

INTERNAL ENTREPRENEURSHIP AT THE DOW CHEMICAL COMPANY

Professor Bala Chakravarthy prepared this case with the research assistance of Hans Huber as a basis for class discussion rather than to illustrate either effective or ineffective handling of a business situation.

The e-epoxy.com venture was not just a business decision; it was also an expression of my business philosophy. I believe in encouraging entrepreneurship and supporting internal entrepreneurs whenever I can. The e-epoxy.com idea was an entrepreneurial one. It had some risks for sure, but it also had enormous upside potential. Moreover, it had a champion in Ian Telford, who brought visible energy and enthusiasm to the project.

Robert (Bob) Wood, Thermoset Business Group President

In 2002 The Dow Chemical Company was a leader in science and technology, providing innovative chemical, plastic and agricultural products to serve many different consumer markets. Its merger with Union Carbide in 2001 rocketed the company's sales to \$27.8 billion and made it the largest chemicals and plastics company in the world. However, just a few years earlier, in 1998, Dow Chemical's turnover had dropped to \$18.4 billion after having been flat for the past four years at around \$20 billion. Net profit margin had also dropped to 7.1%, from a high of 10.3% in 1995. Growth became a priority for the company.

The e-epoxy.com venture was one of several new growth initiatives launched in 2000. The primary targets for e-epoxy.com were small customers and spot market customers, whom Dow Chemical had never served before. Although it was a minuscule contributor to the company's turnover, Wood felt that e-epoxy.com and other similar growth initiatives were vital to the future success of the company. Despite the surge in growth brought about by the merger with Union Carbide, there could be no letting up on the company's growth initiatives. Entrepreneurship would have to be strengthened within the company. Wood wondered what lessons the e-epoxy.com venture offered in this regard.

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The e-epoxy.com Venture

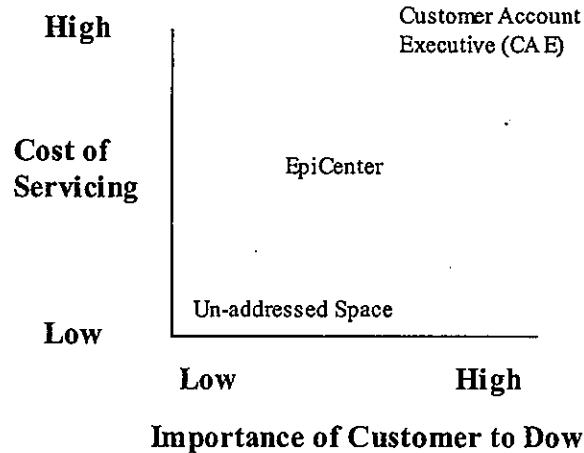
Epoxy Products and Intermediates (EP&I)

The Epoxy Products and Intermediates (EP&I) business division designed, produced and sold epoxy resins that went into the manufacture of electrical laminates, composites (reinforced plastics), adhesives and coatings. It had a turnover of just under \$1 billion in 2000. (*Refer to Exhibit 1 for organization chart from mid-2000.*) The EP&I global business was managed from Dow's European headquarters in Horgen, Switzerland until May 2000 when its vice president, Henry Vermaak, retired.

Epoxy was a specialty, high margin, but highly capital-intensive, business for Dow Chemical. The top 20% of its customers generated 80% of the division's revenues. These key accounts were all global customers. The biggest accounts typically purchased epoxy products worth \$35 million to \$50 million per year. Dow Chemical supported these key accounts with quick deliveries through integrated supply chains, technical assistance and rebates on the volumes purchased. The rest of the division's revenues came from smaller customers, who were served by distributors. Within each country, a distributor usually sold the entire range of Dow Chemical products, including epoxy. Dow Chemical provided technical help to the distributor in determining epoxy specifications to suit various applications.

The epoxy business was cyclical in nature. Capacity utilization was becoming a problem. The division's epoxy plants were large and typically had capacities in the range of 30 ktpa (kilotons per annum) to over 100 ktpa. Future plants were planned to be a minimum of 80 ktpa in size. There was a growing need to bring in new customers and serve them economically.

