Strategies for Restructuring IT Organizations

by Susy S. Chan

In July 1993, DePaul University integrated its information technology and service functions under a new division of University Planning and Information Technology. This restructuring consolidated formerly fragmented services to achieve a unified direction for information technology closely aligned with University goals. This case study discusses the framework, process, and strategies for the restructuring and experiences during the first eighteen months.

DePaul University serves 16,700 students at five campuses in the metropolitan Chicago area. For the past ninety-eight years, its eight colleges and schools have emphasized excellence in instruction and responsiveness in meeting the educational needs of a diverse student body. In recent years, the University has enjoyed strategic growth in academic reputation, increased its market share of students, and expanded its physical plant. In order to maintain this competitiveness, the University recognized the importance of a coherent strategy in information technology support. In 1991, a University planning task force on information technology was formed and recommended general directions, but could not overcome the fragmented structure of IT at DePaul.

In July of 1993, the University’s new president, recognizing the urgent need for change, created a CIO position to restructure the information technology functions. A new division of University Planning and Information Technology (UPIT) was established, with clear expectations. This new division was to play a central role in enabling and facilitating the University’s own transformation into a more responsive institution in the market place. The University expected to achieve significant improvement in University services, particularly in student support, through the innovative use of technology, process reengineering, and rapid redeployment of information technology resources. Furthermore, there was a clear mandate from the president to move the University toward a workgroup computing environment. These broad University goals directed the strategic restructuring effort.

Framework and principles

The goal to move toward a workgroup computing environment necessitated several significant transformations.

• The technology architecture had to move from an obsolescent mainframe architecture to a networked client/server environment.
• UPIT as a division and its members had to embrace a user-oriented culture and acquire new skills in technology and consultation.
• Users needed to go through extensive training.
• The University’s core processes had to be redesigned.
• People who would perform new tasks had to be retrained.

As UPIT was expected to affect a wide range of changes in University services and information delivery, the division itself needed to undergo an immediate transformation.

In view of the urgency and the magnitude of

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"... there was a clear mandate from the president to move the University toward a workgroup computing environment."
change, our framework for restructuring was
drawn primarily from process reengineering
models (e.g., Thomas Davenport's\textsuperscript{1}). This frame-
work emphasizes a holistic approach to change
in four dimensions—vision and directions, work
process and organization, people, and technol-
ogy. Vision and directions set the focus for im-
provement. Organizational structure defines the
horizontal work processes and vertical func-
tional roles. Managed cultural change and re-
definition of incentives and opportunities are
crucial to individuals who are affected by the
transformation. And technology solutions be-
come enabling strategies, a vehicle for imple-
menting desired change. These four transforma-
tion strategies should be implemented in tandem
to achieve successful transformation.

We also established five design principles to
guide the restructuring effort:

\textbf{Strategic focus}
\begin{itemize}
  \item Align with University’s strategic priorities.
  \item Concentrate UPIT resources and energy on its
core services.
  \item Outsource, eliminate, or transfer non-essen-
tial services.
  \item Move from production service to consulting
support.
\end{itemize}

\textbf{Organizational responsiveness}
\begin{itemize}
  \item Cultivate a service-oriented culture.
  \item Reduce organizational hierarchy.
  \item Emphasize project management and cus-
tomer service.
  \item Bridge the communication gap between users
and the division.
\end{itemize}

\textbf{Integrated solutions}
\begin{itemize}
  \item Adopt a cross-functional team approach to
problem solving.
  \item Expand skill sets from a specialist to a general-
list model.
  \item Implement horizontal cross-functional pro-
cesses in targeted areas.
\end{itemize}

\textbf{Learning organization}
\begin{itemize}
  \item Foster a culture of change and openness.
  \item Create clear incentives and opportunities for
learning.
  \item Articulate expectation for new skill sets.
  \item Use role models in leadership development.
\end{itemize}

