations, now are striving to be more adaptive and creative in relation to coping with Agenda 2030.

In more general terms, bureaucratic structures are, in accordance with Weber (1947), hierarchical, coordinated by rules, functionally departmentalized, and impersonal. Uhl-Bien and Marion (2009) furthermore state that 'in today's environment, the vast majority of formal organizations are organized around bureaucratic principles, and bureaucracy provides the context for the bulk of leadership theorizing in organizational studies' (p.632).

At the same time, in order to be creative, adaptive organizations operate in a more informal and nonlinear fashion. Consistent with Nag et al. (2007), Complexity Leadership Theory (CLT) recognizes the fundamental tensions in bureaucratic organizations between the desire for structure (administrative) and the need for creative chaos (adaptive)—a notion they refer to as 'managed chaos.'

To address the actions of these formal and informal dynamics and their integration, Uhl-Bien and Marion (2009) identify three functions of complexity leadership in bureaucratic organizations. The functions are referred to as *administrative leadership*, *adaptive leadership*, and *enabling leadership*. They furthermore stress these functions as entangled. Moreover, they are referred to as function, meaning they describe leadership behaviors rather than individual leaders.

Administrative leadership is then described as the managerial form of leadership that addresses the bureaucratic functions of the organization while not stifling the complex dynamics capable of producing adaptive change (Marion & Uhl-Bien, 2007).

Adaptive leadership, on the other hand, is described as an informal leadership process that occurs in intentional interactions of interdependent human agents (individuals or collectives) as they work to generate and advance novel solutions in the face of adaptive needs of the organization (cf. Heifetz & Laurie, 2001; Johannessen & Aasen, 2007). It is described as productive of new ideas, innovation, adaptability, and change (Uhl-Bien et al., 2007).

Enabling leadership finally acts in the interface between the other two: it is described as working to foster conditions conducive to the complex interactive dynamics of adaptive leadership and manages the administrative-to-adaptive and innovation-to-organization interfaces (Marion & Uhl-Bien, 2007).

A key feature in this model presented by Uhl-Bien and Marion (2009) is *Entanglement*. Entanglement then recognizes that administrative and adaptive leadership must work together effectively if organizations are to function properly; therefore, entanglement refers to a dynamic relationship between the formal top-down, administrative forces and the informal, complexly adaptive emergent forces in organizations (cf. Thomas, Kaminska-Labbé, & McKelvey, 2005).

Further zooming in on leadership practices, a movement that has more recently come to reshape how many practitioners lead and facilitate organizational change is the Dialogic Organizational Development (OD) as highlighted by Bushe and Marshak (2015). Dialogic OD rest on two important intellectual movements, one of which is the science of complexity. The other one is interpretivist social science. As shown in Table

2, the premises of Dialogic OD lead to a different way of thinking about the basic building blocks of organization development in comparison to the traditional Diagnostic OD. With that said, Bushe and Marshak (2015) point out that ‘the Diagnostic Mindset continues today through widespread interest in such things as discovering best practices, benchmarking against world-class organizations, collecting the ”right” data, and continual searches for the singular causes of some problematic situations that can be fixed by applying analysis and expertise’ (p.13). However, when related to the complexity leadership guidelines, as seen in Table 1, it becomes evident that Dialogic OD would be the better match if leading in complex or chaotic contexts.

Table 2: Diagnostic and Dialogic Mindsets (Ideal Types). From Bushe & Marshak, 2015.

DIAGNOSTIC OD		DIALOGIC OD
Positivism Objective Reality	<i>Ontology</i>	Interpretive, Constructionist Social Reality
Open Systems	<i>Organizations are</i>	Dialogic Networks
Behavior and Results	<i>Emphasis on</i>	Discourse and Generativity
Planned Episodic More Developmental	<i>Change is</i>	Emergent Continuous and iterative More Transformational
Stay apart at the margins Partner with	<i>Consultants</i>	Are immersed with Part of
Hierarchical Start at top, work down	<i>Change Processes</i>	Heterarchical Start anywhere, spread out

The Dialogic OD methods include a wide spectrum of methods such as Open Space, Visual Explorer, and World Café, see Bushe (2013). However, one of the most intensively researched and applied practices associated with Dialogic OD is Appreciative Inquiry (AI). In its most practical construction, Cooperrider, Whitney, and Stavros (2008), describe AI as ‘a form of organizational study that selectively seeks to locate, highlight, and illuminate what are referred to as the life-giving forces of the organization's existence, its positive core’ (p.4).

Appreciative Inquiry. AI is also described as ‘...the cooperative, coevolutionary search for the best in people, their organizations, and the world around them’ (Cooperrider & Whitney, 2005, p.8).

In a commonly applied form, Appreciative Inquiry asks organization members to participate in an iterative development process called the ‘4-D’ model or cycle including the four phases of Discover, Dream, Design and Destiny as seen in Figure 2. It starts with selecting a topic in focus for the process: affirmative topic choice. The affirmative topic choice is then followed by *Discovery* of what has been working particularly well in relation to that topic in the past and in the present, and then the

participants *Dream* and envision what it might be like if ‘the best of what is’ occurred more frequently. Based on their images of what can be, participants are asked to *Design* things and processes that work particularly well, and finally in *Destiny*, follow up and implement their desired designs and changes. For further details about Appreciative Inquiry see, e.g., Cooperrider, Whitney, and Stavros (2008).

