Chapter 12: Transition to the New System

# Teaching Tips and Strategies *(from Alan Dennis)*

I suspect that this chapter is different from those you have used in other textbooks because it examines system installation from both a technical and a behavioral perspective. I usually spend one to two classes on this chapter.

From the technical perspective, installation is usually simple, but can be quite time-consuming. We present three different dimensions on which conversion can be examined (rather than the usual one-dimensional approach commonly used). This helps students understand that conversion can be done in stages, with each stage using a different approach. For example, a pilot conversion, in which parallel modular conversion is used in the pilot sites followed by direct--whole system conversion in the second stage sites. One element that is often overlooked is the sheer magnitude of implementing a large conversion. Simply moving all the technical support people to the many offices to actually do the conversion can be very challenging, not to mention converting all the current data to the new system.

In my experience, change management is often one of the most overlooked and misunderstood parts of systems analysis and design, particularly by novice analysts. They have invested so much time and effort in the development of the system, that they find it hard to understand that some people may not want to use it, even if the system brings clear benefits to the organization. I find that raising examples of changes in systems they use sometimes helps them understand (e.g., changing the way their ATM works, installing a new version of Windows). The important point is to have them understand how to perform an analysis of the costs and benefits of change to various stakeholders in their projects. I've found that students are often uncomfortable with the idea that not everyone will want to adopt the system and that sometime organizations resort to pure political power (use it or you're fired) to get systems adopted.

I've also found that the section on training can come as a real surprise. I don't know how many student teams I've worked with that neglected training or tried to train everything in the system. Thinking about training as an extension of the user's job, not of the system, can help.

The section on project assessment fits nicely with the individual assessment activities that I have students do. The last deliverable on the project is a self-assessment and a team-assessment.

# War Stories *(from Alan Dennis)*

**Installation at Lithonia Lighting**

Lithonia Lighting is the world's largest manufacturer of commercial lights, with average annual sales of over $1 billion. They are headquartered in a small town just outside of Atlanta (Conyers, Georgia). Information technology as a key part of their strategy, a strategy that has enabled them to grow from a major player in the industry to the dominant one. They give every one of their agents and distributors a computer with a connection into their order processing system. Any time the system is upgraded, a Lithonia Lighting staff member flies to the agent's office to install the new system and train the users on the new version. There are over 120 separate agents in the U.S., Canada, Latin America, and South America. Assuming that it takes about two days (plus travel time) to install and train a new version in an agent's office, think how many staff members are required to roll-out a new version over a one month time period.

One person can do about two sites per week, or about eight per month, assuming non-stop travel (at which point, people start to get burned out). This means Lithonia Lighting needs about 15 people, just to do the installation of a new version of the system. Installation is not a trivial undertaking.

# Answer to Concepts in Action 12-A: Converting to the Euro (Part 1)

Issues associated with implementing the Target system fall into three categories: Business, Technology, and People. Some of the factors associated with a system that incorporates 15 countries include:

* Business: selecting a conversion strategy, preparing a country-specific contingency plan
* Technology: installing the hardware and software, developing a data standard
* People: developing training for different cultures, developing system support for different languages

# Answer to Concepts in Action 12-B: US Army Installation Support

1. The conversion strategy selected was relatively low risk. Including parallel conversion ensures the new system performs as expected while the old system is still in place. That a modular pilot conversion was also used allows for testing of the new system at specific sites before universal adoption.
2. Any type of phased, pilot conversion, or a combination of these would work. The only conversion that would not be recommended is a direct approach. A direct approach in type of multi-site system would be risky in the extreme.

# Answer to Concepts in Action 12-C: Managing Global Projects

1. There is no standard timeframe for deciding when or if to consolidate systems. This decision depends upon the current system setup at each location and whether a comprehensive system is necessary. Consolidation of multiple systems can be costly, both in time and resources.
2. In order to have a convincing argument, Conor needs to document that there is an identified need to have aggregate data from all systems in order for reporting or decision making. A cost-benefit analysis indicating the expected return of a consolidated system would certainly be of help in supporting his argument.
3. Again, if reporting and decision making depend upon aggregate data, then Conor needs to document the problem and push for a consolidated solution. The alternative is to continue and try to conduct business with incomplete or incompatible data, which will be increasingly difficult.

