

Cisco and CEMEX

“We are going beyond return on investment metrics and toward ensuring customers prefer to do business with us. Our goal since the beginning was not building platforms to handle information. The driver of our design was taking care of customer relationships.”

—Gelacio Iniguez, Chief Information Officer and Chief Technology Officer, CxNetworks, CEMEX’s Internet Subsidiary

Background

One of the world’s three largest cement companies, CEMEX is on a mission. They intend to transform the construction industry—starting with their own organization. Already they have implemented technology that reduces a critical three-hour delivery window to less than 20 minutes, a cycle time unheard of in the ready-mix concrete industry.

Transformation is no small feat in an industry where demand is unpredictable, logistics are challenging, and face-to-face is still the traditional method of doing business.

CEMEX believes they are up to the challenge.

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EXECUTIVE SUMMARY

BACKGROUND: Founded in 1906 and headquartered in Monterrey, Mexico, CEMEX has operations in 30 countries and posted annual sales revenues of US\$4.8 billion for Fiscal Year 1999. Through its operating subsidiaries, the company is engaged in the production, distribution, marketing, and sale of cement, ready-mix concrete, aggregates, and clinker.

CHALLENGE: In an industry plagued by unforecastable demand, unpredictable weather, erratic phone systems, traffic problems, labor disputes, and construction snafus, CEMEX wanted break through the status quo and create a new way of conducting business.

SOLUTION: CEMEX benchmarked world class organizations that had solved challenges similar to those they were facing and selected Cisco to help them an Internet business model.

RESULTS: Using Web-based tools, CEMEX has reduced the standard three-hour ready-mix concrete delivery window to 20 minutes. The company estimates savings from their e-procurement initiative will be between US\$6M and \$11M in the first phase, with 100% ROI within three years. New acquisitions and plants are online within two to three months. And the company has grown from revenues of US\$2.1B in 1994 to US\$4.8B in 1999 without increasing headcount in the last four years.

posted annual sales revenues of US\$4.8 billion for Fiscal Year 1999. Through its extensive network of distribution centers and marine terminals, the company holds trade relations with more than 60 countries around the world.

Through its operating subsidiaries, the company is engaged in the production, distribution, marketing, and sale of cement, ready-mix concrete, aggregates, and clinker, a material developed as part of the cement-making process. With some 77 million metric tons of production capacity, CEMEX is the world’s leading producer of white cement and the world’s largest trader of cement and clinker.

CEMEX intends to serve the global building needs of customers and to create value

for stakeholders by becoming the world's most efficient and profitable multinational cement company. To accomplish this, the company is implementing initiatives they feel will help them become the leading provider of Internet-based solutions in the construction industry.

Challenge

The concrete industry may be one of the most challenging in the world. In fact, Amazon.com founder Jeff Bezos has said that he'd like to sell everything through his company—except cement.

In an industry plagued by unforecastable demand, it's not unusual for sizeable portions of orders to be canceled on the day of delivery. Add to that the variables of unpredictable weather, erratic phone systems, traffic problems, labor disputes, and construction snafus and you could have a recipe for mediocrity at best, failure at worst.

Instead of settling for status quo in this industry, CEMEX has recognized an opportunity to create a new way of conducting business.

"We defined a vision that emphasizes strategic business processes rather than technology platforms," said Gelacio Iniguez, Chief Information Officer and Chief Technology Officer, CxNetworks, a subsidiary of CEMEX.

"In the beginning, we built a series of platforms based on telecommunications, process design, integrated enterprise resource planning, and workflow tools," he added. "That early investment in technology allowed us to grow and rapidly integrate the companies we acquired, often bringing them online within two to three months."

That strategy created a synergistic environment that allowed CEMEX to integrate and optimize new acquisitions fast and then to build a critical level of knowledge and partnership with CEMEX's suppliers. As a result, CEMEX recognized the value of an Internet strategy and decided to extend its vision to the construction industry as a whole.

"There are a lot of opportunities in the construction industry," Iniguez said. "We thought we could be more aggressive in the market, contribute to the industry, and

differentiate ourselves. With the right infrastructure in place, we could bring the technology and design processes that would allow us to make offers in that specific space."

Solution

CEMEX benchmarked world class organizations that had solved challenges similar to those they were facing. They visited Federal Express to learn about demand management and how to improve their ability to better forecast and handle the unpredictable peaks and valleys of cement demand. They visited Exxon to understand how that company handles the task of tracking, scheduling, and re-routing shipments. And they visited Houston's premier 911 Emergency Dispatch Center to study how that organization coordinates hundreds of vehicles around unpredictable situations.

Next, they turned to Cisco to gain insight on its visionary role in the Internet economy, and to learn more about Cisco's proven implementation of network infrastructure solutions. Working with Cisco and Cisco ecosystem partners such as Neoris, a CxNetworks company that is a leading provider of e-business related IT services for the Spanish and Portuguese speaking markets, Ariba, SABA, KPMG Consulting, iXL, and Deloitte, CEMEX developed an overall strategy and several key initiatives.

Ariba provided e-procurement software while Neoris, iXL and Deloitte provided strategic change management to ensure an effective transition to an e-procurement environment.

SABA developed a Learning Management Information System and Digital Think provided content for e-business lectures. KPMG provided valuable B-to-E consulting, which helped CEMEX transition smoothly from their traditional business model to an Internet environment.

To create a visible early victory, CEMEX first Web-enabled its e-procurement business processes with an Ariba solution.

