Innovating the capacity to innovate



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## Innovating the capacity to innovate

Lessons learned from testing a prototype combining talent development and leadership innovation in a Scandinavian hospital setting.

#### Abstract

This paper addresses the potential clash between the "non-failure" culture of the hospital and the "fail-fast-forward" approach of innovation by sharing and analysing narratives from a field study of innovation processes. The case is a large university hospital in Scandinavia and the health care sector in general is outlined as context of the challenges addressed by the innovation processes. The narratives fall into three overlapping categories; the product, the process and the culture of innovation. Regarding the product of innovation, we outline the lessons learned about tensions created by ambitions of radical innovation in a public sector context, challenged by the idea of small-scale experiments and the participant's feelings of inferiority. As for the process of innovation: we share the lessons learned about how linear and non-linear thinking affects the process of innovation. Addressing the culture of innovation, we discuss the lessons learned from working with a prototype testing approach in a system characterized by an evidence-based non-failure culture. Finally we summarize the lessons learned and share concluding perspectives.

## Introduction: Hospital non-failure culture meets innovation fail-fast-forward approach

The field of health is characterized by a strong wish to avoid failure and errors, because of the risk of injuring patients and in worst cases death (Tucker & Edmonson, 2003). Historically a high-prioritized goal of the health care system has thus been to compensate for the risk of failure and the primary strategy has been to develop a dedicated and skilled full professional

workforce. The potentials in focusing on unique organizational and management solutions have in comparison had only a minor interest (though we have seen systematically organizational learning from clinical failure growing the last 10 years). The professionals' answer to the questions of how to avoid failure and to improve standards is an evidence-based approach and culture. In many ways, this is in direct opposition to processes of innovating organization and management. Innovative processes typically imply experiments and prototype tests and these are not aimed at implementation or standardization but at creating possibilities of feedback and learning. The goal is to make better iterations and eventually scaling up (Scharmer, 2008). Following this approach, "failure" is rather to be induced than to be avoided! From the field of tension we will share stories to be analysed and discussed in order to contribute to future attempts to innovate the capacity to innovate in the health care sector.

## Introducing the organization, context and case

The future challenges of the public health care sector in general and to our case hospital in particular, are evident. The hospital is a merger of 5 hospitals, now with approx. 9,000 employees and several building sites. A common building structure is created for the hospital, with ambitions of being the most advanced and sustainable hospital in northern Europe. Due to federal decisions of a new national plan for health care with a considerable reduction of budgets as a consequence, the future hospital has been imposed to perform a 40 pct. cut in number of patient bed days and a similar cut in square meters when the new buildings are ready on a 6-8 year term. In 2011 a budget cut on approx. 80 bill. US dollars was executed, with no relaxation in KPI's to follow (e.g. numbers of treated outpatients, surgical services). These challenges are addressed in numerous ways. One being a prototype combining talent development and leadership innovation, called "NLO - New ways of Leadership and Organiz-

ing", indicating the intention is to create relational innovation rather than product innovation.

## NLO design

NLO (New ways of Leadership and Organizing) is combining talent development and leadership innovation and is the first of its kind in the region. It is a prototype aiming at fostering a pool of future managers at the hospital. NLO is based on an action learning philosophy, where the participants will learn how to deal with nonlinear project leadership as well as the social complexity that characterizes the modern health care system today with several interdependent partners serving different and sometimes opposing interests. The idea is to let the participants organize themselves in groups focusing on topics, defined by the NLO steering committee as important challenges to face in creating the new hospital. The topics are crystallized from several problem-oriented dialogues as; 1) New ways of collaboration within sectors, 2) New ways of collaboration across sectors, 3) Alternatives to hospitalization, 4) New relations between support functions (administration, technique, service) and the clinical practice. The groups will work to define their own innovation intentions, related to the challenges the hospital in particular and the health care sector in general is facing. In other words the participants are dealing with problems where neither the question nor the answer is described known at the project kick off. A critical beginning task is to explore the kind of questioning that is hoped to produce innovation and thereby transform the health care sector.

NLO is organised as a talent development and leadership innovation process, running in oneyear cycles. In the first year of 2011, 43 talents were chosen, primarily from the pool of front line managers and employees and from a diversity of professions in the hospital. Innovation processes like IDEO and Theory U inspire the design of NLO (Brown & Wyatt, 2010; Scharmer, 2008), see figure 1. The program contains a boot camp and three workshops in the first six months, helping the participants develop their capacity to explore contexts, stake-holders and real world challenges and possibilities related to the initial topics and to iterate from the more abstract topics to more specific intentions. The next six months another four workshops support the participants in creating and trying out small-scale prototypes. The aim is to develop the participant's capacity to experiment and create feedback to learn from experience. The participants use this feedback to generate new and better prototypes for further testing and eventually making recommendations for potential scaling up and implementation. Or put differently: The aim is to innovate the capacity to innovate.



#### Figure 1: NLO overview and design

## Let's meet the groups!

In the following section we will supply a short presentation of the seven NLO groups and their work. (For a deeper insight into the work process of the groups, see Appendix 1).

1. "The travelling innovation team". "How do we create alternatives to hospitalization, wanting to reduce the number of beds at the hospital?" The group realizes, that alternatives already exist, but that this knowledge isn't shared. They see how good ideas are killed by obstruction, hidden agendas and protection of identity. They want to support the process where ideas are born with process leadership competences to facilitate dialogues between professional colleagues. 2. "The triangle of dialogue": "If we are to reduce the number of beds at the hospital, we need to make sure, that the right patients enter the hospital. Why are the general practitioners referring patients to the hospital and how can we support him in keeping the patient? We also need to activate the resources of the patient and the patient's relatives in the process. The group creates a space for dialogue about needs and resources involving the perspectives of the hospital, the general practitioner and the patient.

