Organization
The Bedford Hope Center is a non-profit organization affiliated with Bedford Dwellings, a public housing development. Approximately 1200 people live at the center. The organization was previously operated by the Allegheny County Housing Authority, but is now working for Community Builders located in Boston, and it is to Community Builders that the center holds financial accountability. The Hope Center will soon be working for Urban Strategies, located in Pittsburgh.

The Hope Center is designed to support the Bedford Dwellings community, in part by fostering a desire for self-sufficiency including employment and home ownership, and also by providing child care, GED preparation, and a large variety of other services.

One major focus of the Hope Center at present is increasing community involvement. They believe that this may help decrease crime in the community. These opportunities are intended for individuals in all age brackets, from early childhood to adolescence, and even old age. Some of these programs are: an after-school program; a youth program; a day care center known as “A Child's Place”; the Senior Club; food/nutrition programs; and a cleaning committee.

In general, the Hope Center primarily focuses on:
• Providing supportive services to residents in need,
• improving the economic development and quality of life for residents, and
• representing the residents to other organizations.

It is worth noting that the direction of the community is changing. Old, large housing units are being torn down and replaced with new construction, including individual homes and town homes. It is expected that within five years, the community will become a mixed-income community, featuring public housing units as well as market-rate homes.

Facilities
Bedford Dwellings is a complex of public housing units in a continuous stretch of about two miles along Bedford Avenue just outside of downtown Pittsburgh. The center is within walking distance of the Ammons Recreational Center, which offers sports recreation for children in addition to housing the after-school program. The center is also located in a community rich in churches from many denominations. The complex is also just over two miles from the Hill House Association.

The Bedford Hope Center is located approximately in the center of the Bedford Dwellings complex. The building was constructed approximately two years ago, and the organization had occupied the building for one year since April. The center features a receptionist's desk and several offices, in addition to multiple conference rooms and a computer lab.

Staff
Ada Ezekoye is the program manager at the Bedford Hope Center. Her functions including overseeing staff and implementing programs supporting self-sufficiency for residents, including programs related to: Housing, employment, child care, relocation, and a good deal of fundraising.
Gladys Valentine is responsible for direct oversight of the child care facility. She works with Michelle Hughson, the administrative assistant, for payroll, setting up insurance, tracking of children, and dealing with subsidy fees for day-to-day operations.

Byron Wright is the on-site technology supervisor. He provides most of the management for technology at the Hope Center, and he strives to ensure a quick turnaround time for any network or computer problems.

**Technical Environment**
The center features forty networked computers (in addition to others, some inactive) running Windows NT and using Novell Netware for connectivity. The building is networked internally with Ethernet, and there is a 384Kbps DSL connection to the outside world. Thirteen of these computers are in the computer lab, two are in the resource room, and ten are in staff offices. The computers vary somewhat in specifications, but each features at minimum a 600 MHz Pentium II processor with 64MB RAM. A backup-capable file server is accessible from computers in the office; however, backups are not currently being maintained.

**Technology Planning**
There is no formal strategic technology plan, and upgrades are mostly impromptu. Computer upgrades are seen more as a continual process than as a series of one-time expenditures. Every three months there are technology reviews. Current initiatives include bringing in instructors and vendors as well as getting wireless connectivity.

**Information Management**
There is currently no overarching information management plan. Of particular importance is the fact that financial data is currently not stored electronically. Data is generally managed by Michelle Hughson and reviewed by Ada Ezekoye. Some items need approval from the corporate office.

**Consulting Task: Initiate an Electronic Financial Management Program**
The maintenance of good financial records is deeply tied to the mission of any organization. Proper management of fiscal state is essential to the continuation of an organization's programs.

**Description of Problems**
The goal of this task was to address the problems caused by lack of adequate electronic financial record keeping. Among the negative effects are:

- Vital financial data is subject to errors, including transcription errors, arithmetic errors, and errors due to the use of out-of-date information.
- It is difficult to maintain a central summary of data, such as a listing of account balances or a document detailing outstanding debts.
- It can be difficult and time-consuming to prepare summary reports for groups to which the Hope Center is accountable.

**Task Description and Requirements**
In this task, we endeavored to establish an electronic system for financial record management. The primary uses of this system are purchase tracking, petty cash management, invoice management, and similar tasks, but not payroll. The system is currently intended for use in managing the finances of A
Child’s Place only, but if the change is successful then more departments within the Hope Center will eventually be moved over to the QuickBooks system.

