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**CURA RESOURCE COLLECTION**

Center for Urban and Regional Affairs  
University of Minnesota  
330 Humphrey Center

**NONPROFITS AND PERSONAL COMPUTERS**

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## INTRODUCTION

In September 1982, CURA began a two-year study of the potential impact of introducing micro-computer technology in nonprofit organizations. CURA was interested in examining the potential value of volunteers and personal computers as service enhancements for nonprofit organizations. A series of projects was initiated that would simultaneously produce practical information and/or products for a nonprofit group, while generating research data for CURA. Five projects, each providing a distinct but coordinated perspective, were selected. Could a simple information management system be developed for nonprofits using "off the shelf" software on industry standard equipment? CURA assumed that the evolution of personal computer technology was in a fairly early stage of development and that each project should be designed to allow for change and growth with an emphasis on process. There were many possible ways to direct or focus our work. We chose to focus on nonprofits where volunteers accounted for a substantial portion of the organization's service delivery system. Introducing computers into these nonprofits would mean positive results for the service delivery system as well as the volunteer component.

The economic and political climate had created a dilemma for human service delivery systems throughout the country. Demand for services was increasing while resources for providing services were shrinking.

Governments at both the state and federal levels emphasized "public sector--private sector initiatives" as the key to solving this dilemma. As a result, the role and impact of nonprofit organizations in the human services realm simultaneously became more critical and more vulnerable. An underlying assumption was that with cooperation between public and private sectors, government program budgets could be reduced and the private sector would make up the difference. Some estimates, however, suggested that even if private philanthropy increased to the maximum tax incentive level, it would not introduce anywhere near the level of funds needed to offset reduced government support.

This situation was further complicated by the fact that governments were already subcontracting with nonprofit organizations to provide some services, while the government was using the provision of services by nonprofit groups supported by charitable contributions as a rationale for not providing other services.

"Volunteerism" became a popular byword in proposed private sector remedies for the human services crisis. According to the National Center for Citizen Involvement, 84 million Americans volunteered 8.4 billion hours of their time in 1981. Even at minimum wage rates, this represents a contribution of almost \$28.2 billion. If the value of these hours were calculated on a cost-for-service basis and a fringe benefit factor added, estimates of the value of volunteer labor could be substantially higher.

In view of the scarcity of support funds, and projections for continued scarcity, nonprofit agencies cannot afford to overlook the resource potential offered by volunteers. Changes in the type of volunteer, volunteer expectations, and competition for access to available volunteers, however, indicate that while volunteer services can be a significant resource for the nonprofit sector, sophisticated agency management of volunteer services may be required to maximize this potential.

Because technological advances have made (and will continue to make) computers available at prices that seem affordable, many nonprofits were questioning whether they could operate more efficiently if they acquired a computer. Since computers and computer

technology were becoming almost commonplace, and increasing numbers of people were becoming computer literate, it might be easy to assume that a computer (or computers) would save an organization time and money. At the same time, misconceptions about what computerizing really means for a nonprofit organization, and stories about idle and underused computers were surfacing. Thomas Anding, Associate Director at the Center for Urban and Regional Affairs (CURA), felt that this idea should be looked at and tested in some way.

## CASE 1: EAST SIDE NEIGHBORHOOD SERVICES, INC.

As a nonprofit organization with proven longevity, a sizeable client population, a large service area, escalating budget constraints, and a large volunteer component in its service delivery system, East Side Neighborhood Services, Inc. offered a good laboratory for exploring what volunteers mean to an agency and the practical potential for future volunteer services. East Side Neighborhood Services, Inc. (ESNS) started in 1915 as East Side Neighborhood House. In 1982, ESNS encompassed four neighborhood centers, two child-care facilities, two nursery schools, a senior/adult program, and a year-round resident camping facility. Almost a hundred program activities were identified. Programs and services were developed and delivered by a combination of professional and volunteer staff.

Agency operation was underwritten by an annual budget of approximately \$1.1 million from a number of sources including the United Way, federal government agencies, the City of Minneapolis, fees and rentals, contributions, and other miscellaneous revenues. The 1982 budget allocated: 46 percent for child care; 24 percent for community/family; 15 percent for senior services; 6 percent for camp; 3 percent for recreation; and 6 percent for management and general operations.

ESNS uses volunteer services to improve the quality of agency programs and increases their client capacity by delegating duties to volunteers that would otherwise be done by staff or abandoned.

Although occasionally services or programs were designed to be implemented completely by volunteers, these services were clearly limited. The responsibilities of the agency in operating volunteer programs were complex, particularly in light of the demand for increased accountability in all social welfare programs.

