

## CELANESE CHEMICALS

### Solution Overview

#### Industry

Chemical Manufacturing and Distribution

#### Company Profile

A global manufacturer and distributor of commodity chemicals, serving the agrochemical, automotive, cosmetics, health-products, pharmaceutical, wood-products, and other industries.

#### Situation

To make the transition from a successful regional firm to a superior worldwide enterprise, Celanese Chemicals needed a reliable, secure, scalable communications network for sharing supply-chain information. They also required a reliable, multiprocessing desktop environment to provide employees access to that data from anywhere in the world.

#### Solution

Taking advantage of the enterprise alliance between Microsoft and Vanstar Corporation, Celanese Chemicals launched GlobalLink, a project designed to facilitate worldwide information sharing and communications through a standardized, global network and desktop environment based on Microsoft® Windows NT® Server, Windows NT Workstation, and Microsoft Systems Management Server. To facilitate deployment in subsidiaries around the globe, Celanese worked with Vanstar to establish a blueprint for similarly refreshing its worldwide network infrastructure and desktops by 1999.

#### Software Used

Microsoft Windows NT Server 4.0  
Microsoft Windows NT Workstation 4.0  
Microsoft Office 97  
Microsoft Exchange Server 5.5  
Microsoft Systems Management Server  
Microsoft SQL Server™

#### Services

Microsoft Consulting Services

#### Benefits

Worldwide information access  
Improved information sharing through standardization  
Improved customer service  
Enhanced personal productivity  
Reduced support costs for partners

#### Partner

Vanstar Corporation

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***Celanese Chemicals knew that to maintain a competitive edge in the global commodity chemicals industry it needed to improve its customer service on a worldwide basis. Working with Vanstar, an enterprise alliance partner of Microsoft, Celanese defined and implemented a vision for its future global computing environment based on Microsoft's enterprise computing platform. "GlobalLink"—a Celanese Chemicals global network and desktop-computing environment using Microsoft® Windows NT® Server, Windows NT Workstation, Microsoft Systems Management Server and Microsoft Office—has allowed Celanese to reduce costs, enhance personal productivity, enable global information sharing, and improve customer service worldwide.***

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Celanese Chemicals, a \$5 billion manufacturer and supplier of commodity chemicals, provides the basic ingredients for everything from toothpaste and plywood to lipstick and ibuprofen. Founded in 1904 by two brothers, Camille and Henri Dryfus, the company got its start creating cellulose acetate for the textile industry from a lone factory in Basel, Switzerland.

Today, Celanese is a truly global enterprise. With 30 manufacturing sites and 12,000 employees in seven countries, the company now produces more than 200 commodity chemicals. In addition to textile firms, Celanese serves clients in the agrochemical, automotive, cosmetics, pharmaceutical, and wood-products industries.

But by June 1997, the success of Celanese had left one of its two divisions, Celanese Chemicals, with a significant challenge. The IT infrastructure of Celanese Chemicals was designed when it was a successful regional company that served only the European and North American markets. But the company was now taking orders from a growing stable of multinational customers.

"We were fielding orders from virtually everywhere in the world," said Richard L. Funkhouser, global services manager for Celanese Chemicals. "So we needed a global IT presence with instant access to supply-chain information so we could take care of our customers, wherever they were."

Celanese Chemicals had already decided to use SAP R/3 enterprise software to house its supply-chain data. But to support its multinational customers, it needed to make that data accessible worldwide. To do so, Celanese Chemicals launched GlobalLink, a project designed to facilitate worldwide information sharing and communications through a secure, reliable, and scalable network and desktop computing environment. To ensure the success of GlobalLink, Celanese Chemicals tapped the enterprise alliance of Microsoft and Vanstar Corporation, a \$2.2 billion information services company providing consulting and complete lifecycle management services. Using its Horizon methodology, and working with Microsoft Consulting Services engineers, Vanstar created a detailed implementation plan for



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Richard L. Funkhouser  
Global Services Manager  
Celanese Chemicals

deploying a new global network infrastructure based on Microsoft Windows NT Server, and for refreshing desktop systems using Windows NT Workstation, Systems Management Server, and Microsoft Office.