# Answer to Concepts in Action 12-D: Finishing the Process

1. There are any number of ways to determine the validity of MPI’s claims. One step to take is to find out how MPI is measuring the change in turnover, increased productivity, and particularly how they measure reduced stress, anger and depression. Another step is to find other companies that have used MPI’s training program and see if they are willing to share their experiences.
2. The first thing to do is to determine costs associated with the current turnover, and productivity. The second step is to compare those costs to the projected costs (turnover reduced 50%, productivity increased 20%) associated with the resulting claims from MPI. Calculate the difference between the current and projected costs then compare that difference to the cost of the training. If the cost of the training is higher than the projected change, then it would not be beneficial. In order to include the projected reduction in stress, anger and depression in the cost-benefit analysis, it would be first necessary to determine how those are measured and how costs can be associated with them.

# Answer to Concepts in Action 12-E: Converting to the Euro (Part 2)

System support activities typically involve helping the users use the system. In this case, those users are spread over 15 countries, each with their own language and culture. The support activities chosen should be those that can support those users. Online support would be a good choice, as web-sites and FAQs can be translated into many different languages. The material online is relatively easy to develop, maintain, and administer. Additionally, help desk employees in each country should be trained so that they are available to users in answering questions about the system.

# Answer to Concepts in Action 12-F: Software Bugs

Student answers may vary depending upon experience with commercial and locally developed software and their definition of quality. Issues to consider when considering quality include, but are not limited to:

* Expertise: The organization may not have employees with the expertise to produce software. If new developers are used, quality may be low due to inexperience.
* Customized features: Developing a software application in-house results in a product customized to the organization’s specific business needs. Commercial software is a more generic product, developed for many types of businesses.
* Time to market: Commercial developers are very concerned with the competitive market, and oftentimes will forego levels of quality testing in order to release the product. Software developed in-house does not have the same concerns.

# Answer to Your Turn 12-1: Developing a Conversion Strategy

Word Processor Conversion

Conversion Style: Direct

Conversion Location: Simultaneous

Conversion Modules: Whole-System Conversion

Web-Based Course Registration System

Conversion Style: Parallel

Conversion Location: Pilot

Conversion Modules: Modular

Converting from one word processor to another is a fairly straightforward process. Typically, these are off the shelf products with a documented dependability in terms of robustness. Additionally, if problems occur, it would be relatively simple to convert back to the original system. Word processing capabilities certainly support business activities, but do not constitute a major business process.

Converting to a web-based registration system, however, is quite a different scenario. Registration is a major business process at a university, and the conversion to a new platform should be designed as a slow, methodical, tested conversion. The old system should continue to be in operation until the dependability of the new system has been proven. Pilot implementation would aid in testing out the new system before it is implemented system side. If the new system was designed using modules, each module should be tested before each additional module is added on.

# Answer to Your Turn 12-2: Comparing Conversion Strategies

Least Risk

Conversion Style: Parallel

Conversion Location: Pilot

Conversion Modules: Modular

Most Risk

Conversion Style: Direct

Conversion Location: Simultaneous

Conversion Modules: Whole-System

Least Cost

Conversion Style: Direct

Conversion Location: Pilot or Phased

Conversion Modules: Whole-System

Most Cost

Conversion Style: Parallel

Conversion Location: Simultaneous

Conversion Modules: Modular

Least Time

Conversion Style: Direct

Conversion Location: Simultaneous

Conversion Modules: Whole System

Most Time

Conversion Style: Parallel

Conversion Location: Phased

Conversion Modules: Modular

Relationships that can be identified include:

* The conversion style that takes the least amount of time costs less but is more risky.
* The conversion style that takes the most amount of time cost more but is less risky

The above combinations are not the only combinations possible. A decision regarding conversion should be based on weighing and balancing the issues of time, cost and risk.

# Answer to Your Turn 12-3: Standard Operating Procedures

Student answers will vary. One example of a formal standard operating procedure is that the students take a quiz at the beginning of each class session. One example of an informal standard operating procedure is that over time, the first five minutes of class becomes a question and answer period.

# Answer to Your Turn 12-4: Overcoming Resistance to a New EIS

Student answers will vary. One method of reducing the resistance to adoption is to create a cost-benefit analysis and present it to those that will be using the new system. Once they understand the costs and benefits associated with adopting the new system, the employees may be more open to adoption.

