

CONSOLIDATION OF TECHNICAL ADVANCES IN THE PROTECTIVE & MARINE COATINGS INDUSTRY

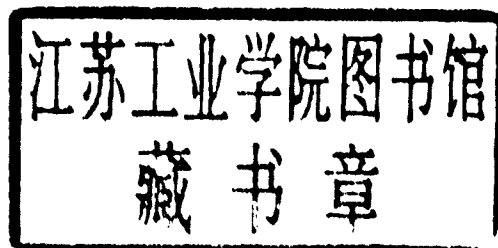


THE PROCEEDINGS OF THE
PCE 2001 CONFERENCE AND EXHIBITION

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ANTWERP, BELGIUM
27-29 MARCH 2001

Consolidation of Technical Advances in the Protective & Marine Coatings Industry

The Proceedings of the PCE 2001 Conference and Exhibition



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E-COMMERCE AND ITS IMPACT ON THE HIGH PERFORMANCE COATINGS INDUSTRY

Author: Linda E. Marquez

Presented By: Linda E. Marquez

**Company: Sigma Coatings
Head Office
Amsterdamsweg 14
PO Box 42
1420 AA Uithoorn
The Netherlands**

Telephone: + 31 297 541 911

SUMMARY

Much is being said about the digital revolution and its potential to reduce transaction costs; and, to maximize efficiencies and profits. E-commerce is the fastest growing trend in the business world today and involves the marketing, buying and selling of goods and services over the net. Potentially it provides companies with the ability to deal with suppliers in the most efficient way possible; and, to leverage purchasing-power to better control costs.

As with any revolution of this magnitude, it represents both an opportunity and a threat. How will the heavy-duty coatings' industry structure and competitive environment change as a result of e-commerce? In which new ways can product differentiation be maintained and communicated in this type of environment? How can this e-revolution be used to create new customer value with "bottomline" benefits to both the sellers and the buyer? And, what impact will the lack of standardization of e-commerce approaches have on a coatings supplier's ability to conduct e-business effectively?

INTRODUCTION

The digital revolution is providing companies with previously unmatched potential to automate functions, to speed processes, to reduce transaction costs and to minimize waste. All this results in a potential ability to maximize efficiencies and therefore profits. Several models exist to describe this e-revolution, but generally it can be broken down into three parts:

- a) Knowledge management, which includes product/technical data as well as business operational practices and procedures.
- b) Linking of databases, which optimally includes all databases used by a company with every application used by that same company throughout its value-chain; and
- c) E-Commerce, which involves the marketing, buying and selling of goods and services over the net.

E-Commerce is now the fastest growing trend in the business world. In the oil industry alone, online business-to-business (B2B) sales of products and services are projected to grow from \$131 billion U.S. in 2000 to \$1.5 trillion U.S. in 2003. However, most of the current e-business transactions by the majors are still of the "electronic" data interchange" (EDI) variety.

The Protective and Marine Coatings Industry and its customer base are just beginning their full-fledged participation in this digital revolution. Most large, heavy-duty-coatings customers have moved or are in the process of moving to internet procurement automation. This provides companies with the ability to deal with suppliers in any part of the world, in the quickest/most efficient way possible; and to do it without using paper. In addition, online procurement controls prevent "maverick" purchases at remote locations, which occur outside competitive corporate procurement processes. Several analysts estimate that firms pay as much as 20% extra when making "rogue" purchases outside corporate-wide negotiated agreements with vendors. Outside the area of e-procurement, the explosion in new digital devices and information management applications opens up entirely new possibilities for conducting business, going to market, refining selling approaches and servicing accounts. New industry dynamics lead to new avenues of creating value and competing. How will the high performance coatings' industry structure and competitive environment change as a result of this digital revolution? How will the coatings industry respond to the many different e-business approaches used by their varied customer-base? And, how will this lack of standardization of e-commerce platforms impact a coatings' suppliers market approach? Solutions to these issues open up the possibility of cost savings on both the supply as well as demand sides; and, provide avenues for new value creation.