3. "The complex patient" "Lack of coordination between specialities and departments result in fragmented treatment of the patient with several diagnosis and complicating life circumstances, leading to lower quality and prolonged hospitalization." We need to know who are the complex patients needing extraordinary coordination? A template with 3 level scores of co4. "Leadership networks" "The structuring of separate departments in the hospital creates a lack of flexibility for managers, who are responsible for patient journeys across departments and professions. Instead of creating new structures, expected to reveal other sorts of problems, the group creates leadership networks across boundaries in the

morbidity, social and lifestyle factors create an	hospital, where focus is on leadership and
overview and serves as the basis for cross-	visions, leaving operational management
professional dialogue and planning.	issues to the agenda of the formal meetings.
5. "Interaction between silos" The merger of	6. "Release the potential of the employees"
two hospitals into new buildings leaves some	We need employees to do more. This is typi-
specialities in several separate departments.	cally achieved by focusing on effectiveness.
This causes possibilities of specialization but	The group believes that the leaders should
creates competition in applying for equipment	motivate the employees, make them grow
and challenges the professional development in	and live their full potential, and through this
general. The group creates an easy to handle	create more. They work this philosophy into
copy and paste structure for creating relations	strategies for managers and employees and
and interaction between departments that usu-	they try to spot the promoters of social capi-
ally avoid collaboration and dialogue.	tal in everyday work.

## 7. "Ambassador of good research topics"

Research is challenged in a hospital with high demands on productivity and an agenda focusing on economics. Young medical students or doctors are having trouble getting into research. A lot of good research topics never reach a protocol due to the anarchistic culture of research that seems to be "survival of the fittest". The group tests a prototype supporting introvert researchers on a personal level with coaching sessions. At the same time they act as the ambassador of the good research topic, supporting the good idea with knowledge about funding etc.

These seven windows to the groups set the stage for the case, this paper is based on. In the following section we will describe the research methods used in conducting the case study.

#### A qualitative case study inspired by ethnographic methods.

The empirical data are derived from a large case study of the innovation processes in NLO, understood as "a field of practice" inspired by the work of Czarniawska (2007, p. 7). The eth-nographic technique of shadowing has been used to follow three levels of actors: 1) the theme "cross-", 2) the groups and 3) the ideas developed. The direct observation has been partly participatory, as two of the authors have been part of NLO as consultants, partly non-participatory as one of the authors is positioned as a researcher following NLO. The groups and the ideas move simultaneously in different places, and the shadowing and observation is supplemented with observant participation, where the participants and consultants from NLO are part of ethnographic group interviews aimed at achieving an account of the ideas generated in the groups and the simultaneous experience of the group dynamics.

The case study is spanning a period of 16 months, from September 2010 until January 2012, covering the months of developing the program and the 1 year cycle with boot camp activities and seven one-day workshops. There have been 15 meetings in the consultancy team to develop and evaluate the work. There have been five meetings in the NLO steering committee to set direction and to land NLO in the hospital. There has been shadowing of meetings in three of the innovation groups, chosen from their theme related to "cross". We have shadowed six prototype tests and lastly conducted eight interviews. The field notes have been extensive: 250 A4 pages. The notes have concerned activities in the group, especially ideas and prototypes, group dynamics, concepts of innovation, and researchers own feelings and perceptions. The observations have on occasions been mirrored back to the groups for negotiation and further reflections. This is supplemented by + 200 pages of transcriptions of interviews. The interview transcripts have been sent to the groups, and all quotes have been accepted.

From all these sources of data we have created seven narratives about the groups (see appendix 1). These narratives will be analysed according to Van de Vens' (1986) classical distinction between four challenges in the field of innovation: attention, process, structure and context. The challenge of attention addresses in our case study in particular the framing of the product of innovation. The challenges of process and structure are entry points to analyse the design and practice of innovation. Finally the challenge of context is in this case addressed through the understanding of the hospital as an organization with a non-failure culture. In sum the seven narratives will be analysed according to the following three questions concerning the product, process and culture of innovation.

#### **Analytical framework**

The field of innovation holds a complexity that leaves only little hope for finding or developing a general and coherent theoretical framework. We have chosen a narrative approach to condensate the empirical data. These narratives are re-told in a kaleidoscope of theoretical perspectives, accepting "reality" as dependent on perspectives, often revealing paradoxical fragments. The framing of the product of innovation is retold with concepts of public and radical innovation, the process of innovation is retold with concepts from complexity theory and the culture of innovation is retold with concepts from Theory U.

#### The product of innovation - Lessons learned from ambitions of radical innovation.

In this section we will from the empirical data create two narratives about how the product of innovation is being framed and from a theoretical perspective discuss the implications of this framing. The first story "New to the world or new in a local context" is analyzed with con-

cepts of innovation, especially in the public sector. The second story "What does innovation look like?" is analyzed with concepts from design thinking, especially prototyping. Finally we look at a common pattern in the two narratives, that we call "innovation inferiority".

## Are the ideas new to the world or new in a local context?

## Scene from top management, facilitators and regional agenda

The steering committee and the consultants are talking about creating a field of creativity for the participants of NLO with "the sky as the limit". Metaphorically speaking we should fly in the ideation phase, not limiting ourselves to what is known or possible. The term "radical innovation" is used to signal ambitions, demands of newness and wide frames, which should allow the participants to create wild ideas. "*This is a playground*"!

The regional innovation-lab has written a book with the appealing title "Next practise" positioning a field of radical new practise compared to the well known (and boring?) "Best practise" meaning doing bench marks, learning from others and so on. The philosophy is that best practise means that we will always be second to someone. When learning from others, they are ahead of us. This point of view seems to be widely acknowledged in NLO.

#### Scene from the talent groups

The participants get hundreds of ideas on how to create a better practise at the hospital concerning a wide range of areas of improvement. To mention some we pick up areas like:

- 1. A more thorough and collaborative visitation involving patient resources, general practitioners and the specialists from the hospital (The triangle of dialogue)
- 2. Systematized collaboration between departments when patients have more than one diagnosis and complicating life circumstances (The complex patient)

- 3. The anarchistic excluding research culture of the hospital (Ambassador for the good research topic)
- 4. The spaces for reflections and talk about leadership in a busy clinical everyday practice where management in terms of specific accounts for production, efficiency, economy and quality rule (Leadership networks)

When it comes to creating ideas of what to do about these areas of improvement, numerous ideas are dismissed by the groups because "this is already being done elsewhere". The group working with "The complex patient" address challenges in coordinating across departments, seriously needed considering the complexity in treating the stroke patients, involving many areas of clinical specialization. During the exploration phase the group visits the rheumatologists, who face similar challenges concerning patients with back pain. After this visit, one of the doctors in the group announces: "Oh, the Centre of Pain is already working hard to coordinate between specialists. And they are not using a specific person in the role as a coordinator, as our initial idea was. They understand coordination as a work function to be handled! This is a great perspective – they are so far ahead of the rest of us. Then we shouldn't continue on that idea, looking at the some type of problems in the neurological department."

