

## E-Commerce Trends

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“One day all businesses will be e-businesses” predicts Sage Software.<sup>1</sup> An e-business, in very simple terms, is a business that is conducted over the Internet. We will review the large scope of e-business and then focus on e-commerce, a subset of e-business. E-Commerce has been rapidly expanding and is projected to explode over the next few years, driven by reduced costs and increased customer service. Although most small businesses feel the Internet has not impacted their business, most are optimistic that it will benefit their business in the future and many are taking steps to implement e-commerce. Security issues related to e-commerce are important to address due to the unsecured nature of the Internet.

### Use Statistics

In this rapidly changing environment, Putnam Investments’ advertisement says it best: “You think you understand the situation, but what you don’t understand is that the situation just changed.”<sup>2</sup> A sample of statistics illustrates how quickly the Internet has been growing:

- Traffic on the Internet doubles every 100 days. (UUNET)<sup>3</sup>
- IDC predicts the world Internet economy will reach \$1 trillion by 2001.<sup>4</sup>
- As of April 1999, the number of Internet users over the age of 16 in the U.S. and Canada had reached 92 million.<sup>5</sup>
- IT Investment now represents 45% of all business equipment investment.<sup>6</sup>

With the Internet growing so rapidly, the number of businesses taking advantage of this market is growing as well.

### ***E-Commerce vs. E-Business***

E-Business is an imprecise term that is not always used consistently and is often confused with e-commerce. E-business encompasses the entire scope of transacting business over the Internet. It includes e-commerce, which means electronic transactions initiated by a non-employee with a business.

E-Business should be viewed as an extension of current operations. You don’t have to become a “.com” to take advantage of the Internet. A business can improve customer service using the Internet, and there are many levels of e-business from a simple e-mail or web site presence to a fully interactive e-commerce system.

E-business can be grouped into the following categories:

#### Application Delivery (Operational)

Application Delivery may take the form of Virtual Private Networks (VPN), Hosting or Application Service Providers (ASP). A VPN links remote locations over the Internet, and encapsulates the data for security. Hosting and ASP's allow companies to take advantage of technology without the investment in hardware, software and ongoing maintenance. Regardless of the form, many companies are using the Internet for operational purposes, allowing full-time employees access to the business computer system.

Application delivery is providing an interesting trend, reversing the move from mainframes to minicomputers, in that "... the world is [probably] moving toward a system in which files and programs will mainly be stored on a giant server computer ..." as noted by The Wall Street Journal.<sup>7</sup>

#### E-Management

E-Management is the ability to use the Internet to better manage business and can come in many forms:

- *Self Service*: Information accessed via the internet, extranet or intranet, and used by employees that typically don't interact with the operational accounting system. For example, a business owner may dial in from anywhere to obtain critical business information from a browser-based reporting system. Another example would be an employee using a Human Resources system on the company intranet.
- *E-Transactions*: Integration to other companies to facilitate the automatic exchange of business transactions. For example, exchanging purchase orders, invoices and other transactions via Electronic Digital Interface (EDI).
- *Integrated Web Services*: Extend business software by integrating existing Web services such as retrieval of credit rating or credit card authorization.<sup>8</sup>