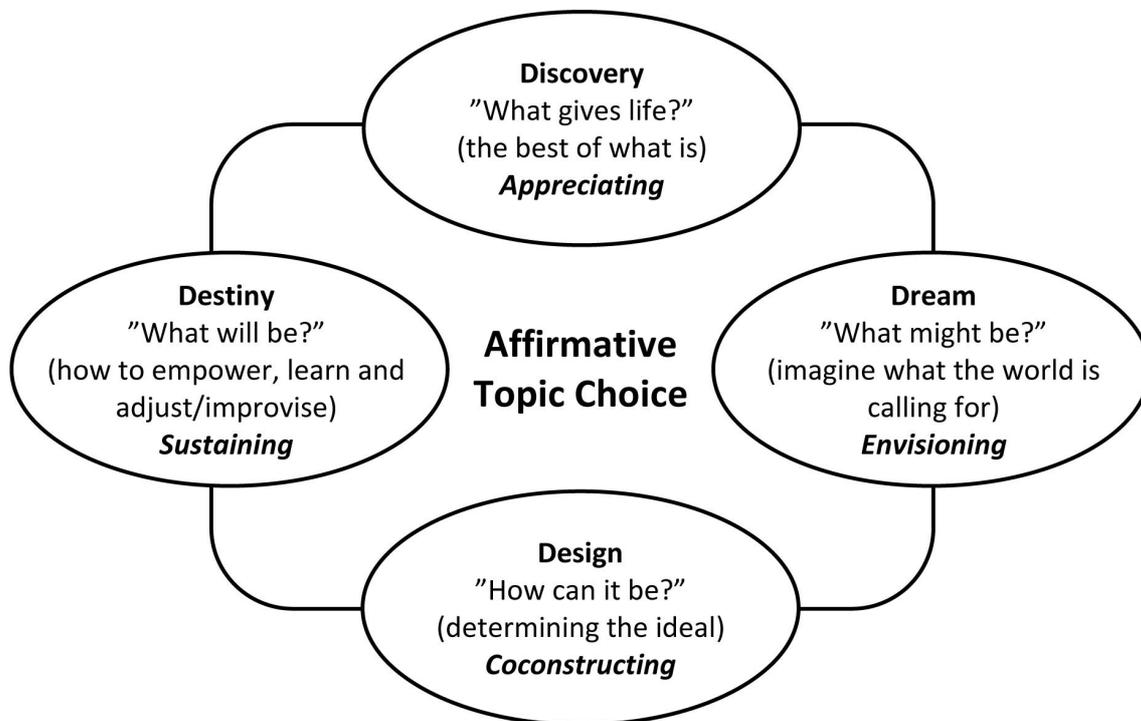


Figure 2: The 4-D Cycle of Appreciative Inquiry with the four phases of Discovery, Dream, Design and Destiny (From: Cooperrider, Whitney, and Stavros (2008).

2.2. Theory behind chosen working methods

Service Design Theory

Design-led processes have been identified as an enabling method for the development of innovation capacity in the public sector (Bason, 2010 and Bessant & Maher, 2009). Scholars argue that a valuable toolkit for innovation can be found in the field of design thinking (e.g., Bason (2010) and Bessant & Maher (2009)). Design thinking is an often-used strategy or process to get a deep understanding of the beneficiaries and to generate solutions suited to meeting their needs (Roberts et. al., 2016). Design processes are often based on some basic components based on trial and error and involvement of beneficiaries, (Stickdorn et. al., 2011). See Figure 3.

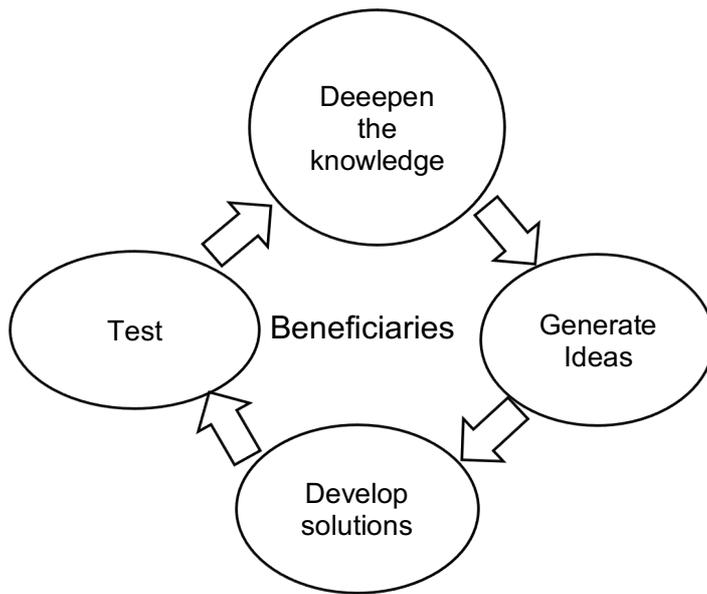


Figure 3: Service innovation through design process.

Innovation Management Theory

In order to respond to the needed changes that Agenda 2030 entails, authorities need to develop their organizational ambidexterity, i.e., its capacity to both develop ongoing processes (exploit) and develop new processes and services (explore) (March, 1991; Tushman and O'reilly, 1996; Palm, 2017). Public authorities seem to have more developed systems for exploitation than exploration and it is therefore important to develop a capacity for exploration in order to reach an organizational ambidexterity. This is a perspective that affects everyone in an organization that works with its development and conversion towards a sustainable authority. Leadership of ambidexterity needs to be embraced by everyone in the organization, and not just the top. The goal is to allow leadership to emerge from the organization at all levels (Uhl-Bien and Arena, 2018). An important component for creating an enabling environment for innovation in a volatile and often unpredictable world is to create an adaptive organization (Uhl-Bien and Arena, 2018). Previous researchers even go so far as to claim that organizational survival depends on the ability to adapt to changing environments (Del Tredici, 2000).

3. Method

The research has been carried out through participatory action research. The purpose of the action research has been to make a direct impact on the researched subjects as well as developing new knowledge. Researchers and practitioners have elaborated a common understanding of what is the best way to achieve the desired changes.

The entire study, and thus also the overall research question, is based on a delimited project. The project can be considered a case - a case consisting of a number of stakeholders linked to the same project. The case consists of the project Innovation lab 2030 and the method has therefore been framed by what is often called a case study.

The method itself has been a qualitative method with primary data collection through interviews and participant observations.

3.1 The case

The co-operative innovation project has been called ‘Innovation Lab 2030’ and involves three governmental authorities; The Swedish Energy Agency, the Swedish International Development Cooperation Agency (Sida) and the Swedish Art Council. These authorities, in this paper called ‘core authorities,’ has collaborated on the project with three universities; Uppsala, Mid Sweden and Malmö Universities and one research institute; RISE. The three core authorities have expressed development needs in performance and execution and the three universities and the institute have contributed more knowledge and methods to facilitate development towards these needs.

