The Contextual Benchmark Method: Benchmarking e-Government services

Jurjen Jansen a,⁎, Sjoerd de Vries a, Paul van Schaik b

a University of Twente, Faculty of Behavioral Sciences, Department: Media, Communication and Organizations, Enschede, The Netherlands
b Teesside University, School of Social Sciences and Law, Middlesbrough, UK

1. Introduction

Government organizations no longer doubt the need to deliver their services on line. Instead, the question that is more relevant is how well the electronic services offered perform, for instance, in comparison with those offered by other (comparable) organizations.

Benchmarking is currently a popular means for answering this question (Janssen, Rotthier, & Snijkers, 2004). The Dutch Ministry of Agriculture had the same question and wondered how to set up a solid, practical, and usable benchmarking method to benchmark e-Government services. That the method is solid means that the method should have a reliable foundation; that the method is practical and usable means that the method should be applied in practice easily. The Ministry asked us to help them set up this method to assist them in answering their question. The primary goal of the present study is to develop a benchmarking method and to illustrate this method by means of a pilot study.

Benchmarking of e-Government services appeared around the beginning of the twenty-first century (Kaylor, Deshazo, & van Eck, 2001). Bannister (2007) indicates that for the last couple of years at least three benchmark reports have been published per year, which suggests that benchmarking e-Government services has received a great deal of attention. The main goal of benchmarking for government organizations is to improve their electronic services (Aarts, van der Heide, van der Kamp, & Potten, 2005). Improving electronic services should ultimately lead to a higher satisfaction of customers (Dialogic, 2004), as illustrated by Cascadis (2007) (translated from the Dutch): “You can only improve your performance when you now where you are at”. Furthermore, Aarts et al. (2005) mention that the willingness of government organizations to cooperate with one another has increased. This trend provides a positive basis for the application of benchmarking as an approach for improving the performance of services.

Janssen et al. (2004) have described the focus of e-Government benchmark studies. By analyzing 18 international studies they came to the following classification terms: information society, e-Government supply, e-Government demand, and e-Government indicators. Kunstelj and Vintar (2004) have also analyzed monitoring, evaluating, and benchmarking studies in the field of e-Government. They came to the following classification terms: e-readiness, back-office, front-office (supply and demand), and effects and impacts.

Current e-Government benchmark studies often take a quite simplistic view of government websites and services and draw sweeping conclusions about their performance. For example, benchmarking the percentage of basic public services online (Kerschot & Poté, 2001; Wauters & Kerschot, 2002). These services are benchmarked by means of identifying the level of online sophistication per service. A similar benchmarking approach can be found in the IDA benchmarking report by Johansson, Aronsson, and Andersson (2001). Kaylor et al. (2001) and Ronaghan (2002) also benchmarked the level of online sophistication in respectively municipalities and across countries. The latter also included comparing the ICT infrastructure and human capital capacity between 144 UN Member States.

While the studies presented above concentrate on the supply-side of e-Government, the benchmarking study of RAND Europe complements these studies by focusing on the demand-side of e-Government. They do so by giving attention to perceptions and barriers, in addition to the availability and usage of e-Government services (Graafland-Essers & Ettedgui, 2003). However, the measured indicators are still quite simplistic. Other e-Government benchmarks that are performed on a regular basis include: the eEurope benchmark by
Ccapgemini, the e-Government leadership reports by Accenture, the Brown University global e-Government survey, and the UNPAN report by the United Nations (Bannister, 2007).

The benchmarking of e-Government services has reached a critical stage where, as we argue, simply measuring the number of electronic services is not enough and a more sophisticated approach is needed. This is mainly due to the limitations of current approaches to benchmarking. The major problems of current benchmark approaches are that they are costly and time-consuming (Bannister, 2007; Anand & Kodali, 2008), quality is poor, and benchmarking is performed as a one-size-fits-all process. In addition, comparisons can become complicated. As Bannister (2007) mentions, there are no rules for a scoring method nor for ranking scales that measure mental states, e.g. attitude to technology. This means that benchmark outcomes vary depending on the context. Bannister continues his enumeration of problems by asking whether a metric and technology are time-invariant and what happens when there is no continued availability of data. Conclusively, Bannister identifies some conceptual issues of benchmarking by stating the following three questions: what is the purpose of the benchmark exercise, what is to be measured, and what type of benchmark is it?

In this paper, we describe the Contextual Benchmark Method (CBM). The CBM is a more useful approach to these problems because it is a contextual approach. The overall requirements set for CBM are that it is:

- Context-driven — for instance, the method needs to be locally based, on-demand available and self-pacing; and
- Benchmark-driven — for instance, well-defined shared procedures, validated techniques and instruments, and reliable data for comparison are used.

