

The State of Forest Products Industry eBusiness

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The Internet creates a new business environment, far different from anything that has come before, because it lets a company conduct its entire set of business processes and practices online. Simply put, eBusiness is the application of Internet-based technologies for conducting business. It includes eCommerce, actual transactions between buyers and sellers, as well as business oriented applications such as logistics, inventory management, order entry, information sharing and transmission of information and business documents between exchange partners. In short, eCommerce deals with all aspects of supply chain and information management.

Perhaps the most important thing to understand about eBusiness is that it is first and foremost about business, not technology. Technology is the enabler, and while important, has not been found to be the limitation in implementing eBusiness. What is difficult is managing the changes in business strategies and internal corporate processes that must take place for a company to take advantage of eBusiness. In other words, technology is the facilitator in this new business paradigm.

There are many questions that continue to be asked daily by forest industry executives and managers and other participants in forest product supply chains: How much business is now being conducted electronically? What's the forecast for growth? Are there too many/too few eBusiness companies in the business? What are the prospects for mergers and/or closures? How is the business divided between information providers and transaction facilitators? How are forest products companies evaluating and using e-commerce? How can they take advantage of these new technologies to?

While these questions are not easily answered by the casual observer, we have invested nearly two decades of working in the forest sector and researching how technologies like the Internet impact the business process. We have also worked with hundreds of companies through the technology selection and implementation process. In this article, we will shed some light on the answers to these questions and provide an update of where the U.S. forest products industry is in adoption of eBusiness.

We have thought long and hard about these questions. Although we have conducted extensive empirical research in this area, we think it goes much deeper than statistics on current e-Business adoption.

First, it is true that the volume and value of wood products currently being transacted using the Internet as a facilitation framework is small in relation to all transactions. Our research indicates that the industry (solid wood and pulp/paper) is about 2-3 years behind most other industrial sectors in the U.S. This has also been confirmed by recent U.S. Department of Commerce data that puts the wood products industry dead last in value of shipments using eCommerce. Why is this? We have found that although there are cases where useful technologies may not have been made available to the forest industry as early as with other industries, the primary cause is the underlying industry culture. The forest and wood industry is often characterized as traditional, risk averse, resistant to change and even in denial when it comes to implementing interorganizational technologies. We found this to be the case across a number of technologies including UPC barcoding, bar coding for inventory management, enterprise resource planning (ERP), electronic data interchange (EDI) and now, the Internet. To this point in time, the wood products industry has focused on technology primarily in the manufacturing process; not the business process. We believe that similar to adoption of manufacturing technologies, while slow, Internet based business process technologies will certainly be embraced as well.

Where is the industry today? Most recent studies, conducted in 2000 and 2001, indicate that overall growth of Internet use in the wood forest products industry in the United States is expected to increase substantially. Larger firms, typically lead technology adopters, are predominant users of the Internet for eBusiness and are more likely to continue to be predominant eBusiness technology implementers in the future. Survey respondents are using the Internet primarily for “lower order” business applications such as email, web site publishing and promotion. Electronic interactions, if managed correctly, can result in faster communication and increased responsiveness. Accordingly, the highest-ranked benefits for the industry are increased access to industry information, timeliness of information exchange, greater exposure to customers, and greater access to customers. And all of these high-ranking benefits can be captured and delivered by web-based supply chain and information management technologies available today.

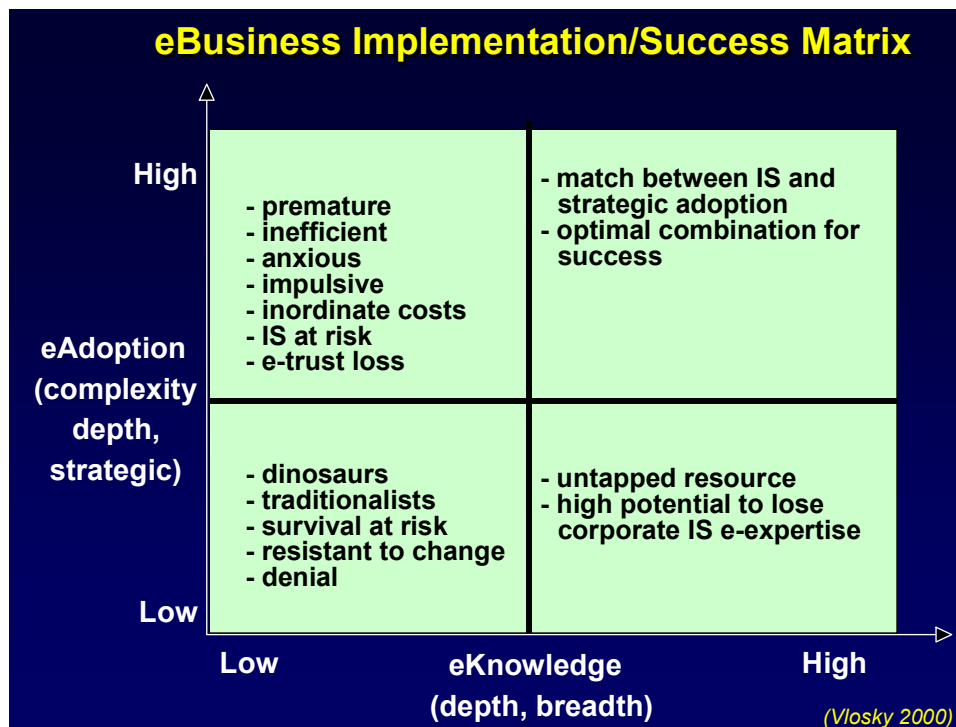
Just over a third of respondents (34%) in these recent studies currently use the Internet to conduct business and an additional 56% said their company has plans to develop such capabilities in the future. About 20% of the industry is conducting eCommerce in 2000 with an additional 20% planning to do so at some point in the near future.