By February 1998, Celanese Chemicals had rolled out a new global wide-area network based on Windows NT Server that linked 30 manufacturing and sales facilities around the world. It had also efficiently refreshed the desktops of 400 users at its Dallas, Texas, headquarters with Windows NT Workstation and Office 97. Finally, Celanese Chemicals had documented the GlobaLink rollout in a unique Site Development Kit. Using this kit, the company's regional IT centers—each of which makes technical decisions nearly autonomously—were able to complete their own site-specific GlobaLink rollouts by the middle of 1999.

As a result of GlobaLink, Celanese Chemicals has increased its productivity, lowered the number of help-desk calls and time necessary to resolve them, sped its software deployment, and reduced its user support costs. It has also significantly reduced its need for redundant Novell NetWare technologies and support staff. Most important, the company has an integrated, flexible architecture with which to effectively respond to customers, wherever they are.

“We compete with the largest chemical suppliers in the world—at this level, it's not price that adds value, but information,” said Funkhouser. “Our Windows NT infrastructure will give our employees access to supply-chain information, wherever and whenever they need it. And we expect that to make our customers very happy.”

### **New Infrastructure Lays Foundation for Global Success**

Three primary business goals drove Celanese Chemical's launch of GlobaLink. The first was its decision to provide superior customer service using SAP R/3. Doing so put critical supply-chain information at the company's fingertips, from order-status and inventory data to shipment and invoice records.

Yet to provide exceptional customer service worldwide, Celanese Chemicals needed to provide global access to that supply-chain data. Funkhouser calls this philosophy “work where you are”: the ability to plug into a LAN, sign on, and do everything from retrieving e-mail messages and applications documents to using local printing resources. Thus the second major business driver behind GlobaLink—the desire to make Celanese Chemicals a truly global enterprise—meant creating an IT infrastructure that let thousands of users and hundreds of roaming executives share information and systems consistently and easily.

In Microsoft Windows NT Server, Funkhouser saw a widely accepted technology that could provide the global infrastructure Celanese Chemicals needed. Although he could have considered a new UNIX infrastructure—or expanding the company's existing Novell NetWare systems—Funkhouser dismissed those choices.

“The market told us that Windows NT was an industry standard,” he said. “We knew this was the direction we needed to go.”

*“Windows NT gave us the ability to change the way we do business.”*

Richard L. Funkhouser  
Global Services Manager  
Celanese Chemicals

The third business goal driving GlobalLink was the need to improve user productivity by refreshing and standardizing the company's desktop computing technologies. The versions of applications in the mainly Microsoft Windows® 3.1 environment were inconsistently deployed, complicating the smooth exchange of documents. Users also needed to run multiple applications simultaneously to perform as efficiently as possible, switching between e-mail, Internet browsing, supply-chain, and personal-productivity programs. Deploying Windows NT Workstation and Office 97, and standardizing the rest of its desktop applications, let Celanese Chemicals meet both its technological and performance goals, without sacrificing its most important need: reliability.

“Reliability was crucial to us,” Funkhouser said. “Like all companies, our desktop environment is becoming critical because we're doing all our work through that single-point-of-failure. It does us no good to have SAP up and running if the desktop isn't running. We were convinced that Windows NT Workstation offered the stability we needed.”

In addition to its primary business and IT goals, Celanese Chemicals found that GlobalLink could address some secondary objectives, too. Among them was improving support services and reducing costs. By adopting a consistent, worldwide Windows NT-based infrastructure, Celanese Chemicals could eliminate its reliance on Novell NetWare and consolidate its network support services around Windows NT Server and the Microsoft computing platform.

“From the standpoint of being able to reduce the technology in place, it didn't make sense to have Novell NetWare,” Funkhouser said. “There was nothing it could do that Windows NT Server couldn't.”

### **Enterprise Alliance Proves a Winning Combination**

By 1997, Celanese Chemicals had become familiar with Vanstar's core competencies. For the previous two years, the information services company had overseen the break-fix operations at Celanese Chemical's headquarters in Dallas. Vanstar had also deployed Windows NT in 1997 to desktop users at a former Celanese Chemicals subsidiary in Charlotte, North Carolina—and in 1997 had helped deploy it to 40 of its sales-force desktops in North America.

Based on Vanstar's past performance, Celanese Chemicals was convinced the IT services company could handle the planning and implementation of GlobalLink, Funkhouser said. But the project specifications also called for Microsoft to review and approve the final GlobalLink design.

