

High level strategies for user involvement in e-Government projects: What role has Scandinavian IS tradition in eGovernment implementations.

Arild Jansen ¹

¹Section for eGovernment Studies, University of Oslo, Norway, arildj@jus.uio.no

Abstract. The aim of this paper is to take part in the discussions on how the Scandinavian IS research tradition in information system research may contribute to eGovernment developments and implementations. Although this tradition does not represent a coherent set of principles and methods for system development, they share some common ideas and goals related to user involvement, participatory design and democracy at the work place. Even if some of the most basic ideas are inherent in our understanding of the IS field to day, many of the lessons from the past may have been forgotten. Some do also claim that the dominant understanding of eGovernment nicely conforms to the perspectives and goals of the New Public Management paradigm. I will rather argue that advanced development and use of ICT can support the ideals and goals of the Scandinavian approaches to IS; we should not least have a greater focus on studying the consequences of various approaches to system design, implementation and use.

Key words: eGovernment development, Scandinavian information system development tradition, participatory design, user involvement

Introduction

The Information Systems Research in Scandinavia seminars (IRIS) is celebrating its 30th anniversary next year, and it gathers every year up to 150 participants, including a number of international researchers. The journal (SJIS) will publish its 23. edition this year. A number of books have been written, and this research community has had significant influence on the IS field in general.

Scandinavian research projects in system development have traditionally put a strong emphasis on user participation and support for different interests as a strategy for increased work life democracy, and also for the society at large. However, as important goals are to develop well-functioning, user-friendly and high-quality system. The basic assumption is that one only can achieve long-term benefits by

combining these different goals and by managing the clashes of interests and contradictions that necessary will appear in system development projects.

However, what impact has this tradition had on the development and implementation of information systems in public sector? Or has the influence of the New Public Management paradigm been dominating, in its focus on market orientation, service provision to customers and high performance through competition?

This paper will not be able to fully answer these questions, but may stimulate to a debate on how the knowledge and experiences gained in the past Scandinavian IS research effort can contribute to progress in this new field.

The structure of the paper is as follows. Chapter 2 summarizes the basic ideas of the Scandinavian school(s) of IS research. Chapter 3 visits the debate on the relation between eGovernment and New Public Management, followed by a discussion of the role that Scandinavian IS approaches may have in the eGovernment era.

Scandinavian traditions in system development research

System developments has, from the outset been an expert-dominated and top-down oriented activity from problem description to implementation, use and maintenance, frequently referred to as “phase-driven” or the “Waterfall” development method. This approach is characterized by system-theoretical thinking, often based a functional analysis of the system to be modeled and designed and implemented. However, it became early clear that this approach had a number of weaknesses.

The Scandinavian tradition in information system research has its roots the early action-oriented research projects and efforts in late 60thies and 70thies. Important inspirations came from the socio-technical research by the Norwegian Industrial Democracy project that started in 1960 as cooperation between the Norwegian Federation of Trade Unions (LO) and the Employers organization (NAF, later renamed NHO). But first of all this tradition is linked to the NJMF-project (Norwegian Iron and Metal Workers), in cooperation with Kristen Nygaard and Olav Terje Bergo (Nygaard og Bergo 1974), followed by the Swedish Demos-project and the Due-project in Denmark (se e.g. Ehn og Sandberg 1979, Bansler 1987, 1989, Bjerknes, Ehn og Kyng 1987), Bjerknes, Dahlbom et al 1990, Iivari 1991, Bjerknes and Bratteteig 1995). Although these projects had partly different goals and perspectives, they can be characterized as action research, having a socio-technical orientation and strong user- involvement in all phases, and aiming at democratization at the workplace.

These and other projects were the inspiration and empirical background for the textbook “*Professional System development*” by Andersen et al (1986), in which they emphasizes the relation between development work and management, between

process and product and between planning and evaluation, and the need for communication at all levels in the system development processes.

Another important and very interesting contribution is textbook “*Computer and controversy. The philosophy and Practice of Systems Design*”, written by Bo Dahlbom and Lars Mathiassen, in which they reflect over the profession of system development and its essential ideas, and not least, discuss some of the fundamental contradictions that is inherent in the practical work. Starting out by addressing our understanding of systems, information and the use of computers as tool for problem solving, and by drawing on various philosophers, they spell out three different frameworks for system development work in distinguishing between *hard, soft, and dialectical* system thinking. Following from that, they outlined three corresponding paradigms for system development. The first one, *construction*, suggests a rational and analytical strategy, while the *evolution* approach focuses on uncertainty and suggests an experimental strategy for problem solving. In the third approach, *intervention* the problem is no longer given, and development cannot be seen as some thing isolated from the life of the organization, and accordingly, system development must be seen as an integral part of organizational change. Furthermore and perhaps the most pioneering, they discuss the many dimensions of quality of technical artifacts, as e.g. functional, aesthetic and symbolic quality, and points to the power, politics and ethics in defining quality.

eGovernment – more than the emperor’s new clothing?