# Answer to Your Turn 12-5: Developing a Training Plan

Student answers will vary based on their organization and what they perceive to be the use of the new program. One response may include creating training tutorials to allow users to become familiar with creating business documents that they use in their day to day tasks; memos, reports, proposals, etc.

# Solutions to End of Chapter Questions

1. *What are the three basic steps in managing organizational change?*

According to Kurt Lewin, change is a three-step process: Unfreeze - preparing people and the organization to break out of their current way of doing things; Move - transition from the old to the new way of doing things; and Refreeze - establish the new system as the way things are done.

1. *What are the major components of a migration plan?*

The migration plan specifies what activities will be performed when and by whom as the transition is made from the old to the new system. One part of the migration plan is the technical plan, which discusses how the new technology will be implemented in the organization. The other major part of the migration plan is the organizational plan, which helps users adjust to and adopt the new system.

1. *Compare and contrast direct conversion and parallel conversion.*

Both conversion strategies focus on the way in which users are switched over to the new system. Direct conversion is an abrupt change: the old system is turned off and the new system is turned on. The users have no choice but to work with the new system. In the parallel conversion strategy, the new system is turned on, but the old system is used simultaneously for a time. Clearly, the direct strategy is more risky because there is no fall-back if significant system bugs are discovered. With parallel conversion, the old system will still be available if there is a major bug discovered in the new system. However, the cost and extra work of using both systems simultaneously must be considered.

1. *Compare and contrast pilot conversion, phased conversion, and simultaneous conversion.*

These terms refer to how the organizational locations are transitioned from the old system to the new system. A *pilot conversion* selects one or more locations (or units or work groups within a location) to be converted first as a part of a pilot test. If the conversion at the pilot location is successful, then the system is installed at the remaining locations. In the phased conversion approach, the system is installed sequentially at different locations. Gradually, the conversion process spreads across all locations until all have been converted. Simultaneous conversion means that all locations are converted at the same time. With this strategy, there is no period in which some locations are using the old system and other locations are using the new system.

1. *Compare and contrast modular conversion and whole-system conversion.*

Whole system conversion means that the entire system is installed at one time. This is the most common circumstance. When the modules within the system are separate

and distinct, organizations may convert to the new system one module at a time, using modular conversion.Modular conversion does require significant time to introduce each module of the system in sequence.

1. *Explain the trade-offs among selecting between the types of conversion in Questions 3, 4, and 5.*

Direct conversion will be the quickest and lowest cost conversion style. Parallel conversion reduces risk, but costs much more and takes more time to complete.

Pilot conversion is the least risky way to convert organizational location. By debugging the system at the pilot location, the installation at the other locations should go smoothly. Phased conversion adds a little more risk in that time is not devoted to debugging the system totally before moving on to other sites. Phased conversion takes longer, however, than pilot conversions. The simultaneous approach will be the highest risk and most expensive approach of the three, but takes the least amount of time.

Whole system conversion is most risky, especially if the system is large and complex, but completes the conversion in the shortest amount of time. Modular conversion reduces risk somewhat because the system is implemented gradually. It adds cost and time to the process, however.

1. *What are the three key roles in any change management initiative?*

The project sponsor is the person or organizational unit that wants the change. The change agent is the person or group who leads the change effort. The potential adopter is the person or group who must actually do the changing.

1. *Why do people resist change? Explain the basic model for understanding why people accept or resist change.*

In general, when people are presented with an opportunity for change, they perform a cost–benefit analysis (sometimes consciously, sometimes subconsciously) and decide the extent to which they will embrace and adopt the change. They identify the costs of and benefits from the system and decide whether the change is worthwhile. However, it is not that simple, because most costs and benefits are not certain.

1. *What are the three major elements of management policies that must be considered when implementing a new system?*

One element is the organization’s standard operating procedures. These procedures define proper behavior, and communicate behavioral norms to the employees. The second element is defining measurements and rewards, which explains what is important to the organization (worth measuring) and how desired behavior will be reinforced with rewards. The third element is resource allocation. By allocating resources in certain ways, management can send both actual and symbolic messages to the organization.