The project has had the objective to develop higher innovation capacity. The project has strived to reach the goal through two methodological blocks: 1) To conduct experimental development projects within authorities with a design-inspired methodology and 2) competence development initiatives through seminars and workshops. Both methods have been used in order to increase the governmental authorities’ ability to innovate and thereby develop their capacity to make changes in performance and execution contributing to an environmentally, socially and economically sustainable future. See Figure 4.

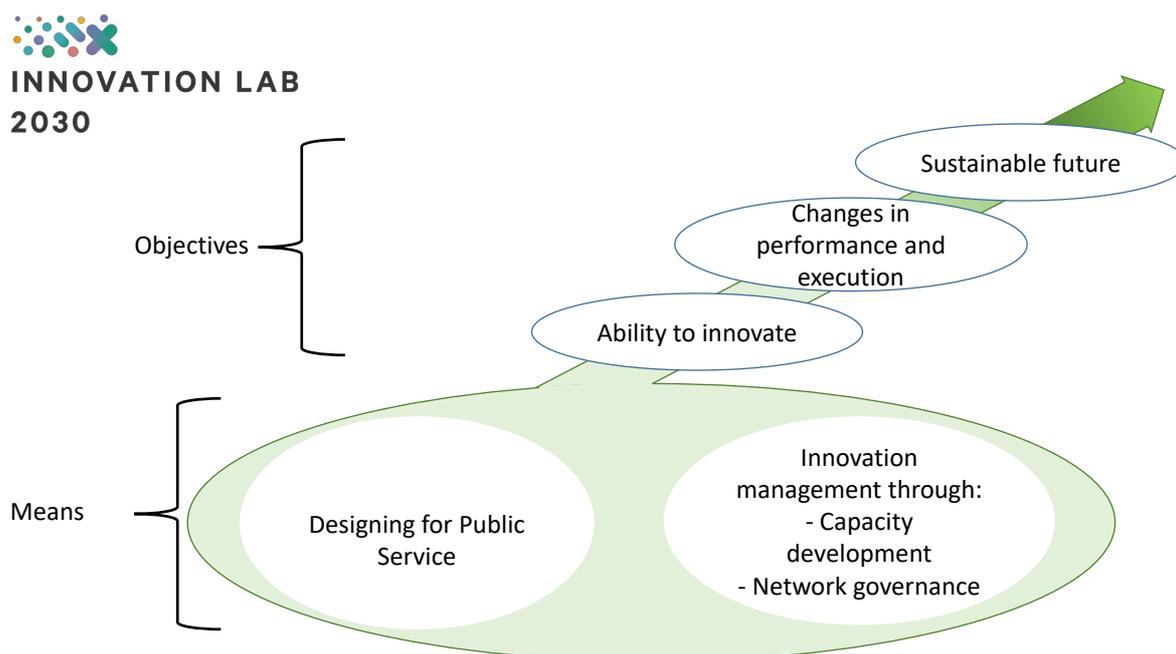


Figure 4: The relation between objectives and means in Innovation Lab 2030.

Within the design-inspired methodology, two experimental development projects have been run. One with the aim to develop an already existing network consisting of a bigger group of Swedish Authorities working with the development of their ability to respond to Agenda 2030 (The Swedish Authorities for Sustainable Development Network). The other experimental project with the aim to develop an innovative capacity in work plan development within the Arts Council.

The design methodology was carried out through six workshop events spread over 12 months. The work was inspired by IDEO, Nesta and Design for Europe's (2016) handbook 'Designing for Public Service' (see Figure 5).

