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The Role of Users in Innovation of the Public Sector

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Abstract

As an answer to present challenges the Danish government has recently announced that user-driven innovation shall be a driver for innovation in the public administration. This policy raises question like: Is it possible to transfer the concept of innovation to the public sector? How can we understand innovation in the public sector? And what is the role of the user in user-driven innovation? In this paper I answer the first two questions by drawing on theoretical literature. I conclude that it does make sense to transfer the concept of innovation to the public sector but due to the differences between the two sectors we have to re-define the concept in a way that it reflects the conditions for the public sector. The third question is answered by an empirical analysis of governmental documents describing the role of users in user-driven innovation. It turns out that the documents describe users in quite different ways and interpret their role in user-driven innovation as either active or passive. I conclude that this difference reflect that users of present public services have different roles and thus they can participate in user-driven innovation in many different ways.

Introduction

Most industrialized societies are at present facing rapidly changing challenges. Just to mention a few, most countries experience huge demographic changes in the form of a population that is growing older. This development lead to an increase in the number of older people who has a need for public services delivered within health and everyday care, while at the same time there is a decrease in the number of citizens in the working age. Another challenge is the citizens' expectations to public services. Due to the high tax level citizens expect to receive public services shaped for their need and of the best quality. At the same time new technologies opens for new services – e.g. in medicine and health care where new medical technologies make it possible to treat chronic diseases which former lead to an early dead. Not to mention the challenges of the financial crises, this set very rigid economic limitations for the delivery of public service. To overcome these challenges the Danish government point at innovation of the public services as a way out (Regeringen, 2007).

For many years the public sector has been accused for not being innovative. The hierarchy and lack of economic incentives was regarded as an obstacle, and in this way a contradiction, to innovation thus many efforts has been made to reform the public administration. The reforms of the resent decades – often labelled as New Public Management – have changed the conditions of the public administration (Rhodes, 1997). Mechanisms from the private sector are implemented in the public sector: e.g. quasi markets are introduced, competition among public institutions is encouraged, and partnerships among public and private partners are strongly recommended. The result of these changes is a public administration, which is depended on partners from the private sector and civil society in a network where policies are formulated and services delivered.

In classic innovation theory technology was pointed out as an important driver for innovation. This has also been the situation in the public administration. E.g. the introduction of ICT was used as a driver for innovation first in the “back-office” of the administration and later in the “front-office” regarding the interaction with the citizens (Jæger, 2003). However, the present challenges of the public sector make it necessary to innovate the public service delivery much further. In this light, the Danish government has recently announced that, among other things, user-driven innovation shall be a new driver for innovation in the public administration.

This policy raises some interesting research questions. The concept of innovation is developed to understand the mechanisms behind innovations in private forms, thus the first question is dealing with the possibility to transfer the concept of innovation to the public sector. Second, how can we understand innovation in a public sector based on network? Third, what is the role of the user in user-driven innovation within the public sector?

The first two questions are theoretical and I will answer them by drawing on theoretical literature concerning innovation as well as public administration. The third question is empirical. Since I have not yet any empirical results to draw on¹, I will go through the governmental documents and show how the role of the users is described.

Differences between the Sectors

While innovation within the private sector has been a subject of study for more than hundred years it is mainly within the last couple of years innovation within the public sector has been brought into focus. In this way, the concept of innovation is developed to understand changes in private firms and due to the differences between the two sectors it is not given that it is possible to transfer the concept to the public sector. Drawing on theoretical literature, I will discuss the possibility of transferring the concept to the public sector by comparing the public and the private sector. The comparison is made to inform the discussion about differences, thus it cannot be characterized as a full comparison between the two sectors.

It is of course a generalization to discuss the ‘Public Sector’ versus the ‘Private Sector’ as they were two homogeneous entities. There are huge differences within each sector spreading from small entrepreneurial enterprises with one or a few employees to global companies with a budget bigger than the GNP of a small country. Just like there are huge differences within the public sector spreading from small decentralized public institutions with a single task (e.g. a kindergarten) to big ministries with the responsibility of a whole field and with collaboration with a row of partners at the national as well as the international arena (e.g. the Ministry of Foreign Affairs). Thus the following section will discuss each sector at a general level. Another generalization is the point of departure in Western-style democracies with some kind of welfare state. It is not the purpose here to discuss different state models and their ability to innovate but to discuss the differences between public and private sectors.

