The HUB Downtown Street Outreach Center
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I. Situation Description

Organization

Three Rivers Youth-The HUB, a Street Outreach Center, located in Pittsburgh's Business Strip District, at 26th and Smallman Streets, serves at-risk, homeless, and runaway youth under the age of twenty-one. Established in 1995, the HUB operates as a provider of services and as a gateway to the services of other organizations. Among the services that it provides itself are free meals, a place to stay during the day, counseling, computer facilities, and recreational activities. In addition, it offers access to other organizations that provide health care, temporary and transitional shelter, and employment/vocational training, among other things.

Founded in 1995, the HUB is a program of Three Rivers Youth, Inc, a private nonprofit organization that was founded in the 1800s to provide services for at-risk youth. Three Rivers Youth provides much of the administrative and supportive structure for the HUB. The HUB operates on approximately $135,000 per year in funding, coming primarily from the U.S. Department of Health and Human Services, the Pittsburgh Emergency Shelter Fund and the United Way.

Three Rivers Youth's mission is "through our leadership, we will ensure that all young people in this region affected by poverty, neglect, violence and abuse have available the resources and services necessary so that they may change their lives and, with their families, gain hope for the future."

Located near the commercial section of the Strip District, the HUB occupies a second floor office, consisting of 4 rooms. Two of these are offices for the HUB's two full time employees, while the third and fourth are a conference room and a living room area with a connected kitchen, respectively. The HUB's staff consists of two full-time and two part-time employees. The full-time employees are the Program Coordinator, Myra Powell, and the Outreach Worker, Kevin Mickens, who is also the community partner. They run the day-to-day operations of the center. In addition to the operations, they provide the youths with job search assistance, referrals to neighborhood resources, crisis intervention, recreation and both peer and individual counseling.

Technical Situation

The center is equipped with 4 PCs of differing qualities and capacities (see Appendix A for a detailed inventory). A Pentium II used by Kevin has a modem, which is connected through AOL. This computer is used for:
· writing proposals
· writing résumés
· writing messages to fax to Three Rivers Youth main office

Myra uses a Pentium for much of the same purposes as Kevin. Finally, there are two 486-class machines, which are used by the participants for playing games.

Kevin, the community partner, manages the computers of the HUB. Kevin is the only person at the center with a strong understanding of technology. He has enough skill to maintain the computers such that they continue to work, but he is not knowledgeable enough to solve any serious problems should they occur. Beyond Kevin, there is no support structure in place.

II. Problems and Opportunities

In examining the problems and opportunities that the HUB has with its use of technology, we identified a few key areas that can benefit from increased and improved use of technology. The HUB can be described as an organization that is new to technology. This situation presents both an opportunity and a problem. Since it is new to technology, there are so many areas in which technology could be used to make improvements. At the same time, the technology in use at the HUB limited what we were could have done. Therefore, we chose to place our efforts on improvements that would work within the existing technology rather than try to acquire new technology. The reasoning behind the selection of these problems and opportunities is to give the HUB a glimpse at what technology can provide, while not overwhelming it. To provide these new opportunities, the first hurdle to overcome was to fix their current technology issues. Once this was accomplished, we set out on three tasks:

1) Set up email and Internet access to:
   a. Improve communication between the HUB and Three Rivers Youth
   b. Enhance services through Internet-based research
2) Obtain educational software for use on the non-administrative computers
3) Build a web site for marketing and outreach purposes

Problem 1: Fix Computers
Our first goal was to fix all the outstanding issues with the HUB's computers. Two computers did not function properly. Problems ranged from random crashes to configuration problems that left the computers inoperable. Once fixed, the computers could be used more effectively without the risk of losing data. This would also provide a means of instructing Kevin in how to fix these problems. After some investigation, we discovered that the Pentium II computer was missing drivers for important components. The Pentium computer was also missing drivers, in addition to programs quitting randomly.

Opportunity 1: Email & Internet Access
As the HUB is a small agency within a larger organization, Three Rivers Youth, the two organizations must contact each other regularly. Three Rivers Youth provides much of the administration and organizational support for the HUB. This communication was conducted through phones and faxes, much of which was wasteful. For every fax that needed to be sent, a document was created on the computer, then printed, and then faxed. This constituted a waste of paper and a waste of time, given the advantages that email provides. With regard to phone conversations, email provides the advantage of leaving a "paper trail", so messages are less likely to be forgotten. Since the HUB had access to an AOL account provided by Three Rivers Youth, we decided to take advantage of it.