1. *Compare and contrast an information change management strategy with a political change management strategy. Is one better than the other?*

Both of these change management strategies are focused on convincing the target adopters of the change that the benefits of the change outweigh the costs of the change. With an informational strategy, the goal is to convince potential adopters that the change is for the better. Th is strategy works when the cost–benefit set of the target adopters has more benefits than costs. In other words, there really are clear reasons for the potential adopters to welcome the change. With the political change management strategy, organizational power is used to motivate change, not information. The change may not actually provide a direct benefit to the target adopters, but it may benefit the organization as a whole. It requires someone in the organization who holds legitimate power over the target group to influence the group to adopt the change. This may be done in a coercive manner or in a negotiated manner.

1. *Explain the three categories of adopters you are likely to encounter in any change management initiative.*

There will usually be a small group (20 to 30%) who are ready adopters. These individuals quickly adopt the change. Another group of about the same size (20 to 30%percent) will be resistant adopters. They will refuse to accept the change and may actively fight against it. The remaining larger group is the reluctant adopters. They tend to be apathetic and will go with the flow to either support or resist the system, depending on how the project evolves and how their coworkers react to the system. .

1. *How should you decide what items to include in your training plan?*

Focus on helping the users to accomplish their jobs, not just on how to use the system. Training must focus on those activities around the system, as well as on the system itself. Focus on the system as it exists in its organizational context of getting day to day business done. Keep the emphasis on what the user needs to do; don’t get caught up in what the system can do. Referring to the use cases can be helpful here, since if we design our training to cover the use cases, we should be able to make the users very comfortable with the system for their routine tasks.

1. *Compare and contrast three basic approaches to training.*

Classroom training is the traditional approach to training in which a number of people are trained simultaneously with one instructor. One-on-one training puts one trainer with one student at a time. Computer-based training uses a DVD or Web-based training program delivered to students as needed. Classroom training is moderately effective. Its costs are moderate, and it is fairly effective, especially since it is the method that many people are most familiar with. One-on-one training is very effective, but is expensive to deliver and reaches only a few people. Computer-based training is very costly to develop, but is inexpensive to disseminate after development. It can reach a large number of people, but its effectiveness can be limited.

1. *What is the role of the operations group in the systems development life cycle (SDLC)?*

The operations group takes the system that the development team has created and makes it work for the organization on a daily basis.

1. *Compare and contrast two major ways to provide system support.*

System support is focused on helping users understand how to perform tasks and answering user questions. This can be accomplished with online support such as reference documentation and help screens, and also with special web sites that answer frequently asked questions. The goal here is to enable the user to find the answer to his/her question without talking to a human. When human help is needed, it is usually provided through a help desk. Help desks can provide human response to questions for the entire organization.

1. *How is a problem report different from a change request?*

A problem report documents a problem that has been encountered with the system that cannot be immediately resolved. The problem report will usually be passed to an application specialist, who will attempt to clear up the problem. If he/she cannot resolve the problem, then it is likely that a system bug has been encountered. At this point, the problem report becomes a change request, which is used to inform the system maintenance group that an unresolvable problem has been discovered that probably requires a system fix.

1. *What are the major sources of change requests?*

The most common source of change requests is the problem reports from the operations group that identify bugs encountered in the system. A second source is the system users, who submit ideas for minor changes and enhancements to the system. Third, other systems development project may have an effect on a system, and change requests may result in order to integrate the systems. A fourth source of change requests is those that occur when underlying software or networks change. A fifth source is senior management, who may trigger change requests in order to tailor the system to the organization’s business strategy.

1. *Why is project assessment important?*

Project assessment is important because it enables the team and the IS organization to learn from its experience, and hopefully improve future systems development projects with the benefit of that experience.

1. *How is project team review different from system review?*

*Project team review* focuses on the way the project team carried out its activities. Each project member prepares a short two- to three-page document that reports on and analyzes his or her performance. The focus is on performance improvement, not penalties for mistakes made. The focus of the *system review* is understanding the extent to which the proposed costs and benefits from the new system that were identified during project initiation were actually recognized from the implemented system. Project team review is usually conducted immediately after the system is installed while system review is often undertaken several months after the system is installed.

1. *What do you think are three common mistakes that novice analysts make in migrating from the as-is to the to-be system?*

* Failure to fully consider the risks associated with the different conversion strategies. May just blithely assume direct conversion is the way to go.
* Failure to adequately train the end users for the work they must perform on the new system.
* Failure to manage the process of change that will be necessary with the new system.