#### Concepts of innovation

Innovation seems to be a fuzzy concept often ill defined in theoretical work (Nauta & Kastbergen, 2009/10) Most of the researches do agree on the abstract level of understanding innovation defined as the value-adding implementation of ideas. (Hartley, 2005) When we are not talking about technological innovation of new products, we could call innovation "*a new practice*." (Moore & Hartley, 2008)

This question about new to the world or new in a local context is important to address when we talk about innovation in the public sector. Hartley talks about radical innovation as "snob innovation" meaning that the idea of radical innovation implies that we think of ourselves as the ones who will get these world-shaking ideas. It's not going to happen, she says. Actually diffusion and the spreading of ideas is the most important difference between innovation in the public sector and innovation in the private sector. The public sector needs to learn from other organizations, to reinvent and adapt ideas to a local context. Inventing implies risk, which is difficult to handle in a non-failure culture, in taxpayer-funded politically lead system, characterized by the law of transparency. This could leave the impression that public innovation is not about adopting and scaling up, but about dynamically adapting innovations to a local context.

#### Lesson learned from the tensions created by the ambition of radical innovation

Framing of innovation as radical actually seems to kill ideas! The point is, that ideas that might not be new to the world, would still be of great importance in creating new practices at the hospital. We often call the challenges of learning across contexts "the not invented here syndrome". This might sometimes be the case, but this narrative tells a different story: A story about learning from others being perceived as non-innovative.

With this learning in mind, let's move to the second narrative about the framing of innovation. This narrative is called "What does innovation look like?" and is analysed with concepts from design thinking.

## What does innovation look like?

## Scene from the groups:

There seem to be two types of activities in NLO. One type involves talking, knowledge (readings, lectures) and ideas. The other is characterized by action (observation, interviews, prototype testing). There seem to be reluctance in the groups to enter the action and prototyping type of activity. What's interesting is, that once in this action mode, the groups express: *"This is where we find energy, deep learning about what to do and what not to do. Here we find the stories that touch us, that convince us of the value of the idea"*.

The participants experience a drop in ambition when they are asked by the consultants to move from the idea-development phase to the action oriented phase of testing small prototypes to learn, improve and scale up in experiments at the hospital. "*Suddenly it is not about being innovative, it's about testing whatever*" as one of the participants claim. This creates a tension between "feeling innovative" when talking about ideas at the group meetings and workshops and the "feeling insecure and unsafe" in experimenting and prototype testing in the everyday practise of the hospital. "*We are disturbing the busy clinicians*" or "*the clinicians won't understand our idea*" are common expressions we hear.

Here we shift our perspective to an analysis of this tendency to "stay in the mind" with concepts from design thinking.

## Inspiration, ideation and implementation

The idea from design thinking (Brown & Wyatt, 2010; www.ideo.com) that innovation is more about doing than trying to figure things out is very dominant. From this perspective we find three types of processes in innovation: inspiration, ideation and implementation. In the inspiration processes the groups work to get "the most fantastic idea" to meet some of the big and complex challenges in the hospital. They explore the world for inspiration and ideas, e.g. other organizations, different sectors, and a multiplicity of professions. In this exploration they use creative tools to observe and think of the challenges in different ways. They do interviews, observation, dialogue meetings and questionnaires. They are brain storming inspired by all these input, and the amount of ideas to create a better hospital is massive.

A central theme in the implementation phase is prototype testing. Prototyping is "quick, cheap and dirty" and "fail fast forward" (Brown & Wyatt, 2010). Challenges are so complex that we have no chance of thinking and analyzing our way to the best solution. The point being, that if we did spend a lot of time on theorizing on a solution and then implementing it, we would in most cases fail large scale, meaning waste of massive amounts of resources that could have been used on curing patients. Instead we should have a clear picture of the problem, we are facing and we should have a clear picture of our intention; what is the desired outcome? From there we should begin to try out on a really small scale, where we have the possibility to learn about what is not working, what to do more of etc. The goal of doing prototyping and experiments is not to succeed, but to fail and learn from the feedback. The innovation process becomes a learning process.

This part of the process is challenging for the groups. The group "Interaction between silos" is concerned about the fact that radiologists in the future hospital will continue to work in three separate departments, related to brain surgery, to specific PET/CT scans and to the general field of medicine and surgery. This structure supports hyper-specialization, but is challenging when resources are scarce and all three departments are applying for founding aiming

at buying the same type of expensive equipment. The group succeeds in creating a meeting between the three departments where they have a dialogue on common goals, resources and competence development ideas.

Another group, "The travelling innovation team", has the idea of involving employees in the process of generating ideas on how to close 9 beds in the heart surgery department. This could just be seen as an example of user-driven, open innovation (Von Hippel, 1986) but to these specific doctors and nurses, we see a tremendous shift from fighting the management and the decisions of reduction of capacity to co-creating and taking responsibility for the effectiveness and rationality of the work processes. The employees produce 200 workable and implement-able ideas in just one hour. Probably making it unnecessary to fire employees to save money!

## Lesson learned about what innovation looks like

The trying out of small-scale experiments (the prototype tests) like bringing three departments together for a facilitated dialogue does not look innovative and even less radical. The power of dialogue and relations in successful collaborations is as old as history itself - but in the concrete local settings, the dialogue meetings change a scene of closure, fighting and competition to a scene of mutual understanding. We end this section about the product of innovation by addressing a common theme to the narratives presented, namely feelings of inferiority.

## Innovation inferiority

When we look at the two narratives, we see an underlying paradox. The aim of creating radically new ways of organizing and leading the hospital is at the same time setting an ambitious context for the groups and creating feelings of inferiority. We listen to many participants ex-

pressing "*Is this idea innovative enough*?" Or "*I am very proud that I was chosen as a talent for NLO, but I am afraid of not being innovative enough*". We pick up competition between groups of being the more innovative one. Groups that do not like to spare with each other on their projects because they feel slow, behind and uncreative when listening to other groups and their stories of progress. They talk about winning and about having ones project chosen for next years work of scaling up and implementing.