¹ This paper is the first contribution to the research project: Collaborative Innovation in the Public Sector (CLIPS) which is funded of the Danish Strategic Research Council and running from summer 2009 to 2013. The CLIPS project will be carried out by a team of academic researchers from Roskilde University, Copenhagen Business School, University of Copenhagen, and Aalborg University in collaboration with non-academic partners from COK (Centre for Competence Building in the Public Sector), Dacapo (private consultancy firm specialized in theatre improvisation), DFH (the Danish School of Public Administration), FORA (research and analysis division under the Danish Ministry of Economy and Business) and FTF (Confederation of Trade Unions for Public Employees).

According to several authors (van Duivenboden & Thaens, 2008; Halvorsen et al., 2005; Kristensen, 2007) the two sectors pursue very different objectives. Where the private firms are striving to maximize the profit and enhance the position at the marked, the public organisations are engaged in implementing the policies outlined by the politicians aiming at increased welfare, democracy, and legitimacy.

The organizations within the two sectors are also dealing with fundamental different rationales. While the public sector organizations are based on the rationales of the legal state, the private sector organizations are based on the rationales of the economic marked. The different objectives and rationales result in different values. Where the private sector is driven by a “shareholder value” the public sector is driven by the “public interest” (IDeA Knowledge, 2005: 30), which include the equality of law, legitimacy, democracy, and a dignified treatment of the citizens (Kristensen, 2007: 16; van Duivenboden & Thaens, 2008: 218).

The two sectors also represent two very different types of governance. The public sector is governed by political and bureaucratic government in the first line, but in the end it is governed by the citizens who vote for the politicians at elections. The private sector is governed by CEOs in the first line, but in the end it is governed by the marked since the performance at the marked is decisive for the survival of the single firm.

The last difference between the two sectors, I will mention here, is the relation to the users of the two sectors. In the private sector the relation is mainly established through the purchase of the product/service. If the firm needs more specialized knowledge about the users/costumers it will be necessary to conduct surveys or other marketed analysis (Halvorsen et al., 2005: 27). The public sector has a much more complicated relationship with the user/citizens. Sometimes the relation can be ‘marked-like’ and the user can be characterized as a customer, but in other situations the relation is of a much more personal character, e.g. when the citizens is depended on the service and can be characterized as a client. In these cases the staff in the public sector has more or less direct access to knowledge about how the service is utilized and assessed of the citizen.

These differences constitute very different platforms for innovation. Where organizations within the private sector are more or less forced to innovate to grow or even survive at the marked, organizations within the public sector are solely motivated for innovations in their search for new solutions to existing or new problems. The two sectors also experience different barriers for innovation. Private firms mainly experience lack of knowledge about different marked conditions (e.g. the customer’s assessment of the product; new technological developments; or new sources of finance) as a barrier for innovation. However, public organisations suffer from organizational and cultural barriers for innovation (van Duivenboden & Thaens, 2008). The differences between the private and the public sector are listed in figure 1.

Figure 1: Differences between the two sectors

	Private Sector	Public Sector
Rationales	Rationales of the economic marked	Rationales of the legal state
Objectives	To maximize the profit and strengthen the position at the marked	Implementation of policies increasing welfare and democracy
Values	Shareholder value	Public interests

Governmental Issues	Governed by the market	Governed by the citizens
Relations with Users	Marked relation through purchase of the product	Both market-like as a customer and more dependent relations as a client
Motivation for Innovation	Growth and survive at the market	To find new solutions on existing and new problems
Barriers for Innovation	Lack of knowledge of important market conditions	Organizational and cultural barriers

This going through the general differences between the two sectors shows that the differences are significant, thus we have to handle the concept of innovation with care if we transfer it from the private to the public sector. Of course there is also a list of similarities between the two sectors, but the differences are of a character and a scale that makes it necessary to re-define the concept of innovation if we want to utilize it in the public sector. A similar conclusion is the result of a literature review of innovation in public services: "...the innovation activities of the private sector cannot simply be transferred to the public sector; however, lessons can still be learnt for and applied to the public sector" (IDeA Knowledge, 2005: 30).

Innovation in a Public Sector Based on Network

The answer to the first question (whether or not it is possible to transfer the concept of innovation to the public sector) brings us forward to the second question of how we can understand innovation in a public sector based on network. If we have to re-define the concept of innovation we have to start by defining the concept and look for elements we can apply in the study of public sector innovations.

The concept of innovation

Innovation theory is a well established field with a huge body of literature discussing many different aspects of innovation. The concept of innovation is usually linked to Schumpeter (1934) who takes his point of departure in private enterprises and uses the concept to describe economic development (Heertje, 2006). From Schumpeter's point of departure the concept of innovation has developed in many different directions (Dosi et al., 1988), and a huge body of literature takes up different aspects of innovation (Fagerberg et al, 2005).

