EVALUATION: THE ADMINISTRATOR'S PERSPECTIVE

Evaluation

As may every speaker today, this one will begin with a brief discussion of the word evaluation. Evaluation entails that whatever is under consideration be treated with respect to some external values or standards. It necessarily means that one is bringing to bear something external to the given situation, condition, decision, practice or experience. The data itself is not self-evaluating, it is just there. Only by virtue of the values or criteria being imposed are the data interpretable, and such judgments are made as: success or failure, good or bad, efficient or wasteful, and on-time or late.

Whatever is the subject for evaluation, in this case the automated system, has brought to bear upon it a set of conditions or standards which will provide the basis for judgments about it. The administrator will bring an unique set of criteria to his or her evaluation, criteria which may be similar in part to those of the project manager, the vendor and others, but ultimately because of the external factors bearing on the administrator's role in the library, criteria for judgment which are different from all of the rubrics imposed by others who are participants in or related to the project.
What this speech will be focused on is this special perspective of the library administrator, and those values or concerns of the administrator which will shape the administrator's evaluation of the project. (Note here that administrator always will be taken to mean library director.)

Evaluation as a Function of External or Non-Library Factors

Each library employee has his or her own role to play in fulfilling the library's mission, and its charge from its constituency. The accountability of all of the employees, except the administrator, is internal and to a supervisor within the organization. But the administrator is accountable externally, depending on the kind of library, to one or more of the following, a mayor, academic president, board of trustees, faculty committee, and so on.

Also being the chief administrator of the library, the administrator will have accountable to him or her all of the library's staff, and on a direct basis those people who report directly to him or her. Thus the administrator, as with the rest of the staff, has to be concerned with the internal operations of the library, yet unlike everyone else, is accountable to one or more people outside of the library.

This puts the administrator in the position of negotiating his or her accountability, funding, etc., in principle, with people who are not librarians, who are not intimately involved with library operations, and people whose chief and primary vocational concern is not the library.
This should not be taken to mean that such people's jobs are unaffected by the library's performance. Just understand that the concern of the mayor or city manager is that the library create no headaches, and that he or she be left to deal with the public's major issues, such as taxes, public safety, sanitation, and fighting communism.

Taking this one step further, we see that those to whom the administrator is accountable will usually want to limit their dealings to only general or the most primary concerns, and particularly those matters which create a special exposure or vulnerability for them. This leads us to the heart of this presentation.

**The Automation Project**

There is no doubt that with the possible exception of a building project, there is no more closely scrutinized, danger filled enterprise for the library administrator than the automation project. It is suggested that unless the building actually falls down or some other such catastrophic event occurs the building project is less danger-fraught for the administrator than the automation project. Accommodations almost always can be made to make a building salvageable and livable.

This all too frequently is not the case with automation projects. Both from one's experience as an automation consultant and a librarian, one has seen how utterly devastating a failed automation project can be. Three instances come to mind.
Degraded System

In one case almost all of the kinds of transactions being performed on a system had to be suspended at peak and near-peak circulation periods to ensure that the response time for charging out materials would keep the charge-out lines inside the building.

The public on a daily basis knew how badly the system was operating. Waiting with a crying child to charge a book out, waiting on line and worrying about a cop ticketing one's car, or being in a hurry or impatient for any of a number of reasons or no reason at all, the public is forced into the indignity of waiting longer to borrow books from the new automated system—which was supposed to bring about a state of nirvana—than the antiquated old rickety manual system that supposedly failed in so many ways and just had to be replaced by the magic of the computer.

Failed System

In another case, outdated equipment and software contributed to major crashes that shut the automated system down for days on end, lost track of overdues and generally failed in ways imaginable only in one's worst nightmares. The system crashes and downtimes became the subject of regular newspaper coverage. In this kind of situation the non-library users get involved and the exposure is dreadful most especially for the administrator, but also for the rest of the library staff and everyone associated with the library with whom any of the public has contact.
Badly Outdated System

And even where everything goes right, the system does everything it should, and such other good things, one finds that the system and database have through an evolutionary process (if one can view computer technology's metastasizing growth evolutionary) become inadequate by the most modest of 1987 standards.

Those libraries which automated their circulation systems in the early or mid-1970s, and created databases of truncated or otherwise less-than-full MARC records, must now go back to their funding agents and say that they need another retrospective conversion project. It is no one's fault that the hardware and software capabilities of our time so grossly exceeded the standards of the mid-1970's when such systems were common.

Nonetheless the administrator must explain why the request for funds for yet another conversion project are necessary, and for that matter why the library is buying a whole new system (either through a major upgrade so massive that it effectively is a new system or purchase via RFP of a replacement system). This upgrade may be especially difficult for the administrator to justify, not because of failure, but because of the success of the previous project.

The existing system may have been working beautifully over the years and continue to do everything it is supposed to do, and do it oh so well.
Nonetheless the administrator is in the position where he or she becomes quite vulnerable to the slings and arrows of those who fund the library and to whom one is directly accountable, as well as the general public, for asking for money to fix something which to few but the library staff does not appear to be broken.

**No Fun to Be an Administrator**

Without further belaboring the failures, the normalities or even the success of automation projects, the exposure of the administrator invariably is great. The amounts of money involved are always substantial, and for public libraries automating the circulation function and for all libraries automating the catalog, the library’s users, better known as the public, are intimately involved. The big money and the public's regular involvement plus some additional factors to be discussed later, combine in the automated system to introduce a considerable stress level for administrators which will age them rapidly.

**Why an Automated System?**

The paving for the road to hell for the administrator begins with the automated system. It used to be that elaborate studies and pilot projects were necessary before an automated system could be developed or implemented. "Used to bell applies to the days when libraries did their own automating and developed their own systems. It was something like what Cutter called the golden age of cataloging, only this speaker has characterized it as the golden age of library automation.
The success of OCLC in the early 1970's pretty much eliminated most local system efforts. Coupled with the success of the turnkey systems from the mid-1970's on, few if any libraries have developed any bibliographic control systems on their own. As an aside, the introduction of microcomputers has found the library back in the local application game, but one is aware of no one suggesting that an off the shelf micro (i.e. Apple, Mac, or PC/compatible) be used for a locally developed MARC based system.

As foolhardy as it might seem, it is suggested that there is no need for elaborate studies and pilot projects to justify automation projects at this time. Such spadework may have been justifiable years ago, but no more. Whether a study is done by the library staff or by a consultant engaged by the library, there has to be a limit on its extent. Simply, the technology is changing far too rapidly for multi-year studies or pilot projects. What great lapses of time will show is that the equipment considered when the study was begun will have been supplanted by newer, faster, and cheaper hardware at the time the study was completed.

Having dismissed over-elaborate studies and pilot projects, how does one justify an automated system? Several bases are available, any or all of which must have as their result that the administrator is convinced of the system's need.

Contributions to the administrator’s belief that the library must automate might be a study by the staff, a consultant, or the success of the library next door. (This must be taken very seriously: many serious
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and fine studies were required before several early members joined OCLC; but at a certain point, a given library could justify membership by simply saying that all of the other state colleges were members and it would be left behind.

It is from the justification for the automated system that the evaluation proceeds. Simply, was what the system was supposed to accomplish, accomplished. Other speakers will investigate more detailed analyses of the methodologies and processes involved in evaluation, but the emphasis here will be on the role of the administrator and how this person's evaluation is especially affected by those outside the library, and to a more limited extent, those inside the library. Both groups are important but involve wholly different problems, attitudes, and actions.

Evaluation Inside the Library

The administrator is responsible for the management of the library. Some administrators are most conversant with automation and others are not. The extent to which they get involved with the automated project manager usually is, but does not have to be, a function of how much they know about automation.

Formal Evaluation

It is absolutely essential that the administrator develop a system of formal and informal methods for evaluating the success of the project and the work of the project manager. On the formal end of things the
administrator should negotiate with the project manager some basis for reporting and accountability that provides several assurances to the administrator. And it must be underscored and understood throughout this entire discussion that evaluation is continuous and cannot be done solely at the conclusion of a project--such a one-time evaluation virtually guarantees a disaster.

First the administrator must be assured that reporting will be on a regular basis and provide sufficient information such that it is clear that the project is proceeding as agreed upon and planned. This of course presupposes that there is a plan with milestones that are capable of being discerned and judged.

E.g. the equipment is either installed by a given date or not; so many records have been converted by a given date or not; the machine room operator has been hired by a given date or not. It is critical that the implementation of an automated system be broken up into as many small pieces or parts as possible, such as the examples given, and then evaluated for successful completion.

In terms of accountability the kind of formal mechanism favored here is a written monthly report. The report should indicate that the targets for the month have been met; or, if not met, have comments indicating why they have not been met and when they will be. Further, any special or unusual circumstances should be noted, and some discussion should be offered as to how such circumstance(s) may or may not impact on the project. Lastly the project manager should meet with the administrator at least once a month so that they can review the written report together.
Note should be taken that the project may take slightly different directions or include results other than those originally anticipated or planned. This is not necessarily bad, but it is essential that the administrator understand the project's potential variability at the earliest possible moment because of the administrator's accountability to the external authority(ies).

Informal Evaluation

Assuming that the formal reporting process works satisfactorily, the administrator must use some additional means to test the success of the automated system's implementation and get some sense of, if not verify, the accuracy of the information reported. Strongly suggested here is an informal approach which is intended to complement the formal approach already outlined. This administrator finds that personally visiting the project site (especially a technical services area) is most helpful.

The visual inspection of the work force establishes several points. First, it demonstrates that the administrator exists and is not some mythical figure hidden away in a distant office.

From a morale standpoint it is good in that the staff is shown that the director has an interest in what they are doing, and depending on how the administrator presents him or herself, it also may show that the administrator cares about the staff, and is supportive of their work.
The original purpose for going on the informal visit might have been evaluative, but there is much to be gained by the staff appreciating the administrator's interest and concern in them and what they are doing.

Informal visits, especially if they are a couple of times a week will give one a good sense of how things are going and more importantly some means of validating the reports of the project manager. Visual contact on a regular basis (but not the same day and time each visit) will show that people routinely are busy or not busy; that backlogs of work are being created or that work is moving expeditiously; that response time is reasonable or clearly degraded (this is painfully obvious--people staring at a CRT waiting for something to happen is as obvious and disheartening an observation as a manager can make); and other such indicators that the system or project is having problems.

These visits should include informal queries of the project manager as to how things are going. Normally these queries will yield answers such as fine or okay. However this is an excellent opportunity as well to get the first inkling of developing problems or anomalies which will need further attention. These drops-in should not necessarily generate impromptu meetings, but as necessary, meetings must be scheduled if something unanticipated of real significance is occurring or brewing.

This informal evaluation process, as noted, is not intended as a substitute for the formal process but as its complement. The administrator is not to be a butt-in-ski, but is to be shown as someone who is both concerned and supportive. And most importantly, the
administrator should be getting a sense by the visits and the conversation as to whether things are indeed going as the formal reports indicate. All of this, of course, assumes a good, or at least civil, relationship between the project manager and the administrator.

Need for Quantifiable Results

Getting back to the formal evaluation process and the reports submitted by the project manager to the administrator, such reports must contain data which lends itself readily to judgment. Such data typically is quantitative data. As noted implementation schedules using dates or time periods, at least on the surface, are easy to evaluate. Numbers of cards converted, transactions processed, queries made, response times experienced, all tend to be reasonable indicators as to whether a project is on track or a system is working as it should.

To the extent one can, one is strongly advised to structure evaluation processes so that quantifiable data are obtained and can be used as a basis for the evaluation.

This point is essential in the administrator - project manager relationship. The administrator as the chief manager of the institution is responsible for projects working out as they should. Impressionistic information is not the best means for such evaluation. What does "it seems fine to me" buy for the administrator?
The Evaluative Framework

However "it seems fine to me" is okay if it is preceded by the evaluation measures all being met as agreed upon and specified. In this latter case it is not an impression it is a conclusion based on information interpreted within a given evaluative framework.

Substitute for the phrase evaluative framework the specific target dates established, quantities of converted records to be completed, etc. and the actual dates when work was completed, the amount of records converted, etc. The evaluative framework, thus, is all of the criteria, indicators and other means by which an evaluation is made of the project.

Administrator's Role Vis-á-Vis the Project

Before leaving the administrator and the project manager, additional salient points must be made. The first and foremost is that the administrator cannot run the project on a daily basis. That is the project manager’s job, and both the project manager and the administrator must understand that completely.

A weak project manager running to the director all of the time, or an overbearing director constantly intruding on the project manager's purview are both scenarios which will inevitably create problems if not disasters.

The project manager must enjoy the director's confidence and must feel free to make operational decisions. The project manager must be technically sound and control the project. The director does not have
to be a tekkie, but must reasonably ensure that the project manager indeed is in control of the project and that the project is generally proceeding as it should.

**The Big Picture or the Institutional perspective**

Additionally the project manager must understand at least in part what is at stake for the overall institution, and especially how the project fits in with the institutional goals. It is crucial to distinguish here between the project manager's understanding and the director's. Unlike the project manager's role, it most definitely is the director's job to see and comprehend the big picture—what the library is, where it is going and how the automated system will contribute to the library's getting there. The project manager's primary role is to make sure the project accomplishes its specific goals. It is nice and all the better if the project manager has the deeper understanding of the institutional goal, but it is not as characteristic of the project manager's job in the way that it is the hallmark of the director's job.

**The External Forces**

It is the director's broader view of the automated system that leads to the discussion of the key external players and how they bear on the director's role in the evaluative process. For a public library, the key players are the governmental people (elected, appointive and civil service) and the lay people (the board of trustees) who have a responsibility for the library. These two bodies must be pleased by the administrator, and it is they who in their respective ways judge the performance of the administrator.
Using the public library as the exemplar, we find two and perhaps three different categories of people concerned with the library. (It is suggested that analogues for these categories can be found in academic and other library environments, too.)

**Board of Trustees**

The Board of Trustees is the appointed or elected body which is responsible for the policies of the public library and to the extent that the Board functions well, it defines the basic directions of the library in consultation with the director. In principle the Board is not to be involved in internal operational decisions, but is assured by the director that such operations are in accord with library policies and consonant with the library's mission and goals.

Typically the Board is composed of lay people whose full-time jobs are not related to the library, but whose responsibility is to represent the community's interest in the library, specifically ensuring that the needs of the community are being served. The Board does not want to nor should it be involved with the management of an automation project.

However the Board is one of the bodies which must approve the development and implementation of an automated system, and usually the first of one or more groups whose approval is needed for the project to proceed.
What the Board Must Know

The director must convince the Board of a need for such a system; estimate how much money it will cost and whatever other resources are needed; show why such a system will satisfy that need; and in broad terms indicate how such a system will be implemented and made to work. These four points are crucial, and it is the director's job to satisfy the Board on all of them.

The Board is not interested in bits and bytes or in what the third clerk on the processing line will be doing. However the Board should satisfy itself that the director, the project manager or someone under the project manager surely does know such arcana. As noted the Board's approval of the project has to precede the approval of the appointed and elected officials. if the board does not find the project worth doing, why should the appointed and elected officials?

What the Civil Servants Must Know

The next step of approval usually is from a paid government employee. Depending on the community, the title of the person might be county administrator, city or village manager, or the surrogate of such a person, depending on the community's size. This person is responsible for the overall management of the community's resources, carrying out policy, laws and regulations in accord with policies defined by elected officials, statutes, etc.

Being delegated the responsibility of keeping within the community's budget,
putting together or signing off on capital programs, and ensuring that all purchasing, civil service and other proprieties of operation are duly followed, this person must weigh the needs of the library's proposed project against all of the other community needs, and especially against or, more pleasantly, in harmony with the requirements of all of the other community departments.

The city manager is at risk because he or she is recommending that a scarce resource—the tax dollar—be applied in an exceptional amount, i.e. a non-recurring amount, for the library. Normally there is much competition for such dollars, so the city manager must be convinced that the library knows what it is doing and that the library director can be counted upon to accomplish what it sets out to do.

Again the four points of assurance are needed for the city manager: a demonstration of the need for such a system, what it will cost, how the automated system will meet that need, and how the system will be made to work. Because of what the city manager is putting on the line, namely his or her managerial skill and the proper discharge of administrative responsibilities (e.g. formal purchasing requirements, civil service regulations involving new, specialized and/or additional positions), and probably most important, the judgment that this project is reasonable within the framework of the community's financial and human resources, the city manager becomes a major stakeholder in the system's success. Normally the project will not go forward unless the city manager is convinced of its viability and its value of the community.
The Elected Official

Be it a mayor, county board of commissioners, village supervisor, or some other such elected executive, title, this person is subject to the public's review on a regular basis, i.e. at each election. The person is re-elected if a good job is done, or, as is the case with our President, if he or she is liked.

The mayor must be assured that the project is good for the community, that the project will work, that the community wants the project, and most importantly at least for some of the pols (not necessarily all) that the accomplishment of the project can be translated into votes in the next election.

Taking this all into account, it is clear that the project must provide assurances on a continuing basis that the mayor's decision was a good one. Good meaning that the community is positive about the automation project and thus positive about the mayor.

The Formal Evaluation

Most notably of these three bodies, elected official(s) require the simplest formal evaluation. Did the project do what it was supposed to; was the money properly spent (and not overspent)

and is the public good better served, as promised? All three groups are concerned with these issues, but the mayor typically does not need much detail beyond these assurances, unless something goes wrong.
Showing the politician that the automated system is working well, and getting a picture or two in the paper with the mayor and a library user smiling in relation to the circulation system's happy operation, while keeping the financial and functional aspects safely accounted for, is largely the evaluation required--formal or otherwise that will satisfy many politicians.

The civil servant will want to be assured of everything that the mayor is to be assured of, but will take the director to deeper layers of reporting and more frequent reports. As noted, assurance that purchasing, civil service, budgeting and other requirements are being met routinely is most important to the city manager. Such assurances can be dealt with formally in relatively straightforward ways.

It is strongly urged here that the director carefully edit the report submitted to the trustees each month, and send a carefully edited version to the city manager and the mayor. (The monthly report to the trustees to which reference is made is discussed in more detail later.) Depending on how carefully worded that report to the board is, it might be distributed beyond the board without additional editing. The point of the editing is not so much to hide information from the city manager and the mayor, but rather to avoid burdening them with a level of detail that goes beyond the time available or the interest they have in the library.

In effect this is the formal evaluation the administrator offers to the external bodies to which he or she is accountable.
Following is further discussion of these external evaluations as well as some informal processes which the director would be most advised to consider.

**The Administrator's Evaluation in Outsider's Terms**

All of these people who are external to the library are concerned with the automation project as a part of their responsibility to the community, as either non-paid trustees, paid employees or elected officials. They all have other things on their mind—full-time jobs at home or out of the home, all or some of the town's operations to oversee or manage, or being the community's elected leader. With the exception of the library's board of trustees, these people have a broader area of concern than just the library.

The trustees are usually involved as an avocation, and one will be so bold as to suggest that for all but the very smallest libraries that is all that it should be. This means that the board's interest should focus on major issues and their resolution, and preclude its involvement on a more detailed level unless it has reason to believe such involvement is necessary.

Typically the board meets monthly with the director. A project of such moment as the implementation of an automated system should involve regular reports to the board about the project's status. It has been the policy of the Westchester Library System (my employer) that the director provide, prior to each board meeting, a written director's report.
This report contains a discussion of all of the major issues with which the director has been concerned the previous month and any other issues which should be taken up at the board meeting. Usually most of the items in this report are agenda items reported on in advance so that the discussion by the board members can be more informed. Invariably all significant library issues are discussed in the report or in accompanying documents.

This assures that the board is never more than a month away from any problem or rising concern. It is recommended here that the status of the project be reported on each month in this venue. The four major points--depending on what aspect of the project is underway--are the areas of **evaluation** that the director must provide to the board.

If a needs document is being prepared, its status should be reported to the board. If the cost analysis or fundraising is underway, exactly where that stands is to be discussed, and as the project is implemented, major targets should be outlined and progress toward their being met should be reported. This kind of evaluative information for the board is the first line of support the library must enjoy with the community.

The director must show the board that all is going well. When all is not going well, the director must not surprise the board to that effect, but again on a monthly basis establish some continuity for how things are getting to where they are and the steps being taken to remedy potentially unhappy situations.
More specifically the project manager's report and the director's visits to the project site are the raw material for the report to the trustees. How much to pass along to the board is not the easiest thing to recommend. Some boards can be meddlesome and demand to know everything imaginable; other boards may take the high road, only investigating or requiring more information when problems arise, or require such data on a random basis so as to ensure that the library staff is doing its job.

The Elected and Appointed Officials

Already indicated, these people require evaluations, and some variant on the director's report is recommended. That covers the ongoing evaluation and all but the final evaluation. it is strongly urged that the director meet on an informal basis no less frequently than monthly with the city manager to discuss the automation project and any other matters of concern to the library. This informal meeting will complement the written report submitted each month and ensure that there are no surprises for the city manager.

As to the elected officials, the written reports should be submitted so that a clear paper trail is established of what was to happen, what did happen, and why what happened is good for the community. The number of meetings, if any, have to be determined on a local basis. Some mayors take a deep interest in the workings of the city's agencies and want to be kept fully informed. Others may choose to keep their distance so as to ensure that damage may not be readily associated with them.
Their distance will never preclude an association with success.

The director must decide what is the best approach for informal contact with the elected official(s), and follow through.

**Ongoing Versus Final Evaluation**

Almost no mention was made of final evaluation. If the ongoing evaluations were carried out carefully and consistently, the final evaluation simply should be an outgrowth of them, and in large part a summation.

Hence the final evaluation is not in conflict with the ongoing evaluations, but should be a logical conclusion of them. The final evaluation should demonstrate how the goals were met, and what the costs were, consistent with the goals and costs which preceded the project’s implementation. The director by having provided all of these interim evaluations can show, each step of the way, how and where the project's objectives were satisfied or varied, and whether the budget was contained or not and exactly what kept it from being contained.

At the risk of belaboring this point, what is crucial is that variations were dealt with and resolved as they were occurring (or better yet, anticipated in advance of their occurrence), and all of the external stakeholders were told about them in writing at the time of the occurrence in a way that both informed them and afforded them the opportunity of participation.

As to the project manager, it is the administrator's responsibility to get a final evaluation from him or her.
The word final is used advisedly because automated systems are alive until they are replaced or shut down. Early in this paper examples were given of degraded and outmoded systems. The project manager must provide to the director a project evaluation, but necessarily must understand that the evaluation process does not end with the project's seeming completion.

It will not go without saying that the automated system's continued operation and growth must be evaluated, reported on and discussed for as long as it runs.

Although not in the same terms as the evaluations provided to the director by the project manager, the director must continue to issue reports, not necessarily as frequent, to the external authorities to whom the director is accountable.

In this way as the system shows signs of degrading or becoming antiquated, the director will be able to begin all over again the process for a new, enhanced or upgraded system.

And it is on this note that this discussion should come to a conclusion. Here we are proposing another automated system project, and starting the whole process all over again.

**CONCLUSION**

An attempt was made to provide some practical insight into the kinds of evaluation of automated systems with which the administrator must deal.
Practical advice was offered about the evaluation process for the administrator, but it has been to the other speakers to explore in greater depth detailed evaluation methodologies and processes.

Evaluation for the director involves people inside the library and outside of the library. A distinction was made between the evaluation the director requires of the project manager--the internal evaluation--and the evaluation provided to the people outside of the library--the external evaluation.

It was suggested that the internal evaluation include a formal and informal report system between the director and the project manager. Visits to the project site and personal contacts with the project manager and staff constitute the informal evaluative process which complements the formal evaluations. Evaluations is used the plural, because there is not a single evaluation but an evaluation process consisting of formal evaluations each month or more frequently as circumstances warrant.

The external evaluation involves the up-to-three outside authorities with whom the administrator must deal. The board of trustees, the appointed official (e.g. city manager), and the elected official(s). All of these folks should receive written evaluations from the administrator so that they are kept abreast of the project, and problems and successes are brought to their attention on a regular basis.

All three categories of people are stakeholders in the project, but the trustees are the community's official body for representing the community's interest in the library, and as such
may require greater knowledge than the other two categories of stakeholders. In any case the director must provide evaluative information on a systematic basis and give neither the appearance nor the substance of withholding such data.

Lastly informal contacts are important, and the board and appointed official should have the project and any other important library related issues discussed with them on a regular basis, wholly above and beyond the written reports already suggested.

As to the elected official(s), personal meetings are a delicate matter and must be handled on an individual basis. However if the director senses that there are major problems brewing, it would be most advisable to meet with the elected official(s). The paper trail as outlined in this discussion should have provided a foundation for the meeting and whatever difficult news the director is to bring.

This discussion will have had some value if the administrators in the audience have gotten a clearer understanding of the kind of evaluation process they need to have with the project manager and how to achieve that process, and the kind of evaluation they should offer to the people to whom they report, the library board of trustees, the city manager, and the mayor, and a means by which to present the evaluation to them.

In sum, automation projects are a major undertaking. If they are not to be just that, undertakings in the mortuary sense of the word, the administrator must understand these several evaluation processes. Good luck.