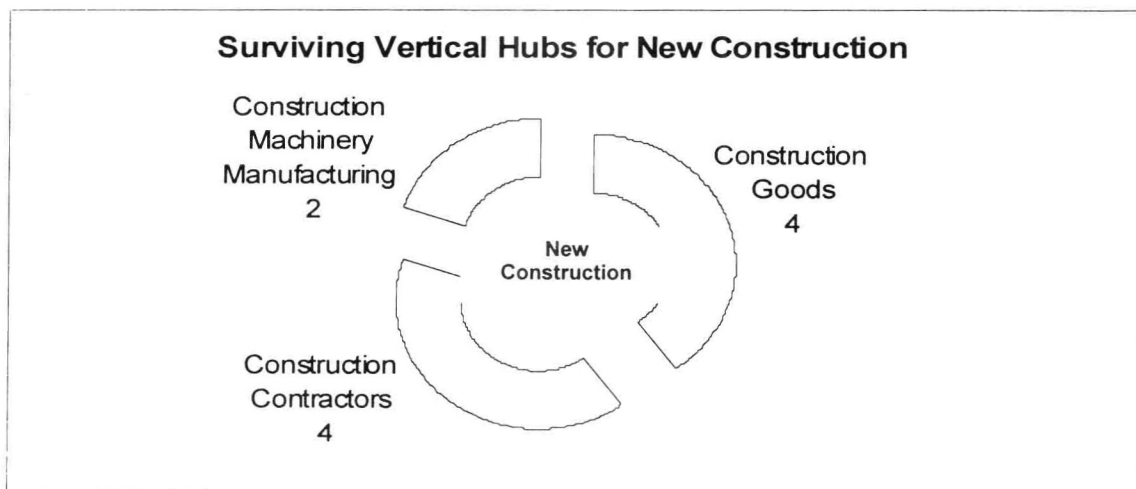
WHAT'S GOING ON IN THE MARKETPLACE?

Most major coatings' suppliers have a home page, and a company-wide e-mail, and intranet system. And, it is now relatively common for selective promotional material and product data information to be made available to customers either on CD or over the net. For major heavy-duty-coatings end-markets and customers, the promise of streamlining processes, controlling costs and improving profitability is a key impetus to move to cyber-trade. As one example, major oil companies have returned about 7% to their shareholders using standard techniques. As the price of oil fluctuates, controlling costs gives these

firms a means of predictably improving returns. Oil industry procurement analysts are predicting savings of 3 - 5% of every transaction value. One oil company has projected that its global strategic procurement system will reduce its operating costs by 10%, which would increase net income by 40%. Whether or not these full savings will be realized is still an open issue.

In another key market, the chemicals industry, e-commerce and online procurement are expected to escalate at a rapid pace from \$75 billion U.S. today to more than \$3 trillion U.S. in four to five years. Chemical industry analysts estimate that the use of the Internet has already reduced the chemical industry's cost of doing business by 10%. Even specialized industries, such as the rail market, have jumped on the "e-train". With a new e-business consciousness, the rail industry is working to improve returns by controlling costs through partnering agreements, improved asset handling and other operational efficiencies. In general, industry analysts expect e-commerce benefits to become sizeable as e-solutions evolve and e-business models stabilize. In fact, rough estimates of savings for new construction have been as much as 4% of total project spending.

More and more customers want to be able to place purchase orders online and even to negotiate contracts with key suppliers via an online line RFQ/auction platform. There is no standardization in the way a key industry or customer type conducts or wants to conduct its e-commerce. In fact, the choices in online marketplaces and exchanges are multiplying too quickly to even track. Besides specific customer approaches, many industries are forming vertical hubs where e-business transactions can be conducted for all key participants in that particular industry. Obviously, the vast multiplicity of e-commerce hubs cannot continue if suppliers to these various markets are going to be able to respond adequately. Some type of standardization and consolidation of e-commerce site approaches and options must occur. New construction industry analysts predict an e-marketplace shakeout within the next two to three years, with only a very limited number of vertical hubs expected to survive.

