Information Systems Management
Course 95-822

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Final Consulting Report

Fair Housing Partnership

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Fair Housing Partnership of Greater Pittsburgh Executive Summary

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I.   Background Information

The Fair Housing Partnership (FHP) is a private, non-profit organization established in 1984 with the mission *to create, promote and support equal housing choice and opportunity in our community*.

FHP serves in the Pittsburgh area and obtains its funds from government grants, private foundations, fees for service and individual donors. It has 7 full time employees and 2 half time senior employees funded through AARP. It serves around 800 people per year and its annual budget is around $450,000

FHP is divided in two main divisions: Enforcement Division, devoted to preventing housing discrimination and assisting its victims and Housing Counseling Division, which provides housing counseling for home seekers in the areas of rental housing, home ownership and predatory lending.

II.   Consulting Tasks

After analyzing the main problems faced by the organization, we decided to work in three different directions to create the required capabilities in order to allow the organization to take advantage of their technology investments. These three tasks were:

Adequate use of current resources (workshops). The adequate use of their current technology as a facilitator to solve their daily problems and as a communication channel with the community is imperative in the organization. Through a series of workshops the staff members increased their knowledge and utilization of these resources.

Improve the House Counseling tracking system. The amount of cases and their information makes difficult for the staff in house counseling division to track, extract and analyze them with their current paper based model. An upgrade to an old Microsoft Access database gave them the opportunity to handle this information in a digital way.

Implement a technology strategic plan. FHP required a manner to make their technology decisions a more formal, organized and ordered way. This technology plan gives guidance to the organization in order to acquire and utilize their current technology to take the best possible advantages.

III.   Outcomes Analysis

The series of workshops, particularly those focused in the redesign of their website, provided the organization with a new communication channel in order to reach more users to promote fair

housing. The knowledge acquired in each of these workshops was captured in a document created by the staff members and reviewed by the consultant.

The updated database for the House Counseling division, which provide them with a framework to handle their cases in a digital format making easier to obtain and analyze their information.

The creation of a Technology Team responsible for planning, monitoring and implementing the Technology plan. This **Technology Plan** will drive the organization's technological future. In order to be sustainable the Technology team is consists of one member from each division, the Executive Officer and one Board member.

IV. Recommendations

At the end of the consultancy there were some final recommendations that could enhance the organization technology in order to expand their capacity in a sustainable way that supports their mission. The recommendations were:

Expand the training services using Podcast in their website. FHP has all the technical requirements to create and publish podcast in their website. This podcast capacity could enable them to reach a broadly number of users in terms of promoting fair housing.

Hire an Intern to manage the technology in the organization. FHP has many improvement opportunities among their processes and procedures; however they require some extra help to be able to do that because their current staff does not have enough time and knowledge to take advantage of them. Hiring an intern will give them the opportunity to increase their communication channels with their customers and seize the opportunities provided by their current technology, taking full advantage of their investments

Train staff members on information management in Microsoft Access. Although the customer tracking database is giving FHP the possibility to maintain all their information of clients in a digital format, it is still a black box for them, because of their limited knowledge of Microsoft Access. To ensure sustainability the consultant recommends relevant training for staff.

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Fair Housing Partnership of Greater Pittsburgh
Final Consulting Report

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I. About the Organization

1. Organization

The Fair Housing Partnership (FHP) is a private, non-profit organization established in 1984 with the mission *to create, promote and support equal housing choice and opportunity in our community.*

FHP serves in the Pittsburgh area interacting with the following organizations/individuals:

- Housing and Urban Development (HUD)
- Fannie Mae
- Pennsylvania Commission on Human Relations
- Pittsburgh Human Relations Commission
- Other housing organizations
- Social service providers
- Real estate agencies/agents
- Landlords
- Housing clients
- Discrimination victims

FHP obtains its funds from government grants, private foundations, fees for service and individual donors.

FHP has 7 full time employees and 2 half time senior employees funded through AARP. It serves around 800 people per year and its annual budget is around $450,000.

2. Facilities

FHP's offices are located at 2840 Liberty Avenue, Suite 205, Pittsburgh PA, near the strip district, in a commercial zone. The site is on a number of bus routes and with on-site paid parking and

surrounding on-street parking. The office space consists of seven private offices (one per staff member), one medium sized meeting room, and at the end of the entry corridor a desk for the receptionist. The building is accessible and provides a positive work environment.