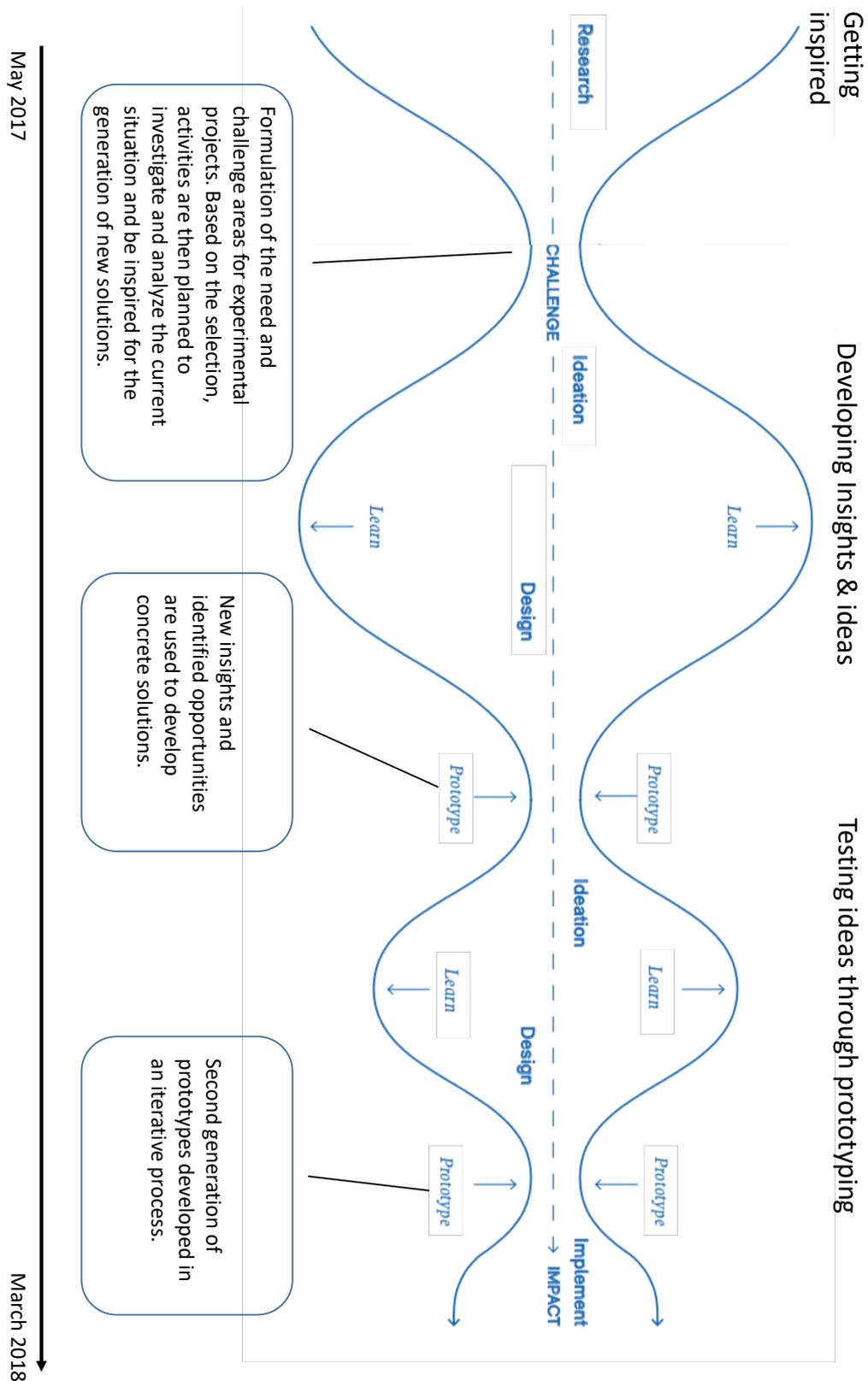


Figure 5: The design process used in Innovation Lab 2030.

One of the most appreciated and vital interventions during Innovation Lab 2030 turned out to be the Appreciative Inquiry workshop conducted on the 17th of November 2017. See photo 1. The workshop involved about 130 participants from around 60 authorities. The workshop design was based upon a Dialogic OD Mindset, as seen in Table 2, acknowledging that the context for the intervention and challenge at hand was indeed complex. The core question of the workshop was ‘how do we, as a community of 50 authorities, move from intent to action on Agenda 2030?’. Given the complexity of the matter, the workshop was designed to encourage and enable more communication, relations, interaction, ideas, and diversity in accordance with ‘the leader’s job’ in complex contexts as seen in Table 2. The workshop was designed together with the operational team and guided by questions such as:

- Who do we want and need in the room? (Ideal of the whole system represented in the room)
- What is it that we want to see more of? (Ideal of inquiring into what is aimed to grow)

Given the dialog in the operational team, interview guides and the workshop timebox was prototyped, evaluated and refined. As a result, the process during the workshop was designed as a 4-D Cycle in accordance with the Appreciative Inquiry (see Figure 2) with a strong emphasis on design thinking in terms of ideation and prototyping during the design phase. For the Discovery phase, the design ended up with three different but related interview guides with affirmative topics in terms of:

- How do we integrate sustainability with the inner life of the authorities?
- How do we enable and create a more sustainable society through our official mandate as authorities?
- How do we reach new sustainable progress via collaboration and innovative partnerships?

As a result of the workshop, the authorities identified the root causes of success for each of the three affirmative topics based on shared experiences and stories. The workshop also resulted in the cocreation of 16 prototypes concerning how to actually start acting and reaching progress in response of the three affirmative topics. The prototypes were visualized, sketched and most often built in 3D. They were also captured as 2-minute video presentations and briefly described in specific capturing forms that were handed out during the final phases of the workshop. The video presentations turned out to be key stimuli and communications material for the following steps during Innovation Lab 2030.



Photo 1: Introduction event at the Appreciative Inquiry workshop in November 2017.

Within the management method ‘competence development through seminars and workshops,’ innovation capacity has been developed in a series of approximately 20 seminars and workshops. These seminars and workshops have been conducted internally within the three core authorities as well as in a broader form when several authorities are invited in so that representatives of up to 50 authorities have been involved. Seminars and workshops have lasted between one and four hours each. Seminars and workshops have been carried out on the following themes: Co-creation, Service Design, Innovation Management, Appreciative Inquiry, System Thinking, Change Management, the law's prerequisites for public sector innovation, Communication and Organizational Learning.

Both methodologies have been based on a general idea of co-creation, i.e., that all stakeholders contribute with valuable knowledge and valuable experience. We worked on creating attractive forums for sharing experiences and seeking to get the authorities' employees to want to participate in the development of their authorities' different responsibilities towards the Sustainable Development Goals.

The seminars, in terms of content, have been presenting - and been based on - research results on what creates leeway for innovation in general in the service sector and specifically in public administration. Seminars have focused on different perspectives of innovation management. Perspectives such as how the individual can act, how organizational structures and culture may need to be developed, what leadership can do, how one can accept and benefit from ambiguity and uncertainty and how one can work with continuous organizational learning to increase our innovation capacity. Seminars have often consisted of educational activities, discussions and exchange of experience between the participants. Workshops, to a greater extent, have been based on the participants' own experiences, where participants have been working, across organizational boundaries, to share dreams, enablers, challenges and concrete tips on how to create leeway for increased innovation in the organizations and thereby create change in performance and execution within the authorities. Seminars and workshops have been taking on between one and four hours. The project was carried out for 24 months from November 2016 to November 2018. The project has been financed by the core authorities and Sweden's governmental innovation agency ‘Vinnova.’

3.2 Data collection

Data has been collected by the authors of the article. The authors have themselves been participating in the project Innovation Lab 2030 and one of the authors has been the project manager for the Innovation Lab project. During the project, the authors have worked in continuous dialogue with representatives of the three core authorities. Between one and three persons from each of the three core authorities, together with a representative from the institute and one from each of the three universities (including the authors) constituted a project-management group. Throughout the project, the authors have also had a central role in implementing activities carried out under the project. Throughout the project, the authors have continuously built up insight into what constituted enablers, obstacles and results of Innovation Lab 2030.

At workshops, seminars and through interviews, the authors have interacted with approximately 400 representatives, primarily from the three core authorities, but also for representatives of approximately 50 authorities that have been involved in some of the project's activities. In November 2018, a concluding conversation was conducted within the project group which, during one afternoon, discusses what constituted obstacles and enablers and which results were perceived as being the most significant. The expressed opinions in this concluding conversation were to a large extent in line with already identified data the authors built through their own participation and conversations that were taken along the project. Furthermore, the data is collected by a constant motion up and down along the ladder of abstraction. This is inspired by the hermeneutical idea that knowledge is built by moving from understanding the parts to understanding the whole in a circular movement (Haidager 1996). The data collection is also inspired by a phenomenological tradition. The phenomenology is based on Edmund Husserl's ideas and is essentially the study of individuals' experience of the situation and the context around that individual (Van Manen, 1997). As Laverty (2008) expresses it, this means that questions to respondents, such as 'what is your experience' are important in this research tradition. It is in this hermeneutic phenomenological tradition, the research behind this article is done.

