



**I C E X**

INTELLECTUAL CAPITAL EXCHANGE

# **Global Deployment of Standard Workstations at Dow Chemical**



## Summary

This case study describes Dow Chemical's "big-bang" approach to deploying standard workstations as part of implementing a global client/server infrastructure. The potential uses of this case study are: (1) to provide examples of strategies and practices for setting and implementing workstation standards; (2) to raise awareness of potential benefits of a standard desktop infrastructure; and (3) to initiate discussions of the project management and change management challenges in enterprise-wide deployment.

## OUTLINE

### *How this case study is organized*

- ❖ Snapshot
- ❖ Timelines: The 1996 and the 1999 Projects
- ❖ Background on Dow
- ❖ Purpose and Scope of the Dow Workstation Initiative
- ❖ The Dow Workstation '96 Project
- ❖ The Dow Workstation '99 Project
- ❖ Table: Changes in Approach between '96 & '99
- ❖ Critical Success Factors: Project Management & Change Management
- ❖ Results and Benefits
- ❖ Advice from the Project Leaders

## SNAPSHOT

### *What Dow accomplished and what you will learn from this case*

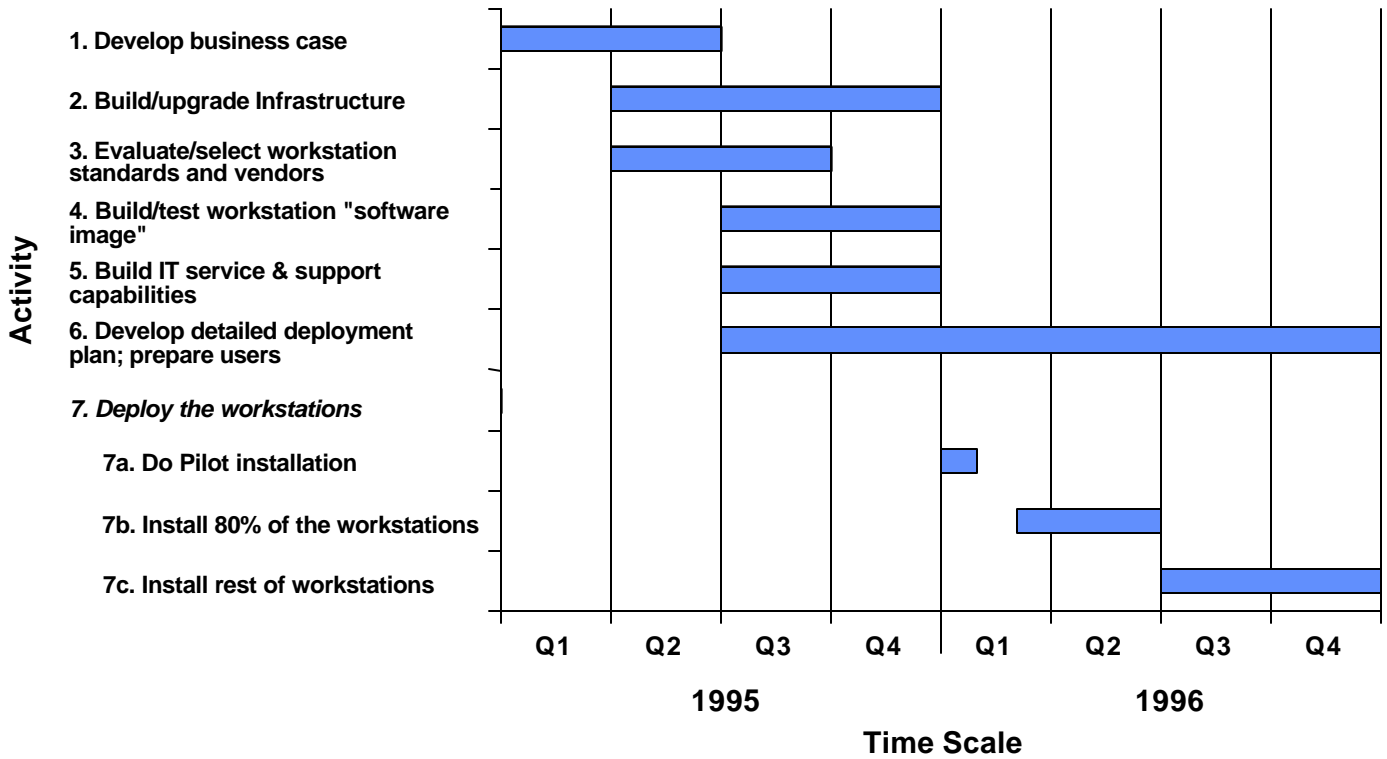
The Dow Chemical Company implemented a global client/server infrastructure between 1995-96 that involved deploying 28,000 personal computers (PCs) across 32 countries, with about 80% of the installations done in a four-month period. In 1999, as planned, Dow is replacing all the workstations (now at 37,500) and scheduling the installation of 90% in a three-month period. The standard desktop infrastructure has resulted in cost savings, enabled workgroup interaction, made implementation of global applications easier, and increased user satisfaction with IS services. Also, the deployment project itself was completed on time and within budget.