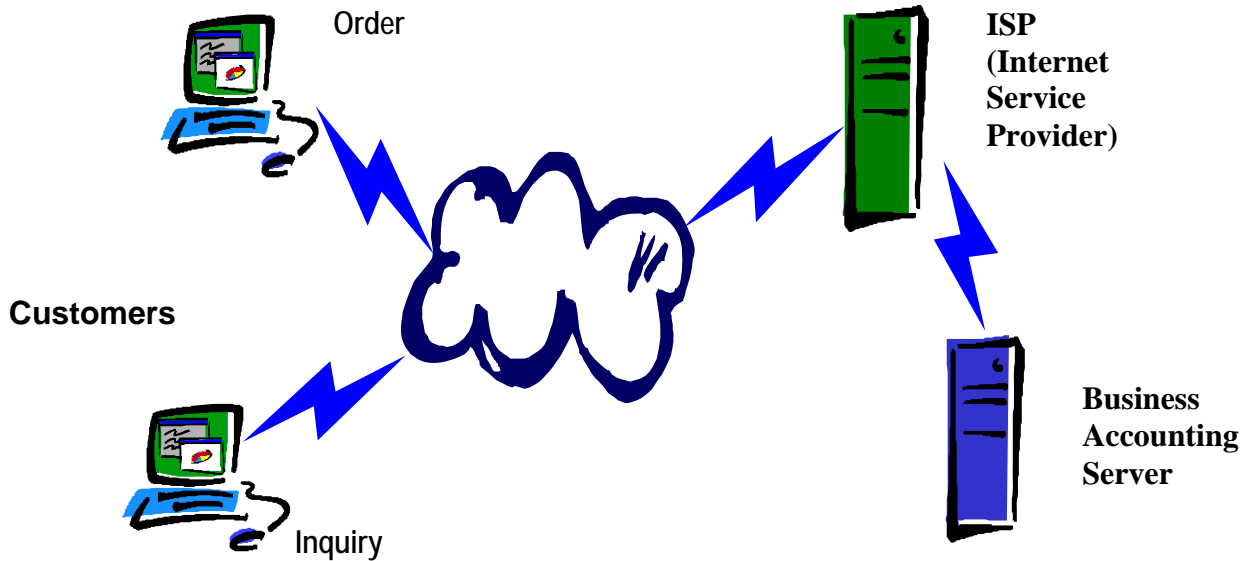
#### E-Commerce

E-Commerce allows non-employees to interact with a business. The most common example would be a customer accessing your Web site and placing an order or to check on the status of an account.

#### **E-Commerce**

The Microsoft and Great Plains Delivering Solutions for Electronic Commerce White Paper states, "Internet technology is being used to improve productivity, reduce costs and provide access to information and knowledge in new and dynamic and interactive ways. Businesses want to run Web-based applications on their servers and realize the advantages of providing customers access to 'electronic storefront information at their fingertips.'"<sup>9</sup>

Although a storefront can exist on the Web without an interactive system, true e-commerce allows direct orders with product availability and current pricing linked directly to a business system. A diagram of the link from customers to a business accounting system using the internet “cloud”:<sup>10</sup>



#### Consumer to Business (C2B)

E-Commerce is most well known by the Consumer to Business (C2B) models used by eBay and Amazon.com. Jeff Bezos of Amazon.com states, “Our vision is that we want to be the world’s most customer centric company. In many ways, we’re a one trick pony. It’s just a good trick.”<sup>11</sup>

In 1996, Amazon.com, the first Internet bookstore, recorded sales of less than \$16 million. In 1997 it sold \$148 million worth of books to Internet customers. Barnes and Noble, one of the nations largest book retailers, launched its own online bookstore in 1997 to compete with Amazon.com, highlighting how e-commerce changes market requirements.<sup>12</sup>

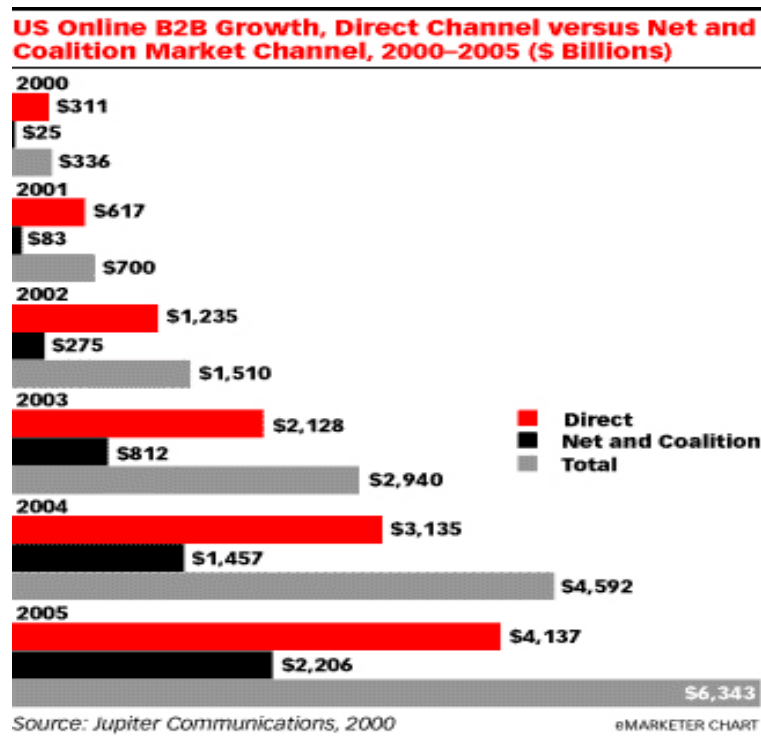
#### Business to Business (B2B)