We know from research (Hartley, 2005), that people have positive emotions towards the word "innovation" and at the same time negative emotions towards the word "change". These positive emotions are contrasted by the fact, that we see how the ambition of radical innovation is literally killing ideas and dismissing the potential of small-scale experiments. We now move from the lessons learned about the product of innovation and the tensions created by ambitions of radical innovation in a public context to the second category of narratives, addressing the process of innovation.

# The process of innovation: Lessons learned about how linear and non-linear thinking affects the process of innovation.

In this section we will from the empirical data create two narratives about how innovation is being designed, primarily by introducing non-linear work processes. From a theoretical point of view we will discuss how linear and non-linear thinking affects the process of innovation. In the first narrative "Knowing and not-knowing as complementary competences" we will explore how the role of the consultants is challenged in designing NLO. We will analyse these challenges with concepts from complexity theory. The second narrative "From innovative talents to leaders of innovation" unfolds how participants are challenged in understanding

their role in the innovation processes. We will use the concept of collective inquiry to understand how this affects the outcome of the processes. Concluding this section we will reflect upon a common theme in the narratives on dynamics between linear and non-linear thinking.

## "Knowing and not-knowing as complementary competences"

## Scene from the consultancy team

The consultants meet their first challenge when they are handed the assignment from the steering committee to organise and design NLO. The intent of the steering committee is to let talents from the organisation explore some of the most challenging problems the organisation is facing today and most likely in the near future and use this as an 'action learning platform' for developing the next generation of managers. The hope is that talents will be able to experiment with new ways of leading and organizing within and across the health care sector and to create some of the answers for the future hospital.

The consultancy team is challenged by the task: "*How are we going to design a process that will develop leaders into approaching complex problems that we don't know the right questions to?*" The consultants decide that the design of NLO is an innovation in its own right. In the early part of NLO, at the boot camp, a variety of non-linear work processes is introduced which creates a high level of engagement and energy among participants. For many it is a new way of relating to each other and to co-create ideas in groups without judging them in the usual way of critical rational analysis. At the same time a need for grasping the essence of what they are about to achieve materialise in how the participants approach the consultants. Some begin to ask for directions: "*When will we be a success*?" or "*What is expected from us now*?" illustrating how the participants perceive the consultants as experts of the outcome. As a parallel process to these dynamics among the participants, the consultants are trying to 'figure it all out'. They are under pressure from both the steering committee and the participants to have an answer (as if there is one right way to design NLO). The challenges continue as the consultancy team moves into the design phase. How can they design a common process for all the groups and create progress in NLO as a whole and at the same time support each group in their work at a given time? Here the story ends and we shift to a theoretical discussion about what could be at play.

## Complex challenges represent' Wicked' problems

How do we understand this tension between wanting to know where we are going and at the same time acknowledge not-knowing as a competence? One perspective on this question concerns the complexity of the challenges. When we meet complex challenges defined by having no well-proven solutions, an important element of grasping the complex part of it, is not about the challenge in itself, but about the people looking at the challenge. The complex challenge evokes contradicting or even opposing needs. According to Conklin's definition of complex or 'wicked' problems, the social factors represent a force of fragmentation. "The 'problem' depends on who you ask. Different stakeholders have different views and the more parties involved in a collaboration, the more socially complex" (Conklin, 2005, p. 7). The consultants meet this complexity in the variety of reactions from the participants to the design of NLO. Some show a high level of interest and accept a relatively loose structure with no predefined agenda. These participants seem to adapt quite well to the non-linear way of thinking that constitutes the early phase of the innovation NLO. They experiment with this "new mindset" to approach problems. Others get quite frustrated and provoked by the design, illustrated by the fact that seven participants leave NLO within the first three months.

The tension between knowing and not knowing leads to an understanding of the design and the intent of NLO as a paradoxical intervention in its own right. Stacey (1999) argues that there seems to be a tendency in mainstream thinking of organisation to try to eliminate paradoxes, because paradoxes distort an objective view of the world. They confuse the idea of being able to plan and control as a linear process of causes and effects. In other words, if you are a strong believer in planning and control, there are plenty of reasons and good arguments for a linear mindset to approach problems, even complex problems. But Conklin emphasises that linear processes are not effective in dealing with wicked problems (Conklin, 2005), and as NLO unfolds during 2011, a linear way of thinking turns out to be both socially and practically inadequate in dealing with the complex challenges in the future Health Care system.

## Lesson learned about knowing and not knowing as a competence.

Linear thinking and linear ways to approach problems are dominant in organisations today and has brought us far. However, this mindset is not suitable alone to deal with the complex challenges we face, and therefore we need to learn how to combine both linear and non-linear processes that will help us address the complexity of these challenges. Another lesson learned is what role the social complexity plays in the way we learn to deal with wicked problems. This has a specific significance when we are trying to handle the challenges in the health care sector with many parties serving different needs and interests.

With this learning in mind, let's move to the second narrative about the process of innovation. This narrative is called "From innovation talents to leaders of innovation" and is analysed with the concept of collective inquiry.

#### From 'innovative talents' to 'leaders of innovation'

It is evident; there are elements in leading innovation that challenges the traditional mind-set, which is predominant in many organisations and also in the health care sector, as we see in NLO. We will now take a deeper look at how this challenge unfolds in the groups. At first, several participants are preoccupied with getting "the best idea" to address the issue at hand. The question here is what other roles than being the "innovative talents", the participants could take in the innovation processes?

## Scene from the groups

The group "Interaction between silos" gets preoccupied with figuring out what they are supposed to be doing when they are doing innovation processes. When they involve people from the organisation, they struggle to understand if they are 'just having a dialogue' or if they are actually doing experiments. In the processes of involving three departments of radiologists, they see themselves, as "*we are innovation talents from NLO*" but later on, this changes to: "*We are practising leading and facilitating innovation*". However, it is not only the NLO group that changes perception of their role. In the creative work in this prototype testing, the radiologists from the three departments also reach a new platform for their conversation. It seems as if the initial competition between departments and mistrust is replaced by an open and more pragmatic dialogue, where the radiologists end up co-creating new practical ways to move forward. One mentions; "*it pays off when you give away your sovereignty*" and another; "*It is not possible for anyone to sit down and figure it all out*".