3. Programs

FHP is divided in two main divisions:

Enforcement Division:

Devoted to prevent housing discrimination and assist its victims. To prevent discrimination FHP conducts outreach and education in the community, with presentations, workshops, brochures, a quarterly news paper, multimedia videos and a web page (http://pittsburghfairhousing.org/). To assist victims FHP helps them to understand the legal process, file discrimination complaints and serve as an advocate throughout the investigation. FHP also conducts testing for housing discrimination (in rental, sales, insurance, mortgage lending, and accessibility). Tests are carried out both in response to specific complaints and systemically to test a certain neighborhood or to investigate treatment of a particular protected class, such as families with children or African Americans. Information gathered through testing can be evidence used to determine the outcome of specific cases or, in the instance of systemic testing, as a reason for initiating a complaint.

Housing Counseling:

FHP provides housing counseling for home seekers in the areas of rental housing, home ownership and predatory lending. This can include landlord/tenant conflict.

4. Staff

- Peter Harvey: Executive Director, responsible for managing the organization, raising funds, and reports to the Board.

Enforcement Division:

- Lisa Mungin-Paige: Managing Attorney, responsible for providing any legal counsel and ensuring the completion of all procedures related to filing a discrimination complaint.

- Mary Vodde-Hamilton: Program Director Enforcement, responsible for supervising enforcement staff and coordinating the course of action in a discrimination case, and coordinating all outreach and education.

- Jay Dworin: Testing Coordinator, responsible for coordinating the "testing" program. He knows a lot about technology and enjoys being learning about the latest developments. He is responsible for the creation of all the multimedia materials in the organization.

- Pam Harris: Intake Specialist, responsible for be the first contact with the clients, creates the administrative case files and turn the cases over to the Program Director for future work. Also provides some bookkeeping functions.

Housing Counseling:

- Tina Doose: Program Director, responsible for housing counseling requests that involve ownership and mortgage.

- Ken Haynes: Mobility Counselor, responsible for housing counseling requests that involve rentals.

5. Technical Environment

The organization possesses six desktop computers, three are penitum4 at 1.8 GHz running Windows XP PRO, one is a Celeron at 2.5 GHz running Windows XP PRO and two are a pentium3 at 900 MHZ running Windows2000. They also have one laptop Centrino running Windows XP PRO and one laptop Pentium 3 with window 2000. All the computers have conventional office software such as Microsoft Office, but some of them have different versions. The organization has a wire local network with all the desktops connected to it, as well as a wireless local network that provides service to the laptops. Each computer is assigned to one member of the staff.

They have two Windows "Servers", one contains shared applications such as Outlook and the other is devoted to the new enforcement database that is being developed by a third party. The server with the shared applications is backed up daily in tapes; however there was no defined procedure for restoring.

FHP has other technology resources such as one scanner, two advanced office-multifunctional devices, one projector in the meeting room, one fax, and interconnected phones with id-caller in each office, as well as an automatic answering system for the non operation hours.

6. Technology Management

In FHP there were no explicit responsibilities for technology management, however two of the staff members usually helped in solving simple things because of their good technology knowledge, in case of something bigger such as a hardware failure, the Executive Director calls "the consultant", that is an outsourcer that provides them with technical support.

Pam Harris is responsible for change daily the backing up tapes. Each staff member is responsible for maintain updated their operating system and antivirus definitions.

7. Technology Planning

There was no Technology plan defined in any sense and they made their decisions based on separate ideas and their isolated valuation. For example, they are implementing a database-web system to help in the Enforcement Division. This development has been done by an outsourcer for the past 2 years and they are still unable to work with it.

8. Internal & External Communications

The external communications are done by phone, email, mail, brochures, conferences, their website, newsletters and face-to-face interviews.

When someone calls, the receptionist redirects the call to the appropriate team. When the receptionist is not available, the person that picks up the call has the ability to redirect the call.

Internally the communication is by email/phone and much was done in paper. Every staff member had their own contact address book, which in some cases is only paper based, and when they needed to share information with others they re typed and sent all the information in a email. Also, each staff member had their own paper based calendar which complicated coordinating meetings.

9. Information Management

All the information is required to be filed or at least printed in paper because a requirement by law.

The Enforcement Division has a shared folder where there are defined subfolders with the digital information of each case. In order to better handle their information, this division is implementing a case management system developed by a third party.

