

## Chapter 2.3

# Electronic Business Models Design for Public–Private Partnerships

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### INTRODUCTION

Public-private partnerships (PPPs) provide an alternative model for producing and delivering public services, both the traditional public services and the electronic ones (i.e., the ones delivered through electronic channels, such as the Internet or other fixed or mobile network infrastructures; Aichholzer, 2004; Andersen, 2003; Broadbend & Laughlin, 2003; Jamali, 2004; Lutz & Moukabary, 2004; McHenry & Borisov, 2005; Nijkamp, Van der Burch, & Vidigni, 2002; Spackman, 2002; Wettenhall, 2003). The basic concept of the PPP model is that the public and the private sectors have different resources and strengths, so in many cases, by combining them, public services can be produced and delivered more economically and at higher quality. In this direction, a PPP is a medium to a long-term relationship between public organizations and private-sector companies, involving the utilization of resources, skills, expertise, and finance from both the public and

the private sectors, and also the sharing of risks and rewards in order to produce some services, infrastructure, or other desired useful outcomes for the citizens and/or the businesses.

Information and communication technologies, and in particular the Internet and WWW (World Wide Web) technologies, have opened a new window of opportunity for a new generation of PPPs for offering new electronic public services in various domains, for example, for developing and operating public information portals (Andersen, 2003), electronic transactions services (Lutz & Moukabary, 2004), electronic payment services (McHenry & Borisov, 2005), value-added services based on public-sector information assets (Aichholzer, 2004), and so forth. However, before such a new service is developed, it is of critical importance to design systematically and rationally its business model, which, according to Magretta (2002), incorporates the underlying economic logic that explains how value is delivered to customers at an appropriate cost

and how revenues are generated. Vickers (2000) argues that most of the failures of e-ventures (also referred to as dot-coms) are due to the lack of a sound business model or due to a flawed business model. However, most of the research that has been conducted in the area of e-business models is dealing mainly with the description and abstraction of new emerging e-business models, the development of e-business-models classification schemes, and the clarification of the definition and the components of the business model concept, as described in more detail in the next section. On the contrary, quite limited is the research on e-business-models design methods despite its apparent usefulness and significance; moreover, this limited research is focused on private-sector e-business models. No research has been conducted on the design of PPP business models for offering electronic services.

In the next section of this article, the background concerning PPPs and e-business-models research is briefly reviewed. Then a new framework for the design of e-business models is presented, which has been customized for the design of PPP business models for offering electronic services. Next, the above framework is applied for the design of a PPP business model for the electronic provision of cultural-heritage education for the project E-Learning Resource Management Service for the Interoperability Network in the European Cultural Heritage Domain (ERMIONE) of the eTEN Programme of the European Union (Grant Agreement C517357/2005). Finally, the future trends and the conclusions are outlined.

## **BACKGROUND**

PPP is defined as “an institutionalized form of cooperation of public and private actors, which, on the basis of their own indigenous objectives, work together towards a joint target” through “leveraging joint resources and capitalizing on the respective competences and strengths of the

public and private partners” (Jamali, 2004, p. 416). Even though in the past various forms of public-private mixing arrangements had been used (such as mixed enterprises, outsourcing, subsidization, etc.), the concept of PPP appeared in the early '90s when the Private Finance Initiative (PFI) was introduced in Great Britain; it envisaged that private companies would design, build, operate, and finance hospitals, schools, prisons, and so forth, and the government would agree to purchase their use as a service for a fixed period of time (Spackman, 2002; Wettenhall, 2003). The evolution of the PFI concept resulted later in the PPP concept. In general, PPPs shift government ministries and agencies from financing, owning, and operating assets to contracting the private sector to finance, build, and operate assets, and to deliver public services using these assets. The private sector is paid for these services, or is given a share of the income generated from them or some other rights. The main drivers for PPP have been improving efficiency in the production and delivery of public services, and finding alternative methods of financing the investments required for developing public infrastructure and for offering public services.

A wide spectrum of PPP forms have been used for achieving various public-sector objectives, such as public-infrastructure building (e.g., roads, bridges, hospitals, energy stations, telecommunications, etc.), urban-areas renewal, rural-areas development, the solving of various social problems, environmental protection, education, the provision of community-based services for disadvantaged children, technology research and development, and so forth (Jamali, 2004; Nijkamp et al., 2002; Spackman, 2002; Wettenhall, 2003), and recently for the provision of electronic services (Aichholzer, 2004; Andersen, 2003; Lutz & Moukabary, 2004; McHenry & Borisov, 2005). However, the relevant literature strongly emphasizes that PPP has resulted not only in successes but also in failures (e.g., Jones, 2005). The central critical success factor of a PPP is to reconcile the

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