I. Situation Description of Peoples Oakland

Organization
Peoples Oakland is a private non-profit agency established in 1971 as a community agency to improve the quality of life in Oakland’s neighborhood. In the early 80’s Peoples Oakland began a mental health project to address needs of persons with mental needs living in the neighborhood. It is located at 3433 Bates St. in South Oakland. Its mission is to empower its members to take control of their own lives and to influence the services that are available to help them. Its staff includes 22 people servicing under the direction of their board of directors. Major funding resources include Allegheny County Mental Health/Mental Retardation, and the Pennsylvania Office of Vocational Rehabilitation for a yearly operational budget of approximately one million dollars. An additional grant for purchasing technology resources has currently been tabled in good standing until mid-November.

Facilities
The agency purchased and moved into the four-story structure in May of 1999, but rents out the third floor for additional income. Of the other three floors, the first floor is used mostly as recreation space and for a snack bar. The second floor is used mainly for administrative offices. The fourth has the vocation skills learning area and additional offices. Both the second and fourth floors also have conference rooms. The different floors are accessible only using the elevator, as the stairway has been secured to allow emergency exit only. A 1.9 million-dollar plan has been developed to improve the physical structure of the building and provide addition space for both administrative and program use. As such, the current physical situation is, in theory, only temporary while the 5-year physical plan in enacted.

Program
The agency sees its role to the community as a wellness recovery center. This includes the dual role of both vocational training and social development. On average, the agency serves 350 members annually and as many as 550. Becoming a member is normally done through a referral from a local mental hospital or mental health clinic. Once one is a member, one is a member for life. It is not uncommon for a member to return years after their initial active membership period so that they can use the support of the organization during difficult periods.

The agency centers on empowering the members to develop skills in both a vocational sense and in a social sense. This is accomplished through a vocational program. During this time, members learn office and other vocational skills that have become essential to gaining and maintaining employment. This includes but is not limited to computer technology use. On the social side of their programs, the agency is involved in softball leagues and other sports leagues allowing for the members to engage in fun activities with other people from throughout the community. In addition, there are skill workshops to encourage group development in mental health issues in a social setting.

Staff
The staff includes 22 people, serving in roles as diverse as administration to program leaders. There is a strong sense of community between the staff members reflecting the mission of the agency as a whole. Each office has at least one computer. Staff uses computer technology as a way to manage their caseload by accessing the database of member information. Also used are general word processing programs, mainly Word Perfect, and the accounting program Peach Tree. Other programs used include PageMaker and PrintShop. The in-house network provides minimal support for email within the building, but its use is severely limited. Also staff is
involved in training computer use for their members, but the teaching approach is to let the members explore and learn on their own and provide assistance as requested.

In addition, member information is shared within the organization and with other government resources. This is done in what is known as BLASTing the reports to the county office through a dial-up connection.

**Technical Environment**

Much of the current computers were purchased in 1992 when several IBM compatible PCs were purchased. There are 23 workstation computers, and 2 servers. The servers are 486DX66 computers with 2GB hard drives running Novell NetWare 3.12. Each also has a tape backup drive for nightly backups. Each of these two servers has a 10-user license, so the 23 workstations have been split into two completely separate networks. 6 of the workstations are Pentium MMX computers running at 200MHz with 32MB ram, and a 2GB hard drive. These machines also have CD-ROM drives. The other workstations are much more limited 486 computers with 8MB ram, 240MB hard drive and often have 5.25 in floppy drives. To allow for a common operating base, all of the workstations including the 6 more powerful workstations are running Windows 3.1 and Dos 6.2 for an OS. The most commonly used program is the dBase 4.0 database that contains the member database. Several dot matrix printers are used, and several laser printers are also available. For an Internet connection, 3 computers have 28.8 modem connection through dedicated phone lines. 2 CompuServe accounts and 1 AOL account can be accessed through them.

In addition to these 25 computers, two new computers were purchased in November of this year. Each is a Pentium III running Windows 2000 and comes complete with Microsoft Office software, Ethernet connectivity, CD-ROM drives, and large hard drives. These computers were purchased in part to fulfill new government requirements as explained below.

**Technology Management**

Eight years ago, Gary LeFebvre became the IT department by default. He has little formal training outside of a novice NetWare administration course. However, he has a strong desire to learn and has gained much experience in his eight years in this position. There had been a consultant working closely with Gary, but beginning August of 1999 has been working independently since then. At the time that the consultant left, several projects were left before completion and have not been completed since then. Unfortunately, the former consultant left very abruptly, and left no plan as to how to proceed next. When problems do arise, Gary is usually able to call upon his experience to troubleshoot them. However, when the problems exceed his knowledge base, a Novell or Dell service technician is usually called.

**II. Analysis of Problems and Opportunities**

**ECAPS Requirements & Implementation**

My community partner had identified several issues that needed to be addressed very quickly for the organization to be able to maintain their funding with the county. Most of these issues revolve around the change the county made in its internal accounting methods which subsequently changed what information needed to be reported to receive funding and the format for this information.

