JANE BURKE  
Director NOTIS  
Northwestern University Library

Automation Planning and Implementation: Library and Vendor Responsibilities

In this paper I will move through the various stages of automating, bringing in aspects of human relationships that seem appropriate. My remarks are intended for librarians who are well past the beginning and are in the serious stages of planning—i.e., either writing the RFP (request for proposal) or evaluating or awarding RFPs. Sara Fine provided a good theoretical background for understanding resistance to change and why it happens. I would like to make a few specific applications of Fine's theory to libraries and library staff.

Planning Process

Generally, there are two very distinct stages of automating a library. There is a planning stage and then there is an implementing stage, and within each stage there are substages. The first piece of the planning process requires constant reiteration while moving through the process; answering the question "Why automate at all?" Be careful not to answer that question on strictly a professional librarian level without involving the political environment, without involving the worker environment, and without really understanding the reasons why automation has been chosen. Many have realized that, even though as professionals we might be vitally interested in the automation of libraries and might feel that it is extremely important to the future of libraries, we are not at all sure that the rest of the world sees it that way. In involving others in automation or in planning it means first understanding the philosophical and economic reasons for automating.
I believe that if libraries do not automate they are going to go out of business. Everything I have seen in the recent past tells me that the information industry is moving toward library automation very quickly. If libraries are not prepared to offer automated services, the information industry is going to do that for them. Whether you agree or not, you need to understand the philosophical reasons for automating and to have agreement on them before you can begin to sell the idea of automation to the other people who have to be involved in it. There have been several statements that can be used in various political environments about whether or not to automate. Ron Zarzara, the president of DataPhase and a nonlibrarian, has captured the essence of why to choose automation in some of the recent DataPhase literature.

I would like to give an example of why it is important to understand one’s reasons for automating. I work on a campus of 10,300 students, 30 percent of whom are graduate students, and with 3,000 faculty members. We receive calls daily from various faculty members who want to know why the entire collection is not automated. Northwestern University’s libraries only have 60 percent or about 1 million titles in the database, and many faculty cannot understand why records on the rest of the collection are not online. So we have to have a grasp of the philosophical reasons as we explain why we have not, even after fifteen years, been able to get the entire collection online while reiterating the commitment to automation.

Another question to think about very carefully is: ‘‘What are we automating?’’ This is another area in which I would urge you to have a lot of discussion and to reach a firm consensus to be able to share the reasons behind the decision with others in a consistent fashion. Perhaps you have decided that you are going to automate only one portion of your library. There are very good reasons for doing that. Perhaps you have decided that you need to have an integrated system, and there are very good reasons for doing that. To gain staff support for the decision to automate you must present a clear rationale for what you are automating and why, and give the rationale at each stage of the automation process.

This detailed planning phase is often a good time to involve people outside of library management. This might be the point at which to bring in the campus registrar or the city data processing director, or whomever in the political environment will have a lot to say about this change within the library. One of the reactions to change is resistance to change from the external environment as well as the internal resistance Sara Fine discussed.

In answering these questions about why to automate and what to automate, it is not too early to begin tapping the external environment to see who reacts, who squeaks when you say ‘‘turnkey system,’’ who has a negative reaction when you talk about getting rid of the card catalog.
Whom do you need to be concerned about as you try to make this change happen, not just within your library but in the rest of your environment? Part of the planning process is getting educated. As soon as you decide it is time to begin educating some of the staff about library automation, it is time to enlarge your thinking and understand that you have to educate all of your staff.

Staff Involvement in Planning

Much of the resistance to change comes because we do not involve levels of staff early enough. Staff members are aware when things are going on among the management team or among the professional staff. We have not yet learned how to share that thinking early enough with paraprofessionals and clerical staff. It certainly might be too early to have them present an opinion about one system vs. another system, but it is not too early to help the staff learn about automated library systems.

Despite Fine's identification of fear of breakdown of relationships as the primary reason for resistance to change, there is a real fear about losing jobs. Particularly because many library processes are so labor-intensive in a nonautomated situation, it is very easy to have that fear under the surface that "I really am going to lose my job." That plus the certainty that as soon as there is a terminal in the department the entire social structure is going to break down are the two reasons that library staff develop a resistance to change, a resistance to automation, and a resistance to technology. Much resistance can be overcome by involving the nonprofessional staff in the planning process and by keeping them involved.

