

# Measuring innovation in the public sector - key issues and concepts

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## Introducton

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Public sector innovation is now recognized as a vital factor in meeting the challenges of globalisation and demographic changes, and at the same time sustaining a high level of public services to citizens and businesses. More specifically, pressures for Public sector innovation stem from a number of sources, among them:

- Desire to increase efficiency in public sector services through outsourcing, licensing or cooperation, e.g. free competition between private and publicly owned firms solving public governance problems
- Increasing service demands from citizens and businesses caused by demographic developments and changing framework conditions in an expanding global economy
- Increased recognition that Public sector innovation has a great impact on business sector performance in many ways (through business services, procurement, physical infrastructure, IT infrastructure, as source of innovations, platform, etc.)
- The public sector in the most countries is large and many 'public services' are provided by both state-owned and private enterprises. Interaction between businesses and the public sector is seen as an important source of innovation and a precondition for business efficiency and global competitiveness

A major challenge in this regard is however how to measure the extent and scope of public sector innovation, as well as to make comparisons between sectors and countries, its impacts on business development and society as well as its dependence on businesses as private providers of goods and services. Recent work, notably through the EU Publin project and other works<sup>1</sup> have provided valuable insights on public innovation, drawing on a broad range of related literature. However, efforts to better understand and to promote public sector innovation are greatly hindered by a lack of quantitative evidence. Relatively few attempts have been made to measure public innovation. Examples of early efforts are Borin (2006) and Earl (2003), and more recent surveys of public innovation have been undertaken in the UK<sup>2</sup>.

A recently initiated Nordic project on public innovation measurement seeks to develop a common conceptual and statistical framework for data collection and the development of indicators that provide much needed inputs to analyze and promote public sector innovation. A user-based approach is used in building this framework, drawing on analysis of user needs through background research, interviews and dialogue with stakeholders from national and regional policymaking institutions and representatives of industry, trade and public sector organizations.

The framework will also build on feasibility studies of public sector institutions that will be conducted in all Nordic countries. Key elements of this framework will be forming a definition of

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<sup>1</sup>E.g. Koch and Hauknes (2005), Kelly et al (2002), Mulgan and Albury (2003). See also Dunleavy et al. (2008), Walker (2008) and Technopolis (2008).

<sup>2</sup> National Audit Office (2006), Audit Commission (2007).

innovation in the public sector and a set of indicators that capture innovation activities, determinants and barriers to innovation, and forms of external interaction.

This paper presents preliminary work on the conceptualisation of public sector innovation and the development of indicators that capture key elements of innovation processes in public organisations. The goal of indicator development is both to form a better understanding of the actual innovative processes, their drivers and hampering factors, and to design policy measures for public sector innovation within a broad range of areas of current policy interest:

- User-driven innovation: to what degree is public sector innovation based on contact with users, examination of user needs, and market potentials or obstacles
- Employee-driven innovation: how are employees involved in innovation processes
- Organization of innovation, innovative or entrepreneurial culture: how are innovation activities organized and do activities and practices indicate a focus on improving service provision
- What types of innovation (new services, introduction of new technologies, organizational or process innovations) are being implemented and what share of institutions are doing so
- Which sources do public service providers rely on for external knowledge, and which types or forms of interaction do they have with other public institutions and private businesses
- IT-based solutions: what types of ICT-based solutions were implemented, how were they developed and what were the effects
- Analysis of innovation in key public service sectors: an example here of prime policy and business interest is the healthcare sector, where innovation data can provide a sound basis for better understanding of innovation processes and for decision-making.

## Approach

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A key issue in this respect is the substantial heterogeneity among public sector organisations and potential implications for measurement. The public sector consists of many sectors, normally with several organisational levels, and with a variety of governing principles. Furthermore, what is in one country or municipality a public institution, is in another a private firm. The health sector is an illustrating example where hospitals on one hand can be large institutions operated directly under a ministry and with advanced medical research and treatment, and on the other a small hospital operated by a municipality and dedicated to caring only. In both categories it can in parallel be private institutions. The paper will thus first discuss the heterogeneity of public sector, and from this put forward suggestions for how to define public sector for measurement of innovation.

The next step will be to discuss how to measure innovation in the public sector; what are the relevant variables and how can they be operationalised. This section will discuss the various types of innovation, the sources of information and interaction with other actors, the use of ICT-based solutions, factors hampering and promoting innovation etc. From this discussion a core set of data will be suggested.

The Nordic project conducts this fall a feasibility study using a pilot questionnaire towards approximately 40-50 public sector institutions in the five countries. The aim of this study is to test the categories and variables developed, and their relevance for the institutions. The results from this study constitute the empirical part of the paper, and this part will discuss the findings in relation to the concepts developed in the first part, - their relevance for the public sector, the potential methodological problems revealed, and the lessons learned for further developing the approach.

Finally, the paper will also discuss preliminary findings of interviews and field work with users and respondents.

The paper is thus essentially a conceptual one, outlining how public sector innovation can be measured and with a first testing of these concepts by a novel methodology.

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