Chapter 12
Planning Support System Project Management

ABSTRACT

The chapter introduces the planning support system project management. What make GDSS and PSS projects in GDI context specific in comparison to other IT projects? This chapter presents a methodological approach to project management with its various phases: planning, conceptual design, development, and testing. The chapter presents available principles and examples of functional architecture and systems components. The systems approach is applied for information systems development and application development, and ensures that such systems are developed, acquired, evaluated, and operated in an efficient manner within prescribed budget and schedule constraints and responsive to mission requirements.

INTRODUCTION

As the GIS has moved to SDI on an open environment characterized by collaboration and interoperability, the way of designing systems has to consider the specific developments and insure that they are present in the new projects satisfying the demand of users. GI implementations to be integrated with non- GI applications in an overall corporate IT environment. Adapting IT standards helps to combine solutions and lets the GI components benefit from the functionalities provided by IT platforms.

Software development focus on the specification of models and model transformations. Model-driven development is a successful methodology for model transformations based on Model Driven Architecture . Model-driven development starts at the computational independent level (CIM) with a business model that capture system requirements. Then the initial CIM model is refined and a platform independent model (PIM) is obtained. Finally, the code is generated by transforming the PIM model into a platform specific model (PSM).

BACKGROUND

The rules for the design of GSDI is based on the analysis of main types of systems which have been developed in the context of SDI (Carrara,P., Fortunati, L., Fresta, G., Gomarasca, M., Bonati, L., P., Poggioli, D., 2004).

A life cycle of such a project starts from the definition of the Strategic Plan and the Feasibility Study, from which derives the tender documentation that professionals in charge of the control and monitoring use as reference during all the project while the appointed general contractor is asked to realize the system components under their strict control.

This approach has been chosen for this kind of project in order to manage the fact that IT is highly dynamic specially in the Geospatial Information and since the Public administration needs may change according to societal and political changes.

The general architecture is considering the participation to the SDI of several types of users according to the main principle that different partners may contribute to the SDI by data and services (Kotsev,A., Cet, V., Dusart, J., Mavridis, D., 2018).

The technical solution which represent the back bone of the system are the cooperative web services: complex and multi services finalized to perform the activities of the offices are based on simple web services either Geospatial services or traditional e-government and IT services.

GDSS in a Spatial Data Infrastructure (SDI) context is considered an ideal mean of support spatial planning since SDI enables the distribution and sharing of the most up-to-date geodata and geoprocessing functionality.

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