It is very easy to view library automation as solely a professional activity. We can think it is one of the provinces of the MLS degree, that we are the ones who work at library automation. But remember that from the time you breathe the first word about automation, your clerical staff are convinced that their jobs will change.

When I started in library automation, part of my job as an implementor was to quiet the people who were saying out loud, "It's just a fad, it'll never work; it'll never stay; it will break down and they will cart it away and we'll go back to the comfortable old manual systems." Workers today know that they can't say that, but they still are frightened.

In deciding who first to involve in automation planning, pick very carefully. Do not necessarily pick the person who is easiest for the management team to get along with. Pick the ringleader. Pick the person who has the most influence among the paraprofessional and clerical staff. Pick the people who are the most respected by their peers and who, as they become convinced, can help convince others.
I remember a story about a company putting together a committee to implement a change. They went to pick the eight best people from the clerical level and all of them said "not me..." "I'm not going to be involved." "I'm not going to put myself on the line among my peers." "I'm not going to appear to have sold out to management." Although it might be easier to get the person who management can get along with, that person might not help the cause. So, even if it is tough to convince them, you want to pick the people who, as they become aware of what automation can really do for them, will provide the best help.

These issues about involvement and who should be involved are part of the planning process. However, they continue all the way through implementation.

As the planning process continues, it is time to go out to test the external environment. The issue that usually presents itself to test the external environment is getting the funding commitment.

There have been instances where the library wanted so desperately to automate that they proceeded to automate and they never told anybody they were going to spend a half million dollars on automation. They suddenly found themselves with five or six real bids and no money. In order to proceed smoothly, and in order for the change to be accepted by the library's external world, you need to get a funding commitment as early as you can. That certainly means some work on your part. It means being able to sell your city, your provost, registrar, or your county on spending money for automation for the library. Do it quickly. It will not be as difficult now as it once was. Acceptance will come easier simply because there are so many automated libraries now and because so many other processes are automated.

You will not know how your environment will react until you test it. You probably do not want to run over to the city treasurer and say, "OK. I need $500,000 tomorrow." You should build a case; take someone to lunch, have some informal conversations, and as painful as it is, you should probably have some of those conversations with the people you feel are your biggest opponents. Do not delude yourself into thinking that opponents' concerns are going to go away. The people you choose not to involve, because traditionally the library does not get along very well with them, are the same people who will come around and bite you just as you are trying to award that bid and get started. Save yourself a lot of disappointment and face up to what is sometimes an unpleasant task early enough to know who your friends are and to try and make some friends where you have not had them before.
The Data Processing Director

One of the traditional enemies—either in the city or on the campus—is the data processing director. We all know he has other views about what the world should look like and that he (I've never met a female DP director) sits over there buying bigger and bigger equipment. He gets all this money and no one knows how he does it.

I would like to plead the case of the data processing director. In today's environment, he is getting a little bit lonely. Microcomputers across your city or on your campus have taken away a lot of his traditional work load. Each department now has its own word processors, its Lotus 1-2-3 and its dBASE III software. They are doing all those little jobs themselves. It is possible that the data processing director is feeling a bit threatened. He is not quite sure what he is going to do to justify his next computer upgrade which he has to have to keep up his prestige with the computer vendor. You might be able to help him out—at least that may be the way he looks at it.

Once you have checked out the political environment and determined how to resolve the political questions, do not keep this information secret. Many of us view the political job as the job of the director. He or she will take care of that part, and all we have to do is stay in the library and write our hardware and software specifications. That is not true. The entire library staff is going to have to deal with the political structure outside the library. Share your understanding of the political environment so that when the circulation supervisor is accosted by a board member's wife, he or she knows how to react to questions about the library's automation plans.

Consortiums

Another decision along the way in the planning process involves who is going to come along on this automated venture. And here I'm speaking particularly of the question: "Do we join into a consortium, or do we automate on our own?"

Consortiums take a great deal of time. If you feel it is worthwhile for resource sharing purposes to automate with your neighbors, prepare to spend at least twice as much time as you would if you were on your own. It takes awhile to get everybody moving at the same rate.

In 1973, when I was working in a library, I was part of the first shared library automation system in the country. It actually drove me into analysis. We would sit there and discuss the messages on our overdue notices to the point where I went absolutely out of my mind. And there were only six of us! Nobody could agree! I talked to a counselor who reminded me that you can only retain consensus if you hold the group together meaning that the group can only move as quickly as its slowest member.
In a consortium, any dollars saved on equipment purchases will be spent in time. You will spend time in joint meetings about what the database should contain. You will spend time and money on travel. The opportunity for resource sharing is tremendous and worthwhile, but it is a different process when you are automating with someone else.

**Flowcharts**

One way to keep your task forces moving is to flowchart your existing manual work flows. Flowcharting can get a lot of lower-level staff involvement because they are the ones who know all of these steps. You do not know that they file into the green box as well as the blue box. If they put it down on paper, it will help in specifying the automated system, and it might even help to simplify the manual system in the meantime. Flowcharting is a good group process; it holds people together, and it makes people communicate at different levels in the departments.

**Pictures**

At this stage in the planning process, many of the library staff cannot picture what an online system even looks like. If they have never used OCLC they probably do not understand the benefit of having that title file online. They do not understand how nifty it is to pull up a record, change a field, and store it back in the database. Maybe this is a good time to get a vendor to come in and do a basic demo on automated library systems.

When I joined CLSI in 1974, I had never touched an automated system. I did not really become a believer in library automation until I was bringing my first library online. The day we were going to run the first overdue notices I thought, "It's not going to work." And when that first overdue started to print, I actually said out loud, "It works!" If I needed that kind of confidence, so do people working in your library. Give them a feeling of what it will be like before actually running the first overdue notices.

**Locations**

While planning, remember that the computer and the terminals have to go somewhere. Look very closely at your building. Figure out whose life you are going to disrupt and work with them. Do not drive someone out of an office by simply telling them it is going to be the computer room. Work through the space planning issues as carefully as you did writing your specifications, perhaps even more so. Anytime staff feel they will have to walk farther or do more work or be inconvenienced you are asking for
trouble unless you involve them—i.e., inform them of the trade-offs. Once again, they probably do not understand that with the automated system they will not have to walk over to the shelflist.

Staffing

As you prepare to release the RFP, think about continuing-staffing needs for this automated system. Many libraries wait much too long to decide who is going to be in charge and what the staff organization will be. There are a number of questions: Who will be the person in overall charge of the project? Does that person exist on the staff now? If not, where can such a person be found? The answers are related to the decision whether to buy a supported software package, such as VTLS.

The people needed to maintain a turnkey system are different from the people needed for a supported software package. These differences affect budgeting and may require changes in the organizational structure as well as changing staff interactions. A supported software package with the hardware in the library might well require hiring a nonlibrarian systems staff. New personnel bring new kinds of personalities and also affect staff interactions.

In the organization chart the person called "systems librarian" should have interdivisional authority. The systems person has to be vested with both power and authority to implement the system across the library. Establish this responsibility and authority up front, before the system comes in the door. It is not easy to get consensus on this, and it takes a lot of work to determine to whom the person should report and how the power and authority are going to be underlined as well as who will announce the decision.

Vendors

Vendors are the other constituent in the planning process. After you've attended vendor demos and wandered around filling out cards at ALA, the vendors are aware that you are getting ready to automate. I think that you have the right at this stage to ask the vendors to help you in providing education. You also have the right to expect that they will respond to your specifications. But, vendors also have the right to refuse. While you are in the process of automating, the particular vendor might have twenty other bids sitting on the windowsill. There might be times when vendors simply are unable to do a demo on the exact day you would like.

As a profession, librarians tend to forget how small their vendors are in comparison to real-world companies. The largest firms in library
automation—e.g., CLSI, Geac—probably sell $25 million a year in goods and services. Large by our standards, but not very large when you consider that IBM in 1984 sold $48 billion worth of equipment. That makes CLSI 1/2000th the size of IBM. The library vendors are companies that have hung in with the library market, and are trying very hard to stay in it. We may need to protect them a bit.

Release of Specifications

When the specifications are finished, it is time to touch base again with the environment. What is it that the purchasing agent has to have on page one? What are his rules and procedures? What has to happen for him to allow your document to go out representing your city or your college? Purchasing agents are constrained by their rules and procedures, and you need to understand what they are.

Once you are ready to put this RFP “on the street,” form an evaluation team and keep the team in place. It is not easy to be on the evaluation team particularly in a consortium. It is natural that in evaluating multiple bids there will be some conflict on the team. Do some team-building exercises beforehand even if it means going out and hiring what you think is a “hokey” consultant to come in and do it. Get that group working as a team, because if you don’t, the process may never come to completion. If the evaluation team breaks down the whole process may break down.

Changing Stages

As soon as the RFP hits the streets you move out of the courtship stage. You will be inundated by vendor contact. It may seem that it will go on forever with all the vendors calling and wanting to help you automate. Eventually, you will pick somebody and the rest of them will go away; it can be awfully disappointing if you have not prepared yourself for ending up with just one vendor. Even after making your selection I would urge you to remember that all of the vendors have invested a little bit in your system. It is disappointing for a vendor to compile a 300-page bid response and never get a letter saying to whom the business was awarded. We get caught up in implementation, and we forget that we have asked people to respond to us and that we should respond to them. This is one of the areas where I am representing the vendors and saying, “At least tell us who got your business.” We keep track of how much business we get and how much we lose. If you don’t want to justify your reasons, that’s OK. At least send a letter indicating which system you selected.
Negotiation

Vendors are better trained at contract negotiations than you are. If they are any good they have done many more contracts than you have. This is not bad. It is just something to be aware of. It does not mean that the vendor will try to pull the wool over your eyes, but it does mean you ought to be prepared.

Understand that part of your obligation, as the customer, is to be the customer. Do not expect the vendor to sit at the negotiation table and represent you. Expect that the vendor has to represent the company. They cannot represent themselves and you at the same time. So have a person at the table who represents you. You might even read a couple of negotiation books as a team, and decide who will play good guy and who will play bad guy. This is the stage at which it is very easy to get sidetracked. Write down the big reasons you decided to automate and tape the list on the table. If you don’t, some relatively minor software feature may cause you to lose track of the things you really want.

In contract negotiation it is important to start every session by saying out loud what the ground rules are for the session. Make it clear what the goal is for today, and find out if the vendor will tell you what his goal is. Does the vendor hope to get closure, or does he want simply to discuss one point or another?

Implementation

Once the contract has been negotiated we move into stage two which is the implementation process. It is much harder to implement a library system than it seems during the acquisition process. After going through writing specifications, getting them out to vendors, listening to vendors’ responses, and seeing their demos, it would be pleasant to sit back and relax and “let the vendor do it.” It’s not that simple.

One of the first things to do is to ask the vendor to come in and set expectations with you. Every vendor has rules and procedures and ways in which they work with their customers. Vendors have developed these procedures from work in a number of installations, and it helps to have them sit down at the table and say, “This is how we work. This is what we’re going to do, this is what you can expect us to do.” Do this early, so your expectations and the vendor’s expectations will be aligned from the time that the first terminal comes in the door. The worst disappointments in library automation have been when the library expects one thing and the vendor expects something else and they have never talked about it. Be sure you have a very clear statement from the beginning about who is responsible for what. If the vendor said they were going to load the database does
that mean that the vendor actually will change the tapes themselves? Probably not. It probably means the vendor will give you software to load the database. Is the library responsible for certain kinds of expenses such as coaxial cable or is the vendor responsible? The software function was a major part of the evaluation process. Now is the time to determine how that software function gets implemented.

At this point, the vendor probably has a priority different from the library’s. The vendor wants to get paid. You need to keep in the back of your mind that the vendors really are in this for the money. There is no nice way to say this, but vendors need to take in money to pay their staff, their light bill, their stockholders, and to meet other expenses. The vendor is concerned about your implementation not only because you have a wonderful library, but also because you are a paying customer. Be sure to avoid disappointment by understanding exactly the payment terms stated in the contract. Sometimes I think we negotiate a contract and do not understand that when it says “within 30 days of invoice” it means within thirty days of invoice, not when the library’s investment matures in 120 days.

After setting expectations with the library and the vendor, the library management team should present the results to library staff. It is easy for this to be another one of those points when the management team pulls into itself and announces to staff in a short memo, “We have selected XYZ’s system.”

Try to share with library staff the details of expectations and operating procedures as soon as you know them. Staff members are frightened as you begin to schedule training because they have no idea what it is. Does it mean fifty people sitting in a room with one person making them take notes? Does it mean that five people are going to work at a terminal? Does it mean the trainer is going to be there three weeks, two days, or never at all? Staff need to know what training is for and how it will work. Staff need time to picture for themselves what the training situation will involve. What is it going to be like to have an outside person judging their skills? If you have ever watched a training process, the very first person to sit down at the keyboard deserves a medal because he or she is always so frightened. There is an expert standing by saying, “Press the clear key” and the trainee cannot even find her or his hand much less the clear key.

Crisis

Expect a crisis. For example, the electrician has started to put electrical cable into the computer room and discovered there are no more circuits available or expect to put the air conditioner in and find there is no water line to get the water cooled or expect that the terminals are now going to come in June not in January. Expect that the director retires. But there will
be some kind of crisis. If you are very well prepared you will have talked through how to react to a crisis earlier. If you have not prepared for a crisis (and most of us have not, as we want to believe that things are going to go well), then your first action in the crisis should be to gather the team together and talk it through.

Talk through how to respond and calm one another down. Try to look at this in a relative fashion. Just because one terminal arrived broken does not mean the entire process is going to fail. Put things in perspective. Everybody is edgy, and the crisis can either drive you right off the end of a loading dock or it can help you come back together with a little more sanity.

Keep up the involvement of the nonprofessional staff while installing the equipment. Usually you have a choice of types and styles of equipment. It is important that the people who will be laying their hands on this equipment be involved in the choices. Give staff some options, if you can, about terminals. Do they want color? Laser scanners? Left-handed keyboards v. right-handed keyboards? As you move toward getting the system implemented (because you promised the mayor it was going to be up for his birthday) it is easy to make these decisions unilaterally.

Remember that you are not the one who will be using the terminals regularly. We did an evaluation of color terminals at Northwestern, and I was surprised that not everybody likes color terminals. I love them, but a lot of the staff felt that color terminals did not add to their productivity at all. We would not have known that had we not put a terminal out and allowed staff to use it while we made equipment decisions.

Make this kind of decision as slowly as you can so you can get a lot of feedback. These are the people who can tell you whether you should put that electrical socket underneath or to the side because they know how they like to work. Give the staff a chance to think through their work flows as you set up the equipment. Do not select a date-due-slip printer if the staff absolutely hate the way it tears off paper. They will discover that the printer does not tear off paper properly and they will not get it fixed so it will never be used.

There is a tendency to believe you can have a very tight implementation schedule and to promise people in the library's political environment that you can keep to that tight schedule. This may work provided you are realistic. Do not expect more of your staff than is reasonably possible. Even though your vendor can load your file and get your terminals in and implement the system in thirty days, can your staff really be ready to go online in thirty days? The best strategy for announcing schedules is to have a fairly tight schedule internally—one that takes into consideration learning time and time to get started—but not to commit to that tight schedule outside the library until you are pretty sure it is going to come off.
Otherwise, you might find yourself driving the staff to keep the mayor happy when really what you need to do is add an extra month to the implementation schedule.

When you go online for circulation, watch out for something I call "online syndrome." Everybody is all shaky about circulation and the first day or so everybody is kind of spastic. As the first week goes along, people will get comfortable. They will learn that they really can get that book under that laser or they really can hold that light pen. But they are not really into circulation that first week. Staff are simply checking out books, and there is not much going on in the internals of the system. Staff get comfortable and they think to themselves, "Why, I understand this. I really can circulate books."

Then the system begins to do its job. It begins to make people delinquent, it charges fines, it sends overdue notices. It does all these things and the staff does not understand why. As much as you discuss "circulation parameters," the staff do not understand that 50 cents a day is coming from this parameter over here. Management needs to get involved at this point and hold the staff together because the staff are scared to death that they will never understand what is going on. This is the point at which they need a review on why all this is happening.

Postimplementation

Be careful of the postimplementation mentality. Once the staff gets those new work flows straightened out, they will never want to change them again. The resistance to change does not alter, whether it is a new automated procedure or simply the first automated procedure. This is the point at which the systems librarian comes in again with the authority to help staff work through changes to the automated procedures. Procedures have to mature as the system matures in the library.

Perhaps the best example I have is that Northwestern University Library went online for automated circulation in January of 1970. In 1985 we went online for circulation again with a brand-new circulation module and it was awful. Everything that had happened the first time happened again, if not worse. People were not any more comfortable with the new routines than they were fifteen years ago. The need for vigilance does not change just because the library has had automated systems before.

Summary

Automation brings with it a lot of change. It changes staff relationships, it changes staff involvement, and it changes the ways things are done. But it doesn’t change the people. Planning for and implementing an
automated system is best done while keeping in mind these changes and their implications for the people involved.