I. The Consulting Situation

The Organization
Parental Stress Center (PSC) serves the southwestern Pennsylvania region, providing family counseling and programs for troubled and at-risk families, and referral services to families, government agencies, and volunteers nationwide. This agency began as a service to the municipal family welfare system, and now hosts other family organizations and provides many other programs for families at all levels of need and risk – everything from prevention and support to in-home counseling for families which have been split apart by abuse, neglect, and other problems. PSC also hosts other community organizations, and partners with these organizations to provide additional services for families. Its mission is:

To prevent child abuse and neglect. It accomplishes this mission by providing education, counseling and support services to families, caregivers and agencies in the Southwestern Pennsylvania region. Its programs are solution focused, strength based and family centered. The goal of PSC is to keep children in the home, and to nurture the home environment, so that children in at risk families don’t have to be put into substitute care.

PSC Key Programs:

**Family Unification**, in which family reunification counselors work with parents whose children have been removed from the home, and continue to work with these parents when the children return home.

**Critical Differences**, a resource for families facing immediate or chronic problems with family relationships. This program provides a variety of care and support to parents who need help with anything family-related, among these, Foster Parent Training, The Nurturing Program, Anger Management, and Grandparents as Parents.

**Parenting Education**, which provides classes in building relationships and self-esteem, reading, and addressing the special needs of various children.

**Staff**

Mr. Timothy P. Snyder is the executive director, and he reports to a board of directors. He raises funds, supervises the staff, and works with agencies, contributors, and volunteers. The executive director, program director, and business manager work as a management team to guide the agency. The program staff consists of five coordinators, ten full-time staff, five support staff, and over fifty independent contractors. The independent contractors are family counselors, trainers, and visitation drivers.
Financial Support
Financial support comes from state government, The United Way, and western Pennsylvania-based corporations. The executive director is responsible for building community partnerships to increase financial support. PSC’s annual budget is currently over $2,000,000 and is expected to double within the next two years.

Location
Parental Stress Center is located in the community of East Liberty at 5877 Commerce Street, Pittsburgh, on Penn Circle. This building formerly housed a PACE school, and it has the warm, pleasant atmosphere of an elementary school, with several classrooms and spacious hallways. PSC moved into this building in April of this year, and is making almost full use of the new space.

The first floor houses the reception area, the family counseling administrative office, a copier room, the executive director’s office, a computer center, a library, a gymnasium, a dining hall, and several classrooms. The second floor contains the offices of the program director, the business manager, and the family reunification counselors. The building has both stairways and elevators and is handicapped accessible. The roof contains an outdoor learning center play area with a view of Penn Circle. The building also contains a large basement, which now hosts a Head Start class and will eventually house a Teen Center. PSC recently received a grant of 300 donated computers, which are currently being stored in the basement. PSC has planned a community event to distribute the machines to other nonprofit agencies.

The Technical Environment

Office Network
The office network consists of 30 PCs running Windows 95, Windows 98, or Windows 2000. All machines have a version of the MS Office suite compatible with the machine’s operating system. The PCs are connected by one of three hubs and each hub is connected to a network server (18 GB HDD, 256 MB RAM, 933 MH Pentium 4 Processor) running MS Exchange. The server and local network were installed mid-way through this consulting period. Every PC on the local network has access to three laser printers, and all staff members have access to copy and fax machines, which are not on the network. Mr. Snyder recently set up LAN E-mail accounts for all of the staff.

Changing Technical Environment
The executive director buys two new PCs every year and distributes machines to staff members who need them. Through this strategy, the technical environment is refreshed with newer technology. Now that PSC has adequate space, it is rapidly adding new technologies. Mid-way through this consulting period, the agency installed symmetric DSL service with 768 Kb/s speed each way (upload and download). The DSL, donated through Three Rivers Connect and provided by Gateway, came with one IP address only; so only one machine is currently connected to the DSL. Mr. Snyder recently hired a part time network administrator, who will install a router on a hosting computer and connect the other machines on the network to the DSL.