Not all industry sectors are implementing Internet capabilities at the same pace. Roughly speaking, based on when the Internet was adopted and complexity of applications used, the following hierarchy gives an idea of who is where in eBusiness.

- U.S. non-forest products industrial sectors are ahead of the forest products industry.
- The pulp and paper industry is ahead of the solid wood sector.
- Composite manufacturers (MDF, Particleboard) are ahead of the softwood lumber sector.

- The softwood lumber sector is ahead of the hardwood lumber sector.
- Dealers and distributors are ahead of manufacturers.

Where could the industry be? **Figure 1** is a 2x2 matrix we use in presentations that shows an optimal mix of eKnowledge and eAdoption. There are a few examples of companies that have or are about to achieve great success in eBusiness. But, these companies are the exception to the rule. Many wood products companies are still in the lower left quadrant, operating in a traditional mode without plans or a desire to adopt eBusiness technology. Many companies also have prematurely implemented eBusiness practices without having a strategic perspective (upper left quadrant). These companies tend to lose interest due to initial failures and often incur inordinate unnecessary costs. Companies in the lower right quadrant have corporate expertise but have opted not to implement eBusiness. Information systems personnel and others in the company that have Internet technology expertise often leave for positions in more progressive companies. Finally, the upper right quadrant describes companies that have matched their Information Systems skill set to an appropriate adoption curve. These companies minimize risk by thinking strategically and executing rationally.



What about e-Commerce providers? The wood products industry is very averse to any intermediation and we don't see successful providers as simply being intermediaries; they have to be facilitators and providers of value. How do they fit into the equation and what are their prospects for success? As we point out in a recent study of Western Lumber producers, there are many third parties that facilitate the exchange of goods and

services between forest products manufacturers, suppliers, and customers using web-based technologies. These exchanges often alter buyer/seller relationships, as they currently exist in traditional non-Internet marketplaces.

Third-party exchanges (TPE) create a market space or additional market channel where buyers and sellers can transact and facilitate business. TPEs can lower transaction costs, shorten cycle-time, and increase supply-chain efficiency. So far, all exchanges have focused on direct material flow, which is in the realm of supply chain, not indirect material and services, which is traditionally defined as value chain. Although a few companies have implemented value chain management features, the supply chain is really where most of the exchanges have been focused. However, while this functionality is available, it does not come without concerns by the industry, which includes the perception of limited functionality, the believed requirement for many Internet-interfaces with multiple marketplaces, in addition to security issues, and privacy matters. On top of this, many people in the industry have the perception that by using Internet technologies, they will have to abandon their traditional relationships with their customers and vendors. While these issues are well understood by the various e-Commerce providers and have been dealt with in the technology offerings available, the perceptions still remain and are often the primary impediment to adoption of Internet technologies throughout the forest industry.

Although TPEs have not been researched thoroughly across all forest product sectors, in the study of western lumber manufacturers, 10% of respondents expressed a strong willingness to sell products through a TPE and 18% of respondents expressed somewhat of a willingness to sell using TPEs. Considering that 40% are willing to conduct e-Commerce now and into the near future, which represents 95% of those who plan to adopt Internet technologies in some form.

The most sophisticated example of using the Internet for conducting business is the linkage to a company's back office applications. A good TPE can provide these linkages and can link trading partners with each other as well. Four (4%) percent of respondents in this study indicated that they were very willing to let a TPE link to their back office systems. An additional 16% were somewhat willing. Willingness to let TPEs link back office systems is significantly and positively correlated to company size; the larger the company, the more willing. This generally has to do with a deeper understanding of Internet technologies and their value in the business process.

By starting from a position of late-adopter, the industry was further influenced by the dot.com crash. For many, this justified the wait-and-see position. For others, it validated their skepticism. Many folks we talk to say "I told you so". This situation has taken its toll on some third-party providers with many having gone out of business due to lack of client-driven revenue or adequate investment capital to survive a slow adoption cycle. However, there is a recent shift in the winds. The past 6 months have shown a dramatic change in how the industry views Internet-based technologies. Many companies that could not see the value of the Internet 12 months ago are finding themselves driven to adoption by their customers who did understand the value and implemented those technologies. Starting with data transformation and transactional processing, and moving to shipping and logistics interfaces, and inventory management functionality, buyers and seller with existing relationships are using TPE's and other e-Commerce solutions providers to connect with each other through web-based technologies. It is now apparent

that at the end of the day, the e-Commerce providers that survive will thrive and be an integral part of doing business in the forest products sector.

To sum up, we strongly believe that the companies that really look at the opportunities that fit their company will have the last laugh. eBusiness/eCommerce has proven benefits to the forest sector as shown by years of research and real life applications. We remain bullish and will continue to try and spread the eBusiness gospel.