ESNS developed out of a volunteerism tradition of neighbors helping neighbors and was therefore firmly grounded in its commitment to volunteers. The staff consider potential benefit to the individual volunteering as well as to the agency's constituency when evaluating the feasibility of volunteer activities. There were divergent views about the net value of volunteers participating in service delivery. In general, however, volunteers have been regarded as an enhancement resource rather than a basic service resource. For budget development purposes this implies that sufficient funds must be available to cover core expenses (particularly salaries of critical staff) before a commitment to provide specific services can be made. Volunteer availability allows for certain services to be expanded or for quality to be improved.

A number of services were highly labor-intensive for short periods of time (for example, the summer lunch program) and these activities reflected significant benefit from volunteer involvement. There were, however, other services that required specialized training and demanded continuous availability (for example, social welfare counseling or licensed day care staff). Volunteers seemed to have a more limited potential regular value to these activities.

ESNS provided the opportunity to analyze a large, well-established, professionally managed volunteer program in a complex agency setting where the potential value of computerization could be presumed to be high. As an ongoing program it also provided opportunities to assess: actual time demands, use of procedures, reliability of file data, availability of data as well as skills and systems available for implementing proposed systems. A potential gift of a used computer to ESNS had raised unanswered questions about what

they would be committing themselves to if they accepted the equipment. Some ESNS board members expressed strong interest in accepting the computer. ESNS saw the CURA project as a non-pressured way to explore the non-hardware costs and procedural changes that might be involved. Since this analysis was intended to provide decision input rather than an operational system, CURA was able to use in-house equipment to design and test a sample system. This model could then be adjusted through subsequent applications in other agencies.

The focus of the project was the generation of a computerized data base for volunteer services at ESNS followed by an analysis of that data. The critical limiting factor for this project, then, was the availability and quality of appropriate records. The time interval considered was the 1982 calendar year. The first operational step in the project was the organization of individual volunteer records at ESNS. During this process each volunteer was assigned a code number to preserve confidentiality while facilitating examination of the descriptive content of individual records. A summary data sheet was designed to transfer pertinent information from individual files to form a data base. Because of fairly substantial gaps in available information a brief survey form was prepared. The questionnaire, with an explanatory letter from the ESNS volunteer coordinator, was mailed to volunteers in mid-May 1983.

A data entry format was developed to combine information supplied from volunteer files, program records, and questionnaires into a single comprehensive presentation of the volunteer personnel files. Information was then transferred from the collection instruments to the data summary sheets. Wordstar and FYI 3000 software programs were used to establish a computerized data base for an IBM personal computer (or compatible hardware). A hard copy of the computerized data base for the 374 individuals who volunteered at ESNS in 1982 was generated for agency use. (Mailing labels were included as part of this product.)

As part of the program analysis, all program staff and agency personnel were interviewed. A small sample of volunteers was also interviewed. Existing policies and procedures for volunteer recruitment, assignment, evaluation and service documentation were reviewed. An assessment of current effectiveness was made. A series of applications for manipulating the data base for planning and reporting functions were then designed and tested. An exercise to estimate the service value of volunteer activities in 1982 was also performed.

One of the more pertinent findings was that although ESNS had the potential to derive significant planning and reporting capacity through computerization of program operations, the current practical value of adding a computer would be crippled by inadequacies in the existing manual systems. A straightforward transfer of information storage modes would not be possible. To have an effective computer-assisted information system substantial adjustments would first have to be made to existing practices and systems. Presumably, however, in those circumstances where information collection was strong but retrieval constrained by size (volume) and time limits, a clear resource improvement could be achieved through computerization.

When contacted in 1986, an ESNS executive involved in the project from the beginning described the operational changes that he felt could be attributed to CURA's involvement. The most significant item was that the volunteer program is fully computerized. They are using essentially the system we designed for them, but have transferred it to a Vector computer donated to the organization by Northern States Power Company. As a result of this shift in hardware, they also had to shift to a different software. Their software needs are met through the services of a volunteer programmer. The computer files are kept current through the data entry services of volunteers.

The organizational impact of the volunteer program has increased because they made a number of adjustments in the volunteer director's job description based on recommendations. The volunteer program has also gained some intra-institutional stature as a result of the discussion/analysis process used. The volunteer program's reporting capability has also improved substantially.