Computer Center
The Computer Center, which PSC plans to use for education purposes, contains fifteen donated Compaq 5200s with a 250 MHZ processor, a 2 GB HDD, and 32 MB RAM. PSC has additional RAM of compatible speed ready to install. The machines currently have no operating systems installed and are not connected to the office network. Mr. Snyder plans for part-time network administrator to work with the management team to establish the Computer Center.
Web Site
PSC would like to use its web site to create a stronger web presence in the community, increase volunteer interest, and inform contributors about new programs, services, and upcoming events. PSC sponsors seminars and other events, and the web site could be a useful way to let other community leaders and potential volunteers who use the World Wide Web on a daily basis (e.g., university students, businesses) know about these events. Mr. Snyder understands that the World Wide Web will increase in its influence on PSC over the next ten years, and that PSC should keep pace with the technical environment of its potential contributors, constituents, and volunteers.

Executive Director
Mr. Snyder reports to the board of directors. He is responsible for raising funds, supervising the staff, and working with agencies, contributors, and volunteers.

Network Experience
In addition to his work in public relations and administration, Mr. Snyder is one of the key players for implementing technology at the agency. He makes major decisions regarding communications, networking, hardware, software, and the Internet. He recently reviewed and approved the contract for the new file server and connection to a SDSL, and oversaw their installation.

PSC is in a period of tremendous programming and technological growth, and the executive director’s technical capacity has grown with it. He has made significant progress in PSC’s technology with limited knowledge and resources. Working directly with the office network has made Mr. Snyder better able to manage technology and to integrate it into the agency’s mission. Mr. Snyder’s knowledge of networks is better than that of the average executive director. Working directly with networking issues in the new building has increased this knowledge, and guided him in his decision to hire the part-time network administrator. He is now in a good position to work with the part-time network administrator to make decisions that will benefit PSC.

Web Site
Currently, the web site is treated as a side project, and is updated as time and the knowledge of the staff allows. It is not yet a key element in the agency’s programs, but PSC is now in a position to do the necessary planning in order for the web site to play a larger role in the future. As in the case of the office network, it seemed that working directly with web technology would equip the executive director to better manage it and to use it to carry out PSC’s mission. It became clear that if Mr. Snyder were familiar with some of the basic elements of web development, and created an architecture for the web site based on his vision for PSC, that he would be better able to work with the staff and/or outside contractors, speaking the language of the web. He would have the necessary knowledge to be a key player in PSC web site development rather than just hoping that the people responsible for creating and managing the web site would perform well.

Consulting Focus
Develop the capacity to better manage web technology, which will help PSC to carry out its mission.

The goal of the partnership was not to redesign the web site, but rather to increase the executive director’s capacity to apply web technology to the organization, by giving him the knowledge and tools needed to:

- Make the web site a more valuable resource for families, partner agencies, contributors, and volunteers
- Give PSC a sophisticated web presence
• Assist the agency staff to make effective contributions toward its development
• Make the web site better reflect PSC’s mission

Our Approach:
The executive director and the consultant:

• Assessed the current site in terms of audience (who does/will use it), the overall look and feel of the site, and the resources that the site provides

• Created a map of the current site (appendix B)
  http://www.andrew.cmu.edu/~smscott/psc.html

• Created a map of the site that the PSC wants to create over the next six months to a year, including a global navigation with topics that PSC would like to feature on the site (see appendix C)
  http://www.andrew.cmu.edu/~smscott/pscNew.html

• Increased the executive director’s understanding of web development so that he can better plan and oversee site planning, design, content, and development

• Sketched a prototype for a proposed site based on the map of the site that PSC would like to create over the next six months to a year. The sketch includes accessible navigation and a graphical layout that would give PSC a stronger web presence (see appendix D)
  http://www.andrew.cmu.edu/~smscott/psc/index.html

• Brainstormed ideas of future uses for the web site

• Updated web pages and sent new content to the site using FTP

• Analyzed the images currently on the web site and planned for a more effective use of graphic files in the future site (see appendix E)

The map and prototype demonstrate that the executive director is in a position to apply what he gained from analysis and planning. In developing the prototype, Mr. Snyder and the consultant considered the criteria for web sites put forth in the National Benchmarks (see appendix A).