Clearly, with the CBM we aim to combine the demands of a benchmark with the advantages of research driven by local context. The following sections elaborate on the benchmark and contextual analysis concepts, and present the CBM and explain how it works. The paper ends with a discussion and some conclusions.

2. Benchmarking

Decision-makers in most service organizations want to improve the quality of their services. As stated, benchmarking aims to improve this quality. Therefore, benchmarking increasingly receives attention in service organizations (Dattakumar & Jagadeesh, 2003). The first question to answer is: what is benchmarking?

The following is a widely adopted definition of benchmarking that was originally postulated by Camp (1989, cited in Anand & Kodali, 2008): “Benchmarking is the search for the best industry practices which will lead to exceptional performance through the implementation of these best practices” (p. 258). Anand and Kodali (2008) came up with their own definition of benchmarking, based on an extensive literature study:

benchmarking is a continuous analysis of strategies, functions, processes, products or services, performance, etc. compared within or between best-in-class organizations by obtaining information through appropriate data collection methods, with the intention of assessing an organization’s current standards and thereby carrying out self-improvement by implementing changes to scale or exceeding those standards (p. 259).

One characteristic mentioned in these definitions is that benchmarks need to be performed between similar organizations. Fong, Cheng, and Ho (1998) express some doubts about this claim. On the other hand, these definitions lack the explicit focus of learning from one another, an issue that is stressed by Aarts et al. (2005).

In our studies into the quality of electronic government studies we stress the need for learning as the focus of benchmarks and the need for benchmarking similar delivered services instead of similar organizations. Therefore, another definition is needed. Inspired by Aarts et al. (2005), we define benchmarking as: a systematic comparison of the performance of (parts of) organizations and their similar services, processes and routines, on the basis of predetermined indicators, with the goal that organizations can improve their performance by learning from one another.

The rationales for the type of data that are collected during a benchmarking exercise and learning from one another are the most important aspects of benchmarking. Furthermore, we reject the idea that the purpose of benchmarking is to report comparisons of organizations, as many e-Government benchmark studies have done in the past. Rather, we contend that the purpose of benchmarking is to serve as a means by which organizations can compare themselves in pursuit of better performance. In other words, comparison is not a purpose in itself, but a means towards an end, which is learning from each other in order to improve. In order to effectively learn from one another, organizations should perform benchmarks on a regular basis, e.g. once a year. Benchmarking should be a continuous learning process.

Moreover, benchmarking is a method that can be used to achieve one or more goals. Aarts et al. (2005) mention that, besides the learning aspect, benchmarking could also be used for organizations to become more transparent to their environment, to justify actions (to specific organizations) and to identify strengths and weaknesses in the organization. When weaknesses are identified, they may lead to a sound basis for improvement projects. When a particular benchmarking exercise is repeated, it becomes possible to measure if the actions taken to achieve improvements have been effective.

3. Contextual analysis

CBM enables an organization to analyze aspects of electronic services, for instance the use and effects, in context. The context of the organization determines the scope, methods, and timeframe. Contextual analysis focuses further on organizational change and stresses the need for longitudinal empirical field research to make tacit knowledge explicit. Based on Pettigrew (1990), two aspects of longitudinal field research on change have been incorporated in CBM.

The first aspect is called multilevel analysis. A multilevel analysis examines “the interdependences between higher or lower levels of analysis upon phenomena to be explained at some further level; for example, the impact of a changing socioeconomic context on features of intraorganizational context and interest-group behavior” (Pettigrew, 1990, p. 269). The second aspect is related to time and is known as processual analysis. Processual analysis examines “the sequential interconnectedness among phenomena in historical, present and future time” (Pettigrew, 1990, p. 269). In summary, CBM aims to study change in the context of interconnected levels of analysis and locates change in the past, present and future. By incorporating multilevel- and processual analysis, CBM facilitates organizational adaptation and change by using/exposing actual events that are of immediate relevance to users and suppliers of public services.

4. Contextual Benchmark Method

A method is “a standard that describes the characteristics of the orderly processes or procedure used in the engineering of a product or performing a service” (IEEE, 1990, p. 47). CBM is based on Essink's (1988) Modeling Approach for Designing Information Systems framework (MADIS), which is used in Lemmen and Punter's approach (1994a,b) to design information systems. The underlying idea of this conceptual approach is that the modeling of information systems always takes place at different levels of abstraction and that the same
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