Chapter 2 Conceptualizing the STOF Model

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Services and services innovation are directly related to and dependent on innovations in business models. In this chapter, we discuss the main theoretical background of the STOF model and its four core components, i.e. services, technology, organizational arrangements and financial issues, which will lay the foundations for the method used in designing business models for (mobile internet) services. We discuss the conceptual background and translate the theoretical insights into more design-oriented issues. Then, we make the transition to a model that helps us understand the dynamics involved in the success of business models, i.e. long-term profitability and market adoption of the service to be designed. In the next chapter we will discuss the Critical Design Issues (CDIs) and Critical Success Factors (CSFs) that are part of the STOF approach.

2.1 Business Model Concept, Typologies and Components

In the 1970s, the concept of business model was used to describe and map business processes and information and communication patterns within companies, for the purpose of building Information Technology (IT)-systems (Konczal, 1975; Stähler, 2001). More recently, business models have been related to market structures and the place individual companies occupy within those structures (Porter, 2001). Sometimes, the concept is used to describe co-ordination mechanisms in economic processes, i.e. markets or hierarchies, or to discuss intermediation or dis-intermediation trends (Hawkins, 2002; Mahadevan, 2000; Tapscott, Lowi, & Ticoll, 2000). In other studies, the implementation of a specific market model, for example the e-shop, e-mall or electronic auction, is discussed in terms of business models (Ajit & Van Heck, 2002; Timmers, 1998). Very often, a single aspect is emphasized, for example in the Business to Consumer (B2C)-model for the retail sector (Lee, 2001; Roussel, Daum, Flint, & Riseley, 2000), or Business to Consumer and Business to Business (B2B)
are discussed (Alt & Zimmermann, 2001). Recently, business models have been related to peer-to-peer file sharing services (Hughes, Lang, & Vragov, 2007).

In addition, business models are more and more related to strategic choices companies are making (Hedman & Kalling, 2003; Porter, 2001). Strategies are increasingly translated into business models. Nowadays, many business ventures have a limited interest in formulating strategies. Instead, they formulate business models (Hedman & Kalling). To a large extent, strategies determine the basis of the business case: the concrete operational implementation of business strategy in a business model. The business model is given shape by answering questions with regard to customer needs, the way services are provided, the availability and the way in which the necessary technical, financial and human resources and capabilities are put in place, the way processes are defined, et cetera. Information and communication technology, i.e. Internet and mobile technologies, play an increasingly important role, not only in the organizational processes (back office), but also in the channels that are needed to deliver products and services to their end-users (front office).

As a result, the concept of business model is also closely related to that of business modeling, which describes organizational and/or transactional processes, using Business Process Modeling Notation (BPMN), and object-oriented modeling language, such as Unified Modeling Language (UML), or Integration Definition Function Modeling-family (IDEF). The concept of business models has been established in scientific research within a short period of time and can be considered to be multi-disciplinary in nature. In disciplines including strategic management, information systems, innovation studies, economics, e-business and marketing research has been conducted with regard to business models. The overall result, however, is that, although the business model concept is used broadly, as yet a single coherent description is lacking (Mahadevan, 2000).

2.1.1 Definitions

One of the earliest definitions of business models was proposed by Timmers (1998), who stresses the architectural and technology elements: “a business model is an architecture for the product, service and information flows, including a description of the various business actors and their roles, a description of potential benefits for the various business actors, and a description of the sources of revenues”. Based on this definition, a number of alternatives were proposed from various disciplines. One of the most complete definitions was probably proposed