

Chapter XXIX

Overview on Information Systems and Tools for Collaborative Enterprise: Business Impacts and Managerial Issues

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ABSTRACT

Recent industry and business trends can be described as shorter life cycle, increased speed to market, customizability, and a wide variety (rather than mass production) of products. In order to cope with the new environment, business organizations in the supply chain need to communicate, collaborate, and share information as efficiently as they can. There are a variety of collaborative information systems and tools that are actively being used in the enterprises that make collaborative efforts among supply chain partners using digital technologies. In order to maximize business impacts of those collaborative tools, proper policy, and support from users and management are required. Understanding of the managerial issues of the collaborative information systems and tools regarding deployment and usage is also important for successful deployment. We provide an overview on functionalities of the collaborative tools, their business impacts, and managerial issues that need to be addressed to maximize their effectiveness.

INTRODUCTION AND BACKGROUND

Recent industry and business trends can be described as shorter life cycle, increased speed to market, customizability, increased value per cost and a wide variety, rather than mass production, of products. In order to cope with this new environment, collaborating business organizations in the supply chain and R&D (research and development) need to communicate, collaborate, and share information as efficiently as they can in order to obtain or maintain their competitive edge. In addition, business-to-business (B2B) and business-to-customer (B2C) electronic commerce is getting more and more popular, and their market size is increasing at about 25 percent per year (Laudon & Traver, 2007a), which intensifies the trends. It is worth mentioning that B2B market size is about 10 times bigger than B2C, which might be the opposite of what people see. It can be said that it is due to the businesses' efforts to make their activity as competent as possible to flourish or just to survive in the fast paced market. The new business environment combined with e-commerce requires fast and timely communication among businesses and customers. Collaborative efforts among businesses using digital technologies are often referred as "*collaborative commerce*" (Turban, King, Viehland, & Lee, 2006a), and it includes supply chain activities such as collaborative production planning, forecasting, automatic ordering, and order fulfillment, and research and design of products, and so on. Companies that exercise collaborative commerce can be referred as *collaborative enterprise*.

There are a variety of collaborative information systems and technologies supporting efficient communication, collaboration, sharing information, and integration of applications within intra-business and inter-business environments. Additionally, it is very usual that adopting and deploying such an information system requires proper understanding, planning, and strong sup-

port from the management. After an information system is deployed, impact on the business cannot be maximized without proper policy and support from users and management. We provide an overview of these collaborative information system and tools with focus on their functionalities, business impacts, and managerial issues for understanding and successful adoption of the collaborative technologies in enterprises.

This paper is organized as follows: in the next section, we discuss a variety of IT tools and systems that help organizations collaborate by allowing them to interact with each other and/or providing timely information. For each of the tools and information systems, we will provide a definition, functionalities, impacts on business, products on the market, and possibly short case studies and a management viewpoint. Then we finish the paper with summary and conclusion.

COLLABORATION TOOLS AND SYSTEMS

There are a variety of IT tools and systems aimed at facilitating communication and collaboration, while they provide dissimilar features coming from different objectives. Some of tools were developed as communication tools, some others as integration tools to facilitate communication among information systems or streamline workflows, synchronous collaboration tools, enterprise application integration, mobile communication, and so on. Based on their features and objectives, we group them into several categories and present individually.

Unstructured Collaboration

Information tools that support *unstructured collaboration* provide communication and collaboration mechanism among human participants in ad-hoc manners. Frequently, technologies originated from Computer Mediated Communication (CMC)

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