Chapter 1
Business-Oriented Process Management

Ming-Chien Shan
SAP Research, USA

ABSTRACT

This paper highlights all the relevant issues and required features from a business operation point of view. It presents an overall intelligent business operation scenario to highlight the required tasks and relevant issues to meet the needs of business managers and business operators. It then outlines the approaches and design to deal with these issues and provides the needed functionality. Finally, it summarizes the study and discusses future work.

1. INTRODUCTION

Is my business performing? This is the fundamental question facing every business manager, and enterprises have advanced a growing dependence on IT technology to devise a solution to that very question.

In the 80's, companies started to leverage IT technology to improve the efficiency of their business system execution. During this early IT adoption stage, companies enhanced IT technology mainly to increase human productivity and, for that reason, concerned themselves with ensuring that their underlying network and computers were under normal execution. The issue of whether a business was performing was equivalent to asking the question: *Is my IT infrastructure performing?*

In the 90's, companies came to realize that functionally excellent application packages were crucial to optimizing each facet of business operation. To support this need, vendors developed various application modules to take care of each key operation segment of the whole value chain. For example, CRM packages supported front-end, customer, and market-facing operations; SCM packages managed planning and forecasting

DOI: 10.4018/978-1-4666-0249-6.ch001

operations (Casati, Dayal, & Shan, 2001); ERP packages executed accounting, billing, and inventory operations; and LTM packages coordinated transportation arrangements, warehousing, and distribution center management operations. Consequently, the question became: *Is every factor of my enterprise being well-executed by apposite software applications?*

In the late 90's, enterprises started to recognize the necessity for a holistic integration and coordination of their operations and made a significant move from a data-centric approach to a process-centric approach. To automate the end-to-end business operation processes, vendors developed technology, such as message broker and workflow, to facilitate companies in linking and directing the execution of all relevant applications. Vendors also provided performance monitoring tools to oversee the execution of these processes. The fundamental question had grown into: *Does my underlying technology provide effective linkage and efficient execution of the complete end-to-end business operation cycle?*

Today, with the emergence of the global economy and the rapid growth of various new business operation models, companies around the world are dramatically changing the way they conduct business. Many companies have embarked on aggressive initiatives to provide the needed flexibility and dynamics for their business operations, only to find that they are unable to achieve their objectives due to a lack of certain core capabilities. In order to truly facilitate prompt decision-making by line-of-business managers or corporate executives, a new demand has emerged for a level of abstraction that takes raw operational data and places it in the proper business context suitable for business managers (META Group, Inc., 2002; Brown, 2002; Powell & Boutte, 2002).

Hence, IT-oriented measurements, such as the number of transactions executed per hour, the average duration of each individual activity, and the details of application failures and exception rates, should be intelligently transformed into practical and valuable information to a business manager, i.e., the number of accepted purchase orders grouped by week, customers, or suppliers, the status of deliveries, and the details on which customer or supplier interactions are profitable. Ideally, we would like to provide:

1. Sales managers with information regarding whether an order can be fulfilled based on suppliers' credibility and CM partners' capacity, whereas, so far, we can inform them only on the IT-based execution status of SCM and MRP applications, and
2. Finance managers with information regarding the stability of account receivables being undertaken to facilitate their cash flow management, whereas, currently, we can merely provide the processing status of each purchase order.

In other words, having a server or application up 99.999% of the time is an IT goal, but it does not necessarily mean that a mission critical process, such as order fulfillment management or customer service delivery, is functioning well. With companies striving to attain zero latency across entire value chain executions, it is critical for business managers to know when a business operation, not a particular IT element, is in danger.

In a recent article, the NY Times reported that the inability of companies "to focus effectively on the core things that drive their business" has spurred increasing interest in "a digital dashboard or cockpit that presents not just the key business data, but also the reasons behind the data," where "these things are all about making sure we react before things get out of hand." Vendors have started to build digital dashboards (Powell & Boutte, 2002; Tedeschi, 2002) to provide business managers with business statistics, trends, and figures that allow them to effortlessly gauge the health of a company's operations. This "feeling the pulse of your business" requirement, coupled with the complexity of today's business operation,