The deployment was thoroughly planned in advance. The organizational capability to support the new environment, including a centralized help desk function, was built. The vendor (IBM) was part of the team from the beginning, and expectations and accountabilities were clearly defined. Key managers from the business were part of the Workstation project team to help ensure the users were ready, supportive, and trained. Dow refers to its approach to architecture and infrastructure as evolutionary planning but "revolutionary" implementation—a "big bang" approach that compresses rollout into a tight timeframe.

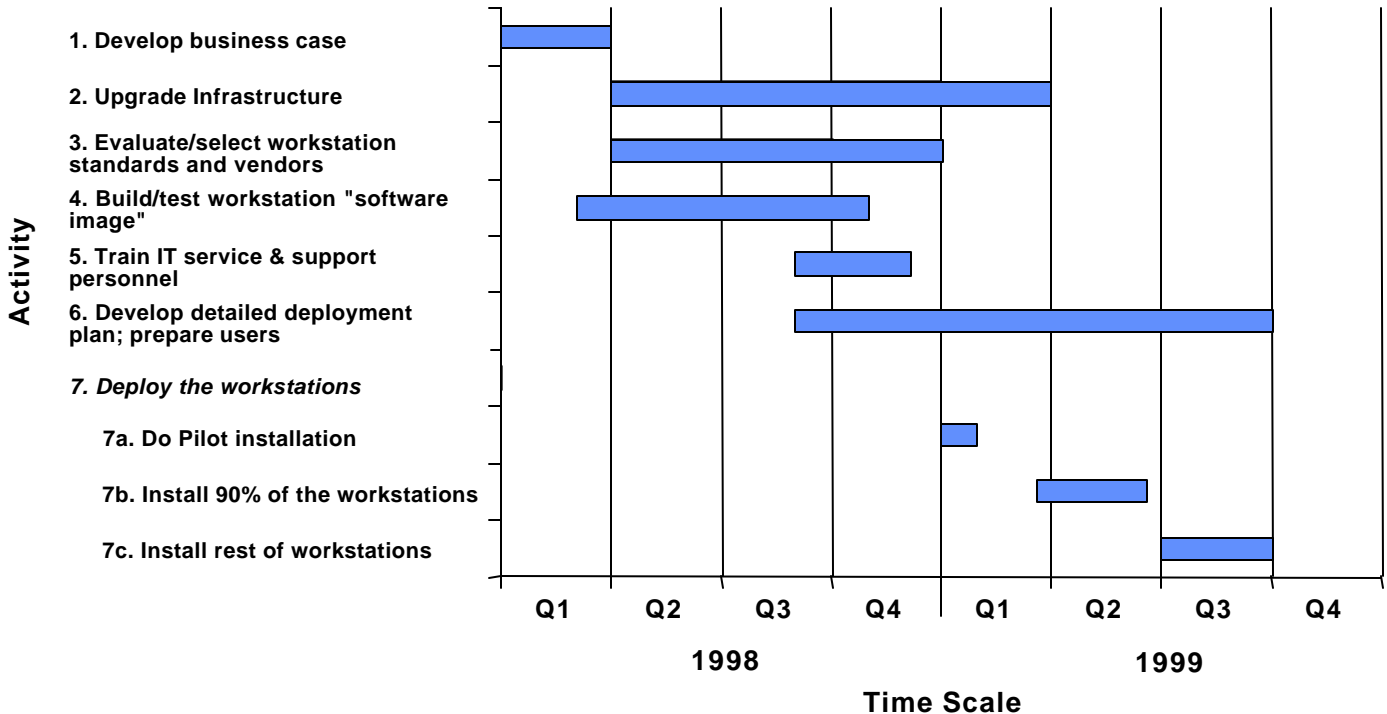
There are useful learnings from Dow's experience for other companies attempting to set enterprise-wide IT standards or deploy new technologies to a large segment of their employees, even if they are not seeking the scale and speed of a "big bang." This case study summarizes the planning, preparation, and rollout activities that happened for Dow Workstation '96 (DWS '96) and those in progress for Dow Workstation '99 (DWS '99). In addition to describing effective practices related to standards setting and deployment, the case highlights project management and change management techniques that were critical to the success of the initiative.