3.3 Analytical method

A three-step analysis was used. In the first step, adequate observations and our own perceived results and factors were combined with collected opinions and information from the respondents. This data constituted a basis for the most significant results, obstacles and enablers. In the second step, this most significant data was sorted and clustered. Some categories of results, obstacles and enablers were identified. Thereby a number of categories of result, obstacles and enablers arose. The obstacles and enablers were combined and converted to factors influencing the ability to achieve good results when governmental authorities work for developed innovation ability through a co-operative innovation project. This was because obstacles and enablers can to a large extent describe different sides of the same coin and whether a factor is described as an enabler or obstacles often only depends on whether the factor is described as a missing or a present phenomenon.

Is it also vital to look at how these categories interact as a system. It often turns out that the whole is more than the sum of the parts (Arbnor Bjerke, 2009; Jackson, 2003). A system analysis enables us to gain a richer picture of the studied phenomenon. Subsequently, as the third step, an analysis of different categories'

relation to each other was conducted in a soft system analysis which can be described as an appropriate organized way of bringing some clarity in complex situations.

Checkland and Scholes (2007) describe the soft system methodology as a system of thinking based on the assumption that there is no absolute truth to be described and the soft system model is flexible in use and broad in scope. Jackson (2003) argues that the analysis in soft systems approaches should consist of building up the richest possible picture of the problematic situation. This means that the images in the system analysis in this paper do not claim to show the absolute truth, but rather to show a possible interpretation and description of enabling factors as respondents describe them and as the authors of this article interpret the respondents' opinions in the interview environment. The analysis in the study behind this article has been inspired by two of Checkland and Scholes's (2007) most used tools, namely to formulate a root definition of the studied phenomenon and a rich picture describing key results, key enablers and obstacles when governmental authorities aim at a sustainable future via cooperation and developed innovation ability.

4. Findings

To answer the research questions, our data collection has strived to obtain descriptions of results achieved by the common project journey and the most dominant/important factors in reaching the achieved results. The data collected contain many different perspectives. These are reported and condensed into the most prominent ones in this section. These findings are listed below, complemented by a number of illustrative quotes from respondents. Quotes that exemplify the statements form the basis for the identified factors. The quotes are shown following indentations below.

4.1 Perceived results achieved by Innovation Lab 2030

Increased ability to work with interactive meetings

The project has contributed to the development of innovative interaction forms within and between authorities.

- Before we started this, we sat and planned, now we have to get up and interact and create visual models. The meeting culture has changed.

Increased knowledge about how to drive innovative development processes

Both through the practical design work and the competence development efforts, a large part of the authorities' staff has gained insight into alternative, design-driven ways of working with business development.

- We see that within the organization it is today okay to work with trial and error, to test and work in iterative processes. It is okay to take development steps without a deep investigation.

Increased capacity to co-create

Innovation Lab 2030 has resulted in increased insight into the need to co-operate in order to handle the complex challenges that society is facing. The project has provided insights on opportunities and challenges to cooperate.

- The project has contributed to an increased insight that one does not need to have a ready-made concept that one launches when opening the mouth, the insight has increased that one can interact in the development of new ideas without appearing as confused and unclear.

Increased possibility for employees to work with curiosity and be in a continuous learning mood

The project has resulted in raised awareness about how innovation takes place. The result has been that the authorities emphasize the importance of all employees experiencing that everyone is involved in processes for continuous learning and curiosity for business development.

- Curiosity becomes the driving force more than, as before, we worked with problem-solving focus.

Everyday small changes as a lever for driving a large organizational culture change

Insight has increased the importance of taking small steps and acting on the basis of where you are today, in order to drive greater cultural changes. It is by changing an everyday practice that one can change the authorities' space for innovation.

- We have many small protocols on how we meet as well as how we are expected to speak and act. By changing these protocols, a little bit at a time, we change the cooperation and development climate.

A common base for flexible and adaptive management

Different departments within the authorities have worked a lot with simplification and transparency, partly as a result of Innovation Lab 2030. This is especially important in the work of restructuring to achieve the goals of Agenda 2030 when the requirements set by Agenda 2030 are so complex. If the authorities succeed in achieving the goals, existing routines may need to be simplified. Through Innovation Lab 2030, insight has increased such that one way of changing existing systems can be - within existing templates for projects - add dedicated space for formulation of how the implementation design should be developed during project implementation, i.e., a planned and strategic flexibility.

- Innovation Lab 2030 has taught us that if you have the goal clear, you can let the 'HOW' be developed along the journey. It is not dangerous, but even good, to develop working methods along the journey.

Awareness of the difference between exploration and exploitation

The knowledge among the authorities has increased about how difficult it is to gain innovative height in the internal development processes - it is difficult because it is deeply rooted in mental systems that control these processes. When the authorities work with business development, the processes tend to have difficulty getting outside the regulations, principles, process models and control systems. Innovation Lab 2030 has resulted in increased insight surrounding the fact that other mental processes are needed for innovation than those used when working with the development of ongoing processes.

- It is difficult to get out of deep wheel tracks. The challenge is to juggle with three balls; continue to deliver, develop what we already do and be innovative to develop new ways to deliver sustainable solutions.

Increased belief in the possibility of transition

The project seems to give greater confidence to the authorities' ability to work with changes in business models. Through the processes, the project offers encouragement for business development and points out possible gains via innovation which are related to a sustainable future.

- The work within Innovation Lab 2030 creates courage and confidence in our adaptability. It offers confidence for the future.

Perceived dominant factors influencing the ability to reach good results

The initial analysis of collected data has also resulted in a number of experienced enablers and obstacles that have influenced the opportunities for Innovation Lab 2030 to reach its goal. These enablers and obstacles constitute the basis for the presentation of factors listed below.