Business to Business e-commerce projections quickly outpace the C2B traffic on the internet. According to Forrester Research, although U.S. online retail (C2B) revenues will grow from 20.3 billion in 1999 to \$38.8 billion in 2000, the U.S. business trade over the Net will skyrocket from \$109 billion in 1999 to \$251 billion in 2000.<sup>13</sup>

Forrester Research states, “online business trade in the US has hit hypergrowth -- setting the stage for B2B eCommerce to hit \$2.7 trillion in 2004. During this enormous five-year growth spurt, historical operating norms within all industries will come under attack -- as 53% of this Internet trade will flow through eMarketplaces.”<sup>14</sup>

Other projections differ slightly on how fast the Internet will grow, but they confirm each other in the astounding size and scale of e-Commerce.

According to Jupiter Communications: Non-service B2B e-commerce in the US will be worth \$6.3 trillion, or 42% of the market, by 2005. This year, only 3 percent of non-service B2B trade will be carried out online, with a value of \$336 billion. Jupiter is advising companies to incorporate Internet strategies immediately throughout their procurement and sales processes and to establish different selling models to protect market share.<sup>15</sup>

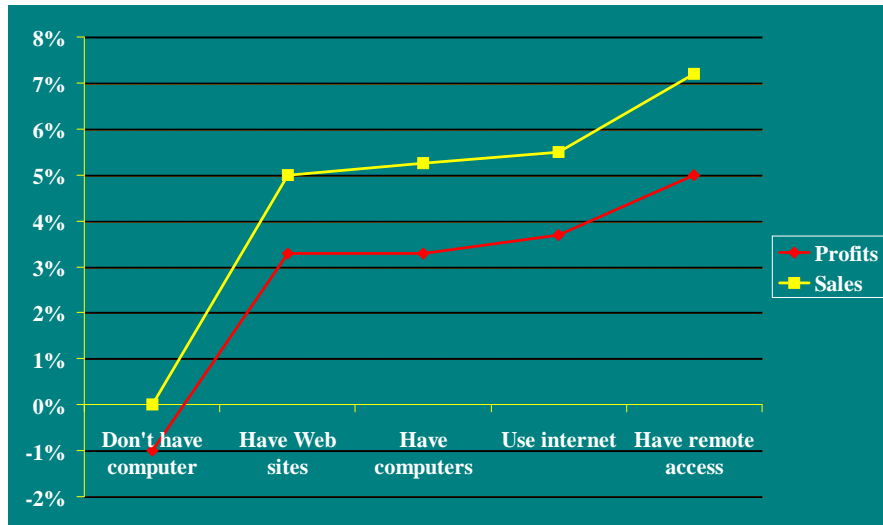


The Kiplinger Letter confirms these predictions when it states, “Business-to-business e-commerce is on the verge of exploding. A \$100-billion market in 1999, it will skyrocket to a staggering \$3 Trillion in the next four years.”<sup>16</sup>

### A Driving Force

One driving force behind the rapid growth of e-commerce is the low cost of processing electronic transactions, since the customer does the order-entry work. Based on information provided by the McKenna Group, the cost of a face to face transaction is \$1.07 while the cost of an electronic transaction is only **one penny**.<sup>17</sup>

Cost savings could be the reason for the correlation between improved profits and use of computers and the Internet as illustrated in the following chart by Arthur Andersen’s Enterprise Group & National Small Business United:<sup>18</sup>



There are many other reasons to engage in e-commerce. For some companies, the number one benefit of transacting business online is to expand market reach to the entire world. A highly-specialized company in Mosinee is developing an e-commerce web site to better reach its widely-scattered customers. Other reasons include improved customer service, decrease cycle times and faster access to customer changes. A fulfillment company in Wausau has established an e-commerce presence to provide better service to its customers. A specialty tea company was able to quickly expand its business, despite the shortage of employees, by setting up an e-commerce web site to accept daily customer orders.