The most time critical aspect of these changes for Peoples Oakland resulted from the county government upgrade of the interagency database. In late October, the county changed to a web-based ECAPS system, which was a significant change from the previous BLASTing procedures. The ECAPS system has steep requirements including Internet Explorer 5.0 and at least a 56k-modem connection. Fortunately, grant money had been allocated for purchasing two new Dell computers that arrived in November that meet the physical requirements for this new system.
The mission of Peoples Oakland is to provide services and opportunities to people with mental disabilities in the neighborhood. Part of this mission involves contracting with the county for funds and services. In order to continue this contracting and billing, Peoples Oakland will need to be able to connect their database to the county database through this new ECAPS system.

Implementing the changes to Peoples Oakland’s database system required a deep understanding of both the technical aspects of the database and the operations of the organization as a whole. The skill set of my community partner and myself complemented each other such that we were able to implement these changes while learning a great deal from each other. While teaching Gary the skills to implement these changes himself extended far beyond the scope of this project, Gary has acquired a significant body of knowledge with regard to database implementation and is an asset to Peoples Oakland for future changes.

**Technical Impact**

1. The formatting for each line in the report has drastically changed.
2. Several operations codes to describe the work performed have changed at the county level with the introduction of the ECAPS system.
3. Information that was not previously required to report is now required.
4. A single report is now generated instead of having a separate report for each type of activity.
5. The old procedure was completed through a direct dialup connection, and now connectivity is through the county’s new website requiring Internet Explorer 5.0.
6. The form is now submitted in a compressed format.

**Technical Feasibility**

1. Peoples Oakland stores their information within the fairly robust program dBase 4.0 which made efforts for changing formatting minimal.
2. The code numbers impacted have been mapped onto new numbers that allow for a simple replacement process for the database.
3. Fortunately the information that was previously not required for funding had been maintained within Peoples Oakland private database system. Therefore, this information could simply be added to the report without having to gather an extensive amount of information from their member base.
4. The manner in which the database system had been implemented allows for changes of this type with minimal effort.
5. Two new computers were purchased as mentioned above that have the capabilities to run Internet Explorer. The computers also have modems so the website can be reached by accessing the Internet as a dialup connection.
6. In order to compress the data, the software WinZip was installed on the new computers. The data file can be generated using the dBase software on one computer, and then easily transferred and zipped on the new computer over the LAN.

**Staff Impact**

As mentioned in bullet five above, the procedure for transmitting the data from Peoples Oakland to the county has changed significantly. The new procedure for transmission is roughly as follows. The report will be generated from one computer; this report is then transferred to a different computer over the LAN; the report is then compressed; a dialup connection is established; finally, the compressed data is actually transmitted to the county using Internet Explorer.

**Staff Feasibility**

Fortunately, Gary’s computer skills allowed him to perform this procedure independently. Furthermore, Gary will be able to train the staff member that normal creates and sends the monthly report under the old
system to perform these new tasks. Steps were taken in the database design and implementation to help streamline this process. Therefore the process requires learning general Internet knowledge in addition to existing database skills to perform the data transfer.

III. Analysis of Outcomes and Recommendations

A. Outcomes

The goal of this semester long project was to augment the abilities of the database system at Peoples Oakland so that it would be compatible with the government’s new requirements and funding could therefore continue. In addition it was hoped that the changes made in this process would not reduce the system’s prior abilities in any way.

The goal has been fully met, and the funding data for Peoples Oakland for the month of October 2000 was transferred to the county through the use of the ECAPS system. In addition, as data is entered for future months in the exact manner as before, new reports can easily be generated and submitted to the county.

Normal use of the database system is for the user to pick options from a series of menu screens to perform the desired outcome. To simplify the transition to the ECAPS system, a new menu item was added to the menu for report generation and BLASTing. When one chooses this item, a pick menu is brought up to choose the month to report on. The report is then generated from the database information. During report generation, statistics are outputted to describe to the user the total counts for different programs as a tool to monitor the organizations activities. This exact procedure was used to create the October data, where approximately four hundred fifty records were reported on.

The database system creates the form on the server’s hard drive, and as such can be accessed by any machine on the network. The new machines were then able to access this report using this feature. Unfortunately, the database platform is outdated and is not compatible with modern operating systems. As such, the database cannot be directly accessed from these machines, and the report cannot be created from them. This issue is examined further in the recommendations below.

While this report was being generated, Gary connected to their ISP and downloaded WinZip so that the report could be compressed before it was sent. Gary successfully downloaded and installed this software, and the next step in the data transfer procedure was performed. The report data file was copied across the network onto the local hard drive, and was then compressed locally on the new machine.

At this point the final steps could be performed, and Internet Explorer was launched to connect to the ECAPS website. Gary had previously connected to and bookmarked the site, so access to the proper address was trivial to achieve. From this screen, it was simply a matter of picking the compressed file, and the uploading was performed. Following this upload a short email was written to notify the county of the upload as requested. Further emails may or may not be necessary as the county becomes adjusted to their ECAPS system.