Unfortunately, we learned that AOL account was the same account used by Three Rivers Youth. Since AOL allows only a single user to be connected at a time, this severely limited the use of the account. It also meant that communicating via email would be limited use because only one person at Three Rivers Youth could check the mail. Because of this limitation, we were unable to complete our goal of using email to improve communications between the two organizations. However, Three Rivers Youth recently granted the HUB funds to acquire its own Internet connection. Furthermore, Three Rivers Youth is planning to implement an email system of its own, which will allow the HUB to communicate via email to anyone in the organization.

The second purpose of this project was to get Internet access. In the HUB's role of providing comprehensive services to at-risk youth, the HUB must often deal with various public and nonprofit agencies in order to help the program's participants. Many of these agencies have web sites that provide information that would be valuable to the HUB. Moreover, there are many websites that contain information that is useful to a nonprofit organization such as the HUB. Having access to the Internet

would allow the HUB to reach all these resources. With access to these resources, the HUB would be able to improve its services to its participants.

Opportunity 2: Educational Software

The two oldest (486) computers are used exclusively by the participants, primarily for playing games. By obtaining some educational software packages, the HUB can provide an opportunity for the youths to learn new things while they are attending the center. The two areas of educational software that could be useful are high school education software and resume writing software. The HUB already encourages its participants to continue with their education, including obtaining a GED for those who did not complete high school. A computer program that teaches high school level education would be useful for those participants who are studying to take the GED. With regards to the resume writing software, part of the HUB's services is to help its participants find jobs. In order to do that, the HUB's staff must help with resume writing. This can be time consuming and repetitive. Resume writing software can solve these problems by allowing the participants to write their own resumes. In addition, the software makes it easier to create more professional looking resumes.

We had some important constraints in choosing the software; the software was to be installed on old computers without CD-ROM drives. It was difficult to find anything that meant those constraints. For the resume software, we did find a package that was capable of running on older computers, but none of the high school level education software would run on these computers. Realizing that it would be hard to find anything worth buying that met our needs, I submitted a recommendation for the resume writing software and a high school level education software. However, the HUB has not yet purchased the software.

Opportunity 3: Web Site

The final opportunity is one in which Kevin has expressed interest in doing. A web site would primarily provide another way for youth to learn about services and increase opportunities for fund development. In addition to a basic informational site, the web site could be expanded to provide services for participants of the center. For example, the participants could post their creative works on the site. It could also be used to maintain contact with former participants, and possibly attract new people to the center, as a number of current youths are college students. In addition, the web site would provide a valuable learning experience on how the Internet works, which could enhances the HUB's ability to maximize the use of the Internet connection that we plan to set up. Finally, the web site was meant to show how technology can provide another means of publicizing the HUB's services. Our goal was to set up the web site in a few stages:

1) Create an initial design and structure of the web site
2) Gather content
3) Instruct Kevin on putting together design and content
4) Build template for future pages
5) Upload web site

We spent about 2 weeks designing the layout and structure of the site. From there we moved on to putting the pages together. With Kevin watching, I built the first two pages of the site and a template. The rest of the site Kevin built himself based on the template. After a few pages were completed, we worked together to fix some of the bugs, and then we uploaded the site. As there are still a few sections of the site that must be completed, Kevin will work on these himself and upload them when he finishes them.

III. Outcomes and Recommendations

A. Outcomes
The relationship with the HUB worked well. The community partner and other members of the HUB were diligent in completing their tasks necessary for the success of our project. Every participant was highly motivated and enthusiastic about the work. As a result of everyone's active involvement, we were able to achieve significant results, even though we were not able to complete everything we set out to accomplish.

In both the email access and educational software projects, we were unable to complete all that we had hoped. This was caused by a variety of reasons outside our control. Despite these set backs, there is evidence that these problems will be solved after the consulting ends. As for the other two projects, namely building the web site and fixing the computers, these went along smoothly.

However, for all the projects, there is considerable evidence that the community partner and the HUB have benefited from this relationship. As it will be shown below, Kevin has learned a great deal about a wide range of technology issues. This increased technological capacity will be very useful for the future of the HUB.

Problem 1: Fix Computers
The first few weeks at the HUB were spent tracking down driver problems on the Pentium and Pentium II computers. After some time had passed, we discovered that the CD included with the Pentium II computer did not contain the correct drivers for the modem or video card. We solved this problem by calling the manufacturer in order to find the location of the correct drivers. Since the drivers were available only on the Internet and the computer's modem was inoperable because of driver problems, I downloaded the drivers from home and brought them to the HUB. We installed the drivers, which solved the problems. For the Pentium computer, we installed the correct drivers for the modem. We also investigated an intermittent crashing problem, but we were unable to duplicate it or locate the cause.