In 1990, ESNS was using personal computers in almost all facets of agency operation. The Vector equipment mentioned earlier was still in service. Several IBM PCs had been added, however, at four locations. It is with the IBM PCs that computer use expansion has occurred. Program statistics, staff listings, word processing, etc. are all handled by packaged software on the IBM equipment. The accounts receivable, accounts payable and general ledgers originally put on the Vector with programmer services are still not integrated and still dependent on programmer services. It may be that ESNS would have used their resources more effectively by declining the gift of the Vector and purchasing more state-of-the-art equipment that would allow for integration and expansion while reducing the amount of accountants' time tied to the computer process. However, a board of directors' decision was made to accept the offered computer.

Looking back, ESNS considers the CURA project to have been valuable long after it ended because of the process it introduced. It was a way of beginning to look at the agency as a whole by looking at the potential and requirements of computerizing one program. Changes in the way programs (particularly government sponsored programs) are administered has increased ESNS program services but not increased administrative revenues, making it increasingly important to realize all possible operating efficiencies.



## 2. ARTSPACE PROJECTS, INC.

Artspace Projects, Inc. began in 1978 as Artspace Reuse Project, Inc. The organization was formed to respond to the need, articulated in a study by the Minneapolis Arts Commission, for a support service to improve the artistic community's access to appropriate quarters in which to live and work.

The published report of the Minneapolis Arts Commission's study of artists' space needs in Minneapolis documented the complexity and challenge inherent in finding safe, affordable, and controlled space for artists. With major funding from the City of Minneapolis through a community development block grant and the Metro Regional Arts Council, Artspace followed up the work of the Minneapolis Planning Department which identified the conversion potential of the North Loop area as an arts and cultural district.

Focusing on the unused and under-used warehouse space in that district, Artspace determined that they could convert space in this downtown location at a price affordable to the artists they serve. Artspace continues to engage in this type of project, actively seeking opportunities to channel development and redevelopment activities into new opportunities for local artists and arts groups.

Perhaps the most basic regular service that Artspace provides is a continuous registration of artists looking for space and an inventory of available spaces. Detailed descriptions of artist requirements and physical characteristics and leasing information for rental sites are maintained in the Artspace office. These inventories provide an efficient mechanism for matching special needs of arts tenants with potential spaces. CURA contributed technical services to design and implement a micro-computer assisted management information system to facilitate upgrading these services.

In the organization's first years, services were provided at no cost. It soon became evident, however, that Artspace would eventually need to provide a certain amount of operating funds through earned income. The board of directors and management staff began to prepare for this change. Changes in government-funded programs and policies, however, catapulted Artspace into a new financial structure much sooner than anticipated.

Artspace had a dynamic vision and was trying to take practical steps to achieve its mission. The demand for Artspace services, both technical and informational, was continuing to increase steadily. It was essential to the vitality of the organization to increase Artspace's ability to generate funds through earned income and contracts.

In the Spring of 1983 the executive director of Artspace Projects, Inc., contacted CURA on the recommendation of Barbara Lukermann at the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota. The basic impetus for contacting CURA was the need for assistance in developing a micro-computer assisted information management system to improve the organization's service delivery capability. Severe financial constraints had resulted in a significant portion of Artspace services being provided by volunteers. Access to a centralized data bank that could be manipulated by volunteers was assumed to have great potential for the organization.

At the time Artspace contacted CURA, they were operating with one salaried staff member (who had actually not received that salary for six months) and an unorganized group of volunteers. Artspace presented CURA with a new population, an organization in which volunteers played a critical role, a nonprofit organization handicapped by recent changes in

government funding, and an organization placing a large portion of its hopes for survival on acquiring a computer to introduce cost efficient service delivery. At the same time, Artspace's nebulous financial condition raised questions about the organization's ability to weather its financial miasma. On balance, Artspace presented a challenging opportunity. CURA agreed to explore possible ways of developing a joint project. On this basis, CURA was included as part of Artspace's proposal to the venture capital competition conducted by the St. Paul-Ramsey United Arts Council.

In late May, Artspace received word that they had been awarded money to purchase computer hardware and software as well as some computer personnel time. Artspace decided to purchase an IBM PC and the same word processing and data handling packages that CURA was testing to help them begin to computerize. CURA agreed to analyze data retrieval needs and the instruments Artspace was using for data collection to develop a new data collection format to facilitate both data collection and retrieval. In view of the expected role of volunteers in using the data base, CURA agreed to test the usability of both the artists' files and the available space files. As part of this process, CURA entered the data on diskettes which could then be used by Artspace to operationalize their micro-computer assisted information system.