How innovation processes are related to other current management processes

The work within Innovation Lab 2030 has to a large extent been affected by the fact that other changes are taking place in how management should be conducted. Several major movements in Swedish administration express a post-NPM movement that goes in the same direction; flexibility, trust in employees and iterative processes. It starts to fall out in the form of new ways of working and new methods of organizing. One crucial factor for the implementation of Innovation Lab 2030 is the extent to which it has been possible to see how innovation management relates to these other change processes.

- What we have done within Innovation Lab 2030 (which I did not see from the beginning but see very clearly now) is work with management paradigms that are highlighted from several different directions. This means that we act in a general development trend that is fully in line with the flexible and design-driven working methods that we have highlighted in Innovation Lab 2030.

Junior or senior employees in change processes

One crucial factor for the project's implementation is the balance between junior and senior employees' engagement in the project. With young and new employees, great leeway and many new ideas have come along, but at the same time it has become extra difficult to get new ideas incorporated into everyday businesses. With senior employees, the innovative height does not become as great, but the implementation of new ideas has been easier.

- It is important to take advantage of existing knowledge and experience at the same time as new ideas and fresh eyes are needed. The balance is very important between new ideas and the utilization of existing experiences.

That someone dare to be a forerunner

For most authorities, it is not explicitly stated in any instructions or regulations that the authorities should work to reach the SDGs. It has resulted in the Director-General's doubts as to how to move from words to action. When a Director-General goes ahead and starts acting, other Director-Generals can be moved in how they view their responsibility, their mandate and their way of acting. Changes in how to interpret assignments and mandates then change through practice.

- When the first Director-General declared that Ze had a mandate and said that as a Director-General, Ze could take a mandate to pursue these issues, the idea went from words to action and spread as rings on the water to other Director-Generals.

Leeway for experiments, support and encouragement if it goes wrong

The opportunity to create space for innovation is related to the authority's ability to create leeway for experiments and to maintain a permissive culture. For efficient innovation processes, the fear of making mistakes must be discouraged.

An organization which appreciates development attempts and innovative work - whether or not there are successful results, have greater potential to find the worthwhile deviations from existing process norms.

- Having leeway to test and to carry out assignments in a different way is important for taking innovative ideas further. This needs to go hand in hand with a permissive management culture. It is linked to trust-driven leadership.

Mandate

It is important for stakeholders who participate and drive an innovative development to know in which mandate one has to implement changes. It is important to give mandates to those who are involved in the processes to really drive change beyond merely idea generation.

Another aspect of mandate is that it seems to give a feeling of obtained mandate when the employees perceive that they are part of a larger movement towards a common goal.

- The work has been driven by a design-democratic method where the participants in the design processes feel that the power of development lies in their hands. The project has encouraged self-organizing networks and self-leadership.

Authority levels impact on the design process

It has been a challenge to apply the design methodology at the authority level and we have noted in the work that the design process needs to look different in the authority's work compared to, for example, region or municipal process.

- We didn't really see how we would use the design thinking model in our work. It was difficult to apply the design model, we might initially have needed to work more with the question of what it entails in our governmental authority context.

Design process as a co-creation platform for authority employees

It is of crucial importance whether the project succeeds in creating processes that are sufficiently attractive for people so they want to be involved in the processes. Two enabling strategies has been the design methodology and the ability to adapt the development to the existing ongoing key issues discussed at the agencies.

- The design process enables a space where we can start navigating ourselves based on our own images and interpretations of overall objectives. We can act more and plan less. It is a joyful way to work.

A clear process model - that can be waived

It is crucial to have a theoretical process model for development and the innovation process in the authority. Through the theoretical model, we have a clear process to start with and to lean on. The extent to which the innovation process allows the organization to not just slavishly follow the model can also be decisive, i.e., it allows a flexibility in the management of innovation.

- It has been good that we have had a theory and established truths that we have been able to use and depart from to make our own journey and our own model.

Increased number of cross-border group work

The experience among the participants in this innovation project is that the authorities' work is moving in a direction towards a management model to a greater extent based on cross-border group work where goals are achieved through network processes. There are seldom simple solutions to the tasks one is faced with. The experience is that civil servants have to learn to live and work with multiple identities and multiple roles. The feeling is that the tools provided by the agency's management does not provide efficient solutions any longer.

- There are more and more intertwined operations. It becomes harder and harder to make simple delimitations.

The importance of visions

The experience is that the dream and the vision about a possible and sustainable future are crucial for whether you get enticing processes and involvement in the innovation work.

- You don't want to change if you don't have an attractive picture of the future you want. An enticing vision is extremely important for creating change in human systems.

5. System analysis

Through system analysis, it is possible to cluster factors perceived as most dominant/important in reaching the achieved results and achieved results via the project. Through this clustering, it is possible to identify different types of results and different types of factors that affect the result. These can be presented in a rich picture. See Figure 6. The root definition for the system analysis presented in Figure 6 can be defined as: a system for leaders and staff in governmental authorities to increase the leeway for innovation in order to change in performance and execution and thereby more efficiently contribute to a sustainable future. This takes place in a context characterized by complex organizational challenges.