Philippe Raynaud de Fitte, the commercial director for Europe at that time, was the sponsor of EP&I's global Commercial Interface Initiative (CII) in 1998. The first tangible idea implemented under CII was the EpiCenter. A customer could call this center for commercial and technical queries on epoxy products. If the query was on the status of an order, the call would automatically be switched to a commercial person who had total responsibility for the order from the time it was placed until it was delivered. Technical queries would go to a technical person, who had access to the company's top scientists. The EpiCenter was helped by computer models, which allowed the technical team to diagnose and solve customer problems online. By closing several regional European sales offices and centralizing commercial and technical inquiries within the EpiCenter, the division was able to free up resources. Using these resources, customer account executives (CAEs) were appointed to service key large accounts. Once the EpiCenter and the CAE were in place, there was an obvious third opportunity: the un-addressed space shown in the diagram below.



The dot.com Revolution and the Inspiration for e-epoxy.com

By 1998 the dot.com revolution was starting to overwhelm many established industries. The chemical industry felt its shock. Electronic marketplaces such as ChemConnect, Plasticsnet and the like threatened to disrupt the business models of old-style chemical companies. In response, Dow Chemical organized training programs about the Internet for its key employees in places like Palo Alto, California.

One of the participants in the 1999 program was Ian Telford, European sales director for EP&I. He had joined Dow Chemical in the UK in 1984 as an inside-sales representative, after two separate year-long stints at other UK companies. Telford left the UK in 1991 and moved up through Dow Chemical's commercial organization, eventually working for de Fitte in 1999. Three other colleagues from Europe joined Telford on the training program at Palo Alto. They noted the skyrocketing share prices of the dot.com companies with envy, and momentarily thought of forming an Internet start-up of their own. However, they quickly concluded that perhaps they did not have the necessary investment capital and risk profile. Mike Kolleth, manager of Dow.com, and one of the Palo Alto four, recalled:

We brainstormed a lot and concluded that what drove our passion for the Internet was the prospect of making a lot of money. If we could not grab the opportunity for ourselves, we could certainly do it for Dow Chemical. If the Internet turned out to be mere hype, there was still a short-term opportunity to make some capital gains; and if it was for real, Dow Chemical would have proactively adapted its business models before they became obsolete.

Telford came back from Palo Alto fired up with the idea of creating a dot.com presence for the EP&I division. He saw the un-addressed space that de Fitte had identified as the perfect place to position his idea. He told de Fitte:

In order to grow our business we have to look at other segments. There are customers out there who just want the product with no frills, no tickets to the ball game, no technical service, no consignment stock, nothing--they just want a low price. And the pressure on prices will increase across all segments once electronic marketplaces start functioning fully.

Raw materials like epoxy resins will increasingly be bought on a spot market basis. We have to deal with this.

In addition to his existing job, Telford volunteered to investigate the Internet effort for the division, and de Fitte agreed.

Selling e-epoxy.com inside Dow Chemical

Exhibit 2 provides a timeline of the e-epoxy.com venture. In November 1999 Telford made a first presentation of the venture to the Epoxy Leadership Team (ELT). The new channel would have three key features: (1) orders had to be in multiples of half-truck loads, (2) only selected epoxy products would be offered online, and (3) contractual terms were fixed and not subject to negotiation. There was little enthusiasm for the project. Of the 12 ELT members, only three were in favor of the venture. The corporate Information Systems (IS) group at Dow Chemical objected to the idea. They were ready to launch a Dow Chemical extranet website called MyAccount@Dow to help customers track their orders and monitor their accounts. The IS group was also exploring partnerships with other industry suppliers to create a common commercial platform on the web. One such B2B hub, Omnexus.com for plastics, was getting ready for launch. (*Refer to Exhibit 3 for the positioning of the e-epoxy.com concept, compared with the other two IS initiatives.*)

There were also problems with the proposed posting of product prices on the e-epoxy.com portal. Traditionally the price of EP&I products was never made public. It was subject to negotiation and thus differed from client to client. The division's global marketing managers argued that since they were judged on the profitability of the division, price transparency would potentially limit their negotiating ability with key accounts, and thus hurt their performance. Henry Vermaak, the then business VP for EP&I, was chairman of the ELT. He recalled:

Each business was rushing with its own Internet ideas. The e-epoxy.com venture was ours. The ELT was very concerned that e-epoxy.com would confuse and upset our existing customers. The proposed price transparency was a big concern. We had different prices in different geographies. This would be compromised as well. I saw the venture as a viable experiment, a new channel that could reduce our cost to discover and serve new customers. But I also had my doubts. I would call myself a concerned supporter.

