

Integrate ERP system into Business Process Management system

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Abstract—Enterprise resource planning (ERP) systems present a holistic view of the business from single information and IT architecture. But ERP systems are comprehensive, huge and complex systems and warrant careful planning and execution not ensure the successful implementation. A business process is set of interrelated activities which have definable inputs result in output that adds value from a custom perspective. Business Process Management (BPM) is a structured approach to understand, analyze, support, and continuously improve fundamental process. In order to improve the success rate of ERP in project implementation, enterprises often implement BPM before or during the ERP implementation. In this paper, a framework for integration ERP system into BPM system is proposed. The framework closes the gap between ERP system and BPM system, enables full life-cycle of process centric enterprise system implementation.

Keywords—business process management, ERP, integration framework;

I. INTRODUCTION

From 1990s, organizations have moved from standalone business information systems applications to integrated and flexible enterprise wide information systems and the rise of Enterprise resource planning (hereinafter, ERP) systems has been the major event in the software industry. ERP systems present a holistic view of the business from single information and IT architecture. But ERP systems are comprehensive, huge and complex systems and warrant careful planning and execution not ensure the successful implementation. [1]

SAP is a worldwide leader in ERP software. Headquartered in Germany, SAP's R/3 ERP system is used by a significant number of the Global 2000 companies to better manage their information needs (<http://www.SAP.com>). SAP has gained popularity in the corporate community over the last twenty years by becoming the first vendor to offer larger organizations an integrated suite of products. The SAP Solution Manager application management solution facilitates technical support for distributed systems – with functionality that covers all key aspects of solution deployment, operation, and continuous improvement.

Business Process Management (hereinafter, BPM) includes methods, techniques, and tools to support the

design, enactment, management, and analysis of operational business processes. It can be considered as an extension of classical Workflow Management systems and approaches. [2]

IBM business process manager (hereinafter, IBPM) is an industry leading commercial tool that helps clients fully visualize, understand, and document business processes, and it is recognized as a leading business process modeling tool by Gartner. The components of IBM Business Process Manager provide a unified BPM repository; tooling for authors, administrators, and users; and a runtime platform. The product can be configured to support various levels of complexity and involvement with business process management.

In order to leverage both the business process modeling capability of BPM system and the existing functions and transactions in mature ERP system, using both of BPM tool and implementation platform is the most feasible way. [1]

In this paper, we propose a framework, for integration BPM system with ERP system, named as SSI4BPM, which implements the integration of IBM BPM with SAP Solution Manager. The architecture of SSI4BPM includes modules in Process Designer and modules in Process Center. SSI4BPM work as an intermediate to support bidirectional model transformation, in Process Designer, we develop modules to interact with user and in Process Center, we develop modules to import, export and store SAP project. The framework closes the gap between ERP system and BPM system, enables full life-cycle of process-centric enterprise system implementation.

This remainder of the paper is organized as follows: In Section 2, related work is reviewed. In Section 3, the model synchronization method is proposed. In Section 4, the SSI4BPM framework is introduced. In Section 5, a case study is provide to illustrate how to user SSI4BPM to integrate SAP with IBM BPM. Finally, we draw our conclusions.

II. RELATED WORK

There are different approaches for integrating ERP systems and BPM systems. A well known approach is Enterprise Application Integration (EAI) another approach is bring SOA into BPM and ERP.

EAI provides methods for enterprise integration with lower costs and less programming using existing