Artspace agreed to locate volunteers or to hire someone to update their records before they were entered into the IBM PC. Although this was a lengthy process, this division of labor allowed Artspace to develop a current computerized set of files. Because of the financial problems the organization faced, they were not able to adequately measure the impact of the micro-computer on their service delivery capability. However, they did see a clear benefit from the early stages of the project, when they began to receive hard copy output, through December 1983, when they started using the diskettes in their own PC.

The computerized service delivery support system was expected to increase Artspace's ability to raise revenue through fee-for-service activities. Because this funding transition would require external support for an initial operational period, a model proposal was developed that Artspace could use in approaching foundations. Using this model, Artspace received \$25,000 in unrestricted funds from the Bush Foundation. A number of individualized adaptations of the model were also used for other funding requests.

The information needs assessment and retrieval needs analysis were done during the summer of 1983. Most of the initial data entry was completed in the Fall of 1983. Preliminary testing indicated a significant potential value for the system if used properly. An up-to-date, fully operational system was transferred to Artspace as a complete package in December 1983. On-site training was provided. Artspace staff and volunteers began operating the system independently in January 1984. Back-up assistance and management support were continued through July of that year.

Cheryl Kartes (executive director of Artspace from 1982-88) said in 1986 that the CURA project had been the pivotal influence on Artspace's survival. When Kartes contacted CURA in 1983, she "knew nothing about computers or data bases." By 1986, the personal computer was used in all phases of operations and service delivery at Artspace. Increased revenue generated as a result of the project made it possible to increase paid staff. The volunteer program was formalized and organized. The artists registration information, which is keyed into the data base, now allows easy access in preparing market surveys for Artspace projects. Some market studies have also been sold to other developers.

The services program became a steady source of earned income. Artists register for a set fee (\$15 in 1986) and computerized space referrals are mailed to them periodically.

The computer-assisted information management system allowed for both system growth and changes in software/hardware. The process model CURA developed helped Artspace build efficiency and capacity. As a result, Artspace became a national model. With the computerized system, Artspace developed a referral model which is being adopted by other cities.

Artspace's computer success influenced the creation of the National Artspace Development Network sponsored by the National Endowment for the Arts. Participants in the National Artspace Development Network electronically link arts development organizations throughout the country using Macintosh technology.

**CASE 3: VOLUNTEERS IN ACTION, ROBBINSDALE AREA SCHOOLS,  
INDEPENDENT SCHOOL DISTRICT #281**

Volunteers in Action (VIA) is a clearinghouse for volunteer services in the Robbinsdale School District. The VIA program offers a brokering service to individuals who want to volunteer their services and schools and other community agencies within the district who are looking for volunteers. As part of the VIA service program, VIA offers training for both volunteers they place and community personnel who will be supervising volunteers in their placements. In addition, VIA maintains service records for people who volunteer through the program.

In 1983, a long-range planning session of the VIA advisory committee pointed to the importance of office efficiencies in attaining VIA goals. Awareness of the work in progress at CURA prompted VIA to contact CURA. The major impetus for the request for CURA's assistance was a need to streamline paper handling and shorten time required to retrieve information from VIA files. The Volunteer Coordinator of the Robbinsdale School District approached CURA in September 1983. The request involved a series of meetings to explore the possibility of a joint project to improve operating efficiencies in the Volunteers in Action program. The goal would be the design and development of a computer-assisted management information system for VIA.

The first step was a site visit. VIA staff explained their program, procedures, and materials. VIA had a fairly comprehensive manual filing system, but the volume of information had reached the point where staff could not process data efficiently.

The VIA program offered CURA an opportunity to test the viability of introducing a micro-computer assisted management information system in a stable, financially secure organization serving a reasonably large client population with a small staff using a relatively sophisticated manual system.

CURA agreed to: 1) provide a pilot study using a sample population from the VIA volunteer files and the VIA request for services files; 2) design a data entry format and data dictionary for the project; 3) enter the data on an IBM PC using packaged software; 4) develop an analysis design to test the system capability as a management information tool; and 5) assess whether VIA would benefit from a microcomputer-assisted management information system.

The pilot study of the VIA program was intended to assess the potential value for VIA of introducing a microcomputer-assisted management information system. The first stage in the study was an information needs assessment. Information needs were divided into four categories: 1) service delivery, 2) operations management, 3) planning, and 4) reporting. Operations management was assumed to include portions of the other three categories as well as day-to-day office operations. The pilot study, therefore, focused on operations management information needs.