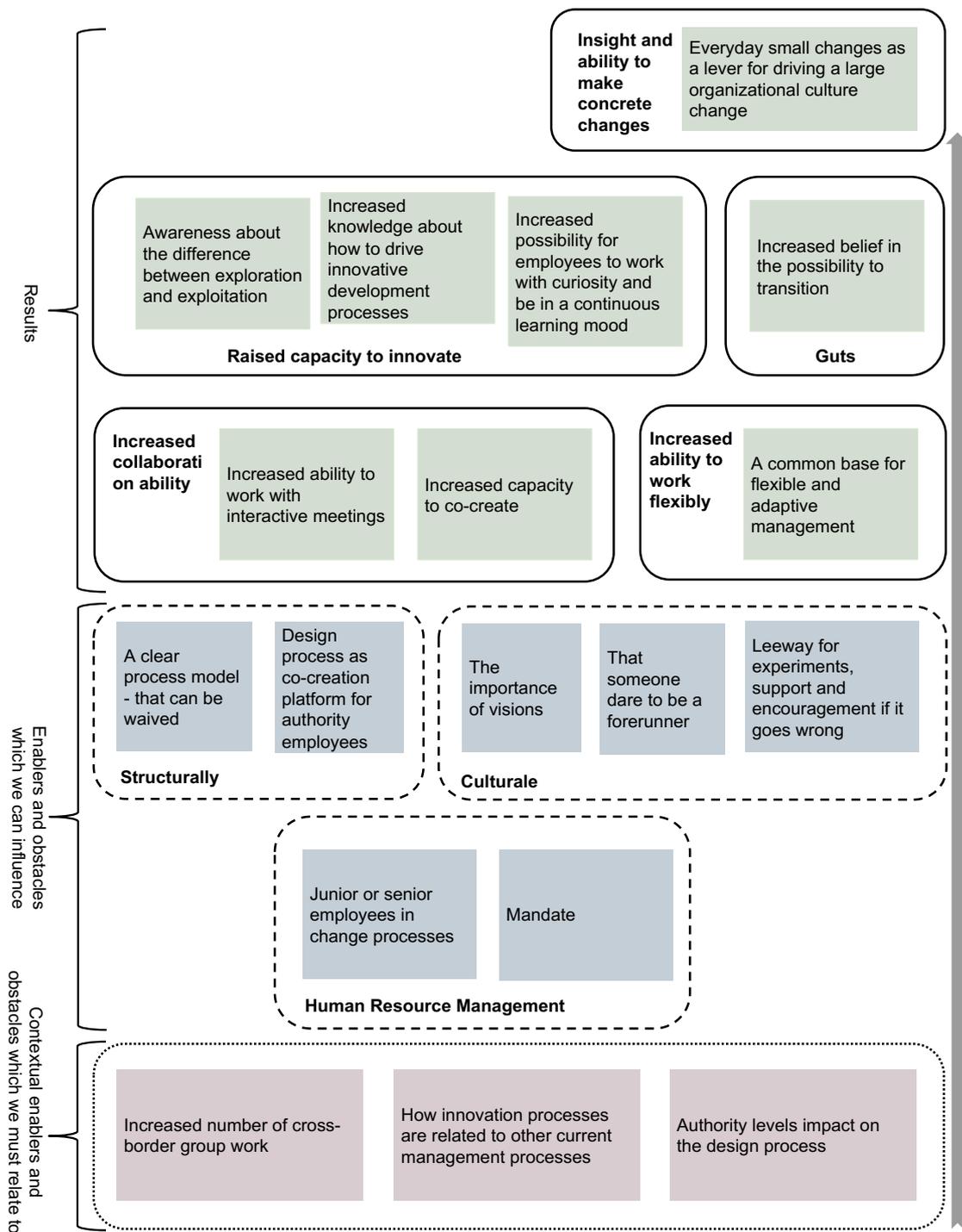


Figure 6. A Rich Picture describing the factors perceived as the most important in reaching the achieved results by the project Innovation Lab 2030. The arrow in the figure indicates how means and objectives seem to affect each other.

The factors can of course also be described in other ways. However, one of the strengths with Soft System Methodology is precisely the ability to describe a complex phenomenon through a rich image that can show a qualitatively grounded description of the phenomena and that the image provides a basis for continued discussion and development of the studied phenomena. This provides a step forward in a continued interaction between stakeholders in order to continue a common building of knowledge to develop the studied phenomenon.

An important lesson for everyone involved in Innovation Lab 2030 is that design-driven development processes at the level of governmental authorities need to be handled in a very different way than design processes within a municipality or a county council. Governmental authorities act in such a different context, with different objectives and have a different approach to the beneficiaries that both the definition of 'beneficiaries' and the procedures for dialogue can be something very different than in a municipality or a county council.

6. Discussion

Innovation Lab 2030 has meant getting into a bureaucratic system and leading a very complex challenge. The projects have been inside and provoked in a system that is created for structure and fixed routines, so when we try to create room for ambidexterity, it has been difficult. Within several authorities, there was a frustration that the existing system was unable to handle both tasks imposed in regulatory letters and work against SDG targets. The rich picture shows the need for flexibility, interaction and network governance. The project has shown that the complex cannot be controlled with complicated systems.

In reconnecting to previous research and theory, this study provides a contribution to more empirical studies of complexity leadership in bureaucratic organizational forms as theorized and discussed by, e.g., Uhl-Bien and Marion (2009). In reflection, the paper provides a deeper and more complex understanding of the factors involved in what Uhl-Bien and Marion (2009) refer to as Entanglement. Entanglement recognizes that administrative and adaptive leadership must work together effectively if organizations are to function properly; therefore, Entanglement refers to a dynamic relationship between the formal top-down, administrative forces and the informal, complexly adaptive emergent forces in organizations.

The case study further indicates that various intellectual fields and practices have the potential to contribute to this field. During the initiatives and the application process, it has become clear that complexity leadership, design thinking, innovation management and dialogic organizational development are all fields with important contributions to make in relation to the phenomena studied here. In one way, this has also indicated that academia is pushed towards more of collaboration and a higher degree of complexity in order to be truly relevant for the complexity of both emerging and studied phenomena.

It is also apparent that the case study provides further evidence of the potential power of using what Bushe and Marshak (2015) refer to as dialogic organizational development practices, such as Appreciative Inquiry, in coping with complex contexts and challenges related to the SDGs and Agenda 2030. The Appreciative Inquiry workshop, designed in accordance with the Appreciative Inquiry 4D-cycle, came to be a core intervention that was perceived as truly generative for the following activities and collaboration.

From a wider perspective, the results might also inspire leaders and people within bureaucratic organizational forms, such as agencies, to develop more of a palette of leadership styles in relation to, e.g., what Snowden & Boone (2007) refer to as simple, complicated, complex, and chaotic contexts. Without such a palette, it is obviously a risk that agencies and bureaucratic organizations that face complex and chaotic contexts will fall back on the existing leadership behaviors and put even more resources into traditional demand-and-control practices of analysis, increasing measurements and control when the context at hand actually demands the opposite. In such a context, proper leadership behavior is rather to encourage dissent, diversity, experimentation, and interaction, as argued by, e.g., Snowden & Boone (2007).