\textbf{Flexibility in resource management}
\begin{itemize}
  \item Centralize headcount management and salary
budgets.
  \item Anticipate job rotation and lateral career
moves.
  \item Anticipate evolving realignment and restruc-
turing.
  \item Realign resources based on changing func-
tions and needs.
\end{itemize}

\textbf{The new division}

Our restructuring efforts brought into one
division four separate units of vastly different
culture, skill sets, and reporting lines. The Infor-
mation Systems department, reporting to the vice
president for business and finance, was a main-
frame-oriented administrative computing group.
Academic Computing Service, reporting to the
academic provost, managed clusters and wide-
area networks. Telecommunications, reporting
to the associate vice president for administration,
owned the communication fibers and voice ser-
VICES. Institutional Planning and Research, re-
porting to the vice president for university plan-
ning, provided decision support to the deans and
executive offices.

Following the design framework and prin-
ciples, these four units were restructured into
seven functional groups as depicted in Table 1.
This organization emphasizes UPIT’s goals to
facilitate University transformation, including
strategy formulation, process innovation, and
technology and service delivery. Out of these
seven groups, six were functional departments,
each led by a director. Broad three-year goals and
targeted skill sets were identified for each group,
and each group was kept flat, with little redun-
dancy in functions or services. Consolidation
occurred in networking, help desk, user training,
and systems and operation. Communication,
marketing service, planning, and resource man-
agement were coordinated at the divisional level.
The “process innovation support” function was
treated initially as a virtual group because of the
controversial nature of this new quality improve-
ment approach and because of our intent to
develop process innovation talents across the
University. This area was later staffed by a con-
sultant.

We emphasized a team approach, within
and across work groups, throughout the division.
A management team, consisting of the vice presi-
dent and directors of the six functional groups,
was formed to lead the division. The manage-
ment team now meets weekly to review project
status and policy issues. We also established two
divisional cross-functional teams in software
training and help-desk support. The help-desk
function is managed by the Network and Tele-
communication group, but staffed by designated
technicians and consultants from several func-
tional areas. The training workshops are coordi-
nated by the Academic Technology Develop-

\textsuperscript{1} Thomas H. Davenport, 
\textit{Process Innovation: Reengineering Work through Informa-
ment group, but each workgroup is responsible for training in one or two software packages.

Several secondary functions were discontinued to allow for the reallocation of resources to support an expanded client base in core functional areas. A centralized word processing function was eliminated. The program to assist employee and student purchase of home computers was terminated. A service to produce slides and overhead transparencies was transferred to the library’s AV service, and users were also directed to outside vendors for film production. These services supported only a few users but consumed considerable divisional resources, which were then redirected to fund two faculty technology labs to support self-production of instructional materials.

We streamlined the titles and ranks within the division to encourage lateral moves and obtain flexibility for further restructuring. There is no associate or assistant vice president on the management team. Other hierarchical ranks and titles, such as associate and assistant director, were replaced by generic titles of senior consultant and manager. Within each group two titles are used, one for position (e.g., senior application developer) and one for assignment (e.g., project leader).

Process

Most of the restructuring plan was completed in four months, from July through October of 1993. (See Table 2 for a chronology.) The steps we took to implement the restructuring included the following.

Step 1: Communicate directions and rationale for change.

The vice president met with the entire technology staff in June 1993 to discuss the goals of the new division and the framework, process, timetable, opportunities, and anticipated outcomes of this restructuring.

Step 2. Select directors and form UPIT management team.

A new job description was prepared for each director’s position. Former directors and senior staff members were invited to apply for the new positions. This process resulted in two reassignments, three promotions, and one continuation.

Step 3. Conduct job analysis of all UPIT members.

Every UPIT member prepared a one-page functional resume about their educational background, skills sets, and project experience. Each individual also participated in a 45-minute inter-

view with an organizational psychologist to voice his/her preference for group assignment, career aspiration, fear, and concerns about restructuring. These two sources of information

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<th>Groups</th>
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<td>• Leadership Development</td>
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Step 4. Make appropriate group assignments.  
The UPIT vice president worked with three consultants to make the staffing assignments: the outside organizational psychologist who conducted the interviews, an information technology consultant, and a director from DePaul's human resources department. In making the decision on group assignment, this four-person team reviewed the information from the interviews and resumes to match each staff member's preferences and skills sets against the desired profile for each functional group.

The three consultants brought objectivity to this process. The psychologist brought an external viewpoint on staff motivation and interests. The IT consultant understood skill sets required for the new division. The human resources director was familiar with past employee performance and could anticipate both new opportunities and possible difficulties before the assignments were made public. For those who were not placed, either for inappropriate skills or different career plans, the human resources department arranged for transfer, outplacement service, or other opportunities. Coupled with the elimination of vacancies, the reassignment resulted in seventy-eight positions, a 15 percent reduction from the ninety-two positions before restructuring.

Step 5. Develop job descriptions  
Each newly appointed director had six weeks to complete the organization design and descriptions of job categories (but not individual job descriptions) for his/her functional group. All job descriptions specified the “desired” skill sets at different proficiency levels and expectations for learning and teamwork.

Step 6. Regrade salaries to reflect market rates  
Once the job categories were complete, the human resources department reviewed them against comparative market salary data to regrade each group of positions. The regraded positions and salary structure reflected expanded responsibilities and higher performance expectations. This process resulted in salary increases for most staff members. Consolidation of positions in several areas allowed us to reinvest salary dollars in those people who were motivated to grow with the new division.

Step 7. Implement a new performance appraisal system  
The UPIT management team, in collaboration with the human resources department, designed a new performance appraisal system. Twice a year the new appraisal system evaluates each individual’s performance toward divisional objectives and fulfillment of divisional attributes. The new system was introduced to the UPIT staff in October 1993 and implemented two months later.

Key strategies  
Beyond the first four months of intensive restructuring efforts, we also implemented three interrelated strategies: high performance management to manage the change in culture, training and development to manage the change in human resources, and partnerships to manage the change in relationship with users.

High performance management  
We designed and implemented a performance management program (see Figure 1) to enable the division to achieve high productivity and develop talents. This program has three components—performance goal setting, performance appraisal, and skills development. The program links divisional goals with individual performance objectives and skills development. The divisional goals are translated into performance objectives for the director and then for directors or cross-functional projects. Individual performance has two components: one set of objectives is closely linked to divisional priorities and projects, while the other pertains to the division’s core values.

To cultivate a culture of service orientation, openness to change, collaborative teamwork,
and continual learning, we introduced ten core values.

**Core Values of UPIT**

- Commitment to the mission
- Continuous quality improvement
- Creativity and innovation
- Customer focus
- Leadership
- Openness to change
- Results oriented
- Self-directed learning
- Self-empowerment
- Teamwork and collaboration

These values signify the expectation for every member in the division. We incorporated the behavioral attributes of these values into the performance appraisal system. The twice-a-year appraisal (June and December) encourages a timely review of progress and adjustment. Performance in all areas is measured on a seven-point scale, where 3, 4, and 5 indicate performance meeting expectations. This measurement scale also encourages us to raise expectations or set new expectations for an individual, to continue to improve productivity and continue challenging him or her.

The diagnostic value of performance appraisal would be limited without an opportunity for skill development. Given DePaul’s mandate to move rapidly to a new technology environment, there needs to be constant upgrade of technical skills and non-technical skills. The job analysis process revealed serious gaps in the division’s skill profiles; namely, analysis, consultation, and project management. The training and development strategies are discussed in details below.

### Training and development

We adopted multiple approaches to skills development, emphasizing both soft and technical skills. The central theme was to create an organizational culture of learning with an openness to change and innovation. Each individual is expected to initiate self-directed learning through formal course work, workshops, vendor-sponsored seminars, and cross-training through teamwork or participation in new projects. In addition, we sponsored selected individuals to participate in several programs.

- **Leadership Learning Forum.** Meeting at DePaul, this program emphasized creativity, problem solving, teamwork, and change management, through guest speakers, readings, and team problem solving. Under the sponsorship of the management team, one-third of the division participated in this program, meeting one day every six weeks.

- **New skills development.** The vice president also sponsored selected individuals for four-month intensive certificate programs offered by DePaul’s School of Computer Science, Information Systems, and Telecommunication. We had individuals complete programs (on their own time) in Windows applications, telecommunications, local area networks (LAN), client/server strategies, database, and desktop applications.

- **Friday Forum.** Held every other week by project team leaders, the sessions showcased major projects and helped to sharpen staff presentation skills.

- **External Leadership Learning Forum.** Several directors and senior staff members also participated in the leadership development programs sponsored by CAUSE and the Society for Information Management (SIM). Partnership with users

Restructuring disrupted our established relationships with the user community. We had to redirect users’ expectations and build new relationships with various groups. Two formal advisory bodies were created to solicit user feedback. An academic advisory group, primarily consisting of faculty and student representatives, reviews policies and initiatives affecting teaching, research, and student computing. A customer service panel, consisting of representatives from all college and divisional offices, provides feedback on services and new needs. Both groups now meet monthly with the vice president and UPIT directors.

We also created new publications and re-
Through restructuring we were able to deliver these results and serve a greatly expanded client base with the same operating budget and a smaller staff. The DePaul administration in turn was willing to provide support for capital projects. This restructuring resulted in a clear strategic vision for information technology, heightened productivity and expectations, and an accelerated momentum for actions. Fundamentally, it ignited new dynamics for organizational and self renewal. Strategic restructuring is an exhilarating yet daunting experience. The impact and implications are far-reaching. The following reflect our experience and concerns.

Cascading sponsorship for change
Support from DePaul executives was critical to the success of restructuring. In addition, strong cascading sponsorship from the vice president through directors also contributed to the result. This cascading sponsorship is manifested in training, priority setting, and human resource management.

A map to guide restructuring
Our framework helped to keep the process on course and on schedule. Restructuring generates anxiety and resistance. A clear plan and a timetable allowed us to communicate with users and those who were affected. A short timetable made the change seem more dramatic but alleviated prolonged anxiety. The fast pace helped to direct everyone’s energy toward the new organization and the intended outcomes.

A faster planning cycle
Restructuring ignites evolving changes. We found that the change triggers self-renewal and further realignment of functions, groups, and individuals because nearly every piece of the organization puzzle was redefined or rearranged. A traditional long-term planning model was too time consuming and could not be effectively supported by an evolving organization. We had to adopt a much shorter cycle for planning and empowered implementation teams to work out details.

Open and informal communication
On one hand, our restructuring unleashed tremendous energy from those who embraced the change; on the other hand, it paralyzed the productivity of those who resisted it.

Results
We were able to implement most of the restructuring plan and strategies discussed above by January 1994. During an eighteen-month period from July 1993 through December 1994, the division focused on building the organization and technology infrastructure, including:

- Created a highly integrated network environment to support workgroup computing which has Novell NetWare 4.0 Ethernet, TCP/IP on the network side, 486 Windows/DOS for the desktop, Microsoft Office Suite (Word, Access, Excel, and Powerpoint), Novell Groupwise, Internet applications for productivity tools, Oracle, UNIX, and MS Access for the client/server environment.
- Reached University consensus on standards for hardware, productivity tools, and operating systems.
- Completed network infrastructure at five campuses.
- Brought 1,700 users into University network with training.
- Redesigned the software training programs for faculty, staff, and students.
- Upgraded student computing labs and created new faculty labs.
- Supported the University reengineering effort and began implementation of system prototype for the fund-raising process.
- Prepared to implement a comprehensive telecommunications plan in 1995, including a new telephone switch, the cabling of all residence halls (1,600 beds) for voice and data services, and long-distance service for resident students.
- Began a two-year project to re-architect enterprise data models and systems for an integrated student service.

