Chapter 4
Developing, Implementing, and Evaluating a Web Interface in the Field of E-Government

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ABSTRACT
For the purpose of good and trustworthy management of information for the government, responsible for the justice domain, the research institute was requested to build a monitor that makes it possible to periodically monitor data flows within as well as between organizations of the justice domain. The aim of this monitor is to get insight into the performance and possible bottlenecks in the criminal justice domain. An important component of the monitor is a Web interface. The Web interface should be user friendly and, more importantly, facilitate policy makers to interpret the data flows in the justice domain. To meet with this facilitation, the authors created a fixed set of variables for the interface that minimizes misinterpretation of the data. In this chapter, they describe how they managed to develop and implement the Web interface. Additionally, the authors illustrate how the Web interface works in practice and describe how they managed to evaluate the Web interface on usefulness and satisfaction.

INTRODUCTION
In the field of the government responsible for the criminal justice domain, many organizations are involved that can be considered partners in a chain of events (i.e. criminal cases or offenders or victims). This implies that the input of one organization is dependent on the output of another organization in the chain (e.g. Kalidien et al., 2009, 2010). From the perspective of the government responsible for this domain, it is desirable to have a good and reliable understanding of the flows within as well as between the organizations in this domain (Choenni et al., 2011). Having a good
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understanding of these flows may give insight into the performance and possible bottlenecks in the justice domain. This way, the government can actively stimulate organizations to solve potential problems at an early stage, which in turn may lead to a system that acts more efficiently.

Current means, such as statistical yearbooks may help the government to get insight in the criminal justice chain. For instance, the Dutch publication ‘Crime and Law enforcement’ describes developments of crimes experienced by victims, crimes registered by the police and the reaction of the criminal justice system on crime (Rosmalen et al., 2012). The book is updated annually and is valuable to a broad audience, such as policy makers, criminologists and media. However, for the means of monitoring data flows within and between organizations the book is less practical, as it is not easy to compare and combine the data of different organizations (Kalidien et al., 2009).

Furthermore, the information need of the government is dependent on the policy that is applicable at a certain moment in time. For instance, the current Dutch government’s policy on the justice domain is to reduce crimes such as street robberies, burglaries and violent crime in general (Rutte II, 2012). Detailed information for specifically these types of crimes are of interest to the government at this time. So, the information need of the government is in some sense ‘ad hoc’, depending on the topics in daily politics. Yearbooks often have static information available, with limited possibilities to drill down information. Moreover, to be able to act on the criminal justice system on possible bottlenecks at an early stage, the government requires information rather quickly and as recent as possible. So updates more frequent than on a yearly basis are a must.

But books are not only less practical. Until recently, policy makers and experts from the justice domain periodically discussed developments of data flows in the justice domain through meetings with some organizations in the justice domain, assisted by a manually composed collection of written reports describing main indicators for each of these organizations. The effectiveness at these meetings can be improved, since the focus often remained on one organization (in particular the Public Prosecution, having a central role in the Dutch Criminal Justice System), and a clear understanding of what happens with data flows between organizations was missing. If there was a comparison between organizations this happened in an unstructured way. Furthermore, only a few organizations were involved in these meetings.

To improve the management information in the justice domain, the government recently requested our research institute to develop and implement a monitor that could provide reliable and valid management information on the criminal justice domain. The monitor should, among other things, be able to monitor flows within and between organizations, and periodically show the data in a way that makes it easy for experts to draw conclusions and have the possibility to produce graphs and reports. In other words, the monitor should include capabilities to facilitate the interpretation of the data in a structured way. An important component of the monitor should be a web interface that makes the data digitally available in a user friendly way and offers the end users the possibility to drill down information. Having such a web interface should make it easier for officials of the government and related partners to monitor the functioning of the entire Dutch criminal justice domain.

In this chapter we focus on the development and implementation of the web interface part of the monitor. We describe how we managed to build a web interface that meets the information need and requirements of the government. For the development of the monitor we used the concept of data space (Kalidien et al, 2009, 2010; Choenii et al., 2011). There are three layers in this concept, a data space layer, a space manager layer and a user interface layer. In this chapter we focus on the latter.
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