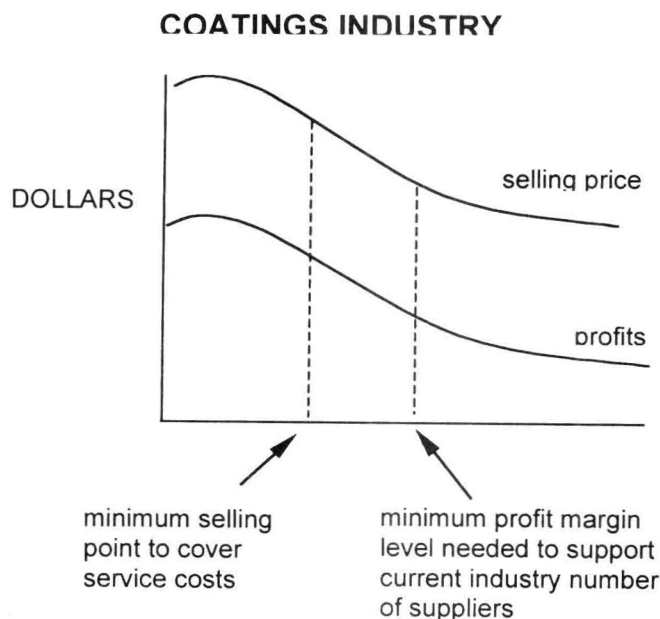


Other major industry vertical hubs, such as for power and for oil, are also expected to survive with different industries having their own site or sites. One such example would be Trade-Ranger, an e-community and vertical procurement site for the oil and petrochemical industry.

Long-term, suppliers will need to realize cost savings themselves by optimizing their own procedures with a new e-business structure. A coating supplier's future profit maximizing plans will have to include not only coatings product differentiation strategies; but also, an identification of new e-services which create the most customer value.

IMPLICATIONS FOR THE HIGH PERFORMANCE COATINGS INDUSTRY

The heavy-duty coatings' industry is a mature market of over \$5 billion U.S., with an aggregate projected growth rate of only 2.7%. In order to improve margins, there has already been much consolidation, with large competitors acquiring smaller companies and even some previously strong industry players. While different suppliers have product advantages in certain applications, the heavy-duty customer base perceives most product offerings between suppliers as equivalents. Intense marketing and one-on-one relationship selling are required to highlight product differences and underscore one supplier's sales and service advantages over another. On-line procurement, along with on-line RFQs and auctions, are exerting downward pressure on pricing. Also, customers are using this to narrow the number of vendors they do business with in order to ensure the lowest volume price. While different methods are being employed to ensure that product benefits are included in the award process, an aggressive decrease in selling price and therefore supplier profitability has been the result. Many e-commerce procurement sites are promoting savings of as much as 20 and even 30%. Ultimately this will, of course, have an impact on the level of support and service that a coatings supplier can provide. Long-term, there will have to be a balance in customer cost savings desires and a supplier's ability to make a reasonable profit while providing that same customer with expected services. Near-term, a further reduction in the number of suppliers to the high performance coatings industry will most likely occur as companies try to take advantage of economies of scale in order to maximize profitability, given lower selling prices and margins and "set" costs of providing required services.



With on-line vendor selection processes and auctions that minimize the selling price for "perceived" product equivalents, "up-front relationship-based" selling becomes even more important. At this early stage, the supplier can continue to define and communicate its advantages and influence the selection criteria. Only in this way can the supplier hope to ensure an "apples-to-apples" comparison of both products and expected service levels. It is the author's opinion that E-commerce may automate many of the processes involved in the mechanics of handling an order and account, but it will never replace the importance of the customer/supplier human relationship. In fact, in this new e-environment, this relationship can be a source of even stronger competitive advantage by ultimately influencing parameters of the online buying criteria and thereby influencing the ultimate buying decision.

