

METHODOLOGIES FOR MUNICIPAL MASTER PLANS MANAGEMENT

Abstract

As a result of a recent political process of responsibility transference from the central to the local administration, the Portuguese municipalities are now in control of the activities that have implications in land-use management. Presently most of the territory has a municipal master plan and the current challenge is to find efficient mechanisms to implement, monitor and manage the plans.

A master plan implementation should ensure its harmonization to the municipal planning and management as well as an open decision-making process on any land-use change in which a permit is needed. Moreover, its execution should respect any other plans valid within the municipality. All these requisites imply a continuous data collection, organization and updating process. These data, which support and describe the plan management, are geo-referenced. This thesis intends to identify how geographical information systems (GIS) can help to select, structure and link the graphic and alphanumeric data needed in such system.

Hence, the main goal of this thesis is to conceive a system to support master plan management, allowing to efficiently answer to any development intention through an easy access to systematically organized information presented in the master plan and other official plans that are in force within the municipality as other important planning information such as legislation. The system herein proposed intends on one hand, to reduce the time needed by the municipality administration to answer to any petition for a building permit, and on the other hand to allow a systematic update of land-use changes, which are mainly due to the master plan implementation. The proposed system to support the master plan management was developed for a specific municipality, using a GIS developed according to the data structure proposed in this thesis.

This thesis presents an analysis of the existent land-use planning management tools available in Portugal to sustain the proposed system. This analysis focused on the available tools is then related to the most critical urban planning and management theories and methods. In addition, this thesis presents the first evaluation of the use of GIS within the municipalities underlining the potential of using GIS for supporting the management of master plans.