Computers have been applied for administrative applications for quite a while and even in Norway, computers were used for governmental tasks already in 1957. During the next decades to come, computers and later on ICT including Internet have being used in a large range of tasks; though the concept of EGovernment was not used until Internet was in use. EGovernment is today becoming a global phenomenon that is consuming the attention of politicians, policy makers as well as ordinary citizens.

There exists a number of different definitions of eGovernment in the literature. Some are rather narrow, focusing on using ICT, particularly the Internet, as e.g. “the use of technology to enhance the access to and delivery of government services to citizens, business partners and employees”, (Deloitte Research 2000, p4.) Others view eGovernment more broadly as efforts to transform government. Such examples can be:

“The use by the government of Web-based Internet applications and other ICTs, combined with processes that implement these technologies, to a) enhance the access to and delivery of government information and services to the public, other agencies, and to government entities; or b) bring about improvements in government to operations that may include effectiveness, efficiencies, service quality, or transformation” (US government 2002)

¹ In the preface to this book, the Scandinavian IS tradition is not explicitly mentioned, but many of the ideas are inherent in this tradition. The authors have been an integral part of this Scandinavian IS community for many years.

eGovernment is thus far more than a technological phenomenon. It is transformative in nature, affecting the management of human, technological, and organizational resources processes. Consequently, the implementation of eGovernment systems will be monumental change effort, which clearly shows that eGovernment to day is qualitatively different from the more isolated ICT-system in the past.

eGovernment and New public Management – a perfect marriage?

The above definitions emphasize eGovernment as a transformational endeavor and that it is an international phenomenon which not at least a number of consultant companies world wide are heavily involved in. This has inspired some commentators to ask if there is a close link between eGovernment and the New Public Management paradigm (NPM). New Public Management is a management philosophy used by Governments since the 1980's to modernize their Public Sector (Wikipedia 2005). Based on public choice and managerial schools of thought, new public management seeks to enhance the efficiency of the public sector and the control the government has over it. The main hypothesis in the NPM-reform is that more marked and active management in the public sector will lead to more cost-efficiency for governments, without having negative side effects on other objectives and considerations.

NPM can among others be characterized by: i) a customer rather than citizen orientation focusing on high quality services that serve narrow interest of the citizens, ii) performance orientation, iii) lean and highly decentralized structures, iv) emphasis on accountability upwards, v) use of divisional structures breaking down former unitary bureaucracies (Bruening 2001). He claims that this type of reform has a techno-optimistic, analytic flavor and seems to reinforce the effects NPM is having on the organizations throughout the industrialized world.

Homburg (2005) points to that about a decade ago, a new kind of rationalization or reform was introduced in public sector by the use of modern ICTs (especially Internet technologies). Initially, it was focused on improving and reengineering internal processes, but later it also included the redesign of external relationships in order to improve public administration's accessibility and quality of service provision. He analyses two different sets of trajectories: one based on an external perspective; on the relationship between government and citizens, and another with an internal focus, referring to the changes that could occur within and between bureaucratic organizations.

However, the ways such principles are implemented show great heterogeneity, and Homburg discusses 4 different patters: i) markets government, ii) participatory government, iii) flexible government (e.g. virtual organizations) and iv) deregulated government. He thus claims that "underlying to all patterns of practices, is a notion of departure from the classic public administration paradigm. Especially the notion of

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decentralization conflicts with public management of strict hierarchy and rules, and centralization by integration. Furthermore, the basic mechanism of the (hierarchical) accountability route is complemented with a product-oriented (opposed to process-oriented) accountability structure, which tries to capture citizens' perception of quality of public services" (ibid, p 549). However, he continues, the means used to achieve this may vary from different contact with citizens, market mechanisms and more organic relationships.

His analysis seems to indicate that eGovernment services in practice, in its focus on transformation of the public sector, mark a deviation from the classical public administration paradigm. However, it shows no unambiguous relationship or marriage between eGovernment and a specific form of public management, rather that there are many different scenarios or trajectories. This is also what is found in other studies; that the use of ICT may affect public management in many ways (e.g. George and King 1991).

EGovernment and the Scandinavian tradition: is there any relation?

