

A NEW STRATEGIC APPROACH TO E-COMMERCE FOR THE ADHESIVES AND SEALANTS INDUSTRY

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**The Adhesive and Sealant Council
Fall Meeting 2001**

October 22, 2001

New Orleans, LA

Abstract:

Electronic Commerce is becoming an important and critical element of the business plan. However, the chemical industry, and especially the specialty chemical industry has struggled to successfully develop and integrate E-Commerce into their overall business plans. E-Commerce is not, and must not be, an isolated venture, but rather must be approached as an integral component of the overall business plan. Only then can E-Commerce fulfill the potential to accelerate growth and provide significant savings in operational and transactional costs.

Until now, most electronic commerce systems have been designed for commodity chemical exchanges and was cumbersome for specialty chemical producers or purchasers to implement and use in a practical manner. A new approach has been developed which meets the unique needs of the adhesives & sealants industry and offers both a front-end exchange as well as a user-friendly procurement system. Private or public exchanges are easily implemented. Both features offer the added benefit of smooth integration with both suppliers' and manufacturers' materials management systems and ERP's (Enterprise Resource Planning). Also recognizing the very high expense of developing and implementing effective E-Commerce systems, this new approach can deliver these features at a fraction of the cost of grass roots solutions with complete customization within very short time spans.

Unique to this new approach is the ability to offer specific lots of raw materials or formulated products, searchable by specification variations as well as product name, nature, etc. A new solution to the E-commerce needs of the specialty and fine chemical industry has been needed to fulfill the promise of E-Commerce. By early 2000, it has been recognized that neither software providers nor the on-line chemical exchanges recognized the difference between commodity and specialty chemicals thereby creating a barrier for fully transactional on-line ordering and fulfillment of fine and specialty chemicals.



This new approach addresses this inadequacy from the industry standpoint. As a result, our industry does not need to force fit over 100 years of organic chemistry progress and creativity into an existing web model. This novel approach offers industry participants a simple, cost effective and seamless E-Commerce implementation meeting the unique needs of our industry.



The Problem

“According to a study conducted by Computer Sciences Corporation, chemical organizations are significantly less likely than their counterparts in other industries to have an effective E-Business strategy. Eighty percent of the chemical industry respondents indicated that their firm does not have an e-business strategy- higher than any other industry. And while 33% of the executives in the chemical industry identified difficulty in aligning the organization on a course of action as the primary barrier to conducting e-business, 30% of them named a lack of interest among their companies or management as another reason for their lack of an e-business strategy. On a more positive note, 69% of the executives did recognize e-business and data warehousing and data mining as the top critical emerging technologies needed to remain competitive. No other industry rated data warehousing and data mining this high.”

Clearly, the chemical industry, and as we shall see, the specialty chemicals portion of our industry, are behind in implementing successful strategies in E-Commerce. The specialty chemicals industry, which would include most of the adhesives & sealants industry as well as their suppliers, has unique needs that might not be best served by approaches designed for commodity chemical producers.



E-Commerce and E-Business

Electronic Commerce is perhaps best defined as “business conducted via the Internet”. There are more complex definitions, but that simple statement includes pretty much all permutations of what has developed over the past few years. We like to think of a successful implementation of E-Commerce as *E-BUSINESS*, since that term better encompasses the many business elements that can be included in a successful implementation strategy. In the most basic implementation, E-Commerce will consist of little more than a “home page” and some basic information about the company, products, history, etc., but today such an implementation would be considered very elementary. Today, effective implementations include the ability to conduct many complex business transactions entirely within the Internet environment, including:

- Procurement of raw materials and services required in operations
- Exchange of information with suppliers, customers and others
- The ability to conduct actual sales and purchase transactions, either publicly or privately entirely within the electronic conduit.
- Partial or complete integration with ERP (Enterprise Resource Planning) implementations

Further, these types of interactions can be conducted on a ONE TO ONE basis, a ONE TO MANY basis, or even in various forms of AUCTIONS or REVERSE AUCTIONS. Options exist for these transactions to exist in a public or private manner. Private exchanges can be created for business to be conducted between two or more parties on a very controlled basis.