VIA staff members were interviewed individually about their role in the organization, their information needs, and the methods currently in use to try to meet these needs. Data collection instruments in use at the agency were examined in the context of the retrieval demand for the information collected by VIA. Staff members were also asked what information would be helpful for them but not collected or not retrievable (for all practical purposes).

After extensive review of VIA materials and goals, a series of data collection instruments was developed. Formats for these instruments were chosen based on their purpose and the personnel who would be using them.

The VIA staff presented a comprehensive listing of the types of information they wanted to be able to generate with the proposed system.

Software capacity and capabilities of the Wordstar/FYI combination appeared compatible with VIA needs at that time. The possibility of changing at a future date to software with arithmetic calculation capability was discussed. Emphasis was placed on system analysis to assure growth potential for the work done during the pilot.

Two of the major concerns were the amount of time required to complete all the necessary cross-reference files, and the difficulty in retrieving information in a timely fashion. In view of these concerns, the VIA staff were asked to provide three scenarios reflective of their retrieval demands. These were then used as test applications in the pilot study. Since the emphasis in the scenarios was on the reporting function, sample operations management and planning applications were developed as well as some search examples for testing service delivery applications. An operations management test was also performed using the VIA volunteer record file.

The results of the test applications performed on the two sample files during the pilot study indicated that VIA could realize substantial benefits from introducing a micro-computer-assisted management information system. CURA recommended that the organization consider revising some of the data collection instruments and changing the identification code assignment process for requests for service.

Since the VIA pilot was intended from the beginning to facilitate development of a permanent VIA system, emphasis was placed on appropriateness and ease of implementation. A substantial amount of time was spent clarifying specific expectations and defining roles. The Director of Continuing Education and Community Services at the Robbinsdale School District proposed the project as a means of meeting a divisional goal. VIA personnel were involved in each facet of the systems analysis as well as in the design of each data instrument proposed. Training was extensive. At the end of the pilot phase both CURA staff and VIA staff felt confident of VIA's ability to both use and maintain the system.

The VIA system was built from the pilot developed at CURA. CURA staff remained available for consultations and assistance as VIA began adoption of the system. The computer-assisted management information system was implemented for the 1984-85 school year as part of the combined manual/automated system. By the Fall of 1986, VIA had discontinued the manual data management system for volunteer files and were fully computerized for that component. Because of staff time limitations, only a portion of the request section of their system was computerized. VIA, however, used the system as designed, and continued coding these files to facilitate transfer to computer should either resources increase or reporting demands change. Program personnel feel productivity increased significantly. They are happy with their system. They feel it works well for them. They also consider the staff development and skills updating that occurred during CURA's work with them a great benefit.

When contacted in 1990, VIA personnel were using essentially the same system, although they had switched software packages the previous year. The dimensions of the program have stayed basically constant. The program still has only one computer, which is used (as envisioned) by the program secretary approximately 50 percent of the time.

**VIA regards the CURA project as a unique opportunity and expects to rely on district computer-related resources now that they are in place.**

#### CASE 4: MINNESOTA OFFICE OF VOLUNTEER SERVICES

The Minnesota Office on Volunteer Services (MOVS) is a division of the State of Minnesota's Department of Administration. It was established in 1979 to provide centralized, non-partisan leadership and support services to strengthen and expand volunteerism, citizen participation, and the voluntary sector in Minnesota. MOVS acts as a catalyst by bringing together both internal and external expertise to address issues and concerns impacting the volunteer sector through a resource collection, an information clearinghouse, materials distribution, and training activities.

In October 1983, the Director of the Minnesota Office on Volunteer Services approached CURA about the possibility of having CURA help MOVS computerize their resource collection. This request was prompted by an awareness of CURA's other personal computer projects. The main concern of MOVS was a need to improve service delivery capability in a tight resource environment. MOVS was also constrained by an inability to add staff (unless funded through an outside-funded special project) without legislative approval. Since a large proportion of the services delivered by MOVS involved use of their resource collection, it appeared logical to assume that improving the efficiency of resource collection management would improve at least a proportionate amount of service delivery capability.

After a series of meetings to explore the most appropriate type of project for CURA and MOVS to undertake, CURA agreed to develop a microcomputer-assisted management information system to support the MOVS service delivery system. As well as developing sample test applications, CURA agreed to operationalize the portion of the system devoted to the resource collection. Work performed at CURA using an IBM PC would be continued at MOVS on similar equipment.

