This BCIS chapter on B2B e-commerce covers various models, including sell-side (one seller, many buyers), buy-side (one buyer, many sellers), exchanges (many sellers and buyers), and supply-chain improvements. B2B transactions are categorized based on seller and buyer numbers and process. The chapter details different marketplace types, illustrating them graphically, highlighting company-centric versus market-centric models. Public exchanges like Amazon and eBay are discussed, emphasizing supply-chain collaboration and the need for efficient, expeditious processes across the chain. The evolution of B2B e-commerce is traced, from EDI to internet-based platforms, including e-government and mobile commerce. Key characteristics of B2B relationships involve sellers, buyers, and intermediaries, with purchasing strategies ranging from spot buying to strategic sourcing. Vertical and horizontal marketplaces are differentiated based on industry focus. The importance of service industries moving online and supply-chain relationship management is stressed due to high transaction values and deadlines. Benefits and limitations of B2B e-commerce are explored, focusing on opportunities and challenges for both buyers and sellers, including channel conflicts and the costs of transitioning from EDI. Sell-side marketplaces are analyzed, noting the advantages of customization and efficiency but also the difficulties of targeting specific buyers. The role of intermediaries like distributors (e.g., Sam's Club, Avnet) is examined. The chapter covers forward and reverse auctions, including their benefits (revenue generation, cost savings, increased member retention) and the decision of using internal versus external auction sites. The concept of buy-side marketplaces and their use of reverse auctions is explained. Procurement management and its inefficiencies are addressed, leading to the introduction of e-procurement and its various types (e-sourcing, e-tendering, reverse auctioning, e-informing). The pros and cons of e-procurement are discussed, including cost considerations and challenges in supplier cooperation and system integration. Group reverse auctions are presented as a means of increasing bargaining power. Other methods like internal aggregated catalogs and desktop purchasing are explored. Group purchasing, both internal and external, is explained, along with the process of direct purchasing from seller sites. The chapter then delves into B2B exchanges, outlining their services (registration, catalog management, auction management) and various revenue models (transaction fees, membership fees, etc.). Potential advantages and limitations of B2B exchanges, including past failures, are examined. B2B portals, encompassing corporate, supplier, customer, employee, executive, and mobile portals, are discussed, along with their applications and issues. Social networking in B2B is analyzed, focusing on opportunities for knowledge sharing, collaboration, and business development. .The increasing use of Web 2.0 tools and the potential of social commerce within B2B are highlighted