1. *Some experts argue that change management is more important than any other part of the SDLC. Do you agree or not? Explain.*

Change management is essential in helping to ensure that the system is accepted and used in the organization. While change management cannot substitute for a system that does not do what it is supposed to do, failing to consider the required process of change may result in even the best system being rejected by the users.

1. *In our experience, change management planning often receives less attention than conversion planning. Why do you think this happens?*

Most systems analysts are more comfortable with the technical aspects of the system rather than the behavioral (people) aspects. As a result, the assumption is made that the people will just adapt to whatever is thrown at them. This is a poor assumption, and attending to change management planning can make a dramatic difference in the ultimate success or failure of the new system.

# Solutions to End of Chapter Exercises

1. *Suppose you are installing a new accounting package in your small business. What conversion strategy would you use? Develop a conversion plan (i.e., technical aspects only).*

Since packaged software is probably being used, we should not have to worry too much about the software not functioning correctly. Therefore, a direct conversion would probably work in this case. The steps we follow are:

* Install hardware if needed for the new system (more memory or a faster processor may be needed if we have outgrown the old system).
* Install software - usually a fairly simple task with today's small business-oriented accounting packages.
* Convert data - most accounting software systems have conversion routines provided that allow the user to convert data from other accounting packages. Be sure to have the old data backed up so that if any aspect of the conversion fails, we can recover the old data and begin again.

1. *Suppose you are installing a new room reservation system for your university that tracks which courses are assigned to which rooms. Assume that all the rooms in each building are “owned” by one college or department and only one person in that college or department has permission to assign them. What conversion strategy would you use? Develop a conversion plan (i.e., technical aspects only).*

In this situation, parallel, pilot conversion might be best. A pilot installation can be conducted at one of the locations, and parallel conversion will lower the risk of the conversion process. The workload associated with parallel conversion should not be too onerous in this case since there is probably not a high volume of room reservations over time. Once the system has been installed at the pilot site and any bugs have been worked out, it can be installed at other locations, again using the parallel conversion strategy. The steps we follow are:

* Install hardware if needed for the new system.
* Install the software.
* Convert data for the new system. Continue to post room reservations using the old and the new system for a period of time.

1. *Suppose you are installing a new payroll system in a very large multinational corporation. What conversion strategy would you use? Develop a conversion plan (i.e., technical aspects only).*

In this case, the conversion should be parallel because of the importance of the payroll application. It is likely that the organization requires all locations to be consistent with payroll, so simultaneous conversion will be needed. However, if the locations are fairly autonomous, then it would be far less difficult if phased conversion was used. The steps we follow are:

* Install hardware if needed for the new system.
* Install the software.
* Convert data for the new system. Continue to process payroll using the old and the new system for a period of time.

1. *Consider a major change you have experienced in your life (e.g., taking a new job, starting a new school). Prepare a cost-benefit analysis of the change in terms of both the change and the transition to the change.*

Student answers will vary.

1. *Suppose you are the project manager for a new library system for your university. The system will improve the way in which students, faculty, and staff can search for books by enabling them to search over the Web, rather than using only the current text-based system available on the computer terminals in the library. Prepare a cost-benefit analysis of the change in terms of both the change and the transition to the change for the major stakeholders.*

**New system**

Benefits: convenience, ease of use, simplicity of browser interface, wider access to system.

Certainty of benefits: active and vocal support of campus leadership will increase the likelihood that benefits will accrue.

Costs: some unhappiness and confusion on the part of users who have become skilled users of the current command-driven system.

Certainty of costs: likelihood of problems will be reduced with a high-quality user interface and good training.

**Transition to new system**

Benefits: more users may use the library system.

Certainty of benefits: announcements and publicity about the new system will increase the likelihood of new users being aware of and using the new system.

Costs: users have to learn new search techniques

Certainty of costs: minimize likelihood with readily available help system and training.

1. *Prepare a plan to motivate the adoption of the system described in Exercise E.*

In this case, an informational strategy will be best since the benefits of the new system will clearly outweigh the costs. Announcements of the new system should be made in the campus newspaper, for example. Demonstrations of the system should be conducted prior to conversion so that users can see the interface and the system’s capabilities. Frequent and convenient training sessions should be available; one-on-one training should also be available. All communication about the new system should emphasize its convenience, ease of use, flexibility, and widespread accessibility.