With Vermaak's help, Telford finally prevailed. He received \$100,000 to research the idea further and build a prototype for demonstration. He was given until the end of March 2000 to come up with a business plan.

Pricing in the New Channel

Telford sought the help of external consultants. However, given his meager budget he had to leverage them wisely. He recalled:

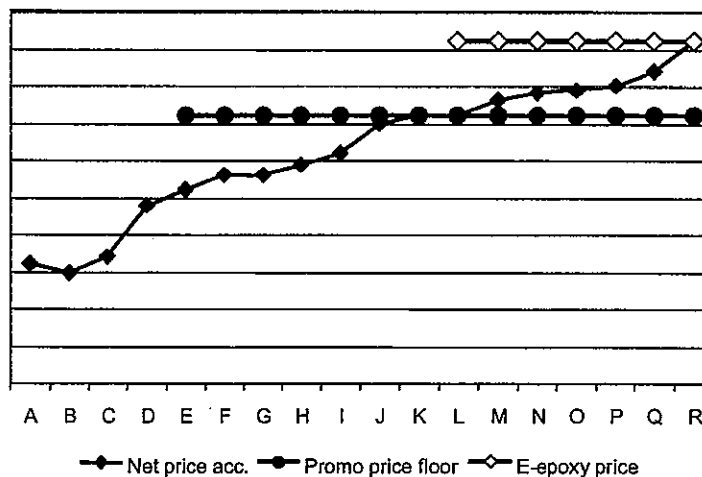
One of our mottoes was "Think Big, Start Smart, Scale Fast." We got a lot of help from our consultants. I got quite a bit of it for free, because of the company's long-standing relationship with them or the promise of new business. When you are leading a venture, don't take no for an answer and negotiate everything.

Telford proposed pricing epoxy products on the web higher than the net price after volume discounts that were available to the key accounts of the EP&I division. However, to give himself some flexibility Telford included a "promo-code" on the e-epoxy.com portal. This code allowed him to offer special promotional prices, targeted at particular countries, products or customers, and limited by pre-specified time windows. Usually, e-mails would be sent to selected accounts to inform the user of the special prices.

As for distributors, they would effectively charge a higher price than that posted on the e-epoxy.com website. However, Telford reasoned that they should be able to do so because of the additional services that they provided, such as a wide product palette, technical assistance, credit terms, rush orders and smaller orders.

Telford realized that he not only had to make the business rules for e-epoxy.com distinct but he also had to enforce them strictly. Only then could he protect the relationships that the EP&I division had with its existing customers or distributors and reduce channel conflict.

e-epoxy.com Pricing vs. Pricing for Different Accounts



Note: A-R represent different accounts

Setting the Scene for the March 2000 Meeting

Telford had tested the prototype of the site and put together a good business plan. However, as was his wont, he wanted to do something dramatic to push home the importance of his venture. He started a rumor via e-mail two weeks before the March meeting, claiming that a major competitive announcement was in the offing. The rumor had a leading chemical distributor, two major chemical competitors and an Internet company coming together to form a virtual company called Epoxies-R-Us.com. In order to add credibility to the story, Telford roped in a well-known consultant and a major customer to send e-mails, one stating: "I am going to be interviewed by Biz TV this Sunday. It is about a major new industry announcement. What do you guys know about this?" Not wishing to leave anything to chance, Telford also circulated a spoof FT.com article on this new announcement. E-mails started flying, with mounting suspense over the Biz TV

announcement and interview that weekend. Telford volunteered to have the show taped and flown in from the UK.