### Timeline: Dow Workstation 1996 Initiative



### Timeline: Dow Workstation 1999 Initiative





## BACKGROUND RE: THE DOW CHEMICAL COMPANY

### *Overview of Dow Chemical and its IS Function*

The Dow Chemical Company manufactures and supplies chemicals, plastics, energy, agricultural products, consumer goods, and environmental services for customers in 157 countries, and is continuing to expand its global reach. Dow is the fifth largest chemical company in the world in terms of sales, with annual revenues over \$20 billion. Headquartered in Midland, Michigan, the company has 94 manufacturing sites in thirty countries and approximately 40,000 employees.

Beginning in late 1980s, Dow refocused its strategy, reengineered business processes, and restructured the organization in order to become a truly global company. Having created strong global business processes, Dow is now shifting resources and people into its fourteen major business areas, intending to keep only about 20% in various “shared services” and “corporate center” groups. The Information Systems (IS) function will remain as a shared service given the significant gains it has attained as a centralized group. The CEO has acknowledged the importance of information technology in Dow’s transformation to a global company and the role the IS function played in recognizing early on what needed to be done to accomplish this vision.

The IS organization, with a staff of 1220<sup>1</sup>, is headed by a CIO who reports directly to the CEO. The “Information Delivery” area within IS encompasses the groups with responsibilities related to technology infrastructure and global standards. The “Alliance IS” group is responsible for the applications portfolio, including a partnership agreement with Andersen Consulting. Dow has done other selective IT outsourcing, including voice communications and Help Desk services.

## BACKGROUND RE: THE DOW WORKSTATION INITIATIVE

### *Why and how the initiative to standardize infrastructure began*

**Drivers.** There were cost and business drivers, as well as a new focus on IT architecture, behind Dow’s decision to establish global standards for workstation hardware and software. In the early 1990s, Dow—like many other companies—had a very diverse workstation environment. There were multiple brands of PCs as well as many Macintosh computers; some equipment had been purchased and some was leased. It was difficult to support and expensive to service so much variability. Also at that time, as part of the business reengineering, Dow had started to implement global business applications (such as SAP) that drove a need for more powerful PCs—and standardization.

**Architecture Process.** In 1994, IS initiated an architecture planning process to look at technology standards issues. A general agreement emerged, shared by IS and business management, that there needed to be a global vision for architecture and infrastructure, and the business units should start moving toward it. As architecture planning progressed, several guiding principles were articulated:

- ❖ Evolutionary planning (past decisions guide future decisions)
- ❖ Revolutionary implementation (rapid deployment of new technology)
- ❖ Global common systems (client-server based applications to support global business processes and provide data integration)

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<sup>1</sup> Of the 1220, 850 are Dow employees and 370 are contractors primarily consisting of Andersen Consulting employees involved in the applications Alliance arrangement. A small number of the contractors are Kelly Services Office professionals.



- ❖ Standard technologies (to lower unit costs of computing and allow scalability)
- ❖ Vendor minimization (to build strategic relationships and leverage influence)

**Decision to Implement.** Early in 1995, corporate IS began to put together a story: “What if we decided to go ahead and implement a global standard infrastructure now?” They looked at what would be involved in terms of technology and implementation costs, and sent out RFPs to vendors. In March/April 1995, they put together the value equation and presented it to senior management. The anticipated cost savings were what sold the initiative to the senior management team.

Thus began the Dow Workstation 1996 project.