In addition to this evidence for the technical outcomes, throughout the semester Gary’s actions proved to be evidence of his own increased abilities. It is obvious that Gary fully understands what is now required to transmit the data under the ECAPS system. The best evidence for this was when Gary downloaded and installed WinZip without prompting or instruction so the compression of the data could be performed. Furthermore the technical level of his questions throughout the semester has risen drastically, and now frequently asks about complicated programming issues.
Prior to this project, Gary had very little knowledge of inner workings of the system and therefore made it difficult to troubleshoot certain problems when they arose. As stated before, it was outside the scope of the project for Gary to master these issues. However, with his new knowledge will be able to ask intelligent questions and address complex issues if and when the need arises to modify the database to do additional government changes or the database is transferred to a modern platform.

B. Recommendations

Technical

The hardware and software at Peoples Oakland is hopelessly outdated. It is of immediate concern that they both be updated as soon as possible. As the currently used technology falls further and further from current standards, it will become increasingly difficult to find support for such technology and it may not be possible to extend it to accommodate future needs.

Of highest importance in the updating process will be to move their existing database system to a modern database application. The current system is horribly outdated and is rapidly approaching its limits of capacity. The time required to perform even the simplest database task is unreasonable and the size of the database is approaching a critical level for such outdated technology. The hardware requirements for the current platform severely limit what upgrades can be made to the server, and consequently limits what upgrades can be performed. Therefore, an update of hardware and software for the server is drastically needed, and client machines will need compatible upgrades immediately following the server upgrade.

This transition will require a very high skill level on the part of a consultant performing these tasks. Knowledge the consultant will need to know includes dBase 4.0 database issues, Novel NetWare 3.1 administration, Windows 2000 administration including peer to peer networking, TCP/IP networking, and knowledge of a suitable modern database system, such as Microsoft Access or an Oracle solution. The current system has been extensively customized to match the requirements for Peoples Oakland. To provide these abilities within a new database system will require the creation of a significant amount of database programming. The customizations are so great that it may not be possible to implement them without use of a high-end solution such as one from Oracle. Low-end solutions like Microsoft Access may not be sufficient for performing all of the tasks required.

After the database changes have been implemented it will be necessary to train the staff on their use, and Gary on database and network administration. The staff is currently trained only on legacy software including DOS versions of WordPerfect. Therefore, in addition to training for using the new database system, the staff will need training for modern Office products and other additional specialized software for the organization.

The changes and training requirements are financially very steep, but failure to perform these soon will ultimately impede the organization in its ability to effectively perform their mission. The current system is rapidly approaching a critical level, and failure will follow shortly after that level has been reached. When this occurs, Peoples Oakland will no longer be able to effectively manage day-to-day business operations that could result in losing or wasting funding. It is imperative upgrades are made immediately so that the transition can occur smoothly and gradually before total failure of the old system necessitates immediate and complete overhaul.
Organizational

The use of technology by staff at Peoples Oakland is currently minimal. Technology is currently used solely for recording and reporting member activity and minor word processing. With the addition of a DSL service to their current or future network would allow for the staff to access the resources of the web. This would make many resources available including email, news, research, and chatting.

These resources will allow the staff members at Peoples Oakland to share ideas amongst themselves and with other similar organizations for methods enhancing the lives of the members. Ultimately the mission of Peoples Oakland is to provide for its members, and providing web access to the staff will have a direct positive impact on their ability to do so. To encourage more widespread use, a technology workshop should be given to provide instruction on these new applications to establish a basic level of competency.

In addition to increasing the technology use by the staff, an increase in technology use by members would directly help implement the organization’s mission. Online resources such as email, chatting, and web surfing will enhance members’ social and intellectual lives in a safe and worldwide environment. Programs devoted to teaching these skills or merely by having these resources available will help accomplish this life enhancement.

Furthermore, the National Strategy for Non-Profit Technology recommends a high level of integration of technology with the operations of all non-profit organizations. As part of this integration, they have established several benchmarks for technology use within an organization. One of these benchmarks recommends a detailed strategic technology plan for mapping the use of technology. A detailed plan will help determine priorities for technology use, and define which goals should be obtained. Failure to develop a coherent long-term plan will serve only to waste financial resources.

Fortunately for Peoples Oakland, they have a staff member that is highly dedicated to the organization and has a rich knowledge set involving technology and how technology might be integrated within the organization. Furthermore, Gary has years of experience in dealing with the goals of the organization and knows which are the highest priority. Peoples Oakland is doubly blessed and has good working relationship with a consulting firm that will continue to be a highly valued resource. Like Gary, this firm has experience with the goals of the organization.

Integration of technology within a nonprofit organization makes the organization more efficient and effective in using its scarce resources, including the time of its staff members and the financial situation. However, technology itself is not an end, but a means to an end. Within Peoples Oakland technology will be a means for enhancing the lives of those it provides for.