Telford had already arranged to have a spoof broadcast video-taped using his friends as stand-ins for a news anchor, a financial analyst, the CEO of the new Internet company and even an actual customer! A video-taped copy of the supposed Biz TV announcement and interview was rushed to the ELT meeting, only a week prior to the meeting that would decide the fate of e-epoxy.com.

While somewhat realistic, the video advertised rather loudly that it was a spoof. It had too many references to Dow Chemical and talked about a precipitous drop in the company's share price that had never happened. Nevertheless, it momentarily fooled the ELT members who watched it. Their reactions were mixed. Some thought it was funny--vintage Telford. Others thought it was juvenile. Luckily not much harm was done. However, Telford decided to stop a similar stunt that was planned for the US ELT members later that day. Vermaak recalled:

People knew Ian's style. They expected him to do something "different." Ian has a tendency to poke people to get a reaction. He sometimes oversteps the line, because some folks don't understand his sense of humor. I have coached him privately on this. Yes, the video tape annoyed me. There was no need for these antics. But it did serve as a wake up call. The majority of the ELT became positive towards his venture.

Getting Top Management Commitment

Telford obtained the approval of the ELT and was promised a budget of \$1 million to pursue the venture further. However, after a mid-2000 company-wide reorganization, Bob Wood had taken over as the new Thermoset group president and began reorganizing the division. Telford's venture, together with others, was put on hold. In the meantime, Vermaak had retired from his position as business VP for EP&I and was replaced by Phil Cook, a seasoned global manager with extensive experience in the epoxy business.

Telford feared that with the delays his venture would lose part or all of its early-mover advantages. He now had two new layers of management to reconvince. The first opportunity came when Wood and Cook called a meeting in May 2000 in Houston to explain their ideas for re-energizing the EP&I business. Telford spoke passionately to the group about his e-commerce initiative. The managers present were asked to prioritize the five critical projects for the division, and gave Telford's venture the top vote. With Cook's intervention, Telford managed to arrange a meeting with Wood for de Fitte and himself. Recalling that intervention, Cook observed:

I heard about the idea for the first time in April 2000. I saw two advantages to the project. First, there were all these bizarre projections on what the Internet would do to our business model. I wanted to be ahead of the change curve and not become a victim of it. Second, I saw e-epoxy.com as a great option in good times. We could use the site to auction our production that was not tied by long-term contracts. In a down cycle, we could use the site to find alternative customers to soak up our idle capacity. Frankly, this was an inexpensive way to set up another channel. Even though the IS community was pushing Omnexus, Ian was only asking for \$1 to \$1.5 million. The venture was inexpensive.

When Telford and de Fitte met Wood in an airport hotel in Chicago to explain the whole venture, Wood made a few suggestions, but approved it. Recalling that meeting, Wood observed:

What I was looking for was not just a great idea but also the level of energy among the people sponsoring the idea. It has to be visible and high. Prior to my meeting with Ian and Philippe, I had a private conversation with Phil and Henry and I knew that the business was enthusiastic about the idea. The IS group was also sold. Frankly, I did not need a whole lot of data. The key was Ian's enthusiasm and drive for results. While the business idea was important, I was betting on the entrepreneur. I had to look him in the eye and see if he had fire in his belly.

Putting e-epoxy.com on the Track to Success

On August 1, 2000 Telford became the head of the new venture with a small increase in salary, and gave up his higher profile sales director's job. Working with a very tight budget, Telford managed to hire three people and launch e-epoxy.com on January 29, 2001, on-time and under-budget.

Co-Opting the Corporate IS Department

Tracy Teich, the IS director assigned to Wood's Thermoset business, recalled her involvement with the e-epoxy.com project:

Our big effort in the summer of 2000 at corporate was to have a standard and global IT response to the Internet. Our big fear was fragmentation and incompatibility. As an IS director attached to a business, my role was to be a supporter of the business priorities. It was my job to sell our CIO on the e-epoxy.com venture and get his approval. That would buy me credibility with the business.