Advantages of E-Business

E-Business has clearly been demonstrated to offer some significant competitive advantages to those businesses that have developed and implemented a sound strategy to approach this new mode of business conduct.

- **Transactional Savings.**

We have seen significant transactional savings resulting from a successful E-Business implementation. In some cases, total transactional costs have dropped to \$25 per order from \$125 per order in a “sell side” implementation.

- **“Store Front” Visibility**

The visibility of a world class implementation can be very effective in prospecting for new customers on a global basis. The effectiveness of the sales force or other marketing resources can be greatly improved.

- **Supply Chain Efficiencies**

These can be very significant, particularly when implemented with a full integration with a business’s ERP system to streamline purchasing, improve just in time deliveries, strip out other inefficiencies in logistic functions, freeing staff for more important tasks.

- **Value Chain Efficiencies**

Combining efficiencies from selling and sourcing transactions, logistic details, and improving sales efficiencies will almost always alter the value chain and capture more value for the business with a truly strategic and successful E-Business implementation.

However, E-Business is not without potential downside risks.

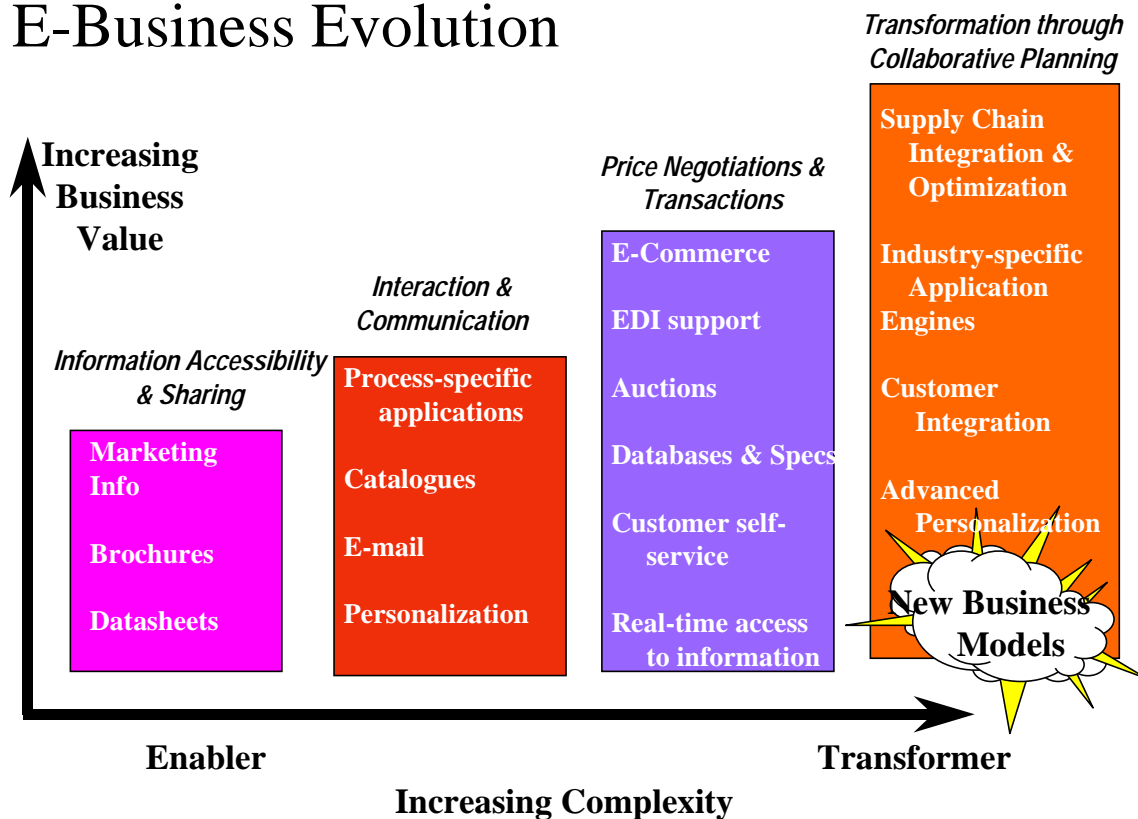
The business press is filled with stories of “dot com” failures in both the business to business and business to consumer arenas. Many of these are the results of lack of cash flow, out of control expenditures,