Schumpeter defines innovation as *new combinations* of existing resources and he describes it as a comprehensive concept since new combinations "comprises a new product, a new method of production, the opening-up of a new market, the utilization of new raw materials and the reorganization of sectors of the economy." (Heertje, 2006: 5). This distinction between *the objects* of innovation is the origin of many succeeding distinctions in different categories of innovations like:

- Product or service innovations
- Technological innovations
- Process innovations
- Organizational innovations
- Conceptual innovations
- Institutional innovations (Bekkers et al., 2006: 11-12)
- Administrative innovations
- System innovations (Halvorsen, 2005: 5)
- Social innovations (Mumford, 2002)

Another distinction between different categories of innovations is by its *degree of radicalism*. In this way many scholars distinguish between: incremental innovations, radical innovations or even transformative or systemic innovations (Fagerberg, 2005: 7; IDeA Knowledge, 2005: 7), or if we are dealing with evolutionary or revolutionary innovations (Bekkers et al., 2006: 11).

Lately, yet another distinction is seen and this time the distinction is about *the source of the innovations*. This distinction gives categories like: user-driven innovation (von Hippel, 2002), staff-driven, research-driven, technology-driven, collaborative-driven innovations (RTI, 2008a), or problem-driven innovations (CLIPS, 2008). Innovation processes that draw on many sources are often described as open innovations in contrast to closed innovations taking place within the boundaries of a single organization. All these categories tell something about an innovation, but they are dealing with different features of the innovation.

To describe the driving force of innovation Schumpeter came up with the concept of entrepreneurship. In the first place he described the entrepreneur as a wild person, who were thinking in untraditional ways and coming up with creative ideas and combining existing knowledge and processes in new ways. This was maybe a sufficient understanding in the early capitalism but as the production and market became more and more complex the institutional setting for innovation became more and more important (Fagerberg, 2005: 10). In the mid 20th century processes of innovation became institutionalized in laboratories, research and developing departments in big companies, and universities. This development made Schumpeter change the concept of entrepreneurship and later in his career he described the entrepreneurs as big companies that own the resources to do research and development². In this setting the entrepreneur was not a single individual but a team of researcher and designers who collaborated and became a 'collective entrepreneur' (Edquist & Hommen, 1999: 74).

Schumpeter distinguishes sharply between invention (the discovery of new knowledge, new ideas, or new technology) and innovation (the application of inventions) (Heertje, 2006: 6). This distinction has given rise to a widespread interpretation of innovation as going on in a linear model, which is based on the assumption that innovation is applied science (Fagerberg, 2005: 8-9). In the simplest form the linear model consists of three phases: 1) Invention, where the scientist or engineer discovers new knowledge or gets a creative idea; 2) Innovation, where the entrepreneur(s) applies the new knowledge or idea, combines it with existing resources, and transforms it to a new product or technology; 3) Diffusion, where the product/technology is diffused to the society through the market (Hall, 2005: 478)³. According to this understanding innovation is generated by manufactures and the role of users is the role of costumers (von Hippel, 2002: 2).

However, this way of thinking has been widely criticized (Fagerberg, 2005). Within the STS-field (Science, Technology, and Society) the linear model, as well as the idea of distinct phases, is questioned (Pinch & Bijker, 1987; Williams et al., 2005; Oudshoorn & Pinch, 2003). Several historical case studies of technological development show that the development is far from a linear process and the split in phases can not be empirically documented. The case studies show that users often play an active role in getting a new technology to fit their needs (Cronberg, 1991; Bijker, 1995) and in this way there are still processes of innovation going on even in the stage of diffusion.

² These two definitions of entrepreneurs are sometimes called 'Schumpeter Mark I and II' (Fagerberg, 2005: 9-10).

³ See Pinch & Bijker (1987) for a richer description and criticism of models like this.

In some cases the user's needs even turned out to be radical different from what the manufacturer had expected. This is clearly documented in a historical case study which shows how American farmers a hundred years ago bought the first model of Ford T, drove it to their farm, took of the wheels, and used the engine to run several machines at the farm (Kline & Pinch, 1996). In this way, the historical case studies have made it clear that users must be understood as a relevant social group (Pinch & Bijker, 1987) in the process of developing a technology⁴. Due to this critique the linear model is rejected as a way to explain innovations, but the elements is still a part of the innovation process (Hall, 2005: 479). Every innovation consists of a new idea/a new combination of existing resources and the idea has to be applied somewhere and diffused to make a difference and to be called an innovation.

