

# Chapter 23

## Policy Modeling Methodologies

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### ABSTRACT

*The process to develop sustainable public policies is done by public authorities ensuring the involvement of all stakeholders. ICT is rarely included in most of the today's applied policymaking processes. Other process definitions with a focus on ICT inclusion in policy modeling still exist, but they are not well defined. This chapter gives an overview of the existing policy modeling process types and explains their major foci and how they consider ICT and the practical process in public authorities. Afterwards, based on these descriptions, the general requirements on a new ICT-oriented policy modeling process that allows the inclusion of ICT into a valid and useful process for public authorities is given.*

### INTRODUCTION

The implementation of public policies follows a policy making lifecycle to ensure that all required aspects are well considered and so the requirements for an effective policy can be ensured. The process were defined through their practical use in the public authorities and got improved, based on changes because of problems or based on new findings in the governance research domain. The primary goal is a stable and valid process that can ensure an effective policy making. The policy modeling, as well as the policy making process,

are a very complex circumstance with a couple of involved stakeholders. Furthermore the process has to follow the democratic idea of western countries, which includes a valuable routine that encounters the general good of citizens. The considering of all of these requirements is complex, so that the resulting structure for policy processes is complex too.

In this policy making process various institutions, departments, interest groups, experts and many more are involved. Their part of work is necessary to create new policies. But how they are involved and also their influences and limita-

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tions need to be defined too. All of that issues are defined in the policy making process too. During past years the policy making process was refined and adapted in many ways, but from the today's point of view, they are less considering ICT.

Since the last decades ICT got more and more important for the society, especially for administrations, because of their new powerful ways to store and organize data. So of course, ICT is in general used in public authorities. But until the last years the used technologies were mostly limited on general data provision and analysis of quantitative data, which are mostly statistical data about indicators. In the last years the web has changed and got more social. There are now new opportunities to stay in contact with (interested) people and – what is more important – these opportunities are used by a wide range of citizens. In 2009 approximately 67% of internet users accessed social networking sites (Redecker et al., 2010; Nielsen Online, 2009). In fact this means that there are now new possibilities to engage citizens and consider their opinions, for instance based on the use of social media. But unfortunately these possibilities of using the engagements of citizens in the social web and others are currently not used and considered sufficiently. The current applied processes are not adequate since they focus on “offline methods.” But to make use of these new opportunities and to allow the integration of new ICT features, it is necessary to change the existing approaches, but this sounds simpler than it is.

To enable such required changes on the existing process governance model, we want to give an overview about the current existing policy modeling methodologies. Most of the today's existing process models are conventional models that are primary used in public authorities. But we also want to introduce existing ICT and technology based process definitions that taking the ICT into a special account. So this chapter aims to give an overview about the current existing types of process definitions and should outline

their characteristics and handicaps concerning a process definition that can be used in public authorities, as well as their consideration of ICT.

## **OVERVIEW ABOUT POLICY MODELING**

In the following sections we majorly focus on policy modeling. Estrada (2011) defines policy modeling as “an academic or empirical research work, that is supported by the use of different theories as well as quantitative or qualitative models and techniques, to analytically evaluate the past (causes) and future (effects) of any policy on society, anywhere and anytime.” So the major focus lays on the policy and the causes and effects on the society. The creation of policies consists of a huge number of tasks and involved stakeholders. To bring them in an efficient and effective order, the policy modeling can be seen as a process, where it is defined what actor has what task at a certain time. This arrangement of task and stakeholders regarding the development of policies is commonly named as policy modeling process. We use the terms policy modeling policy creation synonymously.

## **TYPES OF EXISTING PROCESS DEFINITIONS**

The process of Policy Modeling (PM) is a complex challenge, which includes various tasks with a predefined order to ensure the creation of an effective policy. To face this challenge the structure of the accruing tasks were investigated by several existing process definitions. The processes enable the definition of process-tasks and supporting tools for an efficient task-solving. In particular the supporting tools are nowadays brought by the Information and Communication Technologies (ICT), with the rising role of internet, social web

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