



DuPont takes “Notes” from IBM on enterprisewide collaboration.

Whenever a major corporate restructuring captures the attention of the business world, it is sure to be mirrored by less publicized, but equally dramatic, changes in the company's information technology (IT) infrastructure. Enabling newly defined business units to collaborate through effective sharing of information resources is crucial to the success of any corporate restructuring effort. Yet, for the IT team it poses the most formidable challenges. This is the story of DuPont, a company that took the IT reengineering bull by the horns and, with help from the right partners, succeeded.

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—Steve Miller, Manager of Collaborative Computing, DuPont

With revenues of \$25 billion this past year, DuPont employs approximately 80,000 people in 70 countries. Inventor of Corian,[®] Kevlar,[®] Mylar,[®] Nylon,[®] Teflon[®] and many of the other materials that shape our daily lives, the Wilmington, Delaware-based company is moving toward the new millennium with three core businesses. Life Sciences, its fastest growing venture, focuses on agriculture, pharmaceuticals and nutrition. Differentiated Products offers specialized polyester films, polyester resins and intermediates, photopolymer and electronic materials and printing and graphics products. And the Foundation Businesses deliver high-volume, specification-based products.

Application	Enterprisewide collaboration
Business Benefits	Up to 50% faster decision making; increased ability to exploit market opportunities through faster price change authorization; better dissemination of best practices
Software	Lotus [®] Domino [™] Lotus Notes [®]
Services	IBM [®] Global Services Lotus Consulting



The DuPont IT team rose to the challenge of restructuring the company's information systems, taking collaborative computing to new levels with Lotus Notes and Lotus Domino.

It's about business, not just technology.



What started out as a 4,000-seat e-mail network at DuPont's Wilmington, Delaware headquarters has blossomed into a global collaboration system that will encompass more than 80,000 employees worldwide by 2002.

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—Steve Miller

In all three business areas, increased productivity and collaboration are paramount to continuing competitiveness and profitability. “We needed to provide an infrastructure that would facilitate the leveraging and sharing of knowledge,” says Steve Miller, manager of collaborative computing at DuPont. “Domino and Notes are the vehicles through which these groups collaborate, develop best practices and are able to identify experts in a particular field.”

After successfully using Lotus Notes for two years, DuPont decided to standardize on Notes as the platform for all its collaborative applications. But scaling the Lotus Notes environment from 4,000 users to more than 80,000 turned out to be more than the company could handle on its own. So, it turned to a partner who had successfully navigated these waters itself—IBM. The IBM Complex Opportunity Organization assisted DuPont in building a virtual team of their partners, which included IBM, Lotus and DuPont's managed operations partner, Computer Science Corporation (CSC). IBM Global Services and Lotus Consulting helped DuPont and CSC work through the numerous architectural design and implementation issues that were critical to providing a reliable, scalable and flexible foundation for Lotus Notes application development throughout the company.

“IBM is the only vendor in the world that has experienced the scale of implementation of Lotus Notes that would be comparable to DuPont's plans,” Miller says. “Although Lotus has the product and Lotus Consulting, the service company, has the collaboration expertise, IBM's implementation of Lotus Notes provides DuPont with the confidence and the guiding light DuPont needs. They've been there; they've done it. We need to learn from them.”

According to Miller, DuPont's Lotus Notes implementation provides “an integrated set of tools that allow businesses to communicate, collaborate and coordinate within, around and along their value chains.” And DuPont employees are already beginning to reap the benefits. For example, changes in operating procedures that previously required weeks to approve, with signatures obtained through traditional routing techniques, can now be authorized in hours or days. Requests for price changes to meet a competitive threat, which previously required weeks to approve—thus limiting DuPont's flexibility to capture market opportunities—can now be authorized in hours.

Likewise, DuPont's virtual teams, often operating across the world, have cut their decision cycle time down dramatically—in one case by 50 percent. In some instances, DuPont's rapid decision making has been translated into reduced cycle time for installing new facilities, which, in turn, enables DuPont to capitalize on revenue opportunities faster by bringing products to market in less time.