and in some cases, a fundamentally flawed business model. This latter issue is of particular importance because it suggests many casualties may have entered the E-Business arena without having first developed a sound strategy to integrate E-Commerce activities with the overall business strategy – a critical flaw. History and common sense have clearly demonstrated the importance of such strategic planning in developing a sound E-business strategy.

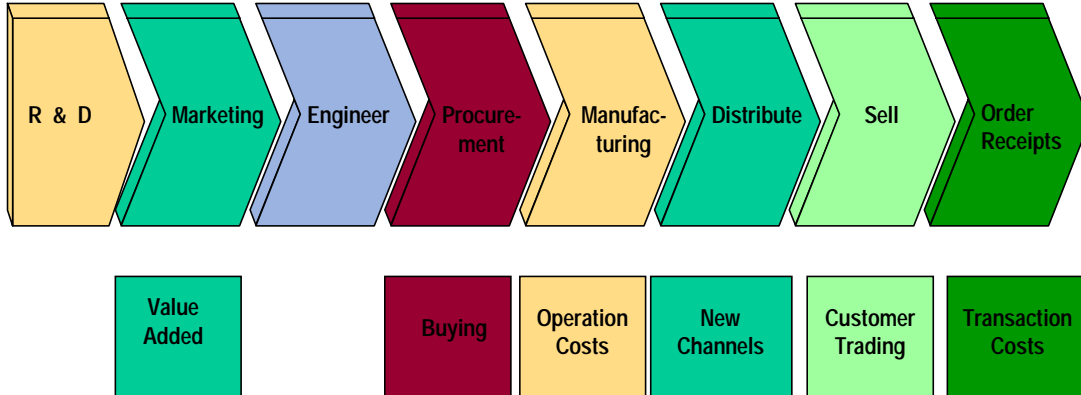
As many have learned the hard way, a grass roots implementation can be very costly with the total costs running well into the “millions of dollars”.

E-Business Evolution



E-Business Opportunities

New Channels



Be First to Market With your E-Commerce Strategy!!

Allow enough time to learn and make mistakes before competitors get up to speed!!

Don't allow your competitor to set the rules!!

- New Industry Business Models
- New Client business
- Online Partnerships
- Vertical Information Sites



Existing Approaches

Many E-Business implementations have been documented, but most fall into four categories:

1. Private initiatives – developed in-house or by third parties on contract. These are essentially systems built from scratch, providing virtually any customization the strategy might call for. However, this approach is most certainly the most costly and perhaps risky strategy.
2. “Vertical Communities” – there are a number of these “shared” systems today. Many offer private “store-fronts” and some degree of customization. Participating in a vertical community does not preclude also having a private initiative. As would be expected, participation in such communities can offer a lower cost alternative, but perhaps with fewer bells and whistles, compromising business strategy elements, which might be highly desirable.
3. Shared Initiatives with other companies or businesses within a single corporate family are beginning to appear. These can also be developed by unrelated businesses. As a “co-operative” of sorts, such implementations also can often result in compromising some elements of the business strategy.
4. Purchased Software. There are some sophisticated software packages which can be purchased by a business, which offer some degree of customization, but usually requires the business to fit their model to the capabilities of the software. You must also provide the hardware platform and hard resources to support the implementation.