The project was divided into two phases. The first step in Phase I of the MOVS/CURA project was performance of a Management Information Needs Assessment. During the assessment, copies of forms in use at MOVS, reporting formats, data collection instruments, and record-keeping procedures were analyzed. A brief informational questionnaire was filled out by each member of the MOVS staff (including temporary project personnel) and analyzed by CURA staff. A series of personal interviews was conducted to expand on the information gathered about office operations, client demand, and internal information needs.

The MOVS staff collected a substantial amount of data that appeared lost through aggregation or inaccessible because of the retrieval time required to manually sort the data. Staff time constraints limited information that could be collected relevant to characteristics of the MOVS client population and the extent of unmet or partially filled client demand for planning input. There was an awareness of the general magnitude of transactions that occurred in the MOVS office, but not much specific information about these activities because of lack of time to document them or manipulate the data in meaningful fashion. Emphasis at MOVS is placed on providing the maximum amount of service. One side-effect of this policy, when constrained by inadequate staffing, was an inability to maintain a viable information support system.

In view of the trends and types of data that would facilitate both direct and support services of the MOVS, a microcomputer-assisted management information system seemed practical. Without additional staffing for data collection and maintenance, however, it appeared unlikely that MOVS would be able to fully implement a satisfactory management information system.

Indications were that the information needs of MOVS would probably continue to grow as office visibility increased. At a minimum, more detailed information could be kept on client population and service demand levels. Because of the role played by the resource collection, both in direct service to clients who are looking for specific reference materials and in the reference activities of the staff, a clear benefit could be derived from the introduction of the capability for maintaining and accessing more detailed information about the sources and content of resource materials (many of which were not catalogued).

A set of data collection instruments was designed to facilitate implementation of the proposed pilot management information system. Evaluation of the data collection instruments in use at MOVS showed a need to update these materials to reflect changes in information needs. As part of the process of redesigning these forms, formats were introduced to facilitate transfer of information into an automated record-keeping system. The content of the information needs assessment was translated into the data collection instruments to structure the information support process. New instruments were designed to cover basic client/staff transactions and use of the MOVS resource collection for both staff and client needs. It was assumed that these instruments would be reevaluated regularly as part of the management information system conducted on site.

Four test applications for the pilot management information system for the MOVS were developed. These applications were geared to assessing the system viability for operations, reporting, and planning support.

A pilot management information system was designed to facilitate MOVS operations and allow for system expansion in the future. The system involved a combination of manual and automated functions.

The system was set up to track client/staff transactions from initiation to closure. A subsystem was developed focusing on resource collection use with an independent value.

The system subset dedicated to the resource collection has an individually tailored bibliographic format. A key element in the resource collection portion of the pilot management information system is the "keyword subject vocabulary," developed to increase access to the collection on a content basis. A rotated subject keyword index was also developed to facilitate identification of subject keywords that have been used for various topics. This subject keyword system provides a search and sort capability for retrieving information in the resource collection and printing specialized bibliographies from the collection holdings. The system also provides the capability for printing complete (or partial) bibliographies alphabetically by either author or title.

The resource collection portion of the system was tested and operationalized at CURA using the holdings of the MOVS collection. The collection included books, journals, hand-outs, and file materials now identifiable by type and age. The acquisition rate indicted the need for an assessment of indexing and entry time availability. Viability of this system required regular maintenance to insure current information on holdings.

Phase II of the MOVS/CURA Project was planned as a test period for the pilot management information system designed during Phase I. Operations during Phase II were severely constrained by MOVS staff changes and late delivery of their computer. Testing expected to be performed on-site using regular MOVS personnel had to be simulated at CURA.

Test results indicated that the system would be a viable support system for MOVS if the amount of anticipated staff time actually became available. Improving the staffing



problem was identified as critical to MOVS' ability to effectively use the system. Another review in six months was suggested.

The resource collection portion of the system functioned well. It is clear that the independent nature of the data collection and processing for the resource collection database was a significant factor in operationalizing it. CURA personnel were able to collect the data, code it, and enter it into the system with a minimum of MOVS staff time. A completed package was transferred to the MOVS office. The MOVS staff received on-site training and were able to operate the system as delivered. As anticipated, when contacted in 1986, MOVS reported a "phenomenal impact" from the resource collection. The value of its simplicity and accessibility has been reinforced by the fact that volunteers have been able to maintain and update this portion of the system, making it substantially independent of staffing circumstances.

The portion of the system dependent on staff maintenance and updating was still under development and using a newer software package. MOVS personnel discussed many benefits experienced as a result of the project, even though progress was slow.

