

CONCORSO PUBBLICO, PER ESAMI, A N. 1 UNITÀ DI CATEGORIA C, POSIZIONE ECONOMICA C1, AREA TECNICA, TECNICO-SCIENTIFICA ED ELABORAZIONE DATI, PER LE ESIGENZE CENTRO INTERDIPARTIMENTALE DI RICERCA LABORATORIO DI URBANISTICA E PIANIFICAZIONE TERRITORIALE (LUPT) "RAFFAELE D'AMBROSIO" DELL'UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II (COD. RIF. 2246)

QUESITI ESTRATTI PROVA ORALE DEL 03 MARZO 2023

TRACCIA A

1. Si illustrino le caratteristiche principali di un'applicazione avente ad oggetto l'elaborazione di percorsi alternativi su rete stradale in caso di eventi sismici pre-eruttivi.
2. Si descrivano le caratteristiche principali di una Tabella Pivot in Excel.
3. Con riferimento alla pubblicazione in allegato, si legga e si traduca il paragrafo 1.1.

Using the synergy of QFIELD for collecting data on-site and QGIS for interactive map creation by ALKIS® data extraction and implementation in PostgreSQL for urban planning processes

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KEY WORDS: ALKIS data extraction, QField, Cadastre land register, Semi-automatic Mapping, QGIS, PostgreSQL, Python, GML

ABSTRACT: The German law concerning Urban Development Promotion (Städtebauförderungsgesetz; StBauFG) is an important component of the Building Law (Baugesetzbuch). It enables municipalities to be financially supported by the federal and provincial governments for promoting urban development in downtown areas being in need of renovation, maintaining historical centers, or enhancing the value of socially imbalanced areas. Therefore, the law plays an important role for the economical, ecological, social and cultural status of cities. If an urban renovation area is formally declared the reconstruction measures taking place there lead to an upgrading of the real estate land values. The present work contributes on one side to the initial phase for the declaration of an urban renovation area and on the other side to the final phase comprising the legal accounting procedure. At first, the city planners must document the urban status concerning the structure and quality of buildings, vacancy rate for housing and industry, road condition and numerous other urban quality and structure deficits. To acquire these data, the open-source GIS plugin QField serves as an appropriate and easy to handle tool installed on a tablet for the urban planners to collect the necessary data on-site. The planners can then easily assign defined qualities and states of the objects on a map or edit and comment new objects and attributes. Through automatic updating of these data in the PostgreSQL-database, an interactive map in QGIS will then be automatically created in Python. For the last phase, the legal closure of a declared renovation area, our work supports the analysis and modelling of the relationships in the Authoritative Real Estate Cadastre Information System ALKIS® in order to identify the property owners being charged a so-called balance payment for the upgrading of the standard land values resulting from the applied renovation measures. The work shows the high potential of the ALKIS® data being processed with open-source software like PostgreSQL, QGIS, and QField towards a more effective urban planning.

1. INTRODUCTION

1.1 Legal background of the renovation areas

Since the Urban Development Promotion Law (Städtebauförderungsgesetz StBauFG) was passed in 1971, more than thousand renovation areas in Germany were designated with the aim to maintain, modernize, and revitalize the urban structure and to improve the living conditions for their inhabitants. Different promotion programs focusing on e.g. social aspects, historical monuments conservation, or urban parks are financed by the German federation, the German states and the involved municipalities. To participate in such a promotion program, the municipality must apply for and to carry out urban investigations proving the necessity to be promoted (Figure 1, Phase 1). In this phase, the city planners have to document the urban structure and its quality deficits. In this work, we present our approach for an automatic procedure to support this process by the integration, adaptation and extension of open-source software tools.

In the urban planning process, if it is proven that the renovation area will be financially supported, the ongoing renovation process however could take place over decades (Figure 1, Phase 2). If extensive renovation measures in these areas were carried out within the time, the German Building Law Baugesetzbuch (§ 154 BauGB, see BauGB, 2018) requires to charge the owners of the affected land parcels a payment due to the upgrading of their property's real estate value (Figure 1, Phase 3).

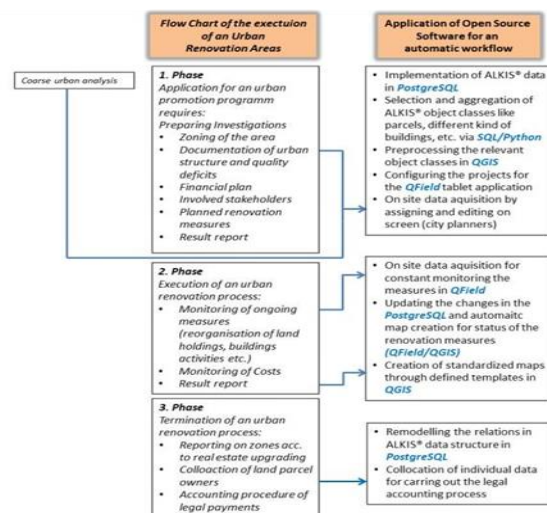


Figure 1: Legal process of the realization of a renovation area with the corresponding open-source application.

To draw up the accounts of this so-called compensation payments, either supporting private companies or the