II. Outcomes and Recommendations

Results of the Consulting Work
Because the executive director went through the site planning process and better understands the various aspects of web construction, he is now in a position to supervise the consultants and staff who implement the web design. Because he can speak the language, he can hire web designers and speak with marketing consultants about the web site. He will be able to ensure that any work performed on the web site will be maintained. For example, he can require that a web designer use templates so that PSC staff can more easily update web content. His knowledge will save
PSC time and money as it develops the web site. He will be able to both make his own updates and supervise other staff members who assume this responsibility.

- Mr. Snyder now has a plan for the web site that he can begin to implement. He has a clear idea of what content the site could provide. He has analyzed the various audiences of the site, and has planned a site that will meet the needs of the various groups involved with PSC.

- Mr. Snyder articulated how he can use web technology to further the mission of the organization. Specifically, he envisions using web technology for the following:

  - Online registration for classes and activities
  - Online volunteer and contribution information
  - Online feedback discussions
  - Video Streaming

**Recommendations**

*Continue the Plan to Expand Web Technology*

Now that Mr. Snyder is in a position to direct web technology and to take it to the next step, I recommend that PSC hire an independent web designer to assist Mr. Snyder to implement a web site that includes the features that he has planned in the site map and the prototype.

*Follow Benchmarks Recommendations*

PSC should follow the recommendations for nonprofits, created by *Technology Literacy Benchmarks for Nonprofits* (appendix A).

*Web Hosting*

Three Rivers Free-net (TRFN) hosts the site free of charge. TRFN does not offer capability for server side includes or server extensions. PSC should have a plan in place to use other hosting options for when its current host no longer suits its needs in the coming years. PSC will eventually want an interactive site. It is likely that PSC will not need a dedicated web server in the foreseeable future, but shared hosting may be a viable option.

**Resources**

*What to look for when choosing a shared web host:*

- Date of establishment of the hosting company
- DNS (domain name system) services
- Reliable uptime
- Connection to a major backbone
- Multiple connections to ensure quick uploading
- A fire suppression system
- Security
- Reliable server system (processor, memory management)
- Redundant Systems
- A diversely connected network ensures that the web site will be available regardless of network problems or circuit failures
- Backup systems, regularly updated
- Ability to switch from a shared host to a dedicated host in the future
- Support services that are local and appropriate
- Price reasonable for what is offered
Additional Recommendations

Computer Center Preparation
Because PSC has been in its new facility for less than one year, it has not yet assessed the goals of the Computer Center, and it does not currently have a clear plan for how to use the Computer Center. I recommend that PSC create a concrete plan for the Computer Center so that it can work efficiently with the network administrator to purchase and install the equipment it needs to realize this goal. PSC could begin by asking the following questions:

- What will the Computer Center be used for?
- Who will use the Computer Center? Will more than one type of person use it?
- Will the Computer Center need to be connected to the Internet?
- What software will the users need?
- What are the budgetary needs of the Computer Center?

PSC should answer these questions, and the questions that arise from answering them, in order to define the Computer Center’s mission and function.

Resources
Community Technology Center’s Network (CTCN) (http://www.ctcnet.org/) is a national, non-profit membership organization of more than 600 independent community technology centers where people can receive free or low-cost access to computers and computer-related technology, such as the Internet. More importantly for PSC, CTCN provides technical support and ideas for how to use technology centers. As the largest nonprofit agency in its area, PSC receives donations of computers and distributes them to other nonprofits. CTCN also provides resources for managing surplus computing equipment.