NEW OPPORTUNITIES TO CREATE VALUE

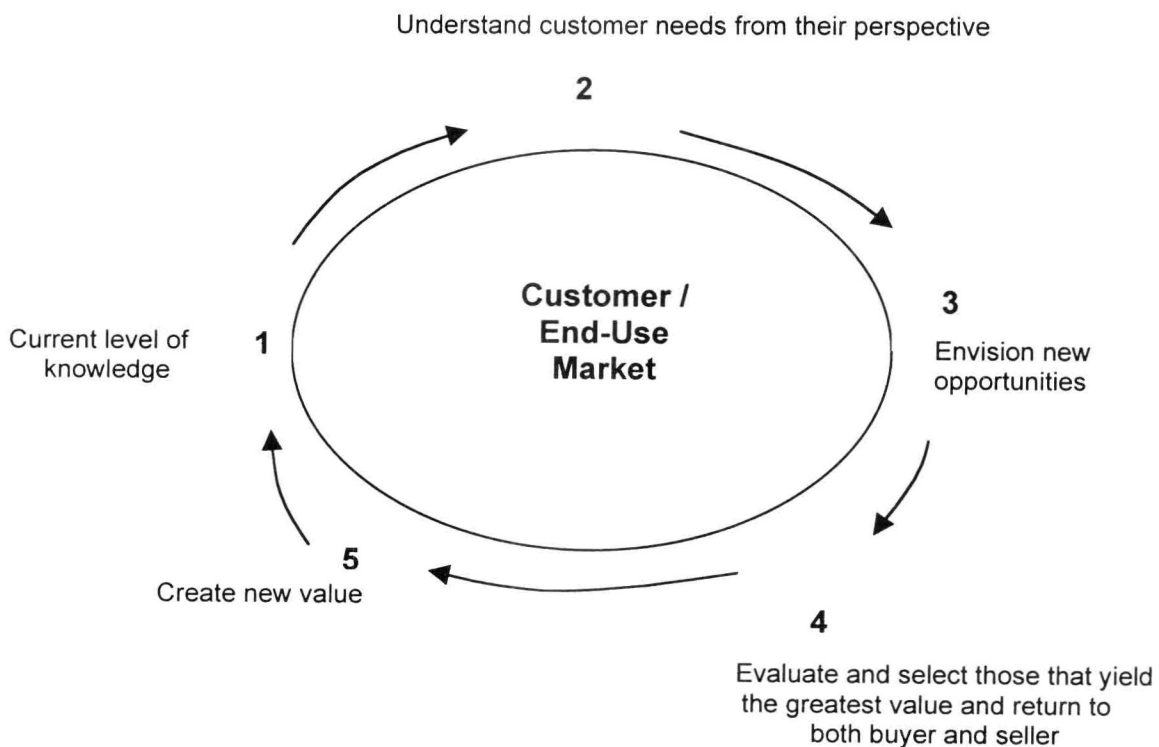
In this new e-business environment, understanding industry "Drivers" and customer's needs becomes even more important in identifying opportunities to create differentiation and value. How well a coatings company positions itself to take advantage of the shift in the way their customers do business will determine how successfully they are able to compete. In fact, the coatings supplier has the opportunity to create new areas of distinctive competence. The Chart of E-business Drivers which follows illustrates the type of analysis needed for one important customer type, large construction firms.

E-Business Drivers

Customer Type	Business Driver	Dream List of Features	Examples of Currently Used Sites
Construction Contractors	Reduce total project costs including material, equipment, transportation, etc.	<ul style="list-style-type: none"> • Just "in-time" "on time" delivery. • Shorten lead-times for ordering of needed materials. • The ability to consolidate purchases to minimize shipping costs. • Instantaneous knowledge of when a preferred supplier runs out of an item and someone else can deliver. • The ability to track critical orders. • The ability to control the procurement process at various locations, across numerous categories of materials, equipment and services to prevent "maverick" buys. • The ability to enter purchase-related information just once and have it flow easily throughout the life-cycle of their projects. • The ability to track and document buying patterns. • The ability to communicate instantaneously with key suppliers on all issues impacting a project. 	<ul style="list-style-type: none"> • Build Point (Transactional catalog for construction related items). • Project Talk (RFQs with detailed, side-by-side bid analysis that facilitate "apples-to-apples" comparisons and automates purchase order to successful bidders). • Trade Power (Connects digital catalogs to real-time inventory and pricing information from approved vendors.) • Closed Exchanges such as TradeMc formed by Fluor (project savings of 10 to 20% on total project purchases). • Free Markets (RFQ/on-line auction technology that facilitates the selection process and promotes cost savings.) • iCollaboration (Coordination of multiple business processes with suppliers worldwide, up and down the supply chain and cradle to grave throughout a project's or asset's life span. • Various industry specific e-community sites that are used for procurement and information sharing, such as Trade-Ranger.