1. *Prepare a training plan that includes both what you would train and how the training would be delivered for the system described in Exercise E.*

Training should emphasize what the users need to do, not just the features of the system. In this case, the users need to be able to search through the library holdings, so training should focus on the search mechanisms of the new system.

Training sessions should be offered frequently, to accommodate the schedules of students and faculty. Small groups or one-on-one training will be preferred. Much of the training could also be handled through an on-line tutorial or help system.

1. *Suppose you are leading the installation of a new decision support system to help admissions officers manage the admissions process at your university. Develop a change management plan (i.e., organizational aspects only).*

Change management plan:

The change management plan will consist of changing management policies to support the new system, assessing and communicating costs and benefits of the new system, and taking steps to motivate adoption of the new system. In this particular case, it is hard to know exactly how the new system will be viewed by the stakeholders. It may be that the admissions staff and management are overwhelmed with their work and welcome a system that will streamline and simplify their work processes. It could also be that no one really sees the need for the new system. If the current ways of doing things seem to be working OK, then the stakeholders may have more resistance to the new system.

*Management policies*:

* Formal standard operating policies must be revised to match the new system. New procedures must be created and implemented so that use of the new system is integrated into the formal operating procedures of the Admissions Office.
* Measurements and rewards must be developed to motivate desired behavior. For example, if one of the benefits of the new system is the ability to process applications more rapidly, then the total elapsed time from application receipt to the acceptance decision should be measured. When the average elapsed time per application falls for the entire Admissions Office, some reward could result. It could be a pay raise, or something as simple as a party for the entire office could be effective.
* Resource allocation can be used to demonstrate management’s commitment to the new system. For example, investing in training programs for the new system will show that management is serious about its adoption.

*Assessing costs and benefits* - from the organization’s perspective and from the perspective of the prospective adopters of the system. The organization’s benefits are likely to be improved decision consistency and faster response to admissions applications. It may be that the organization is expecting staff reductions as another benefit. The costs to the organization may be loss of morale and employee turnover if the staff is unconvinced of the value of the system. Adopters’ benefits may be increased productivity, better quality of admission decisions, better organization. Adopters’ costs may include fear of job loss, uncertainty about the use of the new system, need to change work procedures.

*Motivate adoption* - by demonstrating clear and convincing need for the change. Both the informational strategy and the political strategy may be useful in this case. The informational strategy should emphasize the reduction in problems and increases in decision productivity and quality. The political strategy could be needed if the costs are perceived as outweighing the benefits. Senior management may need to motivate behavior through negotiation or coercion.

1. *Suppose you are the project leader for the development of a new Web-based course registration system for your university that replaces an old system in which students had to go to the coliseum at certain times and stand in line to get permission slips for each course they wanted to take. Develop a migration plan (including both technical conversion and change management).*

Technical conversion - This situation will require a direct conversion of the entire system. It would not be practical to try to run both systems in parallel or to convert by pilot site or by phases.

Change Management Plan - In this case, the student stakeholder group will love the change. The benefits of on-line, web-based registration will be obvious to them in terms of convenience, time savings, and facilitating the registration process. Registration staff also should welcome the change, although there may not be as many staff required any longer, so fear of job loss may be a problem. This is a system that has to be used (it's not optional), so the most important aspect of change management is to provide adequate training and on-line help, so the users find the system easy to use.

1. *Suppose you are the project leader for the development of a new airline reservation system that will be used by the airline’s in-house reservation agents. The system will replace the current command-driven system designed in the 1970s that uses terminals. The new system uses PCs with a Web-based interface. Develop a migration plan (including both conversion and change management) for your telephone operators.*

Technical conversion - In this case, direct conversion should be used. The reservation agents will to too busy to use both systems in parallel. If possible, conversion should take place in phases to ease the conversion process throughout the airline's locations.

Change management plan - Although many of the agents will welcome the updated system, there could be resistance from very skilled, very experienced agents whose knowledge and expertise is no longer relevant. The experienced agents probably work very efficiently with the command-driven system and so will need to be shown the benefits of the new system to persuade them to adopt the new system. Ample training will ease the transition along with strong management promotion of the benefits of the new system. If there is a lot of resistance, the informational strategy may not be sufficient to motivate adoption, and a political strategy may be needed.

1. *Suppose you are the project leader for the scenario described in Exercise J. Develop a migration plan (including both conversion and change management) for the independent travel agencies who use your system.*

Technical conversion - since each independent travel agent location is relatively autonomous, it will probably be possible to convert in phases by location. Each location should be converted directly.