Impacts and implications
Could we have accomplished these results in the old environment? It is unlikely that the former organizational structure could have brought about changes at this pace and magnitude. Too much time would have been spent reaching consensus between competing IT organizations.

"On one hand, our restructuring unleashed tremendous energy from those who embraced the change; on the other hand, it paralyzed the productivity of those who resisted it."
ings with staff to do handholding, answer questions, address their fears, and ensure opportunities for technology training. We found open and informal communication helped bring the impact of change to a personal level.

**Making retraining a must**

Our restructuring afforded many people opportunities for retraining and new responsibilities. Commitment to staff development is the most critical element in restructuring IT organizations. This requires both the resource commitment from the administration and the willingness of the IT staff. We defined the skills sets at the onset and set a two-year timeline to retrain everyone. Through targeted training and participation in projects, the majority of staff have developed new technical skills. It takes much longer to develop soft skills (project management, communication, customer orientation). Retraining has been emphasized as a career necessity, not an option. In many cases, we provided opportunities, but not necessarily the release time. It is our experience that those who are motivated will view retraining as an opportunity, not as an obligation.

**Determination and clear goals**

There are high costs, especially human costs, associated with restructuring. Almost everyone involved in our restructuring experienced tremendous anxiety, not only those who left the division but also those who embraced the change. Managers who carried out the change experienced burnout from dealing with adverse reactions to decisions. It demanded our determination to achieve the outcome. How fast an IT organization can launch such change depends largely on its willingness to endure pain and stress.

**Support from human resource department**

We worked very closely with the human resources department throughout the process, but they had limited experience in implementing organizational restructuring of this magnitude. This probably is the case at most universities. We had to draw support from outside consultants and our own divisional resources to initiate new performance appraisal and training programs.

**Balancing rapid restructuring with process improvement**

We achieved positive results from restructuring. However, we found it difficult to sustain the benefits of restructuring without a continuous process for improvement. Such a process allows people to replenish their energy, strengthen relationships with users, and refocus on quality of services. We are now implementing a process improvement effort after two years of fast-paced restructuring.

**Staff retention**

Retraining improves employability. Some of our newly trained staff, armed with knowledge in Oracle, UNIX, Novell, and Windows applications, were eagerly pursued by headhunters and corporations in the Chicago area. We had to constantly reexamine the salary structure, growth possibilities, and training opportunities. Our focus is on hiring and retaining individuals who demonstrate a capacity to grow. We expect them to achieve. Implicitly, we have adopted the philosophy of preparing staff for employability, either at DePaul or elsewhere, instead of guaranteeing lifetime employment. This philosophy has both short-term and long-term implications. In the short run, this direction improves productivity. In the long-run, the cost of managing a very mobile workforce is high. Our experience suggests that a holistic approach to performance management—from recruiting to selection, evaluation, reward, training, and retention—has to be mapped out before restructuring takes place to ensure productivity.

**Communication and relationship with users**

Our restructuring disrupted users’ established relationships with former organizations. The pace of technology change that we implemented during the first eighteen months heightened users’ anxiety about their own work life. Although we had made an extended effort to communicate the change throughout the process, it never seemed to be adequate. Job rotation, high staff turnover, rising expectations, and new service offerings all made it difficult for us to cement a relationship with user groups. We are now exploring new models to better serve users.

**Conclusions**

DePaul’s effort for restructuring the IT organization has achieved remarkable results, but not without some pain and agony. Within eighteen months, the division built the University’s network infrastructure, brought 1,700 users into a highly advanced network environment, reengineered major work processes, and started implementing client/server solutions. Five critical success factors contributed to this result: (1) cascading sponsorship from executive to UPIT directors, (2) a framework and process for restructuring; (3) a holistic approach to high performance management; (4) a clear strategic focus; and (5) a timetable for outcome measures.