Another group, "the triangle of dialogue" is set to form a prototype involving three sectors, the patient, the general practitioner and the hospital staff. In this inquiry, the involved parties

share their understanding of roles and responsibilities and explore what other potential resources each could bring into the work towards the common goal; coherent patient journeys with a minimum of hospitalization. They realize that the representation of all sectors 'in one room' makes this happens. If the patient, represented by a patient advocate, had not been part of the setting in the room, the hospital staff and the general practitioner might have had another dialogue. Here they genuinely explore potential resources in all three sectors, and new understanding emerges from the open dialogue with the general practitioner, the hospital staff and the patient advocate. How can we understand, what happens, that makes them realize this? Let's shift to a theoretical discussion of what could be at play here.

## Prototyping collective inquiry

Isaacs talks about the ability of inquiry collectively, and about the capacity to sustain respect for the different perspectives that arise, long enough to inquire into them (Isaacs, 1999). Approached this way, it can be agued that these examples demonstrate an act of collective inquiry where no one have it all figured out or have all the answers. They discover that there is a larger meaning unfolding through their conversation – something that goes beyond what they might have imagined and constructed for themselves. According to Isaacs; "people do not simply stand on their position, people are reflective about what they are doing and the impact they are having" (Isaacs, 1999, p. 272). But what can be said about the role of the NLO group? In both case stories, the NLO take the role as initiators on a common challenge faced by several parties and they invite them to join a shared exploration in a designed prototype testing. As such they act as leaders taking an initiative – and somehow they become a catalyst for the learning process, best demonstrated as the radiologists later on are able to continue the dialogues themselves.

Facilitation of collective and participatory inquiry in innovation provides opportunities for mutual investment and participation from all stakeholders. The involved parties realize they face mutual challenges and they experience the benefit of recognising it as a way to move forward. This recognition represent a mindset that moves away from fragmentation, represented by 'silos' and sector thinking, as the ideal way of organising, towards a mindset where we understand that only by bringing our different and contradicting perspectives together will we be able to meet complex challenges successfully. One way to achieve this mindset is to acknowledge the benefit of collective or participatory processes where we involve other parties in the exploration of "the bigger picture" they all take part in. To support this Bohm argues, that literal thought tends to fragment, while participatory thought tends to bring things together (Bohm, 1996), which underlines the importance of initiating and facilitating collective inquiry as a key element towards becoming leaders of innovation.

#### Lesson learned on the role as leaders of innovation.

We now understand that being able to lead and facilitate non-linear as well as linear processes as a way to involve people in a collective exploration of their common challenges might be an important element of becoming leaders of innovation. We conclude this section about the process of innovation by addressing a common theme to the narratives presented, namely the constructive dynamic between linear and non-linear thinking.

## Dynamics between linear and non-linear thinking

The narratives on the process of innovation imply that we are not looking for simple management techniques. We are looking for the social activity of co-creating coherence and shared understanding of our common challenges in the health care sector and how we might approach wicked problems. In all the narratives we notice a common theme of the non-linear thinking being branded as the innovative path and still some of the groups tend to get stuck in the ideation phase. They keep on struggling to get it right, using non-linear processes. We will in this section contrast this by showing how the capability to move freely between linear and non-linear processes is supporting innovation.

At first the group "the complex patient" is preoccupied with the challenges of coordinating the patient journeys. They pursue the idea of hiring a person as a coordinator to do the job. They visit a department known for their ability to coordinate patient flow and realize that they perceive coordination as a 'function'. Successful coordination doesn't happen because of one person's ability and responsibility to coordinate. Coordination happens during effective crosssector conferences with a strong commitment from professionals representing diverse areas. They meet the top management to discuss this idea about coordination with a specific focus on the complex patient with several diagnosis and complicating life circumstances. This meeting ends with one power full question: 'What characterises a complex patient?' From this question the group creates a tool that visualizes an overview of a patient's general condition on three parameters: co-morbidity, social and lifestyle factors. They enthusiastically test the tool in two departments and involve stakeholders from other sectors to refine the tool and do another prototype testing. They get mixed reactions. Some doctors' express; "there is nothing new in this, because the online patient journal already contains this information". Others express: "this is helpful, because it gathers all we know about what makes a certain patient complex in one simple page that makes cross sector dialogue about the patient much easier."

The group succeeds in creating something very simple and linear in its form (the tool to categorize the complex patient), and at the same time they combine linear and non-linear work processes. They involve different parties, extract learning and refine prototypes and this seems to create a high level of engagement within the group and momentum in the innovation with the different parties they involve in the organisation.

## Summing up

We have found that innovation processes reveal paradoxes emotions about knowing and not knowing. We have also found how leaders take different roles in innovation and how linear and non-linear ways of thinking should be seen as complimentary mindsets rather than separate ones, when we design innovation. We now move from these lessons learned about the process of innovation to the third category of narratives, addressing the culture of innovation.

#### The culture of innovation: Lessons learned when prototyping meets non-failure culture.

In this section we will from the empirical data create two narratives about how prototype tests are carried out and from a theoretical perspective discuss clashes between the experimental "trial and error" approach (prototype testing) and the evidence-based non-failure culture. The first story is called "Struggling with our own mindset". The second story is called "Frustrations and learning". Both are analyzed with concepts of prototype testing from Scharmer (2008). Finally we look for at a common pattern in the two narratives.

## Struggling with our own mindset

## Scenes from the groups:

The group "Release the potential of the employees" takes off with an intention to innovate the

overall performance of the service functions of the hospital (transportation, cleaning, logistics, laundry service etc.). Their idea changes during lots of talks with leaders across the organization. The group discusses several theories, approaches and hypothesis about improving performance (e.g. social capital, diversity as a core value, the hospital mission and strategy, change management concepts, service concepts from large private companies etc.). Their theoretical and conceptual knowledge expands dramatically. When the group is urged by NLO to do prototype testing they do interviews, seeking more and better data and documentation and ends up with lots of data, analyses and new insights. The challenge remains how to convert this to meet the real challenges in the service functions of the hospital.