### ***Do Small Businesses Benefit from the Internet?***

#### Internet Impact on Business

A survey conducted in February and March 2000 by Dun and Bradstreet (D&B) found that 70% of small businesses now have access to the internet, which is up from 57% last year and 47% the year before. 31% of the small businesses responded that the Internet has helped them and almost 60% stated that the Web had no impact on their business.<sup>19</sup>

Similar results were found by the Sage Small Business Survey, which indicated that although 80% of small businesses feel that use of the Internet has led to productivity gains, 79% report that they have felt little or no impact on their own business. However, 91% of the Internet-using small businesses report that they believe the Internet will have an increased effect on the way their company conducts business in the future.<sup>20</sup>

“Clearly small business is optimistic about the future benefits of the Internet, The survey data shows that the vast majority (of small businesses are) taking the steps necessary to reap the benefits of this global medium.” said David R. Butler, President and COO of Sage Software.<sup>21</sup>

### Small Business e-Commerce

The Dun and Bradstreet survey found that purchasing of goods and services was the only area of Internet use that increased in 1999. 38% of small companies transacted business with customers over their sites, up from 33% the previous year.<sup>22</sup>

The Sage Small Business Survey found that of those companies that maintain a web site, 29% are capable of e-commerce and 37% of the remainder plan to add e-commerce capabilities in the future.<sup>23</sup>

### **Security**

By nature, the Internet is not a secure environment. Placing highly sensitive financial or purchasing information on a medium that is accessible to anyone in the world requires security measures. It is important to secure all processes of the e-business transaction, including generating product information, recording orders, verifying inventories, initiating customer-specific pricing and generating payment and shipment options.

As you may recall from the e-commerce diagram, the systems involved in this system are the customer's computer, the Internet, the business Internet information server and the business web server / financial system server. The only systems businesses can control are their own systems, so all security must be addressed in those areas using the following tools:

- User Authentication: Passwords to allow users to see only their data or pricing.
- Transmission: How is the information being sent?
- Packet encryption: Coding the data to make it unreadable in transit.
- Payment security: Credit card use requires special security measures.
- Traffic Reporting: Audit trails provide information on the use of the system.<sup>24</sup>

Maintaining control for security includes ensuring that electronic transactions are secure and that personal information is kept private. Technology skills of staff members or consultants are highly important in regards to their ability to use technology tools and services. Finally, remember to incorporate non-technology tools as well, such as contracts and due diligence.

### **Conclusion**

The rapid expansion of the Internet is fueling the growth of e-business. E-Commerce, one type of e-business, is on the verge of exploding as more companies rush to reduce costs, improve productivity, and provide greater customer access. Although most small businesses feel the Internet has not had an impact on their business, many are optimistic and have plans to expand into e-commerce. This expansion should be made with careful consideration for security, which is a concern when operating in the non-secure world of the Internet.

## Endnotes

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- 2 Putnam Investments advertisement uses the quote attributed to Hermann Thoennissen, who manages a large orchard for AgriNorthwest at Plymouth in southeastern Washington. He illustrated the pace of change in today's society with this quote. <http://www.goodfruit.com/archive/Apr1-98/feature4.html>
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<http://www.inktom.com/tech/EconOfLargeScaleCache.html>
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- 7 Butler, David R., President and COO of Sage Software, Inc. “Leading the E-Business Revolution” presentation Aug. 7, 2000.
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- 10 Sage Software, Inc. designed the e-commerce diagram for e-Business Manager product information.
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- 19 Doescher, William F. Senior Vice President of Dun & Bradstreet Corporation. "D&B study shows seven out of 10 U.S. small businesses now have Internet access" Dun & Bradstreet Looks at Business Summer 2000 Volume 18 Number 2.
- 20 "Small Business Jump on E-Commerce Bandwagon" CPA Technology & Internet Advisor Feb. 2000.
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