"The real value of the e-procurement model is how it allows us to handle our relationships with thousands of suppliers," said Gilberto Garcia, IT Planning Leader for CEMEX. "We will achieve 100% of the value of this initiative in three years because our global supplier population is so large."



CEMEX migrated back office operations such as finance and accounting to the Internet to further increase process efficiencies and reduce costs. The company also developed and implemented internal and external Web portals for employees, partners, and suppliers.

The network infrastructure CEMEX implemented allows them to synchronize operations through digital systems designed to manage customer orders using computer terminals integrated with GPS (Global Positioning Satellite). These units are installed in CEMEX ready-mix concrete trucks. Now, centralized dispatchers know the exact location, speed, and direction of all vehicles at all times, and can quickly choose optimal combinations of trucks and customer destinations to fill orders on time, every time.

CxNetworks

In parallel with Web enabling their traditional manufacturing operation, CEMEX launched CxNetworks to create e-business solutions. An integral element of CEMEX's overall strategy to transform the construction industry, CxNetworks will leverage CEMEX's Internet assets and extend the company's reach into marketplaces that complement their core business.

"CxNetworks is important to the future of CEMEX," said Lorenzo H. Zambrano, Chairman and CEO of CEMEX. "Its success will add enormous value to our overall efforts to e-enable the company, not only by helping us provide a broad range of online services and products to our customers and by creating the new networks that are integral to success in the digital age, but by contributing to the building of an e-culture throughout CEMEX."

CxNetwork's initial focus is on three business areas:

- Development of online construction marketplaces (Construmix)
- Creation of an Internet-based marketplace for the purchase of indirect goods and services (Latinexus)
- Expansion of Neoris (formerly Cemtec), CEMEX's information technology and Internet consulting services company, into new markets

Construmix

Construmix is an e-procurement site developed specifically for the construction industry. It provides a virtual marketplace for suppliers encompassing

everything from lightbulbs, carpet, and paint to glass, cement, and roofing. In addition to sourcing construction supplies, the site also gives construction buyers direct access to service providers such as architects, designers, decorators, and other key players in the industry.

Latinexus

CxNetworks, in partnership with Votorantim and Bradespar of Brazil and Alfa of Mexico, launched Latinexus with the goal of becoming the leading B2B e-procurement marketplace for indirect goods and services in Latin America. Customers include both large and small companies across all industries. Establishing partnerships and relationships with other industry groups, such as iron and steel, enabled CEMEX to develop Latinexus to leverage buying power and achieve economies of scale.

Powered by Ariba, Latinexus allows members to purchase non-construction-related items including computers, telephones, calculators, and other office supplies. Latinexus went live in November 2000.

Neoris

CxNetworks is also responsible for transforming Neoris (formerly Cemtec), the internal technology services company of CEMEX, into a leading provider of information technology and Internet-based consulting services. To create a broader presence in the Latin American market, CxNetworks merged Cemtec with the equally successful companies of Amtec in Argentina, CyberMedia in Venezuela, Intec in Spain, and Mlab in Brazil to form Neoris.

"Neoris has the potential to become one of the leading e-business consulting companies in the Americas as well as a key player in other markets, especially Spain and, in time, the rest of Europe," said Juan Pablo San Agustin, Chief Executive Officer, CxNetworks. "The best way to realize the value of this asset is to grow Neoris as rapidly as possible, taking full advantage of expanding market demand for the services this company provides."

Next Steps

In the construction industry, large amounts of materials need to be moved. A logistics portal is under development that will leverage the availability of hundreds of small

logistics companies. "We will offer tools that will allow these small companies to optimize their fleets," Iniguez said.

At the moment, Iniguez explained, most of these companies have a series of customers they support, moving materials from source to destination. Scheduling problems and inefficiencies often cause drivers to return to their origination point with empty trucks.

The logistics portal, which will be offered to all industries, will create access to the various fleets' schedules and availability, resulting in greater scheduling efficiencies.

Transforming an industry as conventionally low-tech as construction is more of a challenge than just changing the business model. It requires building trust and helping the players become comfortable with doing business on the Web.

"One of the biggest challenges is how to build trust among the different participants. How can we remove barriers to change their willingness to really trust the Internet? And how can we speed up and develop business practices which allow them to change the way they conduct their business?" Iniguez said.

CEMEX is confident that technology solutions will play an important part in helping the industry accept new standards, despite the cultural preference for personal contact in Latin America. "IT telephony will play a significant role in trying to converge Internet applications with voice, which is very important for these audiences," Garcia said.

Results

CEMEX estimates savings as a result of their e-procurement initiative will be between US\$6M and \$11M in the first phase. And they expect that 100% ROI will be achieved within three years.

The company is replicating its digital business design in such a systematic way that new acquisitions and plants are part of the CEMEX system within two to three months.

CEMEX's ultimate goal is to provide consistent, customer-centric innovation that keeps the company at the leading edge of their industry. By 2001, the vision is to enable all major customers to purchase direct through the Internet. The company is looking to Cisco to guide them along further development of their own Internet business model, and to help them increase customer retention by helping their customers find solutions for their businesses.

"We have found scalability in information technology," said Jose Luis Luna, CEMEX CIO. Luna noted that although the company has grown from revenues of US\$2.1B in 1994 to US\$4.8B in 1999, they have not increased headcount in the past four years.

"We are far behind where we want to be," San Agustin said. "Right now only around five percent of our platforms are truly Internet platforms. With Cisco as a model, we want to Web-enable all of our processes. By the end of 2001, our objective is for more than 50% of our platforms to be Internet-supported."

Bottom line, they are "cementing" plans for a strong and profitable future.



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