Notes and Domino ensure enterprisewide consistency

Because Notes was already a recognized and familiar tool at DuPont, it was a natural candidate for enterprisewide deployment. However, before making its final decision, the IT organization also evaluated Microsoft® Exchange and Outlook. The company found that these products couldn't match the collaboration and workflow management capabilities of Lotus Notes and its server counterpart, Lotus Domino.

“Out of the box with Domino and Notes, you have templates providing a similar look and feel for all aspects of coordination, collaboration and communications,” Miller explains. “Whereas with Outlook and Exchange, while the application programming interface is there, DuPont would have had to hire people to write custom applications. This would make us run the risk of significantly different interfaces from one application to the next.”

Rapid growth

The expansion of DuPont's Lotus Notes and Domino deployment began in earnest in January 1998, when DuPont had 6,000 seats deployed. And, after one year, 34,000 seats have been deployed with a future deployment schedule that is equally robust—an additional 46,000 seats over the next four years.

Miller says that while its seat growth is impressive, the true value of Lotus Notes in the organization will come from the widening creation of Lotus Notes databases, the foundation for enterprisewide data sharing. “The number of databases, where the real power of Notes lies, is now at 3,000,” says Miller, “and is expected to reach 20,000 by the end of 2002.”

Key role for IBM and Lotus

Miller considers the role of IBM Global Services and Lotus Consulting a crucial element in the successful implementation of DuPont's Lotus Notes platform. “IBM's biggest contribution was the scalable factor. We had hit a wall at around 15,000 to 17,000 seats, after which we couldn't scale. The servers were overloaded, and we did not have the right replication and server topology strategy.”

According to Miller, IBM's most important contributions were its consulting services focused on domain strategy, server strategy and service level agreements; guidance on rules of the road for connecting external partners and customers; certificate taxonomy, specifically how DuPont names individual certificates that identify people within the domain; and various security issues, which IBM both discovered and helped resolve.

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Dupont is using Domino and Notes to leverage its intellectual capital as it diversifies into new lines of business.

Notes adds value through friendlier interfaces

DuPont's Lotus Notes architecture resides on its private worldwide network, with 70 Domino servers distributed in Canada, Europe, Mexico, South America and the United States. In addition to enabling information sharing through Lotus Notes workflow processes, DuPont will also leverage Lotus Notes to add value in its enterprise resource planning applications.

The company plans to integrate Lotus Notes with SAP R/3 running on IBM RS/6000® servers, using Lotus Notes as the user interface for R/3 applications. According to Miller, this will make it easy for casual SAP users to access the data they need. "While the people that will be using SAP routinely will use it in native SAP R/3, the interface is really for the management team who are casual users of SAP," he says. DuPont's Lotus Notes-based R/3 interface will become even more user friendly when Lotus Notes Release 5 is made available. The look and feel of the Release 5 interface is similar to that of a Web browser.

As DuPont moves away from low margin businesses—toward more value-added areas such as life sciences and materials—it recognizes the need to improve its knowledge management to leverage its intellectual capital fully. One of the prime examples of this is the coordination and dissemination of best practices within and across its many lines of business. Miller explains, "Once best practices are agreed to, they can be replicated, thus avoiding duplication of effort and adoption of practices that are less than best."

Evolving with the business

DuPont's most basic plans are to complete the rollout of Lotus Domino and Notes by the end of 2002, providing nearly all employees worldwide with Lotus Domino and Notes access. As the breadth of DuPont's implementation increases, so will the depth of their functionality. According to Miller, the planned capabilities arguably generating the most excitement is the imminent "massive" upgrade of its transaction systems, which govern DuPont's underlying accounting systems and related transactional processes. The shift, unfolding over the next five years, will move DuPont from its existing transaction systems, which Miller calls "unintegrated, outdated and hard to maintain," to one where Lotus Notes is integrated with SAP R/3. Says Miller, "Knowledge workers will be able to use Lotus Notes as their interface into SAP, shop floor control and process control databases, giving them a common look and feel. That's the dream."

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