

DESIGN OF A SINGLE WINDOW SYSTEM FOR E-GOVERNMENT SERVICES: THE CHILEAN CASE

Cataldo, Alejandro; Ferrer, Juan-Carlos; Rey, Pablo A.; Saure, Antoine

Abstract

The single window concept refers to systems that allow organizations to provide one-stop services to users. This paper describes a model for the design of a single window system in the context of e-government. The model determines which government service procedures should be incorporated into the system, which technology should be used to execute each procedure and the time in the planning horizon at which technology upgrades and incorporation processes should take place, while maximizing the total social benefit associated with these decisions. The proposed model, a mixed integer linear program, is applied to the particular problem faced by the government of Chile a few years ago. The solution generated by the model for this instance is compared to that obtained through the Chilean government's own method for prioritizing the inclusion of procedures into its single window system. When the proposed model was limited to choosing 60 procedures, the number chosen by the Chilean government's method, the solution produced 1.6 times more benefits. With the limit on the number of procedures removed but considering a budget constraint, the model chose 111 procedures that generated 1.85 times more social benefits than those procedures chosen using the government's method.

KEYWORDS: E- government, e-services, single window system, integer programming, system design.