The Housing Counseling division keeps all information in paper files. They also maintain two different systems (HUD and Fannie Mae) depending on the nature of the case, as a requisite to receiving federal funds. Funds are generated based on the number of files created in those systems. This paper based management leaves them unable to obtain, analyze, compare and share information of their cases, and requires them to make monthly manual calculations about the total numbers required by the other two systems in order to fulfill that requirement.

One of the goals of the present administration in the organization is to cut down the gap between both divisions by sharing information. The Enforcement system will allow that division to share their information but in that moment the Housing counseling division did not have a way to share theirs.

II. Scope of Work

Task 1. Adequate use of current resources (workshops)

The Fair Housing Partnership has a really good technological infrastructure as described in the "Technological Environment" section. However, the staff members, particularly those on the House Counseling division, had little knowledge of the technology which limited them to under utilize their available technology resources.

This inadequate use of the resources produced an increase in the hand-work, recapture of information and rework reducing the time expended to promote the activities of the organization. Also, this problem increased the complexity of handling customer's information making it difficult to maintain contact with clients a few months after their case was completed. This problem prevented the organization to fulfill their mission in promoting fair housing.

Activities

     1.1   Excel Workshop

     1.2   Outlook Workshop

     1.3   Make/modify/restore server backups

     1.4   Redesign of the website

     1.5   How to distribute their newsletter

     1.6   Create/add/modify share directories

     1.7   Save documents: as PDF files

Task 2. Improve the "Housing Counseling" tracking system

The Housing Counseling division is responsible for providing counseling to home seekers (rental and ownership) related to the different choices, opportunities and rights that they have, as well as providing assistance in landlord/tenant complains. They tracked all those counsels and assistances on paper, which made difficult to obtain data rapidly, such as the number of clients served in a particular period of time, the number of clients that were referred to other institutions, the proportional ethnicity that request more services, among many others. These statistics are important in order to report them to the board and the state government which provides funding depending on the number of cases solved. Also, with a paper based tracking system was more difficult to monitor the progress of each case and the coverage is limited.

Due to this problem FHP lost important advantages that their technology could provide them in order to create and promote equal opportunities in the community. These advantages included the possibility to obtain the information of previous customers in order to maintain contact with them, analyze the type of cases required by each ethnicity group, maintain updated and at hand information of landlords or other organizations to refer a particular client, etc.

To solve that problem we reviewed an "old" tracking system to identify which information and functionality in there was useful. After that, we determined which changes the system required to provide full functionality for the FHP. Also we evaluated the integration of the Federal systems (Fannie Mae) to this tracking system.

Also, the idea was that all the required changes to the system would be done by the consultant and one of the House Counseling staff members, who would be responsible for the system in the future.

Activities

    2.1 Review the actual needs of information

    2.2 Review the current system

    2.3 Update and modify the current system

    2.4 Train users to modify the system in the next areas

        2.4.1   Export data to excel

        2.4.2   Create reports

        2.4.3   Modify forms and queries

        2.4.4   Make periodical backups

    2.5 Integrate the system with Fannie Mae and HUD

        2.5.1   Review how does Fannie Mae and HUD systems works

        2.5.2   Define a solution to import/export Fannie Mae and HUD data

    2.6 Define interfaces that allow the communication with the Enforcement system

Task 3. Implement a technology strategic plan

Before the consultancy FHP based their technology use, purchase and administration on day to day needs, without any strategy guidance. However, initiatives from the board had driven them to contract the development and implementation of a database that tracks the complains received by the Enforcement division as well as integrate the automatic answer phone hardware that they bought and is still not implemented.

Having a good technology strategic plan the organization has a chance to plan ahead and find better ways to promote the fair housing to every one, implementing and exploiting communication channels with their customers and other organizations. Also this strategic plan eliminates software version incompatibilities within the organization, enabling them to access the required resources and information.

Activities

1.1 Create a Technology Team (4 persons)

1.2 Assess the current resources

      1.2.1 Create a Hardware Inventory

      1.2.2 Create a Software Inventory

      1.2.3 Assess the state of the Enforcement system

1.3 Define needs

1.4 Explore solutions

1.5 Write the plan

1.6 Get funding

1.7 Implement the plan

III. Outcomes

Task 1: Adequate use of current resources (workshops)

Although FHP had an excellent "Technological Environment," before the consultant activities started they had little knowledge about the technology and tools that they had available to support their mission. Many of those problems were solved by creating some specialized workshops focused on increasing particular capacities to solve particular problems.