## THE DOW WORKSTATION '96 PROJECT

### *How Dow successfully implemented a global standard desktop infrastructure*

**Scope and Schedule.** The Dow Workstation '96 (DWS '96) project encompassed more than standard PCs—it created a global, uniform platform of hardware, software, networks, and services. As noted, the project began in early 1995. A Global Project Manager was appointed at the beginning of August 1995, and at that point, the project committed to an aggressively fast deployment schedule. As the Global Project Manager explained, “There is value in doing implementations quickly because transitions are usually painful.” Also, IS management believed that the ability to do “revolutionary implementation,” i.e., rapid deployment of new technologies, would be a competitive advantage.

**Better Asset Management.** In addition to establishing global standard hardware and software configurations, the intent was to establish a new asset management process for PC equipment in order to reduce and control costs. Dow wanted to leverage its procurement power, lease rather than buy, and establish a planned lifecycle for replacing the standard workstation. In late 1995, Dow signed a three-year lease agreement with IBM for PC equipment and warranty service.

**Infrastructure and Support.** Significant focus and resources went into upgrading Dow’s infrastructure to support a client/server architecture, including converting networks to TCP/IP and installing (or upgrading) over 500 servers. IS also had to define the ongoing support services that would be required by the new technologies and build the skills and organizational capability to deliver those services uniformly across the globe. This re-evaluation of support activities included consolidating all Help Desks and outsourcing the function to Digital Equipment Corporation (since acquired by Compaq). Finally, the initiative involved training thousands of Dow employees who were recipients of the new workstations.

**Approach to Setting Standards.** The architecture process (see the BACKGROUND section) included a rough inventory of what desktop technologies were in use across the company. Since standards setting for PCs had typically happened at the workgroup level, the inventory found a wide variety of hardware and software. Recommendations from the inventory team, as well as feedback from opinion leaders in the business units who were involved in the architecture process, were inputs into the selection of standards.

The key criteria used to pick standards, however, were market factors not product features. Dow carefully looked at where the market was going to go for the technology products under consideration and at the financial viability of the vendors. They used input from sources such as D&B and Gartner as key inputs to the decisions. (Focusing primarily on comparing the bells & whistles



of different products can generate endless debate.) While there was some resistance from technical people (and users), the logic for focusing on vendor capabilities and viability was compelling and convincing.

For the workstation hardware, Dow selected four models—standard notebook, high-end notebook, standard desktop, high-end desktop—plus a standard engineering CAD workstation. “Core” software included: Windows 95, Microsoft Office, and the Netscape web browser. The requirements of employees’ jobs determined which workstation model they received.

**The Software Build.** An IS team packaged the “core” software into an image so that it could be pre-loaded on all the machines. They set up a lab environment and ran integrated tests of the software, workstations, and network/server infrastructure in November/December 1995.

To facilitate and manage ongoing software distribution to the desktop, Dow IS built “Electronic Software Shelves.” The shelves contain standard software that users can download and are replicated on distributed servers. There are tools and mechanisms to make sure that shelves stay in synch, and standards for packaging applications in order to put them on a shelf. The Global Shelf (of which there are currently over 180 copies) contains the “core” software (e.g., Microsoft Office) and other global standard software. There also are Functional Shelves and Local Shelves that are maintained by business functions and units. For example, the Local Shelf in Horgen, Switzerland has files specific to Dow’s operations in that country.

**Preparing the Business Units.** Another key set of activities revolved around engaging business management to build a supportive and receptive user environment. Setting and managing client expectations was recognized as a critical success factor. This involved setting up a workgroup contact structure in order to establish site accountability and capability. Communication/marketing activities were launched to sell the concept of the Dow Workstation by explaining the benefits for the company. A logo for the initiative was created and used widely to help publicize DWS ’96 to employees.

As noted, the initiative was launched with buy-in at the corporate senior management level. The Global Project Manager then spent a good deal of time with senior managers at various sites to educate them about the goals and benefits and get their buy-in. The project was carefully positioned as being driven by senior management for business reasons—not as IS forcing technology on users. (As with any major change initiative, however, there was initial skepticism and resistance to overcome. See the CRITICAL SUCCESS FACTORS section for a discussion of the approach to change management.)