“We felt strongly that if we were going to implement a Microsoft solution, we wanted Microsoft to certify it,” Funkhouser said.

For Celanese Chemicals, the enterprise alliance of Microsoft and Vanstar was a perfect fit. Formed in 1995, the alliance was designed to bring enterprise organizations comprehensive business solutions based on Microsoft's platform and Vanstar's complete lifecycle services. For Funkhouser, the alliance offered both a chance to work with savvy

Windows NT professionals and to talk candidly with Microsoft about its product plans, especially those related to the upcoming release of the Windows 2000 operating system.

Celanese awarded Vanstar the GlobaLink contract without ever issuing a Request for Proposal.

## Vanstar Creates IT Blueprint to Match Global Vision

Vanstar laid the groundwork for GlobaLink using its Horizon planning methodology. The Horizon approach involves five phases: defining a company's ultimate goal, or *future vision state*; documenting its existing technologies and business processes with an eye toward understanding how they contribute to or detract from that vision; defining the IT requirements necessary to develop a solution to support the vision; developing the actual IT solution that will "deliver" the vision; and developing the plan to implement the IT solution.

Celanese Chemicals knew it wanted a global infrastructure based on Windows NT Server. "But we still had to define what this infrastructure looked like," said Bill Vallance, the senior consulting engineer at Vanstar who oversaw the GlobaLink rollout.

To flesh out that definition, Vallance and his team logged over 200 calendar hours in meetings with business systems managers and IT liaisons from each of Celanese Chemical's business units. From those discussions, a four-fold vision emerged. Celanese Chemicals would:

- Deploy Windows NT Server to all global sites, providing each with a primary and backup domain controller, all linked by a wide-area network using the TCP/IP protocol.
- Migrate the 400 users at its Dallas headquarters to Pentium-based machines running Windows NT Workstation.
- Install Microsoft Office 97 as the standard personal-productivity software suite for all Dallas users.
- Standardize all user applications in Dallas to the greatest extent possible.
- Promote the benefits of migrating to a Windows NT Workstation-based environment to regional IT centers around the world.

With this vision defined, Vanstar set about documenting the operations of Celanese Chemicals in "excruciating detail," according to Vallance. Throughout May and June 1997, Vanstar did nothing but gather data about the company's business units, including its business processes, applications technical infrastructures, and unique technical processes.

After the business unit documentation was completed, Vanstar conducted critical one-on-one interviews with Celanese employees to query them about the desktop applications they used. Which versions did they use? Which programs were critical? Which were simply nice to have? Vanstar also inventoried each user's hardware, noting the processor speed, available RAM, hard disk capacity, and screen size of each PC.

From its interviews, Vanstar built a detailed database of all workstations needing replacement or hardware upgrades. Vanstar also created an inventory of all desktop applications, noting when multiple versions were in use and if different programs were performing similar tasks. Finally, Vanstar pinpointed users with special needs—a person who required a specific statistical package, for example, or one whose charting program ran only under Windows 3.1.

Interviewing employees individually helped Vanstar set end users' expectations for the upcoming desktop migration. "Everyone would notice differences between Windows 3.1 and Windows NT Workstation," Vallance said. Vanstar reassured users that they would receive the training necessary to get up to speed quickly. And for those whose specialized applications would not run in the new environment, Vanstar could suggest a two-PC approach: a Windows 3.1-based computer running the unique application and a computer running Windows NT Workstation with a full complement of applications compatible with the new infrastructure.

"Most users see a computer as a tool, just like a pencil or a calculator, and don't give it much thought beyond that," Vallance said. "But if the tool doesn't work reliably or as expected, they get frustrated." Most users are willing to adapt to new technologies if they know what to expect, he said. "That's why setting their expectations was at the top of our priorities when we set out to scope this project."

Using its detailed documentation of Celanese Chemical's operation, Vanstar created network design, desktop migration, and training strategies that met GlobalLink's objectives. Microsoft Consulting Services engineers played an important role in this process, as they reviewed Vanstar's plans, offered suggestions where appropriate, and certified the final rollout plans. It was a productive, comfortable relationship, Vallance said.