Outcomes:

- Workshops: Specialized workshops were provided to some staff members to show them how they could address some of their common problems using certain tools. Those workshops were:

  1. How to protect files and consolidate information using Microsoft Excel Workshop.

      - The responsible for the housing counseling division created a new version of the document, which they use to request information to other organizations. Now it has blocked cells in order to avoid common changes on the format by the repliers. Also, she created a consolidation spread sheet in order to add all the responses to create her quarterly reports.

  2. How to create contacts, distribution lists, shared contact lists and shared calendars using Microsoft Outlook Workshop.

      - The intake enforcement specialist created a shared address book for all the organization, and a shared calendar for the Enforcement division.

      - Five of six staff members started adding their important contacts to this address book.

      - The Executive Director created a distribution list for the Technology Team.

  3. How to Make/modify/restore server backups workshop

      - The intake enforcement specialist started to monitor in a daily basis the status of the previous day back up.

      - The intake enforcement specialist configured the backup system to notify her and the Executive Director in case of a major problem with the backups.

      - The intake enforcement specialist found that some of the backup tapes were not working properly by the monitoring of the required time to backup.

      - The intake enforcement specialist recovered a file as review of the correct backups.

  4. How to redesign their Website interface to make it more user-friendly using frames

      - The enforcement division responsible began to create a new version of their website.

      - Almost all the pages had been migrated to the new format.

- Other staff members had been creating around 5 new pages following the new interface designs.
- The new interface will be released before the end of May.

5. How to monitor and manage their website

- The enforcement division responsible used once a month the website management console to monitor the number of visits to the site, the most frequently visited page, among others.

6. How to publish their newsletter on their website

- The enforcement division responsible created the last three releases of their newsletter in a PDF format

7. How to create forms using Microsoft Publisher and use them in their website

- The enforcement division responsible created three different example surveys and published them in the new version of their website to test their functionality.

8. How to save documents as PDF files.

- The Executive Director installed the required software in his computer and sent the instructions to the rest of the staff to install it.
- The Executive Director saved one document as PDF.
- The enforcement division responsible started creating PDF documents for newsletters and brochures.
- The attorney saved some federal forms from the web as PDF files.

9. How to create mail merge with information from Microsoft Access using Microsoft Word.

- The Executive Director and the housing counseling responsible created a Mail merge letter to some of the users that were helped last year.

10. How to secure the wireless network.

- The testing coordinator set a password in the wireless router and configured both laptops to access the network.

- User's guide created by participants: After each workshop the staff members were responsible for creating his/her own user guide about what they learned. After that, the consultant reviewed the documentation in order to ensure completeness.

Increased capacity:

All these new capacities derived from the workshops enabled the organization to use in a more efficient way their current technology to perform their daily work in a better way.

Sustainability:

Each workshop was focused on a particular need and so has a particular audience that could vary between one to five staff members. During the workshop the consultant showed simple way to fulfill that particular need and the staff members were able to solve that particular problem. After the workshop the staff members created their own user guide and each time the consultant had the opportunity, he asked them questions about the previous acquired knowledge to ensure that the staff is constantly using the expanded capacity. All the staff members required in each workshop where always preset. Six of the seven staff members were at least in one workshop.

Risks:

Some of the new knowledge created in these workshops could be jeopardized by technological changes such as new versions of Microsoft Excel, changes in the platform used by the web hosting company, etc. if those changes modify the way to operate those tools. In order to mitigate these risks the consultant provided a set of web tutorials in web design and Microsoft tools.

Support to the new technology management:

These workshops gave the staff a better understanding on different ways to use their current technology to solve their problems. In this way, they increased their capabilities as organization to provide better communication channels with their users and partners as well as making more efficient their work. These increased capabilities made them start thinking on new ideas of how to take advantage of their current technology such as creation of surveys, apartment and preferred landlord lists in their website, shared calendars to coordinate their providers payments, among others.

Task 2: Improve the housing counseling tracking system

At the time that the consultant tasks started, the housing counseling division was managing and registering all their cases in paper formats. Those paper formats replaced the "old-database" that they had. This "old-database" was a Microsoft Access database created to handle the introduction of a new regulation in terms of fair housing. However, some of the procedures and information gathered for each case changed, making that system incomplete and inaccurate.

Due to the constrains of time imposed by the increased number and details in the workshops introduced by changes in the organization needs, the planned scope of this task was reduced restricting it to the delivery of the updated database and a quick training to the house counseling division staff members.

Outