Case study

From market entry to new product development in China: Environmental Systems Controls

Dennis Pitta
University of Baltimore, Baltimore, Maryland, USA

Abstract
Purpose – The paper plans to explore the global environment and its implications for new product developers.
Design/methodology/approach – The case was written after in-depth interviews with company managers.
Findings – The paper provides information and action approaches to new product developers engaged in global marketing.
Research limitations/implications – As with most case studies, the situation, industry response and results are pertinent to this particular company. There may be limitations in generalizing to other industries or other countries.
Practical implications – The paper demonstrates a competitive approach to new product development and marketing strategy. It serves as an example of one technique to compete in industrial marketing.
Originality/value – The case reflects an innovative attempt to increase customer service, decrease cost and increase competitiveness in an industrial setting. The specific techniques and decisions represent a potentially valuable response to global competitiveness.

Keywords New products, Product development, China, International marketing

Paper type Case study

Background

Environmental Systems Controls (ESC) is a Maryland-based company whose products include a variety of pollution control equipment. Their systems are especially valuable in the pulp and paper industry, in the public utility area and in the control of municipal solid waste.

The company is substantial but small in global terms. It is dwarfed by one of the worldwide giants, Asea Brown Boveri (ABB), a Swedish-Swiss company with several major businesses in electric power generation, railways, industry automation and environmental equipment. ABB represents a growing trend in global business, combination for success.

History

ESC management realizes that it does not have the size or clout of ABB and other firms. Its early attempts at combination included a joint venture in India that turned out badly. The local joint venture partner is defunct and the company lost money and opportunity. The one saving grace is that the joint venture provided a sense of reality about what was possible and what was not.

Other attempts at combination were also not successful. They included establishing a sales office in Great Britain in 1991. The office was opened and staffed, but the timing was unfortunate. It coincided with a downturn in the UK industrial sector so no orders resulted. The company closed the doors in 1993.

Across the globe, ESC investigated the Brazil market. There has been an industry increase in business in the forested areas of the world due to the increase in pulp operations opening to be close to the timber supply. Up to 75 percent of the pulp pollution control needs are located in these areas. ESC used a licensing agreement with a Sao Paolo company that turned out well.

In 1993, ESC took a long look at Indonesia, partly because of its forests. It hired a consultant to perform market study and embarked on a partner search. Several issues arose that made the Indonesia look less attractive. First, one potential partner ESC uncovered was described as a high roller who wanted no investment in the venture. He would be there to make contacts and help run the unit. While the search went on, a second issue became more important. The market study uncovered the fact that most of the power plant installations in country were installed as turnkey operations. The implication is that local decision making would not include ESC's parts and therefore there was little potential for the company.

Overall, the company has had experience with both joint ventures and licensing arrangements.

The Emerald Research Register for this journal is available at
www.emeraldinsight.com/researchregister

The current issue and full text archive of this journal is available at
www.emeraldinsight.com/1061-0421.htm

Journal of Product & Brand Management
14/2 (2005) 119–122

[DOI 10.1108/10610420510592608]

Journal of Product & Brand Management
Volume 14 · Number 2 · 2005 · 119–122

A new market entry philosophy

John Johnson, the CEO of ESC viewed the India experience as an object lesson. Control was vital and lacking in the previous involvement. A great deal of the company's work involves special purpose engineering. Much of the existing product base must be customized or re-engineered for specific applications. In this arena, the bottleneck for production is high quality engineering. Typically, American companies with only US engineering teams suffer time zone problems. For example, Djakarta's time zone is 12 hours earlier than Baltimore's. If an engineering problem arises, the team in Djakarta must transmit the information via e-mail or fax to Baltimore – often arriving after Baltimore business hours. If the company has no round the clock engineering staff, no engineer in Maryland will see the information until the next morning. Johnson realizes the strategic weakness of the arrangement.

That realization led to the establishment of an engineering team in India. India has a well-educated workforce and suitable types and numbers of engineers. Problems that arise in Asia can be addressed regionally by the team in India. Moreover, complex problems can get coordinated attention by both the Baltimore and India based teams. Thus, Johnson's vision resulted in round the clock engineering and a significant advantage.

A new market

As the situation in Indonesia became less attractive, the Taiwanese Government published an RFP for technology that ESC could provide. Johnson sent Ted Reynolds to Taiwan. At that time Reynolds was a 27-year-old engineer with an MBA from Wharton. Reynolds was new to ESC. He had applicable engineering experience before returning to school for business training. Reynolds was bright, experienced and single. Johnson chose him because of those qualities as well as his lack of ties to the Baltimore operation. The boss valued independence.

Reynolds was charged with learning the market and assessing the market potential for ESC. He rented an apartment in Tapei, and over his first six months, learned Mandarin and studied Chinese culture and Taiwan. After a year in country, he knew the Taiwan market, but also knew much about mainland China. On one of his trips back to Baltimore, he met a delegation from Anhui province. Suddenly things started to click. Anhui and Maryland maintain a sister states relationship. Both the provincial and Maryland state governments maintain ties and a series of cooperative agreements. He already knew some facts about Anhui and China:

- Anhui has coal;
- Anhui is located strategically near but inland from Shanghai; and
- the national railroad system is inadequate.

The first fact struck him – Anhui has coal. To ESC, coal means power and power plants need ESC technology. In fact despite the much heralded construction of the Three Rivers Gorge Dam, over 80 percent of China's power needs will come from coal. Burning coal cleanly requires ESC type of technology. Reynolds coupled Anhui's strategic location near Shanghai with the inadequate rail system and came up with the ultimate conclusion, Anhui should generate electricity from local coal, which could then be transmitted over power lines. Power line losses were acceptable – there were not enough trains to move the coal to Shanghai. Practically, generating electricity in Anhui is the only alternative.

Reynolds also knew one very important fact. Anhui is an underdeveloped province. Therefore, the provincial government has more influence than ordinarily. In addition, the sister states relationship might work in his favor.

Creating a joint venture

Using the offices of the Maryland state agency, the Maryland Department of Business and Economic Development, Reynolds arranged a visit to facilities in Anhui. After a series of protracted negotiations in China and internally in Baltimore, ESC launched an international joint venture (JV), which conveyed an import/export license. Thus the JV would be able to import raw materials and export finished products without incurring the considerable costs of brokers for each transaction. By astute planning and decision making, the ESC JV in Anhui enjoyed considerable revenue and, within two years, produced profits.

Operations in China

ESC continuously assessed its position in China. Seeking to avoid the notable horror stories of Chinese JV partners assuming complete control of facilities and intellectual property, ESC decided on a culturally sensitive strategy of making friends in Anhui province. It hired locally trained engineers and over time built an impressive engineering staff. Since Chinese engineers are in demand in a booming economy, they are highly mobile. It is not uncommon for a sought after engineering candidate to change jobs several times a year. From the start, ESC was sensitive to turnover in its professional staff. It rewarded them well and offered some plums that were difficult for competitors to duplicate.

One benefit involved rotation to positions in Baltimore. In fact it was a two-way street, selected Baltimore personnel would spend six months to a year in the Anhui facility, while selected Chinese engineers would be assigned to Baltimore. It was easy finding Chinese engineers to consider the trip; it was more difficult to find suitable Americans. To accomplish its goals, it created two parallel sets of incentives.

ESC was highly adept at exploiting local resources. Two educational resources existed locally in Baltimore in the form of an excellent engineering school and an equally good business school. In addition there was a significant local Chinese-American community. By careful and continuous recruiting, ESC found recent engineering and business graduates to staff positions in China. ESC also found undergraduate interns interested in spending a semester in Anhui working for the company. The icing on the cake was the business school located in Baltimore. It was not only accredited, but also offered evening classes as well as one of the first online MBA programs. ESC could recognize promising Chinese professionals who were likely to be future leaders. It could offer them a temporary assignment in Baltimore and the chance to start an MBA program. After the assignment was over, they could return home and finish their degrees. While in the USA, they were paid a cost of living allowance that brought their salaries closer to American standards. The company was careful to emphasize and

Journal of Product & Brand Management
Volume 14 · Number 2 · 2005 · 119–122

re-emphasize that the cost of living allowance was simply their attempt to make living arrangements more affordable. It was also careful to apply for US visas that would require rotation back to China.