**Deployment.** The workstations were installed on a site-by-site basis. In order to test the site launch process, the DWS ’96 team did a pilot installation in a busy, technology-dependent group in January 1996. They wanted to demonstrate that the installation of the workstations at a site could happen smoothly during the workday. The site picked was the Dow Customer Service Center, a group of about 500 people that process phone orders for Dow products. The process was videotaped<sup>2</sup> both so the Workstation team could learn from it and so they could have proof to show other groups that installation could be done quickly and not seriously disrupt the flow of business.

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<sup>2</sup> See the section on Change Management for additional discussion of how videotaping was an effective tool for other aspects of the project.



Eighty percent of the 28,000 workstations were installed between March 1 and June 30, 1996, with the remaining 20% in place by the end of December. While about 60% of the workstations were deployed in the U.S., 40% were in thirty-one other countries.

Between February and May 1996, the intense rollout phase, about 750 people worked on the project. They were a mix of internal and external people. IBM “staged” the PCs with the proper hardware options and the universal standard software. Dow hired college students as contractors to add business area specific software to the PCs once IBM had done the staging. Contractors also went into the offices to unplug old machines and then plug in new ones. Then Dow people took over to make sure users could transfer their individual files.

The Launch Process for a site involved these steps:

- ❖ 90-60 days before: assessed the overall workstation requirements for the site and confirmed that any infrastructure work would be completed in time.
- ❖ 60-30 days before: created a plan that specified for each person what hardware and software they needed
- ❖ 30 days before: placed order
- ❖ 30-7 days before: preparation and training
- ❖ The Day: installation (and training)
- ❖ 1-30 days after: follow-up

From the viewpoint of a Dow employee, the installation process looked like this:

- ❖ A few days before Installation Day, you got a call asking if you had moved from your current machine (preferable to a server) all the files you needed to keep.
- ❖ The night before, the equipment for a particular location was delivered to the right work area. Each box was marked for a particular person with the appropriate software pre-loaded on every PC.
- ❖ On Installation Day, an installer showed up in your office and you went off to a training class being held at your site. (It was classroom training; most people did attend.)
- ❖ The installer unplugged your old equipment (note that occasionally for conversion reasons, the old equipment was not immediately removed) and installed the new PC.
- ❖ When you got back from class, there were Implementation Consultants available to help you get started, including assistance as you converted files (because you were switching packages or changing versions). These consultants stayed in contact for the next two weeks.

Note that Dow did not impose any physical constraints to prevent users from loading other software (e.g., diskette drives were not removed), and did not police or reprimand non-compliance. Over time, however, the exceptions have mostly gone away. Business needs have put pressure on non-conformers to adopt the standard packages. There also has been no support available for non-standard packages and very good services provided for the standard software. Employees have also found that a key benefit of the standards is that when they travel to other sites (which happens much more frequently now that Dow operates its businesses globally), they can sit down at any workstation and immediately get work done.



## THE DOW WORKSTATION '99 PROJECT

### *How Dow is upgrading the workstations*

**Scope and schedule.** Dow is keeping to its intent to replace the workstations every three years with a “big bang” deployment project. Planning for the Dow Workstation '99 initiative started early in 1998 with a project study to determine the resources and competencies that would be needed. As part of the initial planning, IS did a high level inventory and overall look at technology requirements. A business case based on all this information was presented to senior management to get their buy-in. (As with DWS '96, senior management's commitment was key.) The deployment phase of DWS '99 will involve installing 37,500 PCs in more than 300 sites in over 50 countries. The goal is to install about 90% of the workstations in three months, beginning mid-March 1999. All installations should be completed by the end of September 1999.

**Infrastructure and Support.** Given the upgrade in workstation hardware, the impact on the network infrastructure had to be evaluated. For example, because of new Ethernet cards and faster modems in the new PCs, changes had to be made in LAN wiring and remote access server software. Capacity needs for NT file servers<sup>3</sup> were reassessed, especially the capacity to deal with migration. Although users are encouraged to store their data on servers instead of on their PCs, this is not always done. As part of converting to the new workstations, however, snapshots of users' hard drives will be stored on servers (see below), which means more server space is needed for short-term migration. In addition, long-term capacity needs are expected to be higher than current needs.

The IS Service Prep group was responsible for making sure that all was ready within IS by January 1 to support the new workstations. This included running technical training on the new product set for the support and field service people, and working with applications staff to ensure that any required modifications to business applications were done.

**Setting standards for DWS '99.** In re-evaluating the software standards, the goal was to make as big as possible a step change in software capability without major disturbance to the users. Minimizing impact on the user interface would help avoid re-training, business disruption, and loss of productivity. Yet the DWS '99 team had to balance this with the fact that they only get the opportunity to make major changes in software every three years. Another major consideration was that all software had to be “rock solid” by the time they needed it, as any delays in rollout (and thus lease extensions on existing equipment) would be fairly costly.

Dow decided on Microsoft Windows 98 and Microsoft Office 97 Pro as updated workstation standards. Other new standards included new terminal emulators. Input from user focus groups was solicited during the standards setting process and this feedback validated the DWS '99 team's assumptions about aiming for minimum change in user interface. Software recommendations were also reviewed with IS management and IS steering committees. IBM was again selected as the hardware vendor. This time there are only two standard workstation models—a desktop PC and a laptop—plus an engineering and a process control workstation.

**The Software Build.** Again, an IS team packaged and tested a standard software image for the workstations. The image is three gigabytes and includes the operating system (Win98), the “core” software (e.g., MS Office 97 Pro), and a set of 125 client/server applications that are Dow's

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<sup>3</sup> Dow has 600-700 NT servers, distributed geographically but managed centrally.



standard global business applications.<sup>4</sup> The image is being pre-loaded by Inacom (a subcontractor to IBM) on all the new PCs before they are delivered to Dow.

As part of both upgrading the workstations and Y2K compliance, Dow also had to undertake a major review and repackaging effort of all the software on the Electronic Software Shelves.

For DWS '99, Dow developed an application called MAGIC to assist with migration. MAGIC takes a snapshot of the software configuration of your current PC and stores this data on an NT server. When you log onto your new PC for the first time, MAGIC goes to the server, looks up your configuration information, and then oversees the installation of the rest of what you need. MAGIC looks first to the image already on your hard drive for the software needed. If it is not there, MAGIC prompts you to see if you have an installation CD-ROM. MAGIC's final choice is to download the required software from the Electronic Software Shelves. (This choice is last so as to minimize network traffic.)

**Preparing the Business Units.** Since the DWS '96 rollout, a permanent Global Implementation Office has been established in the Dow IS Global Project Management Office. There are twelve or so Global Implementation Project Engineers located across geographies, and a subgroup of them created a template for site implementation planning for DWS '99—the “plan of plans.”

For each site, the planning involves:

- ❖ Making sure infrastructure upgrades are done
- ❖ Identifying work group contacts who will assist in communications and rollout
- ❖ Communicating plans to users
- ❖ Identifying hardware and software requirements for every user, including any special migration needs that will require additional support

The DWS '99 team started collecting detailed requirements data in September of 1998, some of this activity is still ongoing. They have a database with all the detail so they know, for example, who is scheduled to get what type of equipment on what date.

**Deployment.** In January 1999, a pilot deployment was done to test the workstations and implementation processes in production environments. The pilot involved 150 users across multiple sites, including one complete site of fifty-two employees in Portugal. In February, the DWS '99 team incorporated what they learned from the pilots. Major deployment started in March 1999. As of March 22, 4,000 workstations had been rolled out in 17 countries. As of April 26, 15,000 had been deployed. The schedule calls for rolling out 90% of the workstations by mid-June. The remainder (certain sites in Pacific & Latin America) will be completed by the end of September 1999.

When it is time for installation at a site, the equipment is delivered by truck. (In Midland, machines delivered in the morning are being installed in the afternoon.) From the viewpoint of an individual employee, the installation process looks like this:

- ❖ You make sure all your data has been saved on a server.

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<sup>4</sup> In the three years since DWS '96, Dow has created 125 Global IS-support client/server apps and many more user-supported apps. All this software had to be repackaged, tested, and migrated to the new Dow Workstation '99 platform, ready for Year 2000. This was a significant difference from the DWS '96 software build activities.



- ❖ Someone from the deployment/installation team comes to your office and runs the MAGIC app to save your configuration information.
- ❖ The installer removes your old machine, deleting all its contents.
- ❖ The installer starts up the new machine.
- ❖ You use the MAGIC app to go through the personalization process.
- ❖ The whole thing takes 1 to 1½ hours.

The main delivery vehicle for training on the new workstations is a multi-media program called Quick Start on CD-ROM. It contains an introduction from Dow’s president on the importance of the workstation initiative and then a 5-6 minute introduction and guided tour from a trainer about the components of the new Dow workstation. The CD has two hours worth of training material in total. It also has a web-interface so users can immediately jump to additional materials on the intranet. There is extensive documentation on the IS website to assist with migration, and IS is offering specific services if more assistance is needed.<sup>5</sup>

IS (which now regularly does customer satisfaction surveys via e-mail) has a survey focused on the DWS ’99 project. Using the actual installation dates captured in that big detailed database, a random sample of users gets sent a survey within a week of installation. Thus, the Global Project Manager for DWS ’99 is getting weekly feedback and has time to take corrective actions as the deployment process progresses. So far, the feedback is good, including some testimonials that he has been very pleased to see.

**TABLE: CHANGES IN APPROACH**

***Key changes made in the DWS ’99 deployment from DWS ’96***

AREA	CHANGE	REASON
Workstation models	Reduced number of PC models. DWS ’96 had 2 desktop and 2 laptop models. DWS ’99 has one each, both high-end machines.	Simplify choices. Want all PCs to be powerful/capable enough for 3-year lifecycle
Pre-loading Software	For DWS ’99, the pre-loaded software image has all the standard software not just the “core.” The image comes in different language versions (English, Spanish, etc.) but for any site, the same image gets loaded on all machines.  The MAGIC application was developed to allow customization to happen after the hardware was deployed.	To avoid custom pre-installations thus having to deliver a specific PC to an individual.  Dow estimates that MAGIC has saved \$5 million in installation costs.

<sup>5</sup> For example, Q&A sessions are being run by IS via NetMeeting and CBT courses are available. The emphasis is on putting the degree of training in the hands of the business users—they determine how much or how little they need and IS makes it available.



AREA	CHANGE	REASON
Training	In DWS '96, classroom training was given to everyone. In DWS '99, the first tier of training is CD-ROM-based. A second tier is a series of Q&A sessions on specific components (e.g., Outlook). These sessions link users (who sign up in advance) with an IS expert via NetMeeting. The third training tier is Productivity Workshops, expert-led, in-person sessions of 10-15 people focused on advanced features. Finally, Dow's HR department has recently launched "University On-Line," offering CBT training in specific software tools.	This time Dow is starting with a population that knows the workstation and wants to be productive on the new workstation as quickly as possible. The new approach leverages the technology. Also it is difficult to design and deliver classroom training to an audience with diverse needs.
Deployment Resources	To staff the installation phase, DWS '99 is using significantly more contractors than last time. For example, in Texas where there are 7000 PCs to install, the team is 5-6 Dow people and about 40 contractors. Over 200 Dow IS employees are involved, however. In Latin America and Pacific, Dow staff will do most of the work for economic reasons.	The CIO did not want to "strip" the IS organization of resources as they did for DWS '96.

**CRITICAL SUCCESS FACTORS:****PROJECT MANAGEMENT & CHANGE MANAGEMENT**

Specific practices from two areas critical to the successful implementation

Underpinning the success of the Dow Workstation implementation were strong project management and attention to the "soft" issues of managing change.

**Program/Project Management.** The Dow Workstation '96 effort was completed on time and within budget. Key to that was strong project management. Here is what Dow did:

- ❖ Appointed a business manager, who had experience in bringing chemical plants on-line, as Global Project Manager of DWS '96. He drove the focus on speed of deployment.
- ❖ Tied incentive awards (i.e., bonuses) for everybody on the project team to the DWS '96 budget, schedule, and customer satisfaction objectives. The objectives were met.



- ❖ Ran an hour-long meeting first thing every morning from Q3 1995 to end of May 1996, with the Global Project Manager and his immediate team of sixteen direct reports—including three users and reps from IBM and Digital. Anyone who was traveling called in. Also, they all wore pagers and were committed to calling back within thirty minutes.
- ❖ Established an issue resolution process to make and communicate decisions quickly. For example, any decision made at the morning meeting was communicated to the full team by noon.
- ❖ Established up-front an escalation process for resolving any vendor-related issues. Given that no one had done such a large-scale roll-out so fast before, Dow went to the CEO-level of its major suppliers to ensure that the vendor support would be there.
- ❖ “Plan the work, work the plan.” Thorough planning enabled fast deployment. For some areas, e.g., where using a new network technology, there was a Plan A and a Plan B.

**Change Management.** Explicit, proactive attention to the “soft issues” of change management was also key, to both the success of the implementation process in the business units and the success of the project team itself. Indeed, the Global Project Manager emphasized that the “human change” part of the initiative was the biggest challenge. Here are some of the practices from the DWS '96 approach to change management:

- ❖ Captured on videotape the reactions of 50-60 people to the news that standard workstations would be implemented globally. The DWS '96 team leaders talked to a range of business managers and users, individually and in focus groups, and videotaped many of the sessions. They learned several key things and used the tapes to help motivate change.
- ❖ Positioned the initiative as aimed at cost savings in communicating with the top 200 managers—based on the learning from the interviews/videotapes that senior level managers were concerned primarily about costs. (Note: DWS '96 met its cost savings goals.)
- ❖ Addressed the skepticism among business users. The typical reaction had three parts: (1) the philosophy that users should have standard IT tools is the right way for Dow to go; (2) #1 is true except for me (i.e., here's why I'm an exception); and (3) it's too big a challenge to be done. The DWS '96 team used the videotapes to help them develop responses to the issues and objections people were raising. The positioning of the initiative to users became: not only will this be a good thing for the company, it will give you faster, better equipment and an increased capability to exchange data, documents, and e-mail with co-workers.
- ❖ Used the videotapes to motivate the IS organization. “People are saying this isn't do-able, let's show them we can.” Interviews with IS staff were also conducted and videotaped to get their input and then help convince them that the project was achievable.
- ❖ Focused within the DWS '96 team on generating passion for the project and building team performance. That the team members did become passionately committed to the project was evident at the Recognition Night held at the end.



## RESULTS AND BENEFITS

### *The benefits that Dow has realized*

As a result of the Dow Workstation initiative, Dow Chemical has achieved the following:

- ❖ Client-server applications are easier to implement globally because of the standard infrastructure.
- ❖ Ability of workgroups to share and transfer data has increased.
- ❖ Total cost of ownership for the desktop was reduced (and will be reduce further when DWS '99 is complete). The contributing factors were substantial volume discounts, reduced order cycle times, complete turnover of asset base, reduced support costs, and reduced structural costs. Dow has compared its cost data with benchmarking data from the Gartner Group and its cost performance is in the top 10%.
- ❖ The technology life cycle for PC equipment was reduced to three years from an average of five years.
- ❖ The IS “utility” is now managed globally, reducing redundant effort.
- ❖ Real improvements in customer satisfaction by being able to provide better service and support to the user community. Survey results showed that 92% of employees felt that that the Dow Workstation project met or exceeded their expectations.

## ADVICE FROM THE PROJECT LEADERS

### *Tips from Dow IS managers*

The Global Project Manager for DWS '96, the Global Project Manager for DWS '99, and the IS manager who has oversight of services and support for the DWS environment offer this advice to companies considering similar initiatives:

- ❖ Plan, plan, plan. To the nth degree and with a fine-tooth comb! Then execute the schedule with unwavering determination. If you start wavering, costs begin to escalate.
- ❖ Get top management on board. Also need strong commitment and support from business unit managers.
- ❖ “Human change” issues have to be the #1 priority.
- ❖ Set clear user expectations—and meet them.
- ❖ Market/communicate best practices and standard services to the user community. Enable employees to be informed consumers of IT.
- ❖ Establish a process for handling exceptions. The “80/20” or “90/10” rule holds—there will always be exceptions for legitimate business reasons. IT standards can’t be so rigid that they are not supporting business needs; yet you must make sure that the business understands early on the benefits of standards.
- ❖ Use your best project management skills. The logistics can be very complicated—as complex as putting a billion dollar chemical plant on-line.
- ❖ Get strong commitment from your suppliers.
- ❖ Instill a strong operating discipline in IS. You’ve got to keep the infrastructure running. The workstation equipment and software themselves are only a small part of satisfying customers. It’s the connectivity!



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