These findings are in line with the studies of sources of innovation of von Hippel (1988 & 2002). Based on a row of empirical case studies in different branches von Hippel concludes that "empirical studies of the sources of innovation in both industrial and consumer goods fields have shown that in many but not all of the fields studied, users rather than manufacturers are typically the initial developers of what later become commercially significant new products and processes." (von Hippel, 2002: 6). The case studies reveal that users of for instance sport equipment come up with new ideas of forming the equipment or ideas of new forms of usage of the equipment, which they share with other sport enthusiasts. This pattern is also found in the development of open source software, where users continue to develop the software. Some times the innovation is shared within a network of users and other times the innovative ideas are picked up by manufactures and used for production.

These case studies make it quite clear that the traditional understanding, which leaves out the users in the process of innovation, is not sufficient. Users are the first to know how a specific product or service works and they are often cable of coming up with new ideas of how to improve the usage of a product or service. Some times they just improve the 'thing' in their own setting and other times they raise their demand to the manufacture of the product. When these demands are taken up by the manufacture they serve as creative ideas in the process of innovation. In this understanding the role of the user is changed from a passive role as costumer into an active role where users either have specific demands for the product/service or they improve the product in a way that fit their own needs.

Along with this way of thinking another steam of criticism of the linear model has lead to the approach: Systems of Innovation (Edquist & McKelvey, 2000; Lundvall, 1992). This approach is based on evolutionary theories of economic growth, interactive learning theories, and institutional theories (Edquist, 2000). In this approach innovations are understood as based on a learning process where knowledge is shaped in an interaction between user and producer. The system also includes public agencies (e.g. universities who produce knowledge and build competences among students) and institutions, in the form of rules, norms and culture that set 'the rules of the game' (Edquist & Hommen, 1999; Edquist, 2005: 188). To define the system Edquist (2000: 10) refers to Christopher Freeman (1987: 1) who defined a national system of innovation as "...the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies". Edquist (2000: 10) also refers to Ludvall (1992: 12), who has a broader definition including: "...all parts and aspects of the economic structure and the institutional set-up

⁴ See Oudshoorn & Pinch (2003) for a comprehensive description of the discussion of users' role in technological development within the STS-field.

affecting learning as well as searching and exploring – the production system, the marketing system and the system of finance present themselves as subsystems in which learning takes place”.

Another approach within the field of innovation theory is dealing with the diffusion of innovations (Rogers, 1995; Hall, 2005). In the classic innovation theory the adaption of an innovation is understood as a passive role but several studies show that this is not the case. Many times implementation of an innovation in a new context leads to a learning processes, which result in incremental innovation in the adopting organization (Fagerberg, 2005: 8). In this way, Rogers (1995), among others, describes the process of diffusion as ‘re-inventing’ the innovation in the new context. He defines it like this: “‘Re-invention’ seems like an appropriate word to describe the degree to which an innovation is changed or modified by be user in the process of its adoption and implementation” (Rogers, 1995: 175). Hence, from an understanding where organisations were regarded as passive adopters of technology it became clear that they are actively re-inventing the technology when it is implemented in a new organisation.

The last approach within innovation theories, I will draw in here, is dealing with studies of innovation outside private companies and often called: Social Innovation. According to Mumford (2002) social innovation can be defined as “the generation and implementation of new ideas about how people should organize interpersonal activities or social interactions, to meet one or more common goals.” (Mumford, 2002: 253).

Social innovations are difficult to study because they “are typically diffuse events involving interactions among multiple parties over rather long periods.” (Mumford, 2002: 254). Beside this, the identification of a creative act is rather difficult when multiple actors are involved in the process. Due to these methodological problems studies of social innovation has focused on:

- Organizational conditions for creativity, concerning both contextual factor that influence idea generation and structural factors that influence acceptance and implementation of new ideas
- Leadership, concerning the creative problem solving of the leader of an organization
- Historical studies of eminent individuals, which point to the interaction between the individual and the social and historical context in which the innovation take place (Mumford, 2002: 254-255).

Studying the life and work of Benjamin Franklin in a specific social and historical context, Mumford concludes that social innovation is characterized by being based on experientially problem identification. Due to the importance of experience the creative ideas often occurs from individuals having unique patterns of experience. To get the creative idea accepted the innovator needs to persuade a rage of other actors involved in the problem solving. The implementation of the idea often involves “a willingness to rearrange or restructure existing social relationships” (Mumford, 2002: 264).

To sum up: From innovation theory we learn that innovation consist of some distinct features like new knowledge or creative ideas, entrepreneurs, institutional and organizational settings that support the emergence and implementation of innovation, including the importance of innovative policy and leadership. We also learn that while the classic innovation theory could be difficult to transfer to innovation in the public sector, new approaches can serve as an inspiration for the application of the concept of innovation in the public sector.