From this Kevin learned how drivers work, what sorts of problems they cause if they are not installed correctly, and how to install them. He also learned that calling the manufacturer of the computer can be useful in finding out information about a particular computer, especially if it is still under warranty. Since we have not come across any similar problems, I cannot say whether Kevin would be able to fix these sorts of problems on his own. However, I am confident that he will be able to, based on his explanation of how he tried to fix these problems before I arrived.

Opportunity 1: Email & Internet Access
Although we did not accomplish all that we set out to, we did achieve a good deal, and we have laid the foundation for future work in this area. We set out to set up email access in order to improve communication between the HUB and Three Rivers Youth. We also wanted to have Internet access for research purposes. We accomplished setting up email and Internet access, and we were able to moderately improve communication between the HUB and Three Rivers Youth.

Despite these problems, the HUB is now able to access the Internet and send email. It has also been approved to register its own AOL account. The observable benefits of these advances might take longer to appear than hoped. There have been talks, however, that Three Rivers Youth will be setting up an email system of its own in the near future. With these things on the horizon, the HUB is well placed to take advantage of email.

Kevin has shown his understanding of email and the Internet in a number ways. We have communicated on a number of occasions via email. In addition, these emails from Kevin have included file attachments.

Kevin has said that he plans to teach email to the other employees of the HUB. Kevin has demonstrated his understanding of the Internet by using it to search for a new computer to buy.

Opportunity 2: Educational Software

As with the first opportunity, our plans to purchase educational software have not been as successful as we had hoped. After some discussions, we decided that we would investigate software packages for writing resumes and for learning high school level classes. This project was designed to show the HUB how technology can improve the services that the HUB provides to its participants.

Since HUB has not yet decided whether to purchase the software, there are few observable outcomes from this project. However, there are two important outcomes. First, the HUB is now more aware that its participants, in more effective ways than they were previously being used, can use the computers in its facilities. Unfortunately, the computers set aside for use by the participants are incapable for running most programs available today. In the future, when the HUB is able to upgrade these computers, they will understand how they can be used to benefit the services that the HUB offers. Second, Kevin is aware of one important technology trend: things become obsolete quickly. The fact that we had such difficulty finding software that would run on the older machines showed Kevin how fast technology moves and how he must make technology plans in the future.

Opportunity 3: Web Site

There are two observable outcomes of this project. First, Kevin is able to create a web page, with both links and images. Second, Kevin can upload the web pages to the web server. Summed up in two sentences, this does not sound like a big accomplishment, but these skills are the basis for all web site design. And since the web site that we created was not complete, Kevin can continue to work on it and improve his skills. In addition, Kevin has expressed interest in expanding the site with the help of some of the participants.

Summary of Outcomes

Although not all of the projects that we began were completed, there was a considerable amount of growth and learning that took place during our consulting relationship. The immediately observable differences between the HUB today and the HUB 13 weeks ago are as follows:

1) All the computers are fixed.
2) The HUB has email and Internet access.
3) The HUB has a web site.

Beyond this, Kevin is more confident about fixing computers problems. He is more aware of the ways in which computers can be used to help the participants of the program. The HUB is well placed to take immediate advantage of the new email system that Three Rivers Youth is planning to install. This will make communication between the two agencies faster and more efficient.

B. Recommendations

As our consulting relationship ends, it is clear that there are many areas in which the HUB could benefit greatly from technology. What follows are some recommendations that show some areas in which the HUB could use technology for further improvements. The recommendations are divided into two sections. The first consists of ideas that can be more easily implemented and would provide immediate benefit. The second are recommendations that are more forward looking, ideas that require more time and effort to realize, but serve as an example of the multitude of ways in which technology can be used.

Recommendations: Section 1

1) **Email** – Since Kevin has an understanding of the advantages that email provides, he is in a good position to encourage Three Rivers Youth to follow through on its plan to set up an organization-wide email system. The most effective way to set up this system would be for Three Rivers Youth to set up an email system for its main office and provide each of its member agencies with Internet accounts so that they may access the system. The HUB stands to gain a lot in convenience and efficiency with such a system.

2) **Computer Ergonomics** – A small, but important, problem that impedes the use of computers is their location and position in the center. The two computers outside of the offices are located in areas that make them difficult to access and use. The computer in the living room is located near a door, which makes it a high traffic area. Both computers are on top of desks far too small to accommodate them, requiring the mouse and keyboards to be in awkward and uncomfortable positions.

   Some investigation could be done into finding a more suitable location for the computers, possibly even getting large desks to hold them. The general placement of the computers might also be improved by placing the non-administrative computers in the same room, making it a small computer room. This way the person using the computer would not be distracted by the TV and vise versa. It might also be cheaper to set up one area, rather than the two current areas, specifically for computers.

   Resources:
   http://ergo.human.cornell.edu/ergoguide.html
   This web site contains some guidelines for creating an ergonomic workspace.