**Approach**

The following approach was used to accomplish the consulting task:

- **Analyze requirements** for software, in order to address the organization’s bookkeeping needs.
- **Select, purchase, install, and configure** software.
- **Bring software up to speed** on current financial situation.
- **Train staff** on use of software.
- **Setup off-site backup** system for financial data, including regular backup schedule.

The following actions were successfully taken during the partnership:

- Various software packages were compared and contrasted in order to determine which best fit the needs of the organization. Out of these, QuickBooks Pro was selected. The packages compared were QuickBooks Premier, QuickBooks Pro, QuickBooks Deluxe, and Microsoft Money.
- Intuit QuickBooks Pro was ordered online. Online prices were lower than prices available at conventional stores, and so the software was ordered from buy.com. However, due to problems with shipping, there was a large delay, and the software arrived only shortly before the end of the partnership.
- The software was configured, including entering details of the financial state of the organization, according to the accounting needs of the organization.

**Outcomes**

There were few outcomes during the term of the consulting partnership, due to various delays, especially shipping delays. The following outcomes have been observed:

- Software has been installed. Staff members have verbalized understanding of software licensing terms, including prohibited activity such as the installation of additional copies of the software.
- The installed software was configured. The configuration was done in such a way as to allow for future flexibility, but without introducing needless extraneous details that would result in high bookkeeping overhead.
- Multiple user accounts have been created, so that only individual staff members will have access to the data, and all changes will list the person who made the change, providing an added measure of financial accountability.
- Gladys Valentine has demonstrated proficiency in updating the system independently.

As time continues after the completion of the partnership, the following outcomes will be expected:

- All relevant recent transactions will be observed in the system, and electronic account balances and other summaries will match corresponding summaries from the existing paper system for as long as the paper system is maintained.
- Staff members will perform independent updates without the need to consult the software manual, technical support, or individuals more familiar with the software or the particulars of the organization’s financial state.
- Staff members will make regular backups according to the prescribed schedule.
- Staff members will utilize the system to make financial decisions that were not previously easy to make.

Upon successful completion of these outcomes, the organization will be more effective in fulfilling its mission in that it will have convenient access to data summaries; this will enable the organization's
leaders to make better decisions about programs to offer, and provide an extra level of security against letting the organization enter into debt. Furthermore, reports issued during future visits by outside auditors will avoid the criticism that would be given for staying with the current manual record keeping system. Additionally, the electronic backup system will provide an added measure of security against flood, fire, or other catastrophe, superior to what is currently in place.

The outcome will be sustainable because all applicable staff members will be fully trained in use of the software, and they will have demonstrated their proficiency in updating the records. Any problems that come up should be addressable by either the on-site technical support staff member or by QuickBooks technical support. In case of catastrophe, the organization will be able to restore its records from backups. It is the consultant’s expectation that continued maintenance of the system will present no major obstacle, since he has observed that staff members have quickly caught on to updating the system.

The only major potential obstacle to the sustainability of the plan is the possibility that the organization will be unwilling to accept the new technology; however, the CP is expected to make a push toward discontinuing maintenance of paper logs, resulting in the electronic system being the only one requiring maintenance.

It is worth noting that installation of this software does not represent a fundamental change in the focus on technology within the organization. It is possible that the system will be fully installed and embraced without having much of a change in technology in other parts of the center. It is nonetheless likely that incorporating this particular piece of technology will substantially advance the state of the organization and its ability to fulfill its mission, since the new features offered by the software will enable new levels of financial planning that were not available before.

Recommendations
The following recommendations are important for the acceptance and sustainability of the system:

1. Install backup system
Failure to install a backup system and maintain regular backups will open the system up to the possibility of all data being lost. This can happen in case of fire or flood, or even in fairly more common scenarios such as data corruption or hard disk failure. Even accidentally deleting the wrong file can cause vital data to be lost. The importance of a reliable backup system therefore cannot be overstated. Although backup systems can be expensive, they are typically far less expensive than a catastrophic loss of vital financial data.

To implement this backup system, the following steps should be taken:

• Identify the needs of a backup system. Specifically, the amount of data requiring backup should be considered, as well as the desired backup frequency. The possibility of setting up automatic backups should be taken into account.
• Compare different backup software and/or systems and purchase one. Some starter suggestions are listed later in this report.
• Configure backup system as prescribed in documentation.
• Establish a regular backup schedule. Backups should be performed no less frequently than every week. Daily backups would be better.
• If desired, this system should be automated once it is demonstrated to be effective.