Change management plan - the independent travel agents are more casual users than the airline's own reservation agents, so they will probably not be as attached to the old system. Less resistance would be expected, especially if the new system's interface is easier for the casual user to understand and use effectively. Since the updated, web-based system will probably be welcomed by the travel agents, the most important aspect of the change management plan is training and on-line help.

# Answers to Textbook Minicases

*1. All of these change requests deserve attention. Prioritizing them will be based on the scope and urgency of the tasks. The bug fix should probably be attended to first. The bug somehow slipped through the testing process, and only happens infrequently, but still should be corrected as quickly as possible now that it has been discovered. The second priority is probably the minor changes that the users have requested. It is not uncommon for users to find things they’d like improved such as report formats and menus. Since these issues can be annoying to users and fixing them can dramatically improve users’ opinions of the system, they should be dealt with quickly. The other two system requests represent projects with a greater scope than the others. The system interface issue should be dealt with in a timely way so that the Billing Department upgrade can proceed on schedule. This change request should be forwarded to the project manager from the client management development project, so that she can begin to design the interface changes. The addition of a new client type to the client management system may be a significant project in itself. It deserves to be treated as a separate project so that the change requirements to the system are thoroughly understood and correctly incorporated into the software. This change request also will be forwarded to the original project manager so that she can begin the Project Initiation work. Since the request is essentially a management directive, there is no need to evaluate the worthiness of the project.*

*2.a. The target adopters of this system probably do not perceive that many benefits will accrue to them as a result of this system being implemented. They may perceive that the system has significant costs to them, such as more exact monitoring of their time. They may feel a loss of freedom and also may perceive a lack of trust on the part of management. They may have little understanding of how the information that is collected will be used, and are assuming that its use will be punitive rather than rewarding.*

*2.b. An informational strategy is designed to convince the target adopters that the change is for the better. It may be that the target adopters were getting shortchanged on their pay with the old system, or that they were not getting the bonuses they deserved for the timely completion of the photo missions. If circumstances like this exist, then an informational strategy will serve to make them aware that their perceptions of costs and benefits were incorrect, and the value of the perceived benefits can be shown to exceed the perceived costs. This can help encourage adoption of the new system.*

*2.c. A political strategy uses organizational power to motivate change. This approach is often used when the system provides clear benefits to the organization, but may not provide particular benefits to the target adopters. In these cases, the target adopters need other motivations to change. It may be possible for the owners of Sky View to develop some kind of linkage to rewards to help motivate change. For example, regular and correct use of the system will lead to more frequent work flying and shooting photo missions. The hangar staff could be rewarded with advancements in training or responsibility. If these negotiated strategies do not work, then coercion may be necessary. There is often a surplus of pilots, photographers, and people who want to work around airplanes, so the owners may simply insist on adoption of the system or face the loss of a job.*

# Supplemental Minicases

1. Birdie Masters is a successful chain of golf schools located in the southwestern United States. The company has been developing a new system that will automate all of the schools operations, and is about ready to begin the installation of the new system. Currently, the school locations are being run with a rather jumbled combination of manual and automated record keeping, and the intent of this new system is to rationalize and standardize the record keeping and improve reporting and analysis capabilities. The system also has a web-based component that is used by school students to check on classes, enroll in classes and lessons, and monitor progress.

Because the winter golf season is approaching, activity at the golf schools is expected to increase soon, and management would like to have the new system in place. Discuss the conversion options that Birdie Masters should consider. What is your recommended conversion strategy? Explain your choices.

*Answer: There are a few factors in this problem that suggest a conversion strategy. First, the fact that existing systems are not well established suggests that direct conversion is appropriate. This style will involve the least cost and the shortest time frame. However, to reduce the risk of this strategy, it may be advantageous to perform a pilot installation first and ‘shake down’ the system in one location before introducing it at all locations. This will add a little time to the conversion timeline, but if the system is stabilized at the pilot location, then it can probably be simultaneously installed at all the other locations to speed up the conversion process. The two components of this system, the school operation system and the web-based customer system, are probably fairly independent from each other. The school operation system is probably higher priority than the web-based customer system, so it should be converted first, and then the web-based system can be brought on line.*

1. Frank, the IS department manager at the Kelso Company was brought in to the firm with a mandate to “get the IS department shaped up.” Kelso management was dissatisfied with a number of aspects of the IS department. The staff seemed to try to do as little as possible to satisfy the users of the systems. The general attitude was that users were a bother and kept the IS staff from doing ‘important work.’ Kelso management did not feel they were getting good value from the huge amount of money that was sunk into the IS budget every year. Frank was told, confidentially, that unless he could turn things around in the department over the next two years, management was prepared to outsource the entire IS department.