## CASE 5: SABATHANI COMMUNITY CENTER, INC.

Sabathani Community Center, Inc. represents a unique attempt at providing services to the southside community of Minneapolis. Sabathani augments its direct services to constituencies with complementary services offered by tenants in its facility. Sabathani attempts to avoid unnecessary duplication in the service capacities of its tenants while attracting needed service.

In the early 1980s, Sabathani executives identified a need for Sabathani to formalize opportunities for tenant cooperative action. Sabathani first approached CURA for help in determining the real extent of the need for these joint activities through a Communiversy Program request for Winter, 1984. One of the possibilities under consideration was introduction of a centralized volunteer office to be shared by all tenants. After follow-up discussions, CURA agreed to assist Sabathani in piloting a "Cooperative Volunteer Service Office."

The Sabathani/CURA project was planned in two stages: 1) a feasibility study, and 2) an implementation process. In Phase I, a graduate student was expected to conduct tenant surveys and participate in the project design under the direction of a joint CURA/ Sabathani project team. The surveys were expected to generate data about current and projected use of volunteers as well as identify volunteer coordinators active in the facility who could form an advisory group. Phase II would begin with the staffing of the Cooperative Volunteer Services Office and end after an appropriate test period. Specific objectives of Phase I and broad goals of Phase II were outlined on the basis of the project team's discussion of the proposed project.

The Sabathani/CURA project was substantially different in scope from other projects in this group because of the integral role of CURA project personnel in Phase II. Phase I was assumed to be a natural extension of earlier projects which would offer another perspective for insight and input for a volunteer management model. Phase II, on the other hand, was recognized as a participant-observer scenario which would be affected by numerous other factors than the quality of the computerized management information system used to support office operations. The CURA/Sabathani project was the only attempt to recruit personnel with a major role after the project was initiated rather than responding to existing concerns.

The recruitment/placement process added unexpected time to the project life. The project also experienced unanticipated personnel turnover which exacerbated the time problem.

Adding temporary, part-time staff with the desired combination of research/ analysis skills and needed volunteer management capability, severely constrained the project. Possibly because of the time lapse between commitment to the project and actual project start-up or because the primary staff was not a participant in the project visioning, or both, a number of operational frustrations and miscues occurred. Lack of clarity about specific expectations in terms of both action and communication further complicated the progress of this project.

An initial needs assessment was conducted in the Spring of 1984. Interest in the project was high among the tenants. The need, however, seemed to be more in direct service terms of recruiting volunteers rather than the support services of managing volunteer placement and records. At this point (August 1984) the originally hired graduate student resigned.

When a replacement was hired, in February 1985, the effects of broken continuity became evident in reworked goals, task and training repetition, and uncoordinated supervision.

Subsequently, much of the time allocation of the primary staff was diverted to fundraising for a permanent staff member to provide direct recruitment on an ongoing basis. This raised the question of duplication of an established position in the Sabathani service organization.

The Sabathani Cooperative Volunteer Services Office did not reach a service demand level that would justify use of an automated volunteer information management system. The system intended for automated use, however, functioned quite well manually with the reduced population. The project provided Sabathani with the opportunity to explore potential use of a personal computer without making a decision to "computerize" the organization.

The CVSO was staffed by a full-time director for less than one year. Sabathani found this project financially unfeasible and began looking to shared office services as a more viable option. The word processing capability introduced as part of this project was regarded as a valuable, ongoing tool for Sabathani.

## INSIGHTS AND CONCLUSIONS

During this two-year process, an overall picture of the potential for personal computers emerged. MOVS, Artspace, and VIA felt that their participation in these CURA projects made it possible for them to introduce computerization. Although the benefits for ESNS were not as tangible, the CURA project acted as a catalyst for them by introducing non-accounting uses of computer technology. The Sabathani project demonstrated that the potential of certain types of computer applications may be limited.

Before installing any system, a problem analysis/solution conceptualization process is essential. Full agency support for the system is necessary to some degree when a new system is being introduced, especially when users, uses, and resource allocations must be identified. Any mixed agendas must be dealt with during the analysis/conceptualization phase. Organizational and/or personnel constraints for either implementation or operation of the system should surface at this point.

Myths about the potential and practical benefits of introducing computer technology must be dispelled early in the process. A particular concern might be time demand vs. time efficiency in organizations already experiencing staff overload. Anticipated savings in data manipulation and retrieval time must be juxtaposed against corresponding increases in data preparation/entry time and continuity and completeness requirements.

Potentially competing uses must also be identified and system parameters clarified. A mind shift to "before" rather than "after" must occur in both planning and implementation strategy development. Coordination and/or integration of existing operations should be considered at the outset along with transferability of any manual system components. Questions of evolving technology and ways new tools or applications could impact proposed systems must also be introduced.

The decision about how much technology to introduce into a voluntary organization and the definition of the relevant timeframe for implementing such a change are the prerogative of individual agency managers. This involves questions of operations and/or process, not policy. Introduction or integration of advanced technologies like computers should be seen as the acquisition of a tool rather than as a policy question to be resolved by the board of directors. It is possible to increase an organization's capacity with the correct use of computer resources or to reduce an organization's capacity with improper use or unrealistic expectations.

Computers are a support resource, not a primary resource. A microcomputer can improve the efficiency of a management information system. It is not, however, in and of itself a management information system. Data collection, coding, and entry are just as critical in a computerized system as they are in a manual system. Perhaps more so, since the quality of the data retrieved is a direct function of the quality of the data entered in the system. And, in some cases in an automated system you may not be aware that you are dealing with incomplete data.

Although they can significantly expand operational capacity, computers function only according to directions. The most valuable assistance that computers can offer is a forced organization of information and an exponential time savings in data retrieval and manipulation. Initial data coding and entry time is seldom reduced, although in some cases it can be. If records are inadequate, incomplete, out of date, or not organized into a logical overall framework, it may be necessary to design a new system and/or increase the amount of time spent preparing data files for entry into the system.

Typewriters, copy machines, calculators, and word processors are fairly common applications of technology to management operations. Micro-processors can provide the same services with a more advanced technology that also allows for fast, accurate information retrieval and manipulation. Not all organizations, however, can show sufficient operational demand to justify the investment required to introduce micro-processor technology into their operational support system. It is usually the labor costs of designing, implementing, and maintaining the support systems that tip the scale from a cost perspective.

Any estimation of the cost of introducing a computer into an organization must therefore include the labor costs associated with preparing the data for use in the system. An effective computerized information system also requires that sufficient resources be allocated to maintaining the quality of the information in the system. Computerization can be time-effective in those situations where the database (or client population) has reached (or is soon expected to reach) a certain critical mass.

The organizational analysis that should precede introduction of a computer into agency operations may be both time consuming and expensive. However, most agencies will find that after conducting this analysis they will have an improved manual system or at the very least a strategy for improving the system whether or not a decision is made to computerize at the time.

The design of an appropriate management information system is the first stage in the computerization of an organization's operations. And, the first step in the design of the management information system is the needs assessment or demand analysis. This analysis considers both internal and external information demands. Personnel, process, timeframes, and audience are all considered as part of the system. Methods in place to meet these demands and their effectiveness and efficiency are also assessed.

A critical factor at this point is evaluation of the problems and successes of current systems to determine how much and what kind of improvements can be expected if computer assistance is added.

Some questions that should be asked of those considering acquiring personal computers include:

- Why are you considering a computer?
- How do you want to use the computer?
- What do you think you'll be able to do with a computer that you aren't able to do now?
- Are you able to get the information you need when you need it?
- What problems do you encounter when you try to get information out of the files?
- Do you have a word processor?
- If you do, are you using it to full capacity?
- Are your files up to date (are all relevant materials in the files)?

- Is the information in your files current?
- Is there information you would like to have access to but don't have the resources to collect?
- Do you have the resources to maintain data you collect?
- Are you understaffed?
- Do you produce reports or publications that require several drafts or periodic updates?
- How well does your organization's internal communication system work?
- Does your organization engage in planning activities?
- How often do you (or one of your staff) evaluate the appropriateness of the information you maintain in your files?
- Do you plan to purchase any office equipment (not furniture) in the next three years?
- Do your managerial or professional staff type drafts of their written materials?
- Do your clerical staff often prepare review drafts for managerial or professional staff?
- Are personnel records maintained for your staff and/or volunteers?
- If you do maintain personnel records, what are they used for?
- Do you maintain files on your clients?
- Do you prepare an annual report?
- Do you write grant requests?
- How much time does your staff spend compiling statistical information about your organization and your service delivery?

Once this analysis is complete, an extrapolation can be made outlining the software capability that an organization will need. In today's computer markets, it is usually possible to identify several alternative software solutions once the basic capabilities have been identified. It is also often possible to locate alternative hardware on which these software packages can run. The value to an organization is more in what the software will allow an organization to do, rather than in the technology itself.

Finally, availability of appropriate resources, both financial and personnel, to design, install, operate and maintain any proposed information management system appears to be as important as the nature of the system itself.