# Chapter 8.7
# Conducting Multi-Project Business Operations in SMEs and IS Support

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## ABSTRACT

Multi-project business operations in SMEs require adaptation of management processes and, consequently, revision of information systems. Present ERP solutions are not suitable in a multi-project environment. This chapter presents a newly designed IS model that supports strategic and commercial multiple project operations. The importance of connecting business goals with project performance and upgrading operational CRM into multi-partner management technology is considered. Significant added functions of IS in a multi-project environment should support project evaluation and management of project portfolios, intra- and inter-project communication, and mastering multi-task workflow. To reduce the need to spend limited SMEs' resources, technological development of the designed IS model must assure its simplicity for use and deployment.

DOI: 10.4018/978-1-60566-892-5.ch008

## INTRODUCTION

The growing dynamics of project implementation and the appearance of multi-project business operations in all types of organizations, including Small to Medium Enterprises (SMEs), requires adaptation of their management processes at all levels. The increasing complexity of SMEs' multi-project business operations leads to greater complexity

among different business relationships. SMEs can cooperate in one project and compete in another, while sharing resources only when necessary. The business systems[1] (BSs) role differs in projects: for instance, it can be project management, a coordinator, a subcontractor, or a consultant. The use of diverse communication standards can lead to inefficient project coordination among partners and can result in sub-optimal project portfolio performance. Dealing with the multi-project business operations conducting process, therefore, has to be holistic enough. New tools and concepts have to be developed to support the management of multi-project business operations. Among this support, special attention is given to assuring appropriate information and information system (IS) suitability.

In general, information systems provide the means for the BS to change and adapt to the business environment. Many ISs, are available to help plan and execute business processes, which will result in better product and services quality, a better response to clients' requests, and recognizing and mitigating the risks. For standard business processes suites of pre-prepared business applications, such as Enterprise Resource Planning (ERP) applications are available.

Present Enterprise Resource Planning (ERP) solutions do not support multi-project business operations appropriately because they are more or less adapted to the continual – therefore non-project oriented – business operations. Among those solutions are some ERP versions, partly adapted to the needs of project-oriented SMEs; there are also some supplemental ERP modules supporting project management in non-project-oriented SMEs. But mostly all of them assist the conduction of individual projects instead of entire (multi)project-oriented business operations, which deal with contemporary and strategically oriented BSs.

Because of some differences in informational needs, we outlined the differences between project-oriented BSs, which deal mostly with commercial projects representing their core business, and BSs, which deal mostly with developing strategic and other on-going projects. To support the informational needs of them all, the new IS should be developed, assuring state-of-the-art support for challenges arising in a multi-project environment. It should upgrade existing independent applications and deliver greater interconnectivity with the BSs' ERP and decision support systems. In this chapter we propose a model for such IS in the form of ***Project Oriented Enterprise Application Suite*** – PREAS.

We wanted to make it possible for SMEs to use the information resources provided in the most efficient way and to efficiently focus on the management of complex business workflow. The model supports project evaluation and the selection process required for managing project portfolios using multi-criteria decision-making methods. It upgrades the operational CRM into multi-partner management technology to manage project partnership relations. Furthermore, the model connects information about the SMEs' business goals and business results with project performance and supports intra- and inter-project communication, as well as connecting project members and partners from within and outside the company. It also supports multi-task workflow planning and processing with limited resources. In developing the applicable IS model, especially in SMEs, we wanted to ensure it would be easy to use and deploy, reducing the need to spend limited resources on IS. Another objective in developing the model was to ensure an environment that stimulates innovative processes and reduces the costs and risks of converting the innovation into projects.

Since new technologies can easily outperform and substitute current mainstream technologies, we tried to avoid and replace as many information application terms as possible (including email and intranet) with content-related terms such as communication.