One of the first tasks that Frank undertook was a review of Kelso’s systems development methodology. One area that he was concerned about was the absence of any project assessment at the conclusion of a development project. Other parts of the methodology appeared sound, but the projects that had been undertaken over the previous five years were always late and over budget. It seemed to Frank that the same mistakes were being repeated over and over, and the development processes were not improving. He decided to mandate that project assessment be performed for all projects that had been completed in the last six months and for all future projects.

1. What is the goal of project assessment? How will it help an IS department like the one at the Kelso Company?

*Answer: The goal of project management is to understand what was successful about the system and the project activities and what needs to be improved. It sounds as if this company needs to learn from its experiences and not just keep repeating poor practices. Project assessment is important because it enables the team and the IS organization to learn from its experience, and hopefully improve future systems development projects through the benefit of that experience.*

1. Discuss the purpose and benefits of performing a project team review. Discuss the purpose and benefits of performing a system review.

*Answer: The project team review summarizes performance by the team members. Its purpose is to help the team members better understand what was done well and what needs improvement. The system review looks back at the projected costs and benefits for the system, and assesses whether these costs and benefits have been achieved following implementation. Estimates of future project costs and benefits can be improved if the accuracy of each project’s estimates is evaluated.*

# Experiential Exercises

1. Purpose: to increase understanding of the organizational change process.

Plan for a class discussion in which students will assume that your institution is planning a change in the method students use to register for classes. Have one group of students develop a list of ideas that will help to unfreeze student behavior. Have a second group of students develop a list of ideas on how to move the students to adopt the new system. Have a third group develop a list of ideas on how to refreeze the behavior into the new desired patterns. After working independently, bring the groups back together and discuss their ideas as a class. After each group has presented their ideas, ask the class to select the methods that will be most effective. Overall, how effect will their process be?

1. Purpose: to increase understanding of the methods for motivating adoption of a change.

This exercise focuses on a personal behavioral change rather than a work-related change, but should serve to distinguish between the informational strategy and the political strategy. Have the class assume that they are trying to persuade someone to stop a destructive behavior such as smoking or excessive drinking. Have one half of the class work together and employ the informational strategy, generating a list of reasons and evidence why this behavior change should be made. Have the other half of the class work together and employ the political strategy, generating a list of ideas for coercing or negotiating the desired behavior change. As a class, have each group summarize their ideas. In discussion, focus on the differences in ideas generated. Have the class discuss which approach they think would be more successful. Then have them discuss whether they think there would be differences if we were talking about changing work-related behavior rather than personal behavior.

1. Purpose: to understand the cost-benefit analysis associated with change.

This exercise is based upon a scenario of an organization that is changing its customer service support system from a terminal-based, command-driven system to a PC-based, GUI system. The current system is difficult to learn, but one learned is very powerful. Skilled users can answer customer questions quickly and efficiently. Clearly, the customer service representatives will have to change their work habits significantly to adopt this new system.

Have half of your students develop a list of ideas for the likely benefits of the new system. Be sure they include both organizational and individual benefits. Then, have them develop a list of ways that the organization can increase the likelihood that these benefits will occur. Have the other half of the class develop a list of the costs associated with the new system. Be sure they include both organizational and individual costs. Then, have them develop a list of ways the organization can influence the perceived size and likelihood of these costs.

In class discussion, have each group summarize their ideas. How successful would they be in convincing the customer service representatives that the expected costs are outweighed by the expected benefits?

1. Purpose: to increase understanding of the system support function.

Have students research the user support function that is implemented at your institution or at a local business. Have them prepare a report that summarizes the amount and type of on-line support that is available. Have them look into the help disk that has been established for the organization, and how it has been implemented. Also, have them determine how problem reports are handled. Have each student or student group report their findings back to the class, and compare and contrast the system support that has been implemented at each organization.