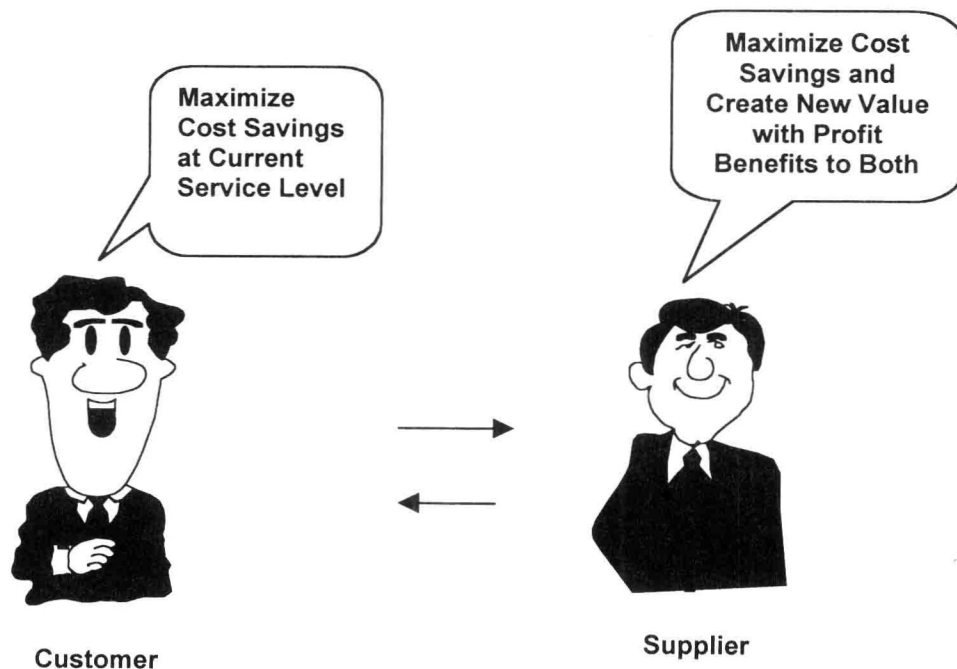
Cost management, along with value creation, will come through sharing knowledge and expertise. As companies outsource services, consultative assistance on coatings issues, collaborative planning of projects, key data sharing along with an electronic catalog, on-line training of key personnel at various locations and project tracking management are all ways to better service customers. How well a supplier is able to do this will create its competitive advantage. In order to minimize costs, key customers are working to improve process efficiencies. Therefore, a supplier's ability to help their customer control inventory and minimize shipping costs can be another source of competitive advantage. Enhanced customer service could also be used to advantage. Electronic invoicing, interactive/on-line purchase requisition status information and real-time access to data needed for concurrent decision making during all stages of supply to a project can also be turned into an advantage of one supplier over another.

As mentioned, understanding an industry's drivers and a customer's needs throughout their value chain is critical for identifying new ways of competing. In order to create new value offerings, a supplier will have to increase its level of market intelligence. More than ever, they will have to "walk in their customer's shoes" in order to identify opportunities to compete.



Every industry and customer type will have some business drivers in common and, others that are unique. The creed for the coatings supplier then becomes: "Know your customer's needs and objectives throughout its value chain."

Since most customers are moving to e-commerce with the hope of getting more for less while also creating value, the coatings supplier should mirror this same philosophy in order to maximize its own returns. By identifying, streamlining and automating certain processes throughout its value-chain, the supplier can realize cost savings as well. And, by marrying certain automated functions with those of key customers and by identifying new ways to better serve its clients, the supplier can create a new customer-valued package for which it can charge a premium. In essence, the supplier and customer can share in the cost savings and enhancement-value premiums that this new interface presents.