The above description also shows that the understanding of the user's role in innovation has changed over time. At the point of departure innovation theory did not reflect on the role of the user – the focus was on the entrepreneur in the company. Later on user's role was taken into account because analysis made it visible that user's demands can generate ideas to innovation in a learning process between user and producer and because users often re-invent the innovation. In this way, the understanding of the role of the user was change from a passive to an active role and given raise to the concept of user-driven innovation.

Innovation in the Public sector

Before we decide which approaches or concepts from the innovation theory that is applicable in the study of innovation in the public sector we have to take a look at the sector itself. The ideal of the hierarchical bureaucracy described by Weber (1920/1971) is still a widespread interpretation of the public sector. However, even though parts of this ideal type still remain, severe changes have transformed the public sector into a different organization. During the 1980s and 1990s most Western countries have experienced a profound modernization of their public sector. These changes were not labelled as innovation but called administrative reforms. The reforms varies greatly in character, depending on the administrative level, the cultural context just as they differ from country to country (Rhodes, 1999). There are, however, many traits that this development has in common (IDeA Knowledge, 2005: 3-4) and the general picture is that these reforms have had great impacts on the way the public services are preformed.

A big part of the reforms have since been collectively labelled New Public Management (NPM). According to Rhodes (1997), NPM can be said to involve two different types of initiatives, the first of which relates to the management itself. These initiatives include a focus on management by objectives, clear standards, and an evaluation of the quality of service, while at the same time granting greater attentiveness towards the users of the public services. The other type of initiative deals with the introduction of economic incentive structures. This involves the dissection of the public sector in demarcated services, contracting out some services, and other services are sought arranged in competitive-like situations by establishing quasi-markets in which the users of the services are provided with opportunity to select between different services.

These alterations have had some more or less unintended consequences – a fragmentation of the public administration (Bogason, 2001) and the emergence of policy networks around the provision of public services (Rhodes, 1997; Stoker, 1998; van Heffen et al., 2000). These policy networks draw new agents into the management and delivery of public services, including agents from the business community as well as from civil society. In this way, we now see private companies carrying out publicly-commissioned services. We also see civic groups in the local community; NGO's, sports clubs or interest organisations take over different tasks of more social and carrying kind, which were earlier defined as public⁵.

At the same time we see users of different public services engaged in policy making and the management of social institutions. E.g. parents to children in kindergartens and schools are elected for Parent's Boards and School Boards and hereby they take part in the policy making and the management of kindergartens and schools (Sørensen, 1998). Senior citizens are elected for Elderly Councils and in this way they participate in the making of local elderly policies (Jæger, 2004). Just

⁵ Here we have to be aware of different traditions in different countries but especially in the Scandinavian countries many of these tasks have been defined as public whereas in other Western countries the family and local community have played a much bigger part in taking care of these tasks.

like policy making in the field of complicated technological and scientific matters now are based on lay peoples opinion, which is revealed through methods like Citizens Panels, Consensus Conferences and Scenario Workshops (Andersen & Jæger, 1999).

All together, the result of the reforms is that all these agents are now engaged in relations with the public sector in collective, binding policy networks (Sørensen & Torfing, 2007). The development is often described in terms of the transformation of public sector regulation from government, understood as the hierarchical bureaucracy, to governance, understood as the organization of public policies in policy networks.

During this transformation of the public administration the relation between the state and the citizens has changed (Melander & Jørgensen, 1992). In the hierarchical bureaucracy the role of the individuals can be characterized as classic *citizens*, where the role is to elect politicians to represent them in the national parliament or local government. With the development of the welfare state the state take over the responsibility of the weak citizens who then becomes *clients*. In this role the users are depended on the public service and a very intimate relationship between the client and the staff is formed. With the introduction of economic incentives in the public sector the role of users changes to *costumers*, where the role is to be in charge and select between different services from either a public or private service provider. With the organization of the public sector in policy networks the users of public services receive a new role – this time as a *participant* in the policy network. In this way, we have to acknowledge that today:

- Users of public services act both as citizens, clients, costumers, and participants in different policy network
- they are single individuals as well as private firms, NGOs and other organizations from the civil society
- some of them they are also responsible for the delivered service
- they are mutual depended on each other.

This short description of the recent development of the public sector clearly shows that it does make sense to study innovation in the public sector. Innovation has already taken place in the public sector – even in big scale. Ad to this that the NPM reforms, which among other things have introduced economic incentive structures in the public sector, make the conditions between the two sectors more like each other. Hence, the recent development of the public sector paves the way for transferring the concept of innovation to this sector. Even though we cannot transfer the basic assumptions of the economic marked to the public sector, economic efficiency is clearly becoming more and more important in the present public sector. However, we cannot just transfer the concept of innovation to the public sector – we have to re-define it.