The strength of the e-epoxy.com venture was that Telford had a well-articulated position. He had thought through this complementary channel, and had clearly defined business rules. He had a credible story and he told it well. Telford was also a model customer. He respected all the IS rules. He took great care in preparing the initial specifications and there were no major revisions as the project progressed. He met all the IS requirements, on time, every time. Some of the best IS architects volunteered for the project. Telford recognized their work and praised their efforts. When he received his first order, he took the trouble to call the IS team. This gave them instant ownership of the project. The system developed was not scaleable, and it also needed more robust back-up and recovery. However, the e-epoxy.com venture did manage to cut some corners and keep costs low.

Building the Right Team

Telford's team consisted of John Everett, Aranxta Olivares and Isabelle Lomba. All three were looking for a change in assignment. Telford recalled how he had hired Olivares:

I was in Cuba on a holiday. Aranxta called. I told her, look I have this marketing job for you. It does not have a description, level or title as yet. It is risky. I don't know whether our venture will survive or not or even if I will survive to be your boss. To my utter surprise, she wanted to join. She said that she was intrigued by the idea and saw it as a great learning opportunity. I knew instantly that she was right for the job. Others who joined were also risk takers.

When asked what would have happened if the venture had failed, Telford acknowledged:

I think my career would have taken a hit. But I was not worried about that. I was more concerned with the experience to be gained and the future of my team members. Even though they volunteered to take on this risky assignment, I tried to develop "escape routes" for all of them. Given the high visibility that the venture had, I made sure that team members were placed in positions where senior executives would notice them if the worst came to the worst.

The team bonded easily, and enthusiastically pursued the task of launching the business, a mere 90 days after they were hired. Everett, who had worked closely with Telford from the beginning of the e-epoxy.com project, commented on Telford's leadership style:

Ian has rich experience of the industry and deep marketing insights. He has exceptional ability to understand stakeholders and dance around minefields of vested interests. He is an all-rounder. His strength is his breadth of grasp, but this is not superficial. He talks to all stakeholders, fully understands their concerns. However, this does not mean that he seeks OK from every one of them.

The Launch

The January 29, 2001 launch covered the US and Europe. The day of the launch, Telford sent an e-mail to 110 people thanking everyone who had helped, including tax, legal, technical and accounting people and, most importantly, the corporate IS department. On September 19 a global launch, with nine different languages and web pages, followed. The e-epoxy.com portal was now available everywhere apart from Australasia, India and China. The remaining countries were scheduled to join soon, but language and currency issues still had to be solved. Recalling the glitches that his team faced in trying to go global, Telford talked about the Brazilian launch:

We had simplified our business model in Latin America and insisted on payment only in US dollars. Our legal staff told us eight days before the launch that we had to advertise on the web in Brazil in the local currency, Reais. We were asked to stop our launch and redo our website. I decided against it, mainly because it would have cost \$150,000 and delayed our global launch by three months. Moreover, we looked at the website of Varig, the national airline of Brazil. They were advertising in US dollars! Why not us? I told the team to press ahead and I would take the blame. I am sure we annoyed our lawyers with our stubbornness. When you are dealing with something new like the Internet, past history and rules are not always helpful. We have to be out in front and take some risk.

Once the website was set up, an advertising campaign was started. The advantage of being a first (or very early) mover was that people in the industry were eager to

hear the business story. Telford became a much sought after speaker at chemical industry conferences, speaking at twelve different events around the world in 2001. The more free publicity Telford could get, the better it was for his venture. This was not always appreciated by the corporate IS department. Teich recalled:

When Ian started talking about Dow Chemical's e-business that was a bit scary. But he was always well informed, told the e-epoxy.com story well, and never generalized from it.

Performance

The e-epoxy.com venture became EBIT positive in the fourth quarter of 2001, less than a year after its launch. By late 2002 e-epoxy.com revenues were still small, but the business was consistently EBIT positive because of strict cost control and low running costs. Sometimes, a customer would have to be contacted on the telephone to clarify and confirm the order. Incoming orders were entered in Dow Chemical's internal SAP system, which then triggered the documentation and subsequent physical delivery from the plant to the customer. The system was not seamless, but it appeared so to the customer. Nearly 75% of the customers were new, with importers making up the bulk of them. The sign-on area of the site had 1,800 addresses, and around 300 accounts had been registered by March 2002, 40% of which had purchased more than once on the site.