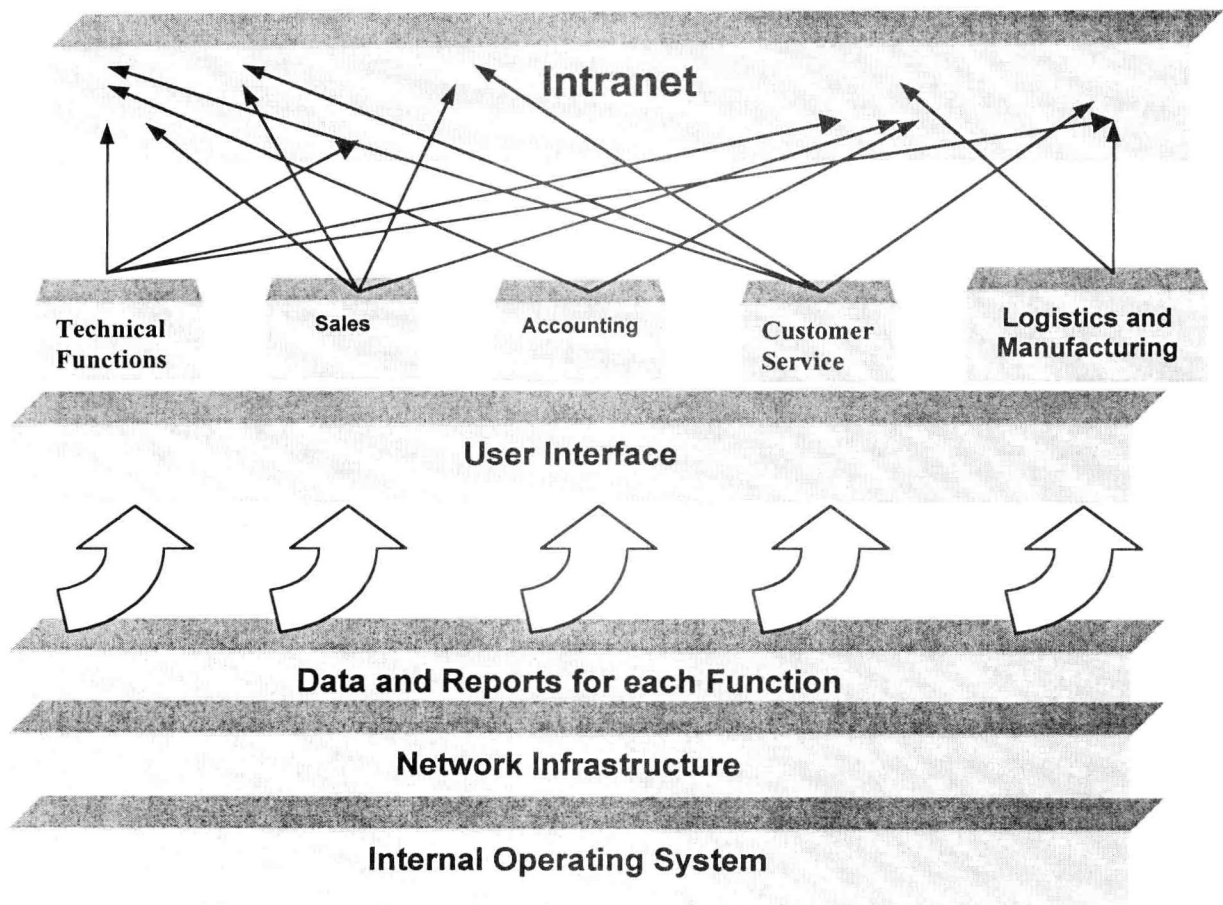


EMERGING E-CAPABILITIES

The dynamics of this cyber-revolution are transforming traditional commercial relationships. One key area where value can be created is "knowledge sharing". With the advent of corporate portals and

systems that allow search, categorization and integration of both structured and unstructured data, a new universe of potential services opens up. Using a portal, a user can access only that information needed and filter-out unwanted data. In essence, a portal can be thought of as a web page unique to the user. It provides a single point of personalized and portable access for specific knowledge. Needed information can be communicated in a more immediate and focussed way to those needing it to make decisions or to take action.

Current E-business System



PORTAL-BASED E-BUSINESS SYSTEM