The backup system should provide off-site backups, whether in the form of storing backup media elsewhere, or actually uploading data to a secure server. Hard copy “backups” are not acceptable, as they
do not provide a convenient or error-free means of restoration; and, when stored on-site, they are hardly more robust than the system they are intended to secure.

The following are good starting points for backup software, hardware, and education that will allow the organization to do its own backups:

- **Dantz Retrospect Backup**: Retrospect Backup is a time-tested, well-respected piece of software that will enable the Bedford Hope Center to be entirely in control of its own backups.
- **Zzyzx Peripherals, Inc.**: Resellers of backup software and hardware spanning a large spectrum of backup needs.
- **Storage Mountain (formerly Backup Central)**: Provides information on backup hardware, software, and execution.
- **Veritas**: Providers of multiple high-quality backup software titles.
- **Handy Backup**: An inexpensive, flexible backup software package for local or remote backups.
- **Avantrix Backup Plus**: User-friendly software for local backups.

If the Hope Center chooses to do its own backups using the solutions mentioned above, it will be necessary to find a storage site for physical backup media. Otherwise, there are companies that will provide remote backup services accessible over the Internet. Useful starting points for investigating this route are:

- **BuyerZone**: Evaluates backup needs on an individual basis and provides free price quotes from multiple vendors based on those needs.
- **@Backup**: Provides both backup software and off-site backup storage.
- **U. S. Data Trust**: Provides secure off-site backup services.

When evaluating backup solutions, the organization should also look for further options that are not listed here.

2. Discontinue paper log maintenance

If the electronic financial management system is to do any good at all, it must gain acceptance. Furthermore, the system cannot gain acceptance until users learn to use it solely for financial management. If users insist on being tied to paper logs, then the electronic system may lapse into disuse. It is therefore important that paper log maintenance is discontinued within a reasonable amount of time of migration to the electronic system. Paper log discontinuation should not be taken lightly, however. If the logs are discontinued too hastily, the organization's staff may find that there was some major omission in the system, at great loss.

Therefore, paper logs should be discontinued no earlier than six months after but no later than one year after full implementation of the electronic system. The electronic system should not be considered fully implemented until:

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6[http://www.backupplus.net/](http://www.backupplus.net/)
• All applicable staff members state that they are comfortable performing within the electronic system all functions that could possibly come up. The staff members must demonstrate autonomy for all common tasks.
• The off-site electronic backup system is established, and backups are made no less frequently than every week.
• No major problems have arisen with the system, and all necessary functionality is accessible.

Implementation of this recommendation should not be difficult. If the paper records are not completely destroyed, they should be stored in a location where they are secure from unauthorized access.

**Other Recommendations**

In addition to the recommendations already detailed, I recommend the development of an explicit technology plan. Although upgrades are currently performed on a somewhat regular basis, this is not sufficient for ensuring total integration of technology into the organization. Development and adoption of a formal strategic technology plan will enable the Hope Center to be in better proactive control of technology, instead of being forced to act only reactively to sudden problems that were never planned for.

A written technology plan should include the following:

• Technology vision statement.
• Statement describing the organization's mission and programs.
• Statement describing current use of technology and how it supports program operations.
• Inventory of current hardware and software.
• Inventory of staff computer skills.
• Statement of long-term and short-term technology goals.
• Strategy for meeting the plan's goals.
• Timeline for meeting the plan's goals.
• Budget detailing the costs of implementing the plan.
• Evaluation criteria to determine whether the plan's goals have been met.

Additionally, the technology plan should have strong organizational leadership and management support, as well as an adequate budget for implementation. Furthermore, in order for a technology plan to be effective there must be an individual responsible for seeing it through.

A useful resource for getting started on these recommendations can be found in NPower's Technology Literacy Benchmarks for Nonprofit Organizations, a source that was used in the preparation of this recommendation, available from CMU Professor Joseph Mertz.

**About the Consultant**

Jim Shuma is a student at Carnegie Mellon University. He is to graduate with his Bachelor of Science in Electrical and Computer Engineering in December of 2002, although he intends to pursue a Master of Science degree in the same field. His academic interests include digital logic and asynchronous circuit design. Outside of classes he enjoys community service and attends a local church. He hopes to be able to devote his life to something other than the accumulation of money.