It thus seems to be evidence for claiming that EGovernment is far more than realizing NPM. If we look at the work on eGovernment in the EU Commission, they focus on these overall objectives for eEurope (Com 2003):

- A public sector as e.g. open and transparent, that is understandable and accountable to the citizens, open to democratic involvement and scrutiny.
- A public sector that is at the service of all, being inclusive and exclude no one from its services
- A productive public sector that delivers maximum value for taxpayers money

These goals may, at a general level conform to the ideas and thinking of Scandinavian IS traditions. However, that is not to say that all eGovernment solutions have consequences we may support from a work life democracy perspective. There are powerful pressure groups, not least from the consulting industry that are pushing strongly for implementing their solutions in rather standardized ways, similar to what we see in the private sector. The strong emphasis on evaluations, benchmarking and ranking (e.g. Com 2003, Capgemini 2005 etc) does not necessarily encourage user involvement and participatory design. The question is then: what role can the Scandinavian IS approaches have in such processes?

Greenbaum (1995) summarizes the main motivations for conducting participatory design as *pragmatic* (improving system design), *theoretical* (e.g. for communication benefits of the involved parties) and *political* (e.g. further workplace democracy). On a more concrete level, these reasons for stronger user involvement are normally given as: i) improving the knowledge upon which systems are build, ii) allowing for experimenting and learning before the solutions are finally implemented and put into use, iii) enabling people to develop realistic expectations and reducing resistance to change, and iv) increasing workplace democracy by giving the member of an organization the right to participate in decisions that are likely to affect their work

However, the way IS systems are being developed and used have been changed during the last 15-20 years, and many will maintain that the above arguments are no longer valid, e.g. because modern system development methods are different from those used in the past, in providing various opportunities for involvement. Internet and Web-based systems tools have changed the way systems are developed. Furthermore, we have a much more knowledgeable and skilled work force related to IT than in the past. There has been a move from internal systems aiming at rationalization to external (customer-oriented) systems aiming at improving the quality of public services, which implies the users to a large extent are not as employees, but as citizens. One can also argue that new legislation, such as the Working environment act in Norway provide means for involvement and participation at various levels.

On the contrary, it can also be argued that greater involvement and participation in all phases of development and deployment are even more necessary now, e.g. because:

- We see greater changes in organization than before; the traditional organizational patterns are being challenged in that the borders between private and public sector is continuously being challenged.
- What differs from the past is the change of focus from stand-alone system to large-scale integration of various systems and restructuring, and a shift from focus on the users to consumers and citizens. Systems are getting more and more complex through closer interaction and integration, as basis for radical restructuring of the public sector at large
- There is an increasingly tendency to outsourcing and globalization. We thus see new types of conflicts and contradictions, which best can be handled through participation on various levels.
- The different threats related to digital divide calls for professionals that can support the various groups of citizens that do not have a strong voice on their own

I am not arguing that we should return to the ideology-driven debates and actions of the “good old days”. But we should critically assess the experiences from the past and use them as inspiration and knowledge base for new thinking and initiatives.

User participation, where and how

User participation is not a panacea in the context of eGovernment. It is not obvious how and where participation best may take place. Marginalization and cultural bias are favoring dominant groups in access and decisions were the important topics in the participatory design activities. And who are the real users? This simple framework may illustrate that there are many different constellation and stakeholders when new ICT-solution are to be implemented:

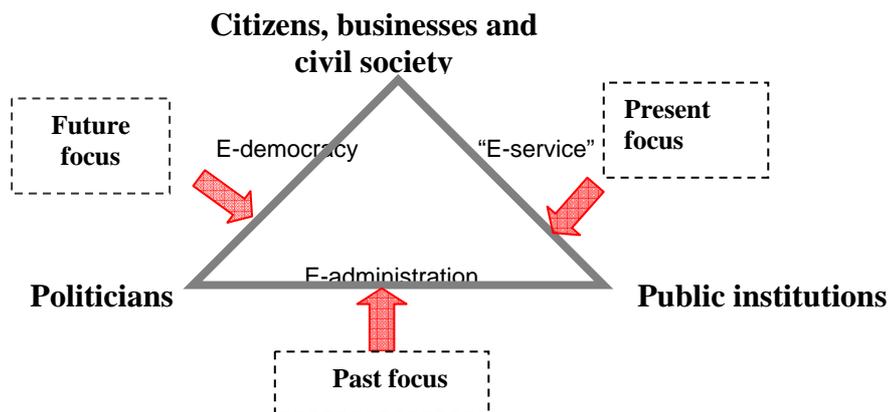


Figure 1: A framework for eGovernment

The above figure aims at illustrating that while one in the pioneering period mostly worked along the horizontal line, and the users were mostly the employees, the focus to day are most related to service provision, and the users are outside the organization (primarily as customers). We are now gradually seeing more efforts toward the “e-democracy” dimension, though mostly as small scale experiments, involving various groups of citizens. It is rather obvious that this wide range of projects types require quite different system development strategies, depending on the goals and perspectives. Thus, in the individual projects, we will have to organize projects such that all involved parties will have their voice heard.