The above description of the development also shows that innovation in the public sector will take place in policy networks. Hence, the approach of Systems of Innovation seems to be promising for the study of innovation in a public sector based on network. According to this approach the innovation can be understood as an interactive learning process between the different actors in the system/network within the institutional settings of the legal state. In this way, the understanding of the collective entrepreneur as the foundation of innovation is applicable to the present public sector based on networks. The concept of re-invention of innovations also makes sense in the public sector. Even though NPM reforms are introduced in many public organizations the results of the implementation turn out to be quite different.

The concept of user-driven innovation also makes sense in the public sector. As described users of public services have different roles and in this way they have different opportunities to come up with new ideas to combine existing resources in new ways. If users can contribute to the innovation in the private sector it is likely that they can also contribute to the innovation in the public sector.

However, due to the different conditions in the two sectors there are still different objectives for the innovations. While innovations within the private sector aims at an increased economic output, innovations in the public sector aims at meeting common goals and in this way often deals more with organization and social interactions. Hence, the approach of Social Innovation seems to be promising.

All together, the answer to the second question is that innovation in a public sector based on network can be studied by some of the key concepts from innovation theory and in this regard especially the approaches of Systems of Innovation and Social Innovation are promising.

The Role of Users in User-Driven Innovation

Now we turn to the third question raised in the introduction: What is the role of users in user-driven innovation within the public sector? As already mentioned, this is an empirical question which I will answer by analyzing governmental documents⁶.

In 2007 the Danish government launched a Quality Reform (Regeringen, 2007). The reform is the result of so-called three-part negotiations between the government, represents for employers and employees in the public sector⁷. The objectives of the reform are to increase the quality of public services as well as the job satisfaction of the staff. Among other things, user-driven innovation in the public sector is described as an important mean to fulfill these objectives.

Following the Quality Reform the government asked the Council for Technology and Innovation (RTI) to focus on innovation in the public sector. This council had for several years worked with innovation in the private sector but the public sector was a new focus. Beside this the government established a research program for user-driven innovation run by the Strategic Research Council under the Danish Agency for Science, Technology and Innovation (FI). Hence, this analysis includes documents from RTI and FI beside the report of the Quality Reform. I have analyzed the documents by asking four questions:

1. How do the documents define user-driven innovation?
2. How do the documents define the users who are going to contribute to the innovations?
3. What is the role of users in innovation?
4. What are the means to fulfil the objectives?

Definition of User-Driven Innovation

According to the Quality Reform: “User-driven innovation is concerned of to develop new products or services based on systematical uncovering of user’s needs and wishes” (Regeringen, 2007: 96).

⁶ The analyzed documents are listed in appendix 1.

⁷ Represents for employers are Danish Regions and Local Government Denmark. Represents for Employees are The Danish Confederation of Trade Unions, The Danish Confederation of Professional Associations, and The Danish Confederation of Trade Unions for Public Employees.

RTI defines user-driven innovation as: "...a systematic approach to the development of new services, processes, organizations, products etc. which build on research on or draw in the users' life, identity, praxis or needs, including not-acknowledged needs" (RTI, 2008b: 12-13). User-driven innovation is not about giving the users what they want but to apply their creative ideas and knowledge.

According to FI user-driven innovation is "... an approach for development of new products, services and organizations, which is built on a fundamental dialog-based exploration of the users of the future's praxis and needs" (FI, 2006: 7).

These quotations show a high degree of agreement of what is going to be innovated. The Quality Reform has the narrowest perspective talking about products and services while the two others mention organizations and RTI also mentions processes. It is also a common feature that the innovation has to build on user's needs, wishes and praxis.

Definition of the Users

The Quality Reform report does not give an exact definition of the users but throughout the report it is clear that the authors have had users of public services in the role of both clients and costumers in mind. Users are described as patients in the health care system; elderly people depended on daycare services; parents to children in kindergartens, and so forth. It is also clear that users expect individual services; they have a right to receive services; they have expectations of high quality; just like they expect to have an opportunity to select between different services. Beside this the user have a right to complain if the quality of the service is bad just like they shall be allowed access to evaluations of services from different service providers (Regeringen, 2007: 34-37).

RTI has a much broader definition of the users which includes clients, patients, staff, costumers, firms, and cooperative partners (RTI, 2008b: 12). So has FI who defines the users as "... consumers, costumers, firms, citizens, cooperative partners: everybody who apply what is developed and produced of others than them selves" (FI, 2006: 7).

In this question there seems to be a disagreement. Where the Quality Reform understands users in the role of customers or clients the two others also draw in the user's role as participant in policy networks.