The group "Leadership networks" has a hard time forming their mission. The group wants to find a solution to inflexible structures, forcing operational managers to manage their own area of responsibility but almost never across the organization. The group is trying hard to form a conceptual solution but every time the group members talk to third parties about their problem, the focus changes. Two of six members leave the program during the first months. A defining moment occurs when the group is asked to form their first prototype in play dough, Lego and other materials. They realise that they should experiment with leaders (in their table model played by Legos) physically crossing the "boundaries" (string and play dough) meeting in small networks or pairs. Managers from the hospitals are now pointed out to meet each other with no other agenda than to cross boundaries and to search for possible win-win solutions together. Here the story ends and we shift to a theoretical discussion.

#### Balancing the head, heart and hands.

Theory U advises us to look at the pitfalls in prototyping and scaling for implementation.

Scharmer (2008, p.421) identifies three types of pitfalls, called execution without improvising and mindfulness (blind actionism), endless reflection without will to act (analysis paralysis) and talking, talking without a connection to source and action (blah-blah-blah). The challenge is to balance head, heart and hands and not to end up in a one-sided mode of operating. The common pattern in the two groups is a dedicated search for the right conceptual idea and an ongoing search for information and new perspectives. They both seem to be uncomfortable leaving analyses with no conclusion to go experimenting. They do a lot of talking and sometimes maybe lost their connection to source and action. But most significantly the pitfall "analysis paralysis" is relevant. The two groups described do lots of reflection and find it hard to move into acting. Our findings indicate that the obstacles for prototype testing seem to be set up by the groups themselves even before they go testing in the organization. It is not from the established system the primary obstacles are constructed. The professional "upbringing" which implies an understanding of the concept "knowledge" as a phenomenon gained by thinking, data collecting and analysing (Rorty, 1979) is even stronger than anticipated. As Scharmer (2008, p.422) puts it: "Creating powerful breakthrough ideas requires learning to access the intelligence of the heart and hand - not only the intelligence of the head. The rational mind is usually the last participant on the scene."

## Lesson learned about struggling with own mind-set

The intellectual heritage in the health care professional culture is challenging the talents when trying to innovate. The "unlearning" process is thus critical for effective innovation processes. One way of overcoming the mind-set of analysis seems to be forcing the groups into fast and rough prototyping.

With this in mind we will move to the second narrative about the culture of innovation. This narrative is called "Frustration and learning" and is analysed with concepts from Theory U.

## Frustrations and learning

## Scenes from the groups:

The group "The triangle of dialogue" is interested in the collaboration between the general practitioners and the hospital. The first prototype is tested in a local clinic involving general practitioners and patients. A lot of ideas are fostered and the general practitioners are highly engaged but the patients' resources seem difficult to activate. This feels like a great defeat for the group because they have a strong belief in the innovative power of involving the patient. The group transforms their concept from engaging the patients directly in the dialogue to the idea of a patient advocate. Here the group regains momentum. They engage an ethnographer who is asked to follow and interview patients at a dermatologist department. Later a new triangle of dialogue is made but this time the ethnographer participates as "the patients advocate". The prototype brings the outcome wished for. The life experiences of the patients are incorporated in the discussions and the participants are moved from their initial point of views. Retrospectively the group is excited about their learning process but they also ask: "why did we feel so knocked out by the first test failing to involve the patients? Why did we take weeks to re-gain momentum?"

The members of the group "Interaction between silos" go on for a long period of time discussing how to define their idea called the "competent environment". To refine their understanding they arrange a dialogue setting, where staff from three radiological departments meet, to discuss the idea as it could take shape in their context. The group talks about the setting as a

*"meeting set up to investigate the needs and create ideas to solutions"* but the information gathered and ideas created do not accelerate the process as hoped. After several weeks of frustration they realize that what they had done maybe in fact was more than gathering data. The dialogue setting with departments was actually a prototype of a "competent environment". At the setting they actually were training a possible future practice with real owners to their problem. What they did was a prototype test. They just did not realize that until later! Here the story ends and we shift to a theoretical discussion.

## Prototype testing

Theory U is amongst others inspired by the work of IDEO in developing the idea of prototype testing in a social context. The philosophy is that prototypes are experiential micro versions of the changes that we want to make. Prototyping means to present your idea or work in progress before it is fully developed. The purpose of prototyping is to generate feedback from all stakeholders in order to refine the idea. The goal is to explore and learn rather than analyze. Scharmer (2008, p. 420) shares seven important R-rules of thumb when selecting ideas for prototyping. 1) Is it relevant? 2) Is it revolutionary (new)? 3) Is it rapid? 4) Is it rough (small scale)? 5) Is it right (focus)? 6) Is it relationally effective (viral)? And 7) is it replicable (scaling potential)? Both stories shared about the prototype tests show several of these characteristics, and seem to serve as a driver in the development of these groups intentions of innovation. We believe the learning processes of these two groups can be understood as examples of the prototype testing approach. But we do notice that in spite of this, both groups were highly frustrated during the testing phase.

The talents are in their clinical research and work familiar to an approach of testing a possible solution against a placebo or even a competitor. But when an experiment shows that it is not just the solution but the whole thinking about the problem that is wrong the talents are both confused and frustrated. How can we understand this frustration? Well, when your problem thinking abilities are dumped by real life experiments your intellectual skills are somehow exposed as being inadequate. Getting your intellectual skills exposed, as being inadequate in the daily life at the hospital would properly be one of the worst things that could happen to your career opportunities as a health care professional. Thus one perspective on understanding the frustration is that the experimental approach puts the talents in situations basically be related to fear.

## Lesson learned on frustrations and learning

The "Learning by testing" approach works as intended for the groups, but it nevertheless makes them very frustrated. We understand this frustration as a key point in the learning process, not to be avoided. Rule of thump number 8 for testing prototypes might be 8) is it emotionally rough on us?

#### Summing up

In this section we have created two narratives about how prototypes tests are carried out and from a theoretical perspective discussed clashes between the experimenting "trial and error" approach and the evidence-based non-failure culture. The first story called "Struggling with our own mindset" showed how cultural obstacles for prototype testing can be set up by the groups themselves. The intellectual disciplines of thinking, data collecting and analyzing must at some point be left behind in order to do prototype testing. This is not always easy. The

second story called "Frustrations and learning" showed that when the analysis is left behind the prototype tests bring new and critical learning to the groups. The non-failure culture is not preventing the prototype testing approach from working. But it seems that the road is bumpy and the price is frustration.

#### **Final perspectives on lessons learned**

Throughout NLO a number of lessons have been learned about the ambition to 'innovate the capacity to innovate' and the kind of tensions that arise in the three overlapping categories: the product, the process and the culture of innovation.

Considering the product of innovation, we now understand that the ambition of radical innovation seduces us to think of ourselves as the ones who will get world-shaking ideas. Changes are that ideas, not new to the world, but new in the local context, would still be of great importance in creating new and better practices in the health care system.

We also understand, that the challenges we are facing are so complex that we have no chance of thinking and analyzing our way to the best solution. If we did spend a lot of time on theorizing, we would probably fail large scale. Instead we should have a clear picture of the problem and intention and from there we should learn from prototyping.

As for the process of innovation, we learned how innovation processes reveal paradoxical processes of knowing and not knowing, how social complexity plays a major role in innovation and how linear and non-linear ways of thinking should be seen as complimentary mindsets rather than separate ones, when we design innovation. Taking this learning seriously, our participants will become leaders of innovation, more than innovative talents. Finally we learned to acknowledge the potential of participatory, collective inquiry as a way to lead and

involve multiple parties in how they can explore "the bigger picture" in our common challenges, and we understand how this might be an important competence for the future leaders of the hospital.

The culture of innovation provokes the culture in the hospital. We learned how prototype testing is an important element in the capacity to innovate, but also how the mindset of the participants becomes an obstacle for themselves. They are trained in thinking and analysing, which are competences that they need to pause in order to do proper prototype testing. This does not only rely on the rational mind, but also the heart and the hands.

Finally we learned that as innovation processes unfold the level of frustrations tend to increase as an important but challenging part of the process. Being involved in innovation challenges the capacity of not-knowing, because the longer we hold ourselves in the position of not-knowing, the longer we allow ourselves to stay alert and open-minded to whatever an experiment might bring us. This is challenging the talents, because in their very professional context they normally are operating in, not-knowing is not a competence – quite the opposite.

The stories from NLO have taught us, how the participants are mending the structures; they maneuverer in the structures instead of suggesting new structures, they create new formal and informal contacts of collaboration. They create relations between leaders from different departments, between sectors, between different roles and positions, people who are not likely to meet and talk as things are working today. Most end up with small-scale projects, trying out creative processes of ideation on issues in the organization and with stakeholders to the organisation. As for the talents, they seem to succeed when they bring parties together and let

them socially inquire and co-create their own learning, leaving the talents not as innovators themselves but as leaders of innovation.

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## Appendix 1

## "The travelling innovation team"

The group finds a departure point in the Chief Nursing Officer announcing going from 1300 to 800 beds in the new hospital buildings in 5 years. They have moved from a reduction of hospital beds to alternatives to hospitalization, e.g. primary care, day hospitals and IT-medicine.

The negotiation of group focus ends in a remark, announced in frustration: "This isn't new at all. We know all this, so why doesn't it happen?" One example of this is picked up during their fieldwork where they realize that a certain heart treatment is done ambulant in one department, but takes a night stay at the other department. The group is puzzled – why this difference? The group talks about explanations concerning power, kings, obstruction, hidden agendas and identity.

After this melt down the group creates a new focus on how we support the process, where ideas are born? Examples are making policies and strategies, creating a forum for generation of ideas, formal involvement of employees in innovation and a team, that travels the hospital to facilitate dialogues. The ideas are challenge in a feedback session with a chief doctor, who says: "courses don't really change anything. We have heard about innovation in an academic sense, we have been in innovation groups, we have learned about theory U, we have been sitting in groups of 20 people, but nothing is happening. If we put our people together in the teams, they work in everyday for a dialogue – then something is happening!"

The group is addressing the lack of process leadership competences in the professional environment. They want to experiment with facilitation of fruit full dialogues and discussions at the hospital. The departure point is, that the resources and ideas are already there! What is

needed is structuring of the dialogue.

The group experiments with the concept in the "heart surgery department", where 9 beds are closing soon. What could have been a very negative and frustrating reality, turned into a creative dialogue producing 200 ideas on how to work smarter and radically different. The chief doctor takes the process further and later the innovation group is called back to facilitate the next steps.

#### The Triangle of dialogue

This group has an interest in the cooperation between sectors. They look into the quality of the initial patient contact with the hospital through her general practitioner as a means to reduce patients entering the hospital. They think of developing new templates to guide general practitioners through the right knowledge to the right decisions. During their fieldwork, they visit a large group of general practitioners, including a private clinic nearby. They conduct a meeting aimed at understanding the needs of the general practitioners, if he is to refrain from hospitalizing the patients. They are met with very different perspectives on tasks, roles and responsibilities and they learn how limited the collaboration between really sectors is. From the different perspectives, a number of questions and creative suggestions come up on how to create a genuine and responsible cooperation between the sectors. The group realize, that instead of their solution-oriented approach (creating a new template) this is about how we frame the problems so they don't just approach the lives within the four walls at the hospital. The group now wants to activate the patient in the dialogue as the third party. They involve general practitioners, doctors and nurses from the hospital and an ethnographer, who interview a number of patients to be able to take the patients perspective in the dialogue - as a patient advocate. The group facilitates a dialogue between the three parties, who share their in-

dividual needs and resources, and explore potential resources that could benefit the future treatments of patients. By this, they let the three parties investigate whether the traditional boundaries between sectors have created a culture, where the patient is seen as an object in the health system as in "the patient has a right to be served!" And they find that the patient has to be involved on even and resourceful terms.

## "The complex patient"

This group is concerned about how to establish better coordination across different departments at the hospital. Lack of coordination often results in poor treatment of patients, especially patients with complex diagnoses. Examples show that consequences are prolonged stays at the hospital, inaccurate diagnosis, numerous shifts between departments and unclear responsibility for patients.

At first they think of coordination as being done by a specific person. During their fieldwork they learn about cross-specialist conferences about complex patients. Coordination turns into an open professional analysis of the patient situation.