The e-epoxy.com business was projected to become cumulative EBIT positive in 2003. Since the IT investments had all been expensed when they were incurred, this meant that the venture pay-back was just over two years.

Reflections on the e-epoxy.com Venture

In March 2002 Telford handed over the e-epoxy.com business to his assistant, John Everett. He was promoted to business director for Glycerine, Acrylic Monomers & Epoxy Specialties, working directly under Cook. When asked whether he was leaving the venture too early, Telford remarked:

The big challenge for me was getting the venture through at Dow Chemical. I spent six to nine months getting approval and then building a global business in an area where nobody had any experience. That was the real challenge. After that the next mountain to climb was the first quarter 2001. We had to prove the concept. When customers we never had before started contacting us we knew we had a success on our hands. We achieved break-even in the fourth quarter of 2001. I am leaving the venture in good shape and in good hands. I will never forget the team spirit we generated and the mixture of hard work and hard fun we had together. I have now been given a bigger challenge, turning around four struggling businesses.

Henry Vermaak, the business VP for EP&I when the venture was first deliberated, gave the following assessment:

Ian was successful because he took the initiative, became computer savvy quickly, and leveraged the IS support from Dow Chemical very well. Once the idea of e-epoxy.com was approved, Ian was the only choice to drive it.

Mike Kolletth, one of the Palo Alto four, recalled:

Ian is always one step ahead of the organization. It may not even be a full step, just half a step, but he is in front. Somebody with a better business idea probably would not have been able to bring such a diverse group of people together and to drive the idea through the required approvals of the business team. More than his idea, Telford deserves credit for his execution skills.

Chris Teulings, supply chain director and a member of the ELT, echoed this view:

Ian did two things particularly well: great lobbying and building a very motivated team. In both Ian is a master. The concept he sold was reasonable, not strong, but Ian handled it pragmatically. He adjusted his concept constantly to overcome resistance and gain support.

Recalling his role as a sponsor and Telford's supervisor, de Fitte observed:

I don't think alone. I absorb the ideas of others. I believed firmly in the e-epoxy.com model, and persuaded my bosses of its merits. I am not necessarily a radical like Ian, but perhaps a closet-radical. I admired Ian's guts. But I did feel tired of the new surprises that Ian would bring. This was creativity out of control, a sign of some immaturity. I tried to round off the abrasive side of Ian. I hope I succeeded.

Cook elaborated on his role in nurturing entrepreneurship:

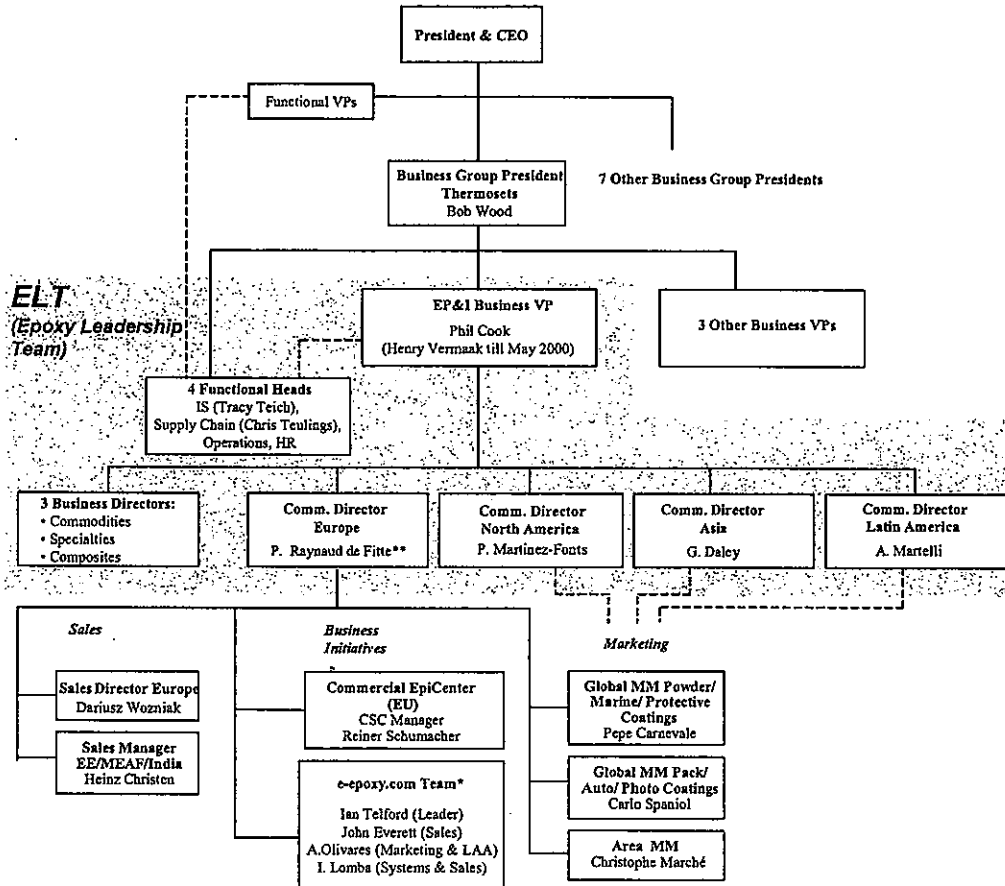
I see my role as one of opening doors and providing air cover. I believe in consciously setting up an organization outside the mainstream, headed by a dedicated champion. To me a corporate entrepreneur in Dow Chemical is like putting sand in an oyster and coming out with a pearl. I think it is important to give the aggressive entrepreneur opportunities earlier in his/her career.

Highlighting the importance of the senior executive's role in nurturing entrepreneurship, Wood noted:

It is the senior executive who should connect a venture proposal to a big strategic opportunity for the company. It is key to spend a lot of time in the front end of the venture, to sit down and discuss the data, the idea, suggest what the timing for the investment should be, what group of people should be involved in the project, ask a number of questions, check the enthusiasm of the team, ensure that they are agile and make sure that they are getting data from actions and not necessarily waiting for all the final details to make a decision and then to act. We have to learn to make decisions in that zone of discomfort.

Some entrepreneurs would rush to go from A to B, knocking down barriers, any obstacle in the way. But it takes a lot of energy to knock down obstacles. It may be smarter to go around this obstacle. That might be the more effective way to achieve results. I have to give very authentic feedback on what I see. That is the only way I can help in the rounding process of the entrepreneur. I also try to ensure that the context in which the entrepreneur functions keeps changing so that there is a new opportunity to test his/her skills.

Exhibit 1
The Dow Chemical Company
EP&I Commercial Organization Chart 2000

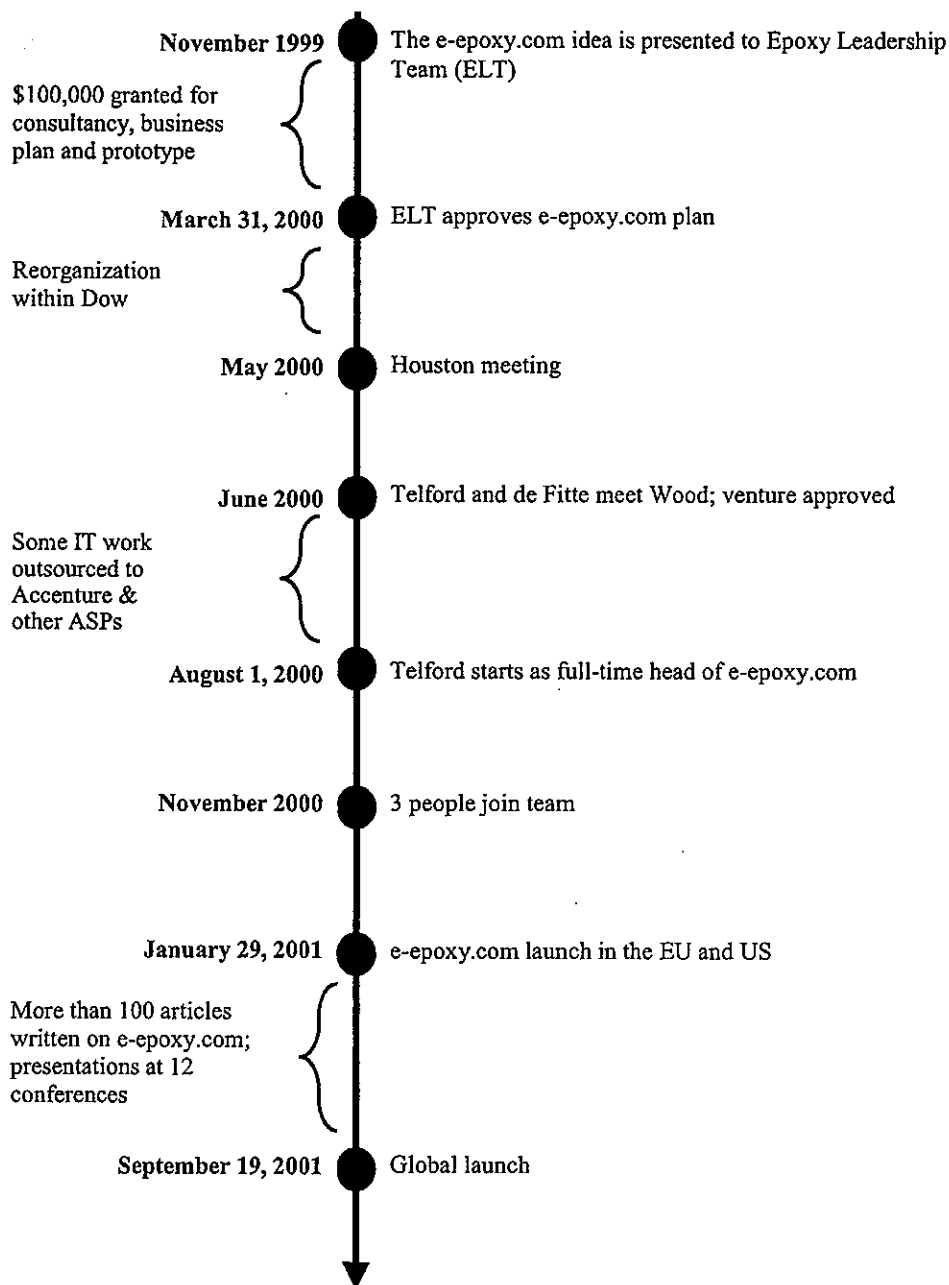


* Telford headed this group till March 2002. Everett took over from him and the e-epoxy.com team was moved under sales. Telford became Business Director (Specialties).

** De Fitte became Global Business Director (Commodities) for EP&I in May 2000. J.A. Merino replaced him as Commercial Director for Europe and North America.

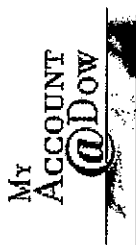
Source: Company information

Exhibit 2 Event Timeline for e-epoxy.com



Source: Company information

Exhibit 3
A Comparison of Dow Chemical's Web Offerings



- Product palette
- Rush orders
- Consignment stock
- Flexible payment terms
- Cheque collection
- Language
- Entertainment
- Local storage
- Tech service
- EPI center/ personal help
- Training
- Samples
- Price protection: 16 months
- Price changes in writing
- Contracts/ Rebates/ Admin.
- Travel to customer's premises



Omnexus

- Vested supplier commitment
- Full customer service
- Dedicated sales force
- Supplier technical support
- Consistent source of supply
- Multiple supplier sourcing
- 24/7 Order convenience
- Price comparison utility
- Neutral, global entity
- Breadth, depth of product line



www.e-epoxy.com

- 8 products on offer
- Longer lead-times (variable)
- Penalties for changes
- Penalties for late payment
- Fixed payment terms
- 20MT or 10MT (bulk, bags)
- No phone, only e-mail
- 24/7 availability
- Newsletter by e-mail
- No paper
- No contracts, rebates, administration
- Promotion codes
- Spot price, no price protection