3) **Upgrade Computers** – The two older 486 computers are no longer able to use much of the software that is currently available. While they are still useful as they are, it will be very difficult to use them for new purposes, should the need arise. There are a few options available to remedy this situation. The easiest is to "merge" the two computers into one. For example, each of the two older computers has certain components that the other does not. One has a CD-ROM drive; another has more RAM. Separately, the value of these computers is diminished because the advantages that one has cannot be used because it lacks what the other has. For example, most new software comes on CDs. In order to install it, you need a CD-ROM drive. Furthermore, newer software requires large amounts of RAM. If one were to remove the CD-ROM drive from one computer and install it on the computer with more RAM, then that computer would be more useful, and the other computer would still be useable. The other way to solve this is purchasing new components for the computers. I would not recommend following this path because it would be wasteful to invest more money in these computers.

   Resources:
   Any computer store would be able to make these sorts of modifications.

Recommendations: Section 2

1) **Network** – The center has four computers, two printers, but no network. This means that each computer is a separate entity; there is no sharing of resources. If a network were to be installed, the printers could be shared, files on computer could be accessed from the other computers, and, importantly, it would set the stage for a faster Internet connection (see next recommendation). In order to implement the network, the HUB would need Ethernet cards for two of the computers, a hub to connect the computer together, and Ethernet cables. These can be purchased for not more

than $80 for the Ethernet cards, $200 for a hub, and $30 for 50 feet of cable. Setting up the network requires some experience, so it would be wise to hire someone.

Resources:
http://www.compusa.com/
CompUSA offers technicians who can install a network. They also sell the hardware. There are many other companies that offer these services, as a quick glance at the yellow pages will show.

2) **High Speed Internet Connection** – The network would also allow for an easy upgrade to Internet access for all the computers with DSL installation. Currently, only one computer is linked to the Internet through AOL. As it would be too costly, both in hardware costs and phone/service costs, to connect each individual computer up to the Internet through a modem, DSL might provide a viable alternative. Even if the network is not installed, the HUB can still use DSL for one computer, making that a dedicated Internet computer.

Resources:
http://www.verizon.com/dsl/
Verizon provides DSL service for the Pittsburgh area. They do all the necessary wiring, and will even configure the computers for a nominal fee.

3) **Free Email for Participants** – As the Internet becomes a more and more common means of communication, those who do not have access to the Internet will be at a disadvantage because they will not be able to communicate as other people do. Since the HUB has an Internet connection, it can solve this problem by providing its participants with an email account through one of the many free email services.

Resources:
http://www.hotmail.com/
http://mail.yahoo.com/
Both Hotmail and Yahoo offer free email accounts. They are easy to use and can be accessed from any computer with an Internet connection.

4) **Creative Tools** – Generally thought of as tools for doing work, computers can also be used for doing creative works. There are many tools available for painting, making music, and other art forms. Two fun programs for making images are Super Goo and Photo Soap, which allow you to edit pictures. For making music on the computer, Steinberg has a powerful tool called Cubase. Making music on the computer is difficult, so it would be wise to focus on graphics if the HUB chose to follow this recommendation. These tools require some skill to use, so it would be necessary for some sort of training program to exist so that the participants can be taught how to use the programs.

Resources:
http://www.scansoft.com/
ScanSoft makes Super Goo and Photo Soap.
http://www.steinberg.net/
Steinberg makes Cubase VST.

5) **CD Burner** – Another fun thing to do with a computer is to get a CD burner, which is a tool that can make CDs. With this you can make your own music CDs by taking songs from other CDs. You can also combine this with a program like Napster, which allows you to download songs from the Internet for free. You can then burn these songs on to a CD. It does take a long time for

songs on the Internet to be downloaded using a modem. A 5-minute song can take as long as 20 minutes. However, with DSL, the download times would drop dramatically.

Resources:
http://www.yamaha.com/
Yamaha is well known for making high quality CD burners.
http://www.adaptec.com/
Adaptec makes a program called EasyCD that is used to burn CDs with a CD burner. This software is usually included with a CD burner, so it is not necessary to purchase it separately.
http://www.napster.com/
Napster is a program that allows you to download songs from the Internet for free. The program itself is free too. It is very popular and easy to use.

Appendix A.

Computers of the HUB					
Location	**Processor**	**RAM**	**HD**	**OS**	**Other**
Kevin's Office	Pentium II	96MB	7GB	Win98	CD-ROM, Zip, Modem, Printer, Ethernet
Myra's Office	Pentium	16MB	600MB	Win95	CD-ROM, Modem, Printer
Living Room	486	45MB	2GB	Win3.1	CD-ROM
Conference Room	486	24MB	600MB	Win95	Ethernet