

Chapter 8

E-Government System Design and Port Authorities: A Survey of Approaches and a Case Study Combining Internet and E-Learning Technologies

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ABSTRACT

Port authorities constitute very active organizations that frequently interact with citizens as well as public and private organizations. The employees and administration of port authorities require effective e-government services in order to implement their tasks. The required services should provide effective information flow and collaboration to improve decision making, governance, and integration of all sectors. In this chapter, the authors briefly outline issues concerning the usefulness of intranets in organizations and corresponding services provided to organization employees. They briefly present key aspects of certain recent approaches concerning e-governance and intranets in ports. The authors also present a case study involving the e-government services implemented for Patras's Port Authority in Greece. The specific port authority has a lot of workload because the corresponding port is the third largest in Greece and a main gate to countries abroad. The case study combined Internet-based technologies with e-learning technologies. E-learning services assist employees in acquainting themselves with newly introduced e-government services. Therefore, e-learning may contribute in the successful realization of e-government projects.

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INTRODUCTION

Port authorities are governmental or quasi-governmental organizations operating ports. They own property as well as vehicles and machinery (e.g. cranes, trailing trucks) useful for performing various tasks in ports. Port authorities collect fees for services provided such as ship anchorage and use of machinery. Fees are also collected from passenger and vehicle tickets as well as customs. Several ports also include marinas attracting visitors owning crafts. Port authorities charge fees for services provided in marinas.

Port authorities are usually governed by boards or councils. Port authorities consist of several divisions and departments. Important tasks performed by a port authority's departments involve utilization of resources, planning and construction of works, maintenance of land and marine installations, maintenance of machinery, administration, economics, marketing and public relations. Corresponding data is recorded in databases. We highlight a few of the tasks performed. Departments responsible for utilization of resources schedule the use of resources (e.g. machinery, marina docking spots), compute/collect appropriate charges and coordinate trade activities related with marine traffic. Departments responsible for planning and construction of works design programs for development works involving the port authority, develop studies for future work concerning infrastructure and supervise all corresponding work. For machinery owned by the Port Authority, a department is responsible for repairs and maintenance, to draft reports with technical specifications of machinery and spare parts that need to be acquired and to record data concerning operation/maintenance of available machinery. In total, port authorities play a key role in commerce, transport, logistics, navigation and tourism.

Port authorities very frequently interact with shipping companies and shipping agencies. Shipping agencies are responsible for handling

routine tasks at ports regarding ships and cargo after agreements with corresponding ship owners. There are also other actors closely interacting with port authorities' internal departments in several activities that also require efficient data exchange. Such actors are shipping agents, customs agencies, towage companies, tourism offices, shipping companies, craft owners, environmental agencies, coast guard, accident and rescue services, banks, ministries, prefectures, municipalities, police and security agencies.

Port authorities constitute organizations which frequently interact with citizens as well as public and private sectors. E-government projects involving ports require careful design due to the several services provided (Pallis & Lambrou, 2007). Automation and efficient data exchange are among the functionalities required in a variety of activities and functions that take place in a port. Coordination of administrative organs and public-private organizational models are also required (Pallis & Lambrou, 2007). The variety of port activities and participants entails a careful design of e-government infrastructures especially taking into consideration human factors and the need for collaboration.

Nowadays, the Internet plays a key role in almost all, if not all, business activities. An increasing number of organizations are adopting the use of Internet and Intranet technologies in their working environment in order to facilitate and automate their working tasks (Robertson, 2009, 2010; Blackmore, 2010; Casselberry, R. et al., 1996). With the effective dissemination of information within organizations, employees save time and paperwork is reduced. The advantages are multiplied in case of an organization that frequently interacts with the public. A significant amount of information becomes available to the public through the Web reducing the employees' workload and facilitating the citizens' contact with the organization. Just like other organizations, port authorities may exploit Internet and Intranet technologies. The provided services may

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