For Anhui personnel, the combination of a US working experience as well as a chance for an American MBA was highly motivating. They even earned a special title: global professional. It was clear to all that those individuals fortunate enough to be selected faced an extraordinary opportunity, which would help them inside and outside of the company. Initiatives such as these built company loyalty.

ESC's American managers who spent time in China realized that Chinese professionals are essentially free agents. They switch positions and companies frequently. Moreover, non-Chinese organizations are forbidden by law to deal with Chinese citizens directly. Instead, a few authorized Chinese personnel companies such as the Foreign Employee Service Corporation (FESCO), handle recruitment and employee relations. ESC paid careful attention to courting important FESCO executives and recognizing the value of their aid.

After five years of careful hands on management, partly under Tom Reynolds' direct supervision, ESC had achieved noteworthy customer service. The China operation enhanced its reputation in delivering high quality engineering services. It was widely recognized that complex engineering operations generate unanticipated problems. Solving them quickly meant that customers saved money. Clearly, the idea of round the clock engineering support was a winner. Moreover, the Anhui engineers were excellent. Their skills and work habits were exemplary. Perhaps the greater benefit was that the costs of this level of customer service were lower than if they were run solely out of the Baltimore office.

As ESC-rotated global professionals through Baltimore, it realized that many who opted for the MBA program majored in marketing. After several Chinese executives enrolled and excelled, the business school invited ESC to serve on its business advisory board. Tom Reynolds, now the vice-president of Marketing, agreed to serve and made valuable contacts within the faculty and learned of their strong product management and new product development (NPD) research interests. The association was natural.

As time went by, ESC realized that it had a skilled team in Anhui that could help with not only engineering troubleshooting, but also the NPD process.

Extending NPD to China

Globalizing business functions is common and becoming more prevalent. In most cases it offers benefits that outweigh the costs. ESC found that globalizing its customer service engineering function brought great benefits in terms of increased service quality and lower service cost. Product development is a business function that has been globalized in many consumer organizations and ESC thought that it might be straightforward with professional customers like engineers.

The new direction was not straightforward. ESC management was mindful of the potential problems in such a move. Upper management expected teething problems and they were correct. Under Tom Reynolds' leadership ESC sought help in designing a product development globalization strategy. It enlisted some business school professors with expertise in organizational development and new product issues. With their aid, ESC embarked on a measured strategy for extending their NPD team.

Using a similar approach to the customer service initiative, namely integrating visiting American managers with seasoned Chinese global professionals, it slowly moved part of its product development function to China. To prepare for the move, it designed a cross-functional team using that combination of American and Chinese professionals.

In essence, the initiative would be culturally sensitive and acknowledge both Chinese and American business customs. To aid the cross-functional team of mainly Chinese and a few US engineers and product development specialists, the company set out a detailed procedure. The group enjoyed a two-month period of training, familiarization, and team development. The experience involved some of the classic team building exercises as well as basic education in the NPD process. After training, the new group was assigned to work on a product already in the development stage. The team was charged with determining product benefits, the nature of the bundle of products and services as well as a strategic price.

After an initial period of progress, the team's efforts stalled and signs of trouble appeared. The problem seemed to reside in the different backgrounds of the two groups of professionals. It was pinpointed as originating in the overall objectives of customer service engineers versus new product developers. The best customer service people were dedicated to solving problems in a timely manner without much concern for cost. Their operating concept was to fix it as quickly as possible. In contrast, new product developers concentrated on getting it right, even if it took considerable time. The two views resulted in a few disagreements and misunderstandings that slowed progress. In fact, the project made little headway. ESC management in Baltimore had hoped that the initiative would lower costs and result in successful products. The differences between team members seemed too large to overcome. Therefore the company reviewed the situation to diagnose what went wrong.