Technology Plan
In light of PSC’s rate of programmatic and technological growth, it is time for the agency to develop a technology plan. A technology plan will help PSC to identify gaps and problem areas. Two preliminary steps in this process are:

- An inventory of all hardware, software, and other equipment
- Keeping a log of all purchases and maintenance

Resources
TechSoup (http://www.techsoup.com), a technology resource for nonprofits, provides the step-by-step instructions, worksheets, and assistance needed to create a technology plan.
Technology Benchmarks Recommendations for Web Sites

Technology Literacy Benchmarks for Non-Profit Organizations

Technology Literacy Benchmarks for Nonprofit Organizations, the technology guide that is the national standard for non-profit organizations, is referred to in various recommendations in this report. A copy of the guide has been provided to the executive director.

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Web Site Recommendations from Benchmarks

Benchmarks explains that:

A web site provides a nonprofit organization with the ability to convey its message, mission and services to many more people than traditional forms of communication. Small organizations should work to concentrate their initial web site efforts at developing an online brochure. Once this is in place, a more advanced web site can be built.

According to Benchmarks, a web site should include the following information:

- The organization’s mission statement
- Current news about the organization
- Organization services and how to access them, including mailing address, phone and fax numbers, and appropriate e-mail contact information
- Information about staff members
- Significant organization achievements
- Information about volunteering
- Directions on how to donate to the organization
- Links to related services and resources

Currently, the site is following all of these guidelines, but it could fulfill these tasks in a more effective way with a new design and structure.
The web site is a communications tool. It can be an important part of the agency’s market and public relations efforts. *Benchmarks* suggests the asking following questions to assess the web site:

- What message is your organization trying to send with the Web site?
- Who is the target audience?
- How can the message be most effectively presented?
- What do you expect the web site to bring to the organization?
- How can you make the most use if interactive elements?
- Do the web site’s graphics, colors, and fonts match your organization’s other marketing materials?

*Interactive Opportunities*

*Benchmarks* recommends that larger organizations (organizations with a budget of over $500,000) include interactive opportunities in their web sites.
Map of Current Web Site

In order to fit the entire map onto this page, the image was significantly reduced in size. The reader will note that the current web site consists of pages mostly linked from the home page.

Mr. Snyder and the consultant worked together to improve the architecture by dividing the site into eight major local areas, and by linking all of the relevant pages from those eight sections.
APPENDIX C

Home Page of the Current Web Site

The current site faces some design challenges:

- The local navigation is not being used to its full effectiveness.
- Image sizes and the large number of images on the home page slow download time for the user.
- A Parental Stress Center identity would let users know that they are at the PSC home page.
- A unified design would improve the look and feel of the pages.
This is only a beginning of what will be a long-term project for PSC. Here, only a sketch of the site architecture is present. PSC plans to create a warm yet professional look and feel for the user, to make decisions about navigation and design elements, and to create a strong PSC identity on the site.
Images on the Web

Using Adobe Photoshop™, you can check to see how long your image will take to download at various downloading speeds (e.g., using a 56K modem). You can adjust the file size (and therefore quality) of your image, and make an acceptable compromise between image quality and downloading time.

Graphics in their natural state are too large to be quickly downloaded over the Web and must be compressed. The standard compression formats are GIF and JPEG. These compression algorithms reduce the size of the image file, allowing the user to see the entire web page, pictures and all, quickly. Bitmaps/uncompressed images, depending on their size, can make an impatient user wait so long that he/she will move on to another web site.

Photographs and graphics with many color fields, particularly colors that blend and fade into one another, are best compressed with JPEG because this format can save images with millions of colors, whereas the GIF option provides only 256 colors. If you save a scanned photograph in the GIF format, you will often see dots in the image, called dithering, and the overall effect is unappealing.

On the other hand, if the image has few colors, GIF is often the better format. GIFs have some advantages over JPEG:

- GIF’s can be interlaced. Interlaced GIFs appear first with poor resolution and then improve in resolution until the entire image has arrived, allowing the viewer to get a quick idea of what the picture will look like while waiting for the rest.
- GIFs can be made transparent to allow the background color of the browser window to be seen.
- GIFs can be animated.

Deciding which compression format to use depends on the image being compressed.