Planning for Automation

Susan Epstein

I am probably going to touch on some things that Dick Boss has mentioned but hope to do them in a little bit more depth, as they involve the planning process. I will agree with Dick that automation will not solve all of your problems.

Costs

One of the problems of libraries is that they do not seem to know very much about real costs. We figure that if we have people on the staff already, they are free. If we have to hire somebody else, they cost. So we do not look at cost quite the way the business world does, and that is one of our failings. When you start to talk about implementation, be brutally honest and start talking about the real costs. The real costs are not just the cost of the hardware or the costs of programming when you are putting the system together. You may be paying for a consultant. You will certainly be paying for training time, you may have some site preparation, and you may have telecommunications costs. Those things cost money, and so does lost productivity as you run a manual system and an automated system side by side, or lost productivity as you have to take people away from one to get ready for another, or to train for another. And if you can't afford all of those things that the implementation costs, then you have absolutely no business buying an automated system.

Look into your library and your operations. Why are you doing this? If you don't know, stop. It is not necessary to do everything at once. I certainly would recommend that you do not do everything at once. There is nothing more likely to produce chaos in a library than implementing a circulation system, a COM Catalog, and a new acquisition system all in the same fiscal year.

Looking Ahead

How do you see your library? We tend to have a vagueness of vision. We don't look at what we will be doing five years from now. This is a very good time to do a whole goals statement for your entire library. Now, when you are trying to make a decision whether to buy OCLC or not, somehow the idea of going into goals assessment seems a little overblown, but start thinking about what your library is going to be doing five years from now. The automation of a library is quite likely to be the largest one-time expense that any library will ever undergo, short of building a new building. When you build a new building, you always figure out why you are putting it there, what you are doing, what kind of

service you hope to be offering in five years from that building. Too few people do that with automation.

Do a systems analysis on your operation. Your solution is not always automation. There are a lot of manual things that you can do. Now, to be honest with you, however, it is very difficult sometimes to get someone to switch from a blue file to a green file if what you are doing is changing the manual operation. Some person has to take the blame for that change, usually the systems analyst or the director of technical services or the director of libraries. When you make the change in conjunction with automation, you have an advantage, because the computer can take the blame and the computer does not care. This is an asset that has been used over and over again.

The Routine and the Exceptional

When we look at library automation, library operations today, manual operations, you will find that almost everything we planned was planned for the exception. You start looking at circulation. We use the circulation system now primarily to know what does not come back. In most public libraries today without automation, we get about 95 percent of our books back anyway, but we have to go to all of the trouble of keeping all the records for those 95 percent simply so we can find the 5 percent that do not come back. The idea is to get those things automated which happen most frequently done fastest and best and cheapest, and you will be left with some things that will have to be handled manually, but expect that.

Start looking at who does what in your operation that you are trying to automate. It is quite likely that you can break the job into many pieces which require different levels of staff. With a manual system we tend to use the highest level person necessary to do all parts of the function, but the computer helps you to break functions down. You may be able to use clerical and para-professional staff to do the routine, only leaving the exception which requires professional judgement for a professional. The computer helps to identify those exceptions, which is one reason it makes it much easier to use differentiated staffing.

Learning from Others

Talk to other librarians, find out what they have done, what they would do again, and what they did best. So many people ask librarians who have already automated libraries, what did you do wrong? There is something in that question which implies that they did not do much right. Ask them what they did best. Do not criticize their decisions; you were not in their shoes at the time. You can learn a lot from them, you can go home shaking your head saying I will never do what they did, but use some professional courtesy and do not criticize them directly for what they did. You will not get good information from them if they are always on the defensive.

Do not duplicate what somebody else has done just because it worked for them. Your situation is probably not identical to theirs. You learn from them, but do not simply go out and buy one of those. Do not chase technology forever. If there is some one thing that you particularly want and no one can do it for you now, wait. But do not keep chasing the next model computer forever. You could end up with no automation, no improvement, and still be waiting five or ten years from now.

Working with Library Staff

Make your expectations realistic. Automation will not solve all your problems, the vendor will not be perfect, you will not always be precise and clear to the vendor, you will not have error-free operations, it will not save you a million dollars in the first year of operation. The more realistic you make your expectations, the less likely you are to be disappointed. We talked about knowing yourself and your operations. One of the vital components if you are going to do that is working with your staff. And I mean ALL of your staff. You need to work with them from the very beginning so that they can feel more comfortable about what is coming and they will feel a part of it. There will be some changing of jobs. I think in many operations what happens is, for instance, in a clerical operation libraries which tend to have three levels of clerical operations tend to lose the middle level. There is the person who still wraps books, which still may need to be done, and the person who deals with the exceptions, but the person, for instance, who types catalog cards may disappear.

One reason why it is vital to work with the staff does not have anything to do with morale or how they will feel about implementation, but it has to do with some very practical down-to-earth reasons. Your staff has a great deal of power, and that power is the ability to withhold information from you. If your staff feels threatened by what you are doing and you or a systems analyst goes down to technical services, for instance, and says, "Do you use that file to do job A?", the staff member may say, "No, I don't use that file to do job A." So you then decide on a new way to do the job so that you can get rid of that file, which you proceed to do. About a month later, you find out, after you have already destroyed the file, that the file was used to do job B also. But you didn't ask the specific question because you really never conceived that it was being used for job B. You had not encouraged an open communication with staff and they didn't feel that they had to give any extra information to you. First of all, they did not even know why you wanted that information.

Writing Specifications

Once you know that you want to automate and have a pretty good idea of what you want to automate, it is time to get down to the details. Those details need to be transferred into specifications. It is very important that you write the

specifications for any automation you do, even something as basic as OCLC, because that will at least make you formulate your thinking into very precise terms. When you write an RFP, a Request for Proposal, you generally have three parts. One is the functional specifications. They say what you want the system to do, and in this area it's very important that you talk to your vendor about what you might want to do in the future. You tell vendors exactly what you are planning and, incidentally, when you get down to the end and you have already negotiated the contract, please tell them what you have chosen.

You also are going to have to deal with contract provisions, and these often come from your purchasing department. There is a very, very delicate line that you have to walk with the purchasing department. They can be extremely helpful. They become a third party in any kind of negotiation and they can help you do things that are standard. On the other hand, they can hurt you a great deal. Most purchasing departments have never participated in the purchase of anything like a turnkey system.

They are accustomed to listing mandatory and optional functions, you can get into real trouble here because when you are buying a turnkey system it is pretty much on a take-it-or-leave-it basis. You may be able to negotiate some special features with the vendor, but mostly you are going to take what comes off the shelf. That, of course, is what makes the whole thing feasible. If you could not buy off the shelf, it would cost twice as much, so you are trading some customization. Look at all your needs and see which vendor comes the closest. The other thing that you have to watch for is the lowest bidder. You want to get away from the concept of low bid being the only factor in your choice, because it is not. You are going to have to also consider performance and you are going to have to consider features.

When you are talking about costs in the RFP make it very clear that you want to know more than just the original purchase price cost, but that you will consider operating costs over at least the next five years. Make it clear to your vendor that you are willing to pay the extra initial cost if they can reduce the total cost for five years, and make that part of your operating costs when you are figuring what your system will cost you. Put into your RFP everything that you want and be as specific as possible. Do not make your vendor guess. Do not ask for things which are contradictory. You are not going to get responses or you are going to get responses back that are not to your liking. Make sure you mention all interfaces that you would want.

I mentioned functional specifications, I mentioned contract specifications, and the other concern is performance specifications. This is where you tell the vendor how much, and how often, and how fast you want it back.

It is necessary to put these specifications in the RFP because that is what determines what kind of computer you get. The vendor, very naturally, will try to sell the smallest configuration that will do the job, because we are so conscious of price and that is the only way the vendor can keep the price down. If a vendor specifies a larger computer, a higher price than everybody else may

be expected. You also need to be very precise in these specifications because they are going to end up in your contract and they are going to end up as part of your acceptance test.

Two Kinds of Tests

In your RFP there are two types of tests which you must insist on. One is called the benchmark test. A benchmark test is a test where you run the computer, not on the equipment you have bought but on the equipment supplied by the manufacturer. You run it with simulated files and try to see how many transactions an hour you can accomplish, you see if you can do the average number of transactions for year one and then you try do do the peak number of transactions for year one, then the average number of transactions for year five and then peak number of transactions for year five, and if the system cannot do it, with the configuration proposed to you, it will not work in your library. This should be done before any equipment is delivered and the contract signed.

The other thing you are going to want besides the benchmark test is the acceptance test. That is a little different. It happens in your library on your equipment. Ideally, a great deal of the money in a contract should be withheld until after the library finishes the acceptance test. Just be reasonable on this. The vendor must pay the equipment suppliers and has put money into your contract before you ever start to pay. You do not want to hold your acceptance test for two or three years until you can do your conversion, as I have known libraries to want to do. On the other hand, recognize the fact that you have almost no leverage left once you have made the last payment. Your relationship, for instance, with the circulation vendor when the last payment is made will drop dramatically. So you have to hold back the money as leverage until the acceptance test is completed. The acceptance test includes the same kinds of things I mentioned for the benchmark. It also looks at all of the functions and looks at downtime on the system and it looks at the performance rates and the response time.

The response time is vital in automated systems. Those of you who use OCLC have an instance of poor response time if you ever sat down at a terminal at 11:00 on Tuesday morning. With the circulation system, for instance, if the response time begins to get slower and slower and slower, the result is lines of people waiting to check out books, and that's not too great for the public image. You've got to make sure the system can do what you need it to do. Now, once you have told the vendor what it is you want the system to do and how fast and how many, it is not the vendor's fault if you decide two years from now (because you have a little extra capacity) to add four neighboring libraries and the system still runs, but then you grow up to your fifth year projection and suddenly your system slows to a virtual walk. That is not the vendor's fault. It is your fault because you never mentioned that you were going to add the four new libraries. And they gave you the size computer needed to do the job you told them you were going to do.

Bidding

Always go to bid. In any kind of situation, except, for instance, the OCLC choice where you do not have one. Even if you have selected a vendor, go to bid. You will get a much better price from that vendor in a bid situation than you will if you just walk in and say, "I want to buy your circulation system, how much is it going to cost?" "I want to buy your COM catalog. What kind of price can you give me?" You will always get a better price in a bid situation. It is also cleaner; you can avoid all kinds of legal problems potentially. You may decide that only one vendor can possibly fill your needs and so you do not go out to bid, and sure enough, out of the woodwork comes another vendor who says, "oh yes we could have," and you can end up in a suit. There are several pending library automation suits which have now gone on for four and five years that are now in the courts of appeal. Do not get yourself in that trap.

Watch the language of the response. Dick mentions "we understand the acceptance test." There is another classic which has to do with looking at a functional specification that says, can you do this, can you do that, can you do this. The response that comes from one vendor traditionally is, "provision has been made for." Now, I will bet to you that sounds like they can do it. Right? No. What that means is if they have not thought of anything or done anything yet that means that if they ever wanted to do that they could not. It is the worst type of implementation that the vendor has. The only thing worse is "we are not going to do it, we never will do it, we have done something to our system that means we cannot do it." That is one of the things that consultants know because they read these comments over and over again. When you write your specifications, give the vendor a language he must use to respond. For instance, in functional specifications, you should list the functions that you wish and then give the vendor a choice of perhaps six possible responses and tell the vendor that every other response will be considered as "we do not have it." In operation at limited libraries means "it is available for all libraries, but only in operation of some." In test means "at test site libraries." The vendor should name three and give the date of expected release. Be very specific and get specific answers back from the vendor. The vaguer you are, the vaguer the vendor knows he can be.

Contracts

Never, ever sign a standard contract. It is the vendor's wildest dream; it is the best they can ever hope to do. They do not think they can get away with one more word than what is in the standard contract. Do not ever sign it. Get a lawyer in on it. I have known libraries which have signed contracts for hundreds of thousands of dollars worth of automation without ever having a lawyer look at any of the contracts. Both the RFP and the response should be made part of the contract.

In-House Systems

One of the things I was asked to talk about is what about working with inhouse systems, developing your own. Most people today are using turnkey systems. First of all, what is your relationship with your data processing center? How important do they consider the library? If you are very honest, in most public library institutions you are about the lowest priority. Make sure that the data processing center you are working with has had experience with large scale data base management systems. Many of them have not. In some cases, what we have needed is a computer person, a library person, and a translator in the middle. And that will cost you money. What are you going to do about chargebacks? How much are they going to charge you for all of this? And what are you going to do about contract and delivery? I mentioned when I was talking about contracts about putting penalties in for non-delivery for a commercial vendor of COM or circulation or acquisitions. Most people do not have a position where they impose penalties on their own data processing department. You may end up three years from now with something which is still just a gleam in some data processing manager's eyes. There is a compromise between having a city or academic data processing center do everything and not doing anything at all, and that is to have them help in running your installation. You buy the turnkey system and have them operate it. That has worked very successfully in a number of institutions. They may have the site ready, a computer room with a raised floor and proper environmental controls. They have people who are used to dealing with electronic data processing contracts, who can help you a great deal. They may have staff on duty twenty-four hours a day, seven days a week which means that things such as overdue notices can be done in non-prime time. You may be able to share their personnel and only pay for the actual hours worked instead of having to hire a whole person.

Implementing the System

When you actually begin to implement your system, put one person in charge, no matter what kind of automation you are talking about. This person should be as high a level a person as possible and the more that this system impacts on the library, the higher the level of person involved. When you are implementing a circulation system, the ideal person for this position is the library director. However, the library director usually has a few other things to do. So this person who has been put in charge of the project must have the confidence and the authority given by the library director. This person must truly understand the current manual system and all people who are involved in it, and of course they must understand the new system thoroughly. The person has to be persuasive, personable, and actually a paragon. This person more than anything else involved in the system will probably make or break it.

Market your system to every one of the stake holders you can find. You have done something different. Do not hide it under a bush. Make it something that you can be proud of. Let the library board, the trustees, the city people, the academic people, professors, students, the public know what you have done. Let them know how far-thinking you are. Let them know why you have done it. That you have done it to enhance service, to help them. They will be pleased to know that you have thought about them; we are so often accused of never thinking of the public. If you have done it to save money, they will be overjoyed.

Susan Epstein is presently a consultant in Costa Mesa, California.