Basic assumptions

NPD aimed at the industrial market is slightly different than that aimed at ordinary consumers. ESC felt that its staff would be able to speak the same language as its customers and that troubleshooting engineers would be perfect for NPD. After all, these engineers knew the problems that company products faced and they knew the solutions that were created. ESC assumed that possessing that experience would translate well to the NPD process.

Perhaps the more difficult issue was their professionalism. These engineers were committed to relying on their own professional judgment, considering even their customers' professional staff amateurs. The result was a know-it-all attitude that was compounded by traditional Chinese respect for authority and expertise. In fact, they lacked in-depth listening skills, the kind needed to hear the voice of the customer. They did listen but one might say they listened to the words, not the meaning of the words. Although some team members, notably the NPD specialists from Baltimore, searched for customer wants and needs, their actions and knowledge were not embraced by the technical members. The team had to rely on the strength of its leader pulling and pushing people along.

Journal of Product & Brand Management
Volume 14 · Number 2 · 2005 · 119–122

Other difficulties cropped up. Surprisingly, language skills became important. The team clearly had good Mandarin and English skills. However an increasing amount of business came from other parts of Asia and the Middle East. Specifically, ESC decided to compete for some Thai government contracts. The Baltimore office had local relationships with numerous language experts including some expatriate Thais who handled oral and written interpretation superbly. Baltimore had local contract language experts available who could cover the company's needs in most of the world. The problem was that they were in Baltimore. Despite Anhui's strategic placement to develop products in China for countries in the region, ESC found it necessary to shift some of the work back to the home office.

Lessons learned

The first lesson learned was that culture remains an important factor in globalizing business processes. In this case ESC was well prepared for the primary cultural differences between the tradition-influenced Chinese culture and the hard numbers-oriented Western business culture. The culture clash that mattered was secondary in nature: it was the clash of East versus West underlying the clash of "engineer versus marketer". This difference proved somewhat difficult to resolve.

Another lesson associated with the first focused on clash caused by professional expectations. The engineers were characterized as having an inward focus. Their professional training and practice stressed self-reliance and "professionalism". Professionals are supposed to have the answers. In contrast their customers can only supply descriptions of symptoms from which the professional must diagnose underlying causes and provide solutions. This relationship endures despite any professional credentials the customer might have. The result is that the engineering professionals viewed others outside the company as amateurs in relation to ESC's products.

The marketing professionals were imbued with the classic customer orientation and were therefore outward oriented. The focus was on customer needs. They were aware of their considerable marketing skills and likened them to Sherlock Holmes' ability to delve below the surface to learn customer needs accurately. That forced them to interact with their market and in doing so, bred a respect for the customer. The marketers' professionalism made them focus on the customer first.

Another lesson learned focused on training. At first, ESC thought of the future. Management in Baltimore dreamed of a self-sufficient NPD operation in China. Consequently, it tried to train its Chinese customer service engineers to be NPD specialists. It learned that they should have been trained to be engineering experts in a NPD team, subordinate to the marketing leader.

Staff support was the final lesson learned. It became clear that placing an NPD team in China without a complete set of resources to make it self-sufficient would not yield a stream of successful product offers. ESC committed itself to a preliminary step, building a partial team, really a resource for a complete NPD team. It realized that for the foreseeable future, the new product development function should remain in the USA.

The final result

With these findings, ESC opted to create a cross-functional, globe spanning NPD operation. It retains a few US managers in Anhui and concentrates the NPD process in Baltimore. There are several project teams consisting of the mix of US- and China-based personnel. In order to conduct business, ESC relies heavily on e-mail- and internet-based meetings. It has become another flextime activity in Baltimore. Anhui and Baltimore usually have a 12-hour time difference. Baltimore team members arrive at work for 7 a.m. meetings that last an hour or two. Their counterparts in Anhui stay until 7 p.m. to start the same meeting. Initial results are promising.

ESC also realized that the best result for the future would hinge on centralizing NPD activities with global elements as information resources. Its initial attempt ignored the need for functional area and strategic decision making.