Failures

There have been a number of high profile failures of E-Commerce business models in the chemical industry. Our work with clients has revealed the key reasons for these failures have been primarily related to one or more of the following:

- High cost of implementation and resultant cash flow weakness.
- Most of the systems today have been designed for commodity chemical business models and then adapted for the unique needs of the specialty chemical industry.
- Perception of “dot-coms”.
- Interestingly, we have seen failures related to large companies forcing specialized businesses into a single corporate E-commerce model, which usually does not meet the strategic needs of the specialty business.



New Approach

From the lessons learned already in this dynamic part of the industry, we have observed the following needs for the specialty chemical industry, and more pointedly, for the adhesives and sealants industry – including manufacturers and raw material suppliers.

First and foremost is the critical importance of developing a sound overall business strategy that can incorporate the desirable features of E-business. It's a critical error to implement an E-business strategy unless it meets the overall strategic needs of the business in question. Don't get into E-commerce just to get into E-commerce! That said, the key elements of a successful E-business implementation for our industry should:

1. be designed for “performance products” – not commodity products.
2. offer the ability to be lot specific
3. be easily integrated into any ERP system
4. have low initial implementation cost
5. offer low operational cost – ideally reside on third party hardware
6. be easily customized to meet specific needs
7. be reliable
8. be secure
9. can offer numerous implementations and capabilities, including:
 - Information exchange (data sheets, MSDS, etc.)
 - Ease of adaptation for both procurement and sell-side activities
 - “One to one” transactional capability
 - “One to many” transactional capability
 - Potential for standard and reverse auctions
 - Potential for anonymity – for example – for selling out of spec materials
 - Speed to implement
 - Opportunity to create and capitalize on new marketing channels such as branded vs. unbranded; specific sales to specific end use or geographical markets
 - Multiple language capability



- Ability to handle distribution and logistics – both informational and actual

This new approach to E-commerce for the adhesives and sealants industry offers all these important features in an economical and easy to implement package. As an Application Service Provider, this is accomplished through the development of pre-written code capable of rapid customization. The software itself resides on a third party platform and the third party can even implement programs to provide complete distribution capability for the client. Implementation can be completed in as little as thirty days at a fraction of the cost of traditional grass roots implementations. The risks are minimized and since the implementation resides at a third party location, it is ideal for a small to medium sized business within a large corporation or for a small to medium sized stand alone business that previously could not afford to consider e-commerce seriously.

E-Commerce offers a business some very attractive strategic options:

- Reducing costs
- Reducing Search costs (finding each other)
- Information costs (learning about the product)
- Reducing operational cost
- Reducing transactional cost
- Globalization
- New market and marketing channels
- Liberating value chain costs, i.e. Creating and/ or extracting new value (implementing business reengineering)
- Improving your customer relations management (CRM)



The Implementation Process

The critical first step in implementing the E-Business solution involves developing detailed value chains to understand where opportunities exist to capture value from the existing value chain, or to create value by changing the current value chain to your benefit. From this, a detailed analysis of current transactional costs can be developed which can lead to identification of potential, and often significant, cost savings that can be realized with the correct E-business implementation. Working capital components are then identified that might be key targets to reduce with the right e-business solution. Finally, the value chain is re-aligned to fit the new business model that can evolve via E-business. These steps all need to be examined from both an internal and external perspective to see where value can be delivered to customers and via your suppliers to create a true win-win scenario.

With this new complete package, the customers you invite into your e-commerce service will, within weeks, be capable of fully transactional lot level on line self service, ordering and fulfillment of the products you want to make available to them applying the same terms, conditions, pricing and agreements you have with them now. By either web interface or XML automation, you will be able to control and selectively migrate your test data, packaging and inventory for customers to securely view. Customers will view CoA's, MSDS's on-line, will track orders and much more. You will have a completely automatic 24 hours a day, 7 days a week, 52 weeks a year customer service and support department.

A recent article in C&EN concluded that the early e-commerce software failed to deliver the tools that chemical suppliers need but that "second generation e-commerce solutions will incorporate extensive industry-specific know-how allowing users to realize the true potential of the Internet." We agree!



About The Author



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