The Role of the Users

In the Quality Reform user-driven innovation is a question of uncovering user's needs and wishes. Looking more closely at the text in the report it turns out that the role of the users is rather passive. It is stated that the development of services must be based on user's needs, wishes and demands but it is researchers, like sociologists or anthropologists, who is going to map these needs and wishes. In this way, the role of users is reduced to answer questions in user satisfaction surveys and interviews or to be observed by the researchers. In this mapping the user can come up with creative ideas but the role of designing the new service is handed over to researchers and staff. The Quality Reform emphasizes the experience of the staff (Regeringen, 2007: 97). They have a huge knowledge about user's needs and this knowledge can be useful in the process of innovation. Hence, the report announces a program for staff-driven innovation, in which the users also play a passive role as a source of knowledge.

RTI think the users should be included in the process of innovation from start to end. They can be included either directly through dialog or indirectly by collecting knowledge about their everyday life and (not-acknowledged) needs (RTI, 2008b: 12).

Following the definition of user-driven innovation FI explains that ‘dialog-based exploration’ does not mean an interview or a conversation but ‘active participation’ of the users. In this way, the users are assigned an active role as taking directly part in the process (FI, 2006: 7). They enhance this statement by referring to the experiences from the Scandinavian approach of Participatory Design. This approach was developed in the 1970s where system designers of electronically systems for production processes worked in close collaboration with the employed in the production (Clausen et al. 1992). According to this approach the users have a role as co-designers to the technology and hereby it is possible to draw in other considerations than the pure economic and production objectives. The aim was not just to design a new system but to design it in a way so it enhanced democracy at the working place and at the same time took the working environment into account. Methodologically, the approach was based on Action Research (Toulmin, 1996), which to a great extent has served as inspiration to what is now labeled as ‘Mode Two’ production of knowledge (Nowotny et al., 2001). By referring to these experiences FI signals an active role of the users.

In this question we have three different interpretations. Where the Quality Reform regards the role of users as passive (the source of knowledge) RTI broadens the interpretation and acknowledges that the users can also play an active role. However, FI defines the role of users as active participants in the process as co-designers of the innovation.

Means to fulfill the objectives

To fulfill the overall objectives of the Quality Reform the report lines up 180 concrete initiatives of which 35 are dealing with innovation in public organizations. These initiatives include a fond for pilot projects with user-driven innovation in which: “Managers and staff in the public sector shall work systematic with new thoughts of quality development” (Regeringen, 2007: 96). The initiatives also include the already mentioned research program, the program for staff-driven innovation, and the new focus for RTI.

Through the work with innovation in the private sector RTI has developed different programs for innovation (RTI, 2008a). Some of these programs can be used in the public sector as well – with some adjustments. RTI also argues for the use of open innovation in the public sector. In an open innovation many sources are drawn into the process, including the users. This way to innovate has proved to be very effective and since the public sector is not in a situation of competition it is not necessary to classify new ideas and innovation in the making. In this way, the public sector can enjoy the benefits of open innovation without risking any disadvantages in the competition (RTI, 2008c).

As already mentioned, the FI has the task to run a research program in user-driven innovation and they recommend a focus on interdisciplinary research crossing the humanities and social sciences. They also recommend that the funded research should be developed in cooperation with the public sector using the methodology of ‘Mode Two’.

These differences in the view on means to fulfill the objectives mirror the different tasks of the document’s authors. In this way, it is not reasonable to describe it as a matter of different interpretations. However, what they have in common is that the acting part is the professionals – the

managers and staff in the public sector; the experts running the programs for innovation; or the researchers. None of the documents point at users of public services as the acting part. This emphasizes that even when the users are supposed to take active part in the process it is on conditions defined by the experts. The answers to the four questions are summarized in figure 2.

Figure 2: Summary of the Interpretation of User-Driven Innovation

	User-Driven Innovation	Definition of Users	The Role of Users	Means to Fulfill the Objectives
The Quality Report	Development of new products or services based on uncovering of user's needs and wishes	Users of public services as clients or costumers: e.g. patients, parents and elderly	Passive – users are the source of knowledge necessary for the innovation	Managers and staff's systematic work with creative ideas – and 35 concrete initiatives
RTI (Council of Technology and Innovation)	A systematic approach to the development of new services, products, processes or organizations based on user's needs	A broad definition including users as clients, costumers and participants in policy networks	Users should be included either directly through dialog or indirectly by collecting knowledge about their life	Adjusted programs for innovation and open innovation
FI (Danish Agency for Science, Technology and Innovation)	An approach for development of new products, services and organizations, building on dialog-based exploration of user's needs	A broad definition including users as clients, costumers and participants in policy networks	Active participation as co-designers	Interdisciplinary research based on 'Mode Two' methodology

To answer the third question about the role of the user in user-driven innovation in the public sector, this going through the governmental documents shows that the Quality Reform is operating whit a more narrow definition of both user-driven innovation, the users, as well as their role, than the two other. The biggest difference is found in the question about the role of the users. In this matter the Quality Reform regards users as a source of knowledge, which staff, researchers and other experts can utilize to design new public services. The RTI acknowledges that the users can also play a more active role, while FI interprets the role of users as co-designers in the process of innovation.