Meeting the Chief Nurse and Doctor Officers the group realize that there is no common picture of who the complex patient is. Realising this, the group get a new orientation on the coordination challenge and starts to look at the 'complex patient'. The group prototypes a template to gather information about the patient on three topics: co-morbidity, social and lifestyle factors. Nurses from the cancer and neurological department test the template on all patients for a number of days. It turns out that the different nurses evaluate the same patients quite equally on the three topics. The template doesn't bring new knowledge about the patient, but they feedback indicates, that it creates a shared picture of the complexity of the patient. The group also finds that the template can not be compared to the more detailed scientifically

based documentation in journals. The group suggests that this should be used for a professional dialogue among clinical staff representing different departments. The shared picture supports the dialogue, more than the usual detailed information and the clinicians are better able to define the best scenario for treatment and recovery.

The template can be used in the collaboration between hospitals in handling over patient and between hospital and patient as a mean for communicating what the patient and relatives need to pay attention to in order to avoid re-hospitalization and quicker recovery in general. The group suggest further experiments in cross-functional time-out conferences, to test whether the use of template will actually accelerate the cross coordination to the benefit of a better flow around treatment of complex patients.

## "Leadership Networks"

The group sees how their ability to take the leadership actions needed to support global performance at the hospital *across* sections and departments is significantly reduced by a lack of flexibility. The challenge also exists within departments where flexibility is harmed by rigid subdivided groups of professionals each with a manager, even though they share the same patients. The group wants to find new ways of enabling managers to lead across "turfs".

The group sees the formal structures of the hospital as the explanation and the key in solving the flexibility-problem. They try to form alternative formal organizations. But during their fieldwork they understand that new structures would create new turf related problems. Leaving the new structures, the group sees a chance to change the agendas of the formal management meetings. Maybe the management teams shouldn't always talk about the operational tasks related to running the department? Maybe they should also talk about leadership and

vision? A defining moment occurs when the group is asked to form their first prototype in play dough, LEGO and other materials. The group realises that the focus on structures and formal agenda should be left behind. Instead they should search for potentials in getting leaders to physically *cross the "boundaries"* meeting in small networks or pairs, visiting each others turfs. Managers from the hospitals are now appointed to meet each other with no other agenda than to meet and search for possible win-win solutions to not yet recognized common problems.

#### "Interaction between silos"

The group wants to create space at the hospital where equipment and employees are shared resources. The idea changes from the concrete sharing of e.g. CT scans to a focus of the culture and interaction between the different elements of the patient journey. They realize that this group of six people might not be the only ones out of the 9.000 people with great ideas. This leads them to talk about an environment for ideas. Maybe the hospital could benefit from a task force that can communicate the good ideas? A place where you can take your idea and where people with ideas will be able to share and connect. Then again, maybe the important part is not a central unit holding the ideas, but all the local initiatives?

All the ideas they come up with are seen before, and labelled non innovative. They leave the ideas and move on. The group experiences many frustrations and crisis, e.g. related to own and consultants ambitions of coming up with this idea never seen before and the shift from opening up to becoming concrete, which they see as opposite to ambitious. Suddenly it's the practice of doing experiments that's important.

All along the groups is working with three similar departments that will be kept apart in the new hospital but having to collaborate and coordinate. They test a process design for dia-

logue to explore the need for interaction between the three departments. The idea is to create environments locally, where the need is and where ideas develop. Focus is on the relations between human being and silos. They have made a manuscript, that is easy to copy and paste for other areas with silos. They help the work get started, but the goal is to make it running on its own using a minimum of consultancy assistance. "The paradox is, that we have become consultants, but in a new sense of the word."

#### "Release the potential of the employees"

The group is working with employees as the primary focus, this creating quality form the patients in the end. Talking about social capital and so frustrates them and, stuff people have talked about for decades. It is not new to the world at all. But why is it, when we know all this, that we don't do it? This inspires them to try to understand the motivating mechanisms in a local context.

They move from creating new concepts for service to developing new ways of thinking about what is important to make people grow. They see communication and leadership as means to motivate employees thereby working more, which is seen as a different path to follow than cut downs and focus on efficiency. They look for what motivates people in their fieldwork. One example is how they learn that when giving the cleaning assistants more responsibility, they start creating better conditions for the cancer patients, when food is served. They instruct appointed employees to look for "diamonds", meaning situations creating collaboration, transparency and trust. The ways to motivate are then described in politics, leadership strategies, but also in terms of the employees' responsibilities.

Concerning cleaning and transportation the concepts from the two merging hospitals are discussed in terms of which one to choose. They learn that the concept is not decisive. Both hos-

pitals get cleaned and patients are transported. What matters is, that the employees feel connected to a department and that they have good relations. The group is disappointed that they cannot recommend one concept over the other. But they learn that their stories can be used to fight prejudice, like employees from the private cleaning company being robots doing the cleaning. They are actually nice people, drinking coffee with the clinical colleagues. When the group experiences, that the hospital starts a formal process on choosing concept they get a feeling of living in a parallel world in NLO with no connection or demand from the "real" organization.

## "Ambassador of good research topics."

This group addresses the challenge that research is so important for the university hospital on the one hand and on the other hand very few medicine students doing a year of research end up doing a PhD and very few PhDs end up in research. Research is something you do in your spare time, "con amore" but also because it has low priority in a busy clinical everyday practise. It is hard to involve non-researching colleagues in the research, them being stressed up doing their regular jobs.

In their fieldwork big private research driven companies inspires them. They brand themselves on research and know that stock prices dependent on research. The professional project management these companies use to drive research projects fascinates them.

Research management is one way to look at what is needed. How is research positioned in the management hierarchy?

The research culture is anarchistic, meaning it can be tough to cope as a young researcher. It feels like survival of the fittest when a young researcher has to kick in doors to senior professors on their own. How can we help these young researchers, who have difficulties in getting

into research? How can we help them to know about founding etc.?

But it is not only the young researcher who is struggling. Also the ideas are having a hard time to grow and settle in a project. This is where the idea of the ambassador for the good idea and the coach for the young researcher is born. The ambassador is a volunteer only driven by interest in coaching, not greed or money. The role is hard to define and is very dependent of the person. An educational course could provide the competences. The ambassador also has to stop bad ideas. In the private sector they take ideas seriously. They kill bad ideas and create good frames for the good ones. At the hospital, we let it continue, now that we got the money, and it just fades, nobody stops it. Who would dare to tell the professor, that his ideas are bad, as a student doing her research year? The project affects the pipeline into research and in time also the culture as a critical mass of people with different values will enter the system.