

Why is scalability important in building an ebusiness it infrastructure?

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Scalability is the ability to respond to an increase in workload without breaking down. Four dimensions exist to scalability: data size, speed, workload, and transaction cost (Lin, 2001, par. 1-2). Johnson and Whang (2002) point out that “ modern manufacturing requires flexibility due to stiff competition, fast changing customer preferences, shortening product life cycle, and product variety proliferation (p. 3). It is precisely for these reasons, according to Lin (2001), that scalability is a vital component of the eBusiness infrastructure. Scalability is vital to eBusiness due to the uncertain nature of that business.

That is, an eBusiness can grow quickly and without sufficient warning to the proprietor, requiring the infrastructure to handle the influx of new accounts and their demands without failing. Having a system without sufficient scalability can result in the entire system crashing, breaking down in such a manner that no customer or supplier can make use of it. Not only would such a failure prevent individual customers from doing business with the eBusiness, but it would also prevent the organization from doing any business worldwide, for the entire period that the system was down.

A failure that lasted for an extended period might be sufficient cause for the business to ultimately close. 2. How can Internet-based technologies be used to automate the supply chain? Internet-based technologies can be used to automate the supply chain by being part of a configure-to-order (CTO) process of controlling inventory. According to Johnson and Whang (2002): The manufacturer is expected to solve a mixed integer program per batch interval. The program captures demand profiles and supply constraints [. . .

] and maximizes the operational profits. Its output includes final assembly plans for orders, order acceptance decisions, and delivery quantity over time. (p. 2) By using a sensitive CTO system, a manufacturer would be able to keep track of precisely how many people are ordering a particular item and how many of those items are being ordered. Using this program, the vast majority of the supply chain process becomes automated, since these data are used to supply information to fill the orders that the system has accepted.

This kind of system reduces the number of individuals that are needed to fulfill the orders to that manufacturer, virtually automating the supply chain through CTO inventory control. 3. Discuss strategic opportunities for eCommerce enabled supply chains. First, eCommerce enabled supply chains make it possible for businesses to maximize profits by minimizing expenses. They allow the business organization to have more freedom in selecting the products that they will offer and in the speed with which they select these products.

That is, businesses have the opportunity to react more quickly to trends in the marketplace, particularly if they have systems in place that are sensitive to detecting these trends. E-procurement allows a business to be responsive to dynamic markets (Johnson & Whang, 2002). According to Johnson and Whang (2002) Internet auctions and “smart optimization algorithms” allowed Home Depot to effectively allocate “large transportation contracts to freight carriers” (p. 4). Such algorithms would modify the method by

which business would not only select their goods, but the manner in which they are moved around the globe, as well.

It is clear that using the Internet can be an efficient and effective way to conduct business. By using eBusiness strategies to enhance traditional business practices, it is possible to run an efficient and profitable Internet-based business. References Johnson, M. E. , & Whang, S. (2002). E-business and supply chain management: An overview and framework. Retrieved 23 August 2007 from Lin, B. (2001). Scalability management for e-business solution: A resource-based view. Retrieved 23 August 2007 from http://www.iaacis.org/iis/2001_iis/pdf%20files/LIN248.PDF