

# RMG Consultants, Inc.

Papers on Library Automation

## Preparation of Librarians for Library Automation

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Table 1 outlines a typical set of tasks for acquiring and implementing a turnkey, integrated library system. Clearly this is more work than a single individual can accomplish and introduces my thesis that organizations—not just individuals—must be educated and prepared for library automation. What competencies are required of librarians and library organizations to do such work? Table 2 lists major knowledge, skills, and attitudes that I believe are useful in planning and implementing automated library systems. How might these be gained?

**Table 1**  
**Typical Library Automation Project Tasks for Acquiring and Implementing an Integrated Online Library System**

___ 1.0	___ Administer the Project
___ 2.0	___ Issue RFPs for System and Services
___ 3.0	___ Organize and Staff Project
___ 4.0	___ Prepare Project Control Documents
___ 5.0	___ Receive and Evaluate Proposals
___ 6.0	___ Develop Conversion Schemes
___ 7.0	___ Negotiate and Execute Contracts
___ 8.0	___ Develop System Implementation Plans
___ 9.0	___ Provide Specifications for Site Preparations
___ 10.0	___ Prepare Sites
___ 11.0	___ Provide and Install Hardware
___ 12.0	___ Provide System Documentation
___ 13.0	___ Provide and Install Software
___ 14.0	___ Install Telecommunications Circuits
___ 15.0	___ Provide for Overall Conversion of Data
___ 16.0	___ Provide User Documentation
___ 17.0	___ Provide Training
___ 18.0	___ Provide Supplies and Labels
___ 19.0	___ Provide Conversion
___ 20.0	___ Decide on Policies and Parameters
___ 21.0	___ Provide Interfaces to Other Systems
___ 22.0	___ Provide System Backup
___ 23.0	___ Perform Acceptance Tests
___ 24.0	___ Provide Ongoing Support and Maintenance
___ 25.0	___ Provide Technical Support
___ 26.0	___ Conduct Production Operations
___ 27.0	___ Provide Future Expansions

**Table 2**  
**Knowledge, Skills, and Attitudes Useful in Library Automation Projects**

- Knowledge of Libraries
- Knowledge of Fundamental Concepts of Data Processing
- Knowledge of Automated Library Systems and Services
- Ability to Communicate Well, Orally and in Writing
- Ability to Work Well with People
- Ability to Analyze Complex Issues and Problems
- Ability to Define, Plan, Schedule, and Manage Project Tasks and Activities
- Objectivity
- Willingness to Learn
- Task-Oriented Work Habits and Personal Discipline

Through formal education, reading, attendance of conferences and seminars, programs of continuing education, and on-the-job experience, individuals can gain knowledge of libraries and data processing, and the skills of communication and problem-definition and analysis. What I believe is lacking in traditional programs of library education is development of:

- Skills to work well with people, and
- Abilities to define, plan, schedule, and manage project tasks and activities.

Table 3 characterizes data processing as “ruthlessly objective”—opinion, emotion, and politics will not change the nature or facts of data processing. Problems and choices relating to data processing should be dealt with by individuals on a factual basis, with the same kind of rigorous objectivity one hopes to find in a research scientist, judge, or systems analyst. Dealing objectively with complex situations and problems can be learned as a by-product of formal education or on-the-job experience, or perhaps received as a natural skill.

Because library automation, either directly or indirectly, can affect everyone in the library's environment — staff, users, and others — it requires frequent and regular communications about problems and changes. Tables 3 and 4 emphasize the importance of effective communication and reporting by both the individuals and the organization.

**Table 3**  
**Data Processing Is:**

1. Ruthlessly Objective  
Know the difference between:
  - Opinion/Emotion/Politics  
    and
  - Fact
2. Complex  
Communicate:
  - Precisely
  - Broadly
3. Dynamic  
Report:
  - Problems
  - Changes
  - Frequently
  - Regularly

**Table 4**  
**In Managing Library Automation Projects**

1. Don't Surprise Users - Communicate with Them
  - Staff
  - Patrons
2. Plan for Change
  - Goals
  - Processes
  - Tasks
  - Schedules
  - Budgets

**Table 5**  
**Automating A Library Is:**

1. An organizational process with
  - Objectives
  - Goals
  - Budgets
2. A social process requiring
  - Understanding
  - Acceptance
  - Approval
  - Support from those who
    - Make decisions
    - Implement decisions
    - Are affected by decisions

Therefore,
2. Planning and procuring an automated library system must be conducted appropriately

By definition, a "project" is a set of activities that an organization does not perform permanently, but rather on an as-needed basis until one-time tasks are completed. Table 1 identifies at a high level major tasks of a library automation project; Table 5 emphasizes the project's organizational and social nature. To successfully plan and manage a library automation project requires the definition of tasks, and a task-oriented discipline and management style. How do individuals and organizations learn to operate in such a style, and to report and communicate effectively?

In essence, RMG Consultants, Inc. believes that personnel in the organization need "to go to school together" through a well-designed planning process to learn together about library automation and how to work as individuals and in teams to accomplish the successful planning and implementation of the library automation project. By itself the formal education of personnel on an individual basis cannot accomplish this. We find that the best way to prepare an organization and its individuals is through a library automation planning process whose goals are education and planning for library automation. We view this as a major role of our work as library automation consultants.

The consultant can present technical information and teach the basic concepts of library automation. The consultant can assist the library to plan and organize itself for the project and to establish effective patterns of communication and reporting. The project organization can receive information and guidance from the consultant, assimilate information through the performance of team assignments and thereby learn to work together on new topics in ways that will be essential for the subsequent project implementation phases.

By force of circumstance, such planning processes must provide the education and experience necessary for the organization and its leaders — both its formal management and natural leaders — to conduct a successful library automation project. Reliance upon prior knowledge of individuals may not be assumed — the more prudent approach is to present information to all project personnel, and to foster their development of mutual understandings. Having one or several staff who "know all the answers" does not necessarily make a successful project, and in the worst cases can actually thwart establishment of shared understandings and goals.

In summary, it is a great advantage for individuals in the organization to have a good working knowledge of libraries and data processing fundamentals. However, I believe it is the responsibility of management, with the help of consultants as necessary, to conduct processes that will educate and prepare the library organization and other individuals in the library's environment for a successful library automation project.

Individuals may prepare themselves for this through reading library automation literature, and attending conferences and seminars on library automation and demonstrations of automated library systems and services. However, the overall understanding and commitment of personnel throughout the organization are RMG's recommended goals. We believe the most effective education and preparations are those provided through processes designed for the organization as a whole, which will allow interested individuals to learn and develop as much as they will, and to identify themselves as valuable resources for the ensuing system implementation and accompanying organizational change.