"Microsoft basically allowed us to work with our customer," he said. "We never felt like they were looking over our shoulder."

## Lab, Production Tests Set Stage for Smooth Rollout

Like any enterprise whose profitability depends on the availability of IT systems, Celanese Chemicals needed to launch GlobalLink with minimal impact on its users. Yet in addition to its global communications network, the company had to roll out Windows NT Workstation image files, Office 97-based applications, and other production programs to 400 Dallas users on 10 different hardware platforms.

So Vanstar conducted a two-month, two-stage, proof-of-concept test: one in a stand-alone laboratory and another in a production environment with approximately 40 volunteer users. The stand-alone lab simulated Celanese Chemical's global Windows NT wide-area network system. The lab was used to test and certify that all technical systems operated according to Celanese Chemicals requirements. The dress rehearsals let Vanstar fine-tune its rollout procedures and resolve technical issues that, in such a significant refresh of desktop technologies, were bound to occur, Vallance said.

For example, the GlobalLink testing identified five of what Vallance called “nasty apps”: programs that, despite their compatibility with Windows NT, failed to function fully in their new desktop environments. Being able to meticulously examine the applications in a test-only setting let Vanstar’s engineers resolve such problems completely. “Without a formal software testing process, this project would have failed,” Vallance said.

After a final check by a quality-control team, the GlobalLink testing was complete. By September 1997, Vanstar had created and certified every Windows NT Workstation image file to be deployed—and identified, tested, and certified the application versions that would function in the new environment.

All that remained was the rollout.

### **Efficient Rollout Completes Infrastructure Transformation**

For GlobalLink’s desktop users, Vanstar teams gathered in two adjoining conference rooms at Celanese Chemical’s headquarters to install, test, and deploy their new systems.

While users went to afternoon training classes, Vanstar retrieved their PCs and converted them overnight. Engineers backed up a computer’s data, made any hardware modifications necessary, then installed the Windows NT Workstation operating system, Office 97, and all other GlobalLink-certified applications, including Hyperion and Caps Logistics. A separate Vanstar quality-control team double-checked each new installation before returning a PC to its owner. Using this approach, Vanstar created and certified 30 Windows NT Workstation-based systems per day—and finished the 400-machine Dallas rollout in just under six weeks.

### **Site Implementation Kit Offers Blueprint for Global Migration**

Celanese Chemicals next turned to its goal of promoting Windows NT Workstation to its regional IT sites. As each site had the authority to pick its own desktop technologies and set its own IT-deployment schedules, there was a premium placed on making the migration process as easy as possible.

So Celanese Chemicals asked Vanstar to capture the GlobalLink process in a Site Implementation Kit: a detailed blueprint with step-by-step instructions for migrating to Windows NT. The result is a two-book set, based on Vanstar’s Horizon methodology, which covers everything from creating a vision state to configuring user profiles.

The *Project Definition and Planning* component of the Site Implementation Kit lays out clear, check-box-type instructions for defining a site’s current IT state, its desired future state, and the steps necessary to move from one to the other. It then details everything from facilities design, vendor selection, and proof-of-concept testing, to workstation conversion and deployment, user training, and making the transition from a vendor-supported environment to a Celanese Chemicals-supported one. At each GlobalLink stage, *Project Definition and Planning* identifies critical-success factors, project risks, and risk-mitigation strategies. It also details strategies for project management, quality assurance, change management, problems management, and project communications. For applications, the book describes how to create a software-testing lab. It also lists all

application versions certified for Celanese Chemicals workstations and details the Windows NT Workstation image-file configurations for each of the company's 10 acceptable desktop-hardware configurations.

The *Network Architecture Standards* portion of the Site Implementation Kit features technical drawings that detail GlobalLink's device-level implementation, all the way down to its asynchronous transfer mode (ATM) backbone. It also details all network protocols and services, including the Microsoft Remote Access Services (RAS) used by traveling Celanese Chemicals users. For security, the book features everything from physical plant design to assigning user ID/password combinations.

*Network Architecture Standards* also features standards and conventions for user accounts, NetBIOS settings, DNS devices, and user profiles—including a five-page list of access rights for Celanese Chemical's three user classes (lockdown, general, and power user). It also provides IT managers with account recovery, data backup, and recovery procedures, in addition to the minimum-acceptable hardware specifications for end-user workstations.

