Chapter IX

Re-Engineering of Logistics Activities for Electronic Commerce

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Abstract

In order to achieve a successful implementation of electronic commerce (EC), it is necessary to “re-engineer” the logistics activities of the enterprise. This chapter first presents and analyses the features of EC, i.e., the typical content of Web sites and technological and operational requirements, for the implementation of each of the four stages of EC (Brochureware, e-commerce, e-business, and e-enterprise). Then the concepts, techniques, and tools that may contribute to the successful implementation of EC are surveyed. Finally, a self-diagnosis tool is presented to initiate the re-engineering process. The self-diagnosis tool
details the company’s profile in view of an EC implementation and identifies the operational activities that need to be reviewed, upgraded, integrated or outsourced.

Introduction

The Internet and the World Wide Web (Web) have allowed the advent of new forms of marketing and new possibilities of collaboration and exchange between a company and all its actors. Electronic commerce (EC) is certainly the most prominent application of the Internet. Hoque (2000) presents four stages of EC:

- **Brochureware** (also called brochures-online Web sites, Rosen, 2000), which is the static posting of information (e.g., description of the company, product catalogue, employment opportunities);
- **E-Commerce** (associated to B2C - Business-to-Consumer, Delfmann, Albers & Gehring, 2002), which includes all the commercial transactions and their supporting activities for a consumer to obtain a product or a service (e.g., online advertisement, billing, customer service);
- **E-Business** (associated to B2B - Business-to-Business, Delfmann et al., 2002), which includes all the intra- and inter-enterprises transactions with any types of commercial partners (e.g., suppliers, subcontractors, distributors);
- **E-Enterprise** (associated to the Virtual Enterprise, Lefebvre & Lefebvre, 2000), which integrates the previous stages with all the intraorganisational activities.

A number of authors (e.g., Baker, 2000; Chambers, 2000; Dilger, 2000; Norton, 2000; Tinham, 2000b; and Chabli, Chapelet, Deglaine & Dimitriadis, 1999) have pointed out that, in order to achieve a successful implementation of EC, it is necessary to review the logistics activities of the enterprise. This review is defined herein as the re-engineering of the logistics activities of the traditional processes for an integration of EC.

Rosen (2000) enumerates a number of questions raised by most businesses when considering the implementation of EC: How should we integrate EC with
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