With regards to methodology the Quality Reform deals with user satisfaction surveys and anthropological studies of users' praxis, while FI operates with a 'Mode Two' methodology where the users participate in the research process and development of innovation. Altogether, it seems reasonable to sum up that the users are intended to have an active role in the research program run by the Strategic Research Council under FI. Whereas in the pilot projects, funded of another part of the Quality Reform, they are more intended to have the role as source of knowledge instead of taking actively part in the process of designing new services.

Conclusion

Altogether, I can now sum up the answers to the three questions raised in the introduction. At the two theoretical questions, I concluded that even though the two sectors operate on very different conditions it does make sense to transfer the concept of innovation to the public sector. Not in the classic understanding of innovation, but re-defined with a broader scope it is possible to understand the reforms within the public sector with the concept of innovation. There is still a work to do to re-define the concept of innovation in a way that it fully reflects the different rationales in the public sector, but with new approaches like Systems of Innovation and Social Innovation it seems possible.

Answering the third and empirical question I concluded that the governmental documents operate with different definitions of users and their role. As we saw in the description of the development of the public sector, users of public services are a complex group playing different roles. They act as citizens, clients, costumers, participants in networks and even suppliers of public services. Emphasizing a few of these roles (like the Quality Reform does) will necessarily lead to another understanding of user-driven innovation than the one taking as point of departure that users can have all these roles (like the two other parts do).

With an understanding of how diverse the role of users is, it is likely that users will participate in user-driven innovation in many different ways. Just to mention a few ways, individual users in the role of clients or costumers can participate in user-driven innovation by answering questions in a survey or interview and in this way be a source of knowledge for experts and designers. Private enterprises, who deliver public outsourced services, can participate in user-driven innovation by letting users into their design process of the service in question. Simultaneous, they can, together with NGOs and other organizations from the civil society, take part in innovations through the policy networks they participate in.

Different roles of users point to the necessity of using different methods. 'Doing' user-driven innovation in the public sector is not a question of selecting a single method. User-driven innovation can be performed in very different ways, thus we need a range of different methods to investigate how user-driven innovation is taking place, and to reveal knowledge which can support the process of innovation in the public sector. In this way, it will be necessary to develop a new methodology to fully grasp the complicated multi-level actor interplay in policy networks.

To sum up, if we want to develop a fully understanding of user-driven innovation in the public sector it is necessary to develop a theoretical and methodological framework, which is based on the concept of innovation but re-defined in a way that take into account that the public sector is operating on other conditions than private companies. At the same time the framework must take into account that users of present public services are a variety of different actors, who play different roles and participate in the process of innovation in very different ways.

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Appendix 1: List of governmental documents

The Quality Report of the Government

Regeringen (2007): Bedre velfærd og større arbejdsglæde – regeringens strategi for høj kvalitet i den offentlige service. Denmark: Schultz Information (www.kvalitetsreform.dk)

RTI: The Council for Technology and Innovation

Rådet for Teknologi og Innovation (2008a): InnovationDanmark 2008. Handlingsplan fra Rådet for Teknologi og Innovation. Forsknings- og Innovationsstyrelsen, Copenhagen: Schultz Distribution (www.fi.dk)

Rådet for Teknologi og Innovation (2008b): Øget vidensspredning og innovation i den offentlige sektor. På vej mod en strategi. Forsknings- og Innovationsstyrelsen, Copenhagen: Schultz Information (www.fi.dk)

Rådet for Teknologi og Innovation (2008c): Strategi for styrket innovation i den offentlige sektor. Forsknings- og Innovationsstyrelsen, Copenhagen: Schultz Distribution (www.fi.dk)

FI: The Danish Agency for Science, Technology and Innovation

Forsknings- og Innovationsstyrelsen (2008): Fra inspiration til innovation – casesamling fra offentlige og private organisationer. Copenhagen: Schultz Distribution (www.fi.dk)

Forsknings- og Innovationsstyrelsen (2006): Brugerdreven innovation. Baggrundsrapport til et strategisk forskningsprogram. Copenhagen: Grefta Tryk A/S (www.fi.dk)