7. Further research

As stated previously, entanglement recognizes that administrative and adaptive leadership must work together effectively if organizations are to function properly; therefore, entanglement refers to a dynamic relationship between the formal top-down, administrative forces and the informal, complexly adaptive emergent forces in organizations. Given the results of this study, it is apparent that entanglement will be a phenomenon of interest for future research.

8. References

- Arbnor, I. & Bjerke, B. (2009). *Methodology for creating business knowledge*. (3. ed.) Thousand Oaks: Sage.
- Bason, C. (2010). *Leading Public Sector Innovation: Co-Creating for a Better Society*. Bristol: Policy Press.
- Bessant, J. and Maher, L. (2009). Developing radical service innovations in healthcare—The role of design methods. *International Journal of Innovation Management*. Vol. 13 No 04. pp. 555-568.
- Bushe, G. (2019). Generative Leadership. Accepted for publication in the Canadian Journal of Physician Leadership Vol. 5 No (3), 2019.
- Bushe, G. (2013). Dialogic OD: A theory of practice. *OD Practitioner*. Vol. 45 No 01. pp. 11-17.
- Bushe, G. & Marshak, R. J. (2015). *Dialogic organization development: the theory and practice of transformational change*. Oakland, CA: Berrett-Koehler.
- Cilliers, P. (1998). *Complexity and postmodernism: Understanding complex systems*. London: Routledge.
- Checkland, P. and Scholes, J. (2007). *Soft System Methodology in Action with 30-year retrospective*. Chichester: John Wiley & Sons Ltd.
- Cooperrider, D. L. and Whitney, D. K. (2005). *Appreciative Inquiry: A positive revolution in change*. San Francisco, CA: Berrett-Koehler

- Cooperrider, D. L., Whitney, D. K., & Stavros, J. M. (2008). *Appreciative Inquiry Handbook: For Leaders of Change* (2. ed.). Brunswick, OH, San Francisco, CA: Crown Custom Publishing.
- Del Tredici, P. (2000). Survival of the most adaptable. *Arnoldia* Vol. 60 No 4. pp. 10-18.
- DuFour, R., Eaker, R and Many, T. (2016). *Learning by doing*. Bloomington: Solution Tree Press.
- IDEO, Nesta and Design for Europe (2016). *Designing for Public Service*, Downloaded 8th of March 2019 at: <https://www.ideo.com/post/designing-for-public-services>
- Jackson, M. C. (2003). *System Thinking*. Chichester: John Weley & Sons Ltd.
- Johannessen, S., & Aasen, T. M. B. (2007). Exploring innovation processes from a complexity perspective. Part I: Theoretical and methodological approach. *International Journal of Learning and Change*. Vol. 2 No 4. pp. 420–433.
- Heidegger, M. (1996). *Being and time: A translation of Sein und Zeit*. New York: State University of New York Press.
- Heifetz, R. A., & Laurie, D. L. (2001). The work of leadership. *Harvard Business Review*. Vol. 79 No 11. pp. 131–141.
- Laverty, S. M. (2008). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations, *International journal of qualitative methods*, Vol. 2 No 3. pp. 21-35.
- Macdonald, R. and Joughin, G. (2009). Changing assessment in higher education: A model in support of institution-wide improvement, in Joughin, G. (Ed.), *Assessment, Learning and Judgement in Higher Education*. Springer, pp. 1-21.
- March, J. G., (1991), Exploration and Exploitation in Organizational Learning *Organization Science*. Vol. 2 No 1. pp. 71-87.
- Marion, R., & Uhl-Bien, M. (2007). Paradigmatic influence and leadership: The perspectives of complexity theory and bureaucracy theory. In J. K. Hazy, J. Goldstein, & B. Lichtenstein (Eds.), *Complex systems leadership theory* (pp. 143–159). New York, NY: ISCE Publishing.
- Nag, R., Corley, K. G., & Gioia, D. A. (2007). The intersection of organizational identity, knowledge, and practice: Attempting strategic change via knowledge grafting. *Academy of Management Journal*, Vol. 50 No 4. pp. 821–847.
- Palm, K. and Algehed, J. (2017). Exploring enablers of innovative quality development in public administration. *International Journal of Quality and Service Sciences*. Vol. 9 No 2. pp. 203-217.

Roberts, J. P., Fisher, T. R., Trowbridge, M. J., Bent, C. (2016). A design thinking framework for healthcare management and innovation. *Healthcare*, Vol. 4 No 1. pp 11-14.

Snowden, D. J., & Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review*, Vol. 85 No 11. Pp. 68.

Stickdorn, M., Schneider, J., Andrews, K. and Lawrence, A. (2011). *This Is Service Design Thinking*. Hoboken: Wiley.

Thomas, C., Kaminska-Labbé, R., & McKelvey, B. (2005). Managing the MNC and exploitation/exploration dilemma: From static balance to dynamic oscillation. In G. Szulanski, Y. Doz, & J. Porac (Eds.), *Advances in strategic management: Expanding perspectives on the strategy process*, Vol. 22 (pp. 213—250). Amsterdam, NL: Elsevier.

Tushman, M. L., O'Reilly, C. A., (1996), Ambidextrous organizations: Managing evolutionary and revolutionary change *California Management Review*, Vol. 38 No 4. pp. 8-30.

Uhl-Bien, M., & Marion, R. (2009). Complexity leadership in bureaucratic forms of organizing: A meso model. *The Leadership Quarterly*. Vol. 20 No 4. pp. 631-650.

Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*. Vol. 18 No 4. pp. 298–318.

Uhl-Bien, M., & Arena, M. (2018). Leadership for organizational adaptability: A theoretical synthesis and integrative framework. *The Leadership Quarterly*. Vol. 29 No 1. pp. 89-104.

Van Manen, M. (1997). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd Ed.). London, Canada: The Athlone Press.

Voss, J.-P., Bauknecht, D. and Kemp, R. (2006). *Reflexive governance for sustainable development*. Cheltenham: Edward Elgar Publishing.

Weber, M. (1947). *The theory of social and economic organization* (A.H.H.T. Parsons, Trans.). Glencoe, IL: Free Press.