Følstad, Jørgensen et al (2005) have studied user involvement in eGovernment development projects in Norway. They found that there seems to be a broad agreement on the importance of user involvement, at least among the project leaders. However, actual user involvement is often conducted according to the participant practice of the industrial democracy, emphasizing formal procedures rather than the processes and methods advocated within the traditions of HCI. The most frequently deployed user involvement is user representation in project teams, rather than e.g. usability tests and user group analysis. One conclusion from the study is that there seem to be an explicit need of more structured processes for user involvement activities for eGovernment projects.

Oostveen and van den Besselaar (2005) discusses different methods for engaging users in systems design, and ask: To what extent can we use lessons and methods from participatory design, as e.g. being active in the specification and design process, to include a variety of political views and social interests in the social-technical shaping of future trajectories of large-scale of large-scale eGovernment systems. They claim, based on experiences from to large projects, that such traditional methods does not apply for various reasons: i) the models and methods are based on small scale projects, ii) the number and variation of user groups are quite different, and iii) it involves not (only) users as citizens and civil servants, but also politicians on various levels. Their conclusion is that a combination of methods from technology assessment approaches with participatory design practice can be successful, but is not yet practiced enough.

Different levels of participation

Bjerknes and Bratteteig (1995) point to that there are many different arenas of participation and democracy, and they describe these four:

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- 1) The *work situation* level, in which the use of technology depends on the nature of work tasks, and the ICT systems are viewed basically as *concrete tools*. It is possible to influence through participation in the individual development projects, which used to be the traditional type of involvement.
- 2) The *workplace or organization* level, which depends on how different activities are coordinated and integrated in the organization. Focus is not only on individual systems, but their interlinkage and integration, where the information (technology) architecture and infrastructure are designed, including choices of standards and type of software. Important issues will be the degree of (de)centralization (as e.g. in the national wide systems in public sectors as Tax administration, National Health Insurance offices, etc.) To ensure the employees influence on their work organization, it is necessary to address the whole organization.
- 3) The *interorganisational level*, in which the focus is on the relation between an organization and its environment, as e.g. the external users (customers), cooperating agencies, private businesses. Important issues are how to design technical and organizational infrastructure, and how changes in the environment can and will affect the internal structure of the organization. In Norway, such examples are cross-sector ICT initiatives as common solutions for businesses, collaborative use of registers, (including a common Meta database), the reorganization of National Insurance Administration, Directorate of Labour and social welfare into one unit, the PKI (public Key Infrastructure) initiatives, etc. At this level, user involvement and participation are complicated issues, involving many stakeholders and interests.

Are other strategies more adequate?

Should we choose a political or an ethical road to democracy?

The ACM (Association for Computer Machinery) has its Code of Ethics and Professional Conduct², in which a commitment to ethical professional conduct is expected of every member. E.g. § 2.5 reads: "Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks". Another approach is chosen by the North America³ based organization Computer Professional for Social Responsibility, which through individual participating members have been able to provide substantial contribution to important areas within the field. Is this the way to go?

Bjerknes and Bratteteig (op. cit.) expressed in their article a concern about a shift in locus from being seen as the realm of systems design as such to a notion of responsibility testing on individual ethics. They see the danger that user participation in system development activities is a mean or the only means. They argue that the political dimension should be reintroduced. The change of power structures in society

²ACM home page: <http://www.acm.org/constitution/code.html>

³ CPSR do also have chapter outside US, e.g. in Europe, see <http://www.cpsr.org/>

during the last decades is an important challenge for system developments research that cannot be dealt without discussing the political dimension, on various levels.

Eevi Beck (2001), in her provocative article in *SJIS P for political* claim that “in a world made global by ICT, political concerns remain on the minds of many, PD (participatory design) must encompass work motivated political conscience which is expressed through of approaches and conducted at multiple points throughout the processes of computer development and adoption, not only participatory design”. She calls for a community of professionals that develops a stronger demand for analysis of societal and ethical consequences of ICT developments, adoption and use.

Conclusions – a value-laden research agenda is still needed

My intention with this paper has been to take part in a discussion on how the Scandinavian tradition in information system research may contribute to eGovernment developments and implementations. It is not argued that the Scandinavian IS tradition represents a coherent set of principle and methods for system development, but that it shares some common ideas and goals related to socio-technical thinking, user involvement and democracy at the work place. Without aiming at raising the whole debate of the emancipator dimension of user involvement or digital divide in general, I will argue for a greater focus on studying the consequences of various approaches to system design, implementations and use. We accordingly need to study how user involvement is practiced in various types of eGovernment projects and what impact different approaches have had.

I believe that specific challenges are related to outsourcing strategies, where top-down, specification-driven projects are dominating. Referring to Dahlbom and Mathiassen (1993), I will maintain that we also need experimental and evolutionary approaches, allowing for “failures” without dramatic consequences. Not least, we need a better understanding of the problems associated with defining quality as an objective and measurable entity, as well as the efforts it takes to change the culture in an organization.

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