

## Chapter 3

# Model of Functionalities for the Development of B2B E-Commerce Solutions

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### **ABSTRACT**

*The explosive growth of the Internet has revolutionized the way of conducting business in several areas, acting nowadays as an important channel of communication and for the trading of goods and services. Therefore, electronic commerce (EC), defined as the execution of transactions of goods and services which rely on computers mediated by informatics networks, assumes particular importance due to the benefits that it may imply for companies. In this chapter we focus on a particular type of electronic commerce: business to business (B2B). B2B describes electronic commerce associated to operations of buying and selling products and services through the Internet or through the use of private networks shared between business partners, thus replacing the physical process around commercial transactions. This type of EC facilitates conducting electronic transactions between companies. There are several B2B solutions that enable companies to make transactions from buying and selling goods and services, to participating in auctions. The analysis of such solutions enabled us to verify that there are big differences in the amount of the supported functionalities, and significant opportunities for development, with the aim of helping companies to evaluate their electronic commerce solutions and to conceive new and more complete systems. In this chapter, a new model of functionalities for the development of B2B EC solutions is presented.*

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## **1. INTRODUCTION**

One of the first organizations to use the term e-business (electronic business) was IBM in 1997. Up to this point, the term used was e-commerce (electronic commerce). This expansion of the terminology also necessitated a paradigm shift: until then, selling was the only experience that people could reproduce on the Web. As such, electronic business (EB), which IBM defines as “a safe, flexible and integrated proposal for distributing different business values with simplicity and range, made possible through the application of Internet technology” entails using the worldwide convenience, availability and range of the Internet to empower already existent businesses/companies or to create new businesses (Laudon & Traver, 2003). Electronic commerce (EC) becomes one of the components of EB, along with e-mailing and e-marketing, among others. Sometimes EC is understood only as “selling through the Web” or as “a company activity in which its presence is only on the Web”. Nevertheless, it can also be defined as a sharing of business information, preservation of business relationships and the direction of business transactions through communication networks (Zwass, 2003). According to another definition EC entails the purchase and sale of goods and/or services through electronic networks of data such as the Internet.

As a particular case of EC, the Business-to-Business (B2B) comprises the electronic transactions made between companies and is mainly conducted in electronic markets (e-marketplaces) (Zhu & Lu, 2005). Basically it is possible to identify three big areas of B2B: e-marketplaces, e-procurement and e-distribution. In the context of the present work, the focus is on the area of e-marketplaces and of e-procurement.

B2B has a growing importance in companies and due to the great disparity in the characteristics and functionalities of solutions, there is an opportunity for contributing to its general improvement. As such, the main aim of this work is to present a

model of functionalities of B2B solutions, which helps future implementations by companies of this type of EC solution. It allows companies to analyze the best way of developing a B2B solution, while also helping them to understand the advantages that solution may bring. It will help to potentiate the business, making it more profitable on a global scale, with a cost reduction in comparison to the traditional way. With this work, companies will become aware of all the electronic processes surrounding transactions between companies, from the purchase and sale of goods and products, to the exchange of information on prices.

In the next sections we review the fundamental concepts for understanding B2B and describe the process of investigation. Then, a model of functionalities for the development of B2B solutions is presented, finishing with some general conclusions.

## **2. CONTEXT**

EC can be defined as the process of buying, selling and exchanging products, services and information, using computer networks including the Internet (Turban et al., 2002; Jennex et al., 2004). Kalakota and Whinston (1997) define EC using the perspective of an electronic data network, automated business processes, automated services and on-line buying and selling.

Nowadays it has a significant importance in the business world and it radically changes the relationship between supplier and client (Kendall et al., 2001), not only in process terms but also in the way transactions are made (Wigand, 1997; Kalakota & Whinston, 1997; Choi et al., 2006). It has the power of connecting individuals, groups and organizations worldwide and one of the differences in contrast to traditional industries is the high degree of interconnection between the several parts. It can help organizations to reduce costs, to interact directly with clients and to stay ahead of the competition (Liu & Arnett, 2000).

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