## **Increased Productivity, Standardization Make GlobalLink Worldwide Success**

Completed in February 1998, Celanese Chemical's Windows NT Server-based network provides reliable, secure communications worldwide. It's exactly what the company wanted.

"The global architecture is a smashing success," Funkhouser said. "My vice presidents from Dallas can go to Frankfurt and securely plug in and read their e-mail. They can do their jobs—because they have access to the same information when they're gone as when they're here."

GlobalLink has also spurred greater productivity, Funkhouser said. The company's sales force can now review a customer's current account status before making a site visit. The ubiquitous network—and its tested and standardized applications—also lets employees collaborate freely, exchanging documents as easily as they do e-mail. Should a remote user need to travel to another company site, they need only plug in a laptop upon arrival to retrieve the latest messages. And if a site needs to expand its operation, as a European office of Celanese Chemicals recently did when it created a new order-fulfillment house, the network can scale easily to accommodate the new services.

For a company whose bottom-line success means serving customers as quickly as possible, a flexible IT architecture that provides worldwide access is critical—and Funkhouser is unequivocal in his praise of the Microsoft technologies behind his new infrastructure. He said, "Windows NT gave us the ability to change the way we do business."

Change is also evident at the desktop level. "The environment is much more stable," said Brad Kogler of the Celanese global solutions group. "From a user's perspective, the machines crash less and they support multiple applications simultaneously. That translates into greater productivity." The European and Asian IT centers of Celanese Chemicals have

### For More Information

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<http://www.celanese.com/>

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completed their desktop rollouts of GlobaLink, and the rest of its North American operations will soon follow. Celanese Chemicals expects worldwide deployment of GlobaLink by the middle of 1999.

Meanwhile, GlobaLink is letting Celanese Chemicals reap the efficiencies of standardization. Deploying only Windows NT-certified applications, for example, has reduced redundant programs by an estimated 50 percent, eliminated file-compatibility conflicts, and cut IT support costs by 10 percent. Funkhouser expects to reduce those support costs further as the company replaces its Dallas-based Novell NetWare file-and-print technologies over the next two years.

On the back end, Celanese Chemicals has streamlined its communications by standardizing on Microsoft Exchange Server, the messaging and collaboration component of the Microsoft BackOffice® family. Worldwide, 7,000 users rely on Exchange Server 5.0 to send e-mail and share documents. Celanese Chemicals plans to migrate to the server's latest version, Microsoft Exchange 5.5, in Spring 1999.

Celanese Chemicals has also adopted the Microsoft Systems Management Server, a component of Microsoft BackOffice, to deploy and troubleshoot applications. The scripting capabilities of Systems Management Server let the company centrally deploy applications and software upgrades worldwide, saving considerable time over desktop-by-desktop installations. And its remote-control features let support technicians take control of user PCs, diagnosing and solving software issues without ever leaving the help desk.

As a result of GlobaLink and Systems Management Server, Celanese Chemicals has already seen its service-call volume drop by 10 percent, Funkhouser said. In fact, with a streamlined IT infrastructure, the company can cost-justify contracting the help-desk and desktop support services for its Dallas headquarters to Vanstar. Celanese expects the contract to save 30% annually, Funkhouser said, and provide more time for IT personnel to spend with Celanese Chemicals business units, helping them to further improve their customer-service processes.

## Enterprise Alliance a Formula for Continued Success

The GlobaLink rollout is a vivid example of the success of the Microsoft-Vanstar enterprise alliance. But it's not the only one. Vanstar has taken the expertise it gained as a result of GlobaLink and packaged it into a formal product for companies intent on migrating to Windows NT. Marketed under the Enterprise Express Services brand, the *Advanced Desktop Renewal Services* product offers step-by-step instructions for 32-bit desktop migrations similar to those found in its GlobaLink Site Development Kits.

"Other companies are struggling with the same issues Celanese Chemicals faced," said Vanstar's Vallance. "They want to move to Windows NT, but don't know how to do it. Our Enterprise Express Services products give them the tools for doing so."

Vallance predicted continued success from the Microsoft-Vanstar alliance. "GlobaLink is just one illustration of how things between Vanstar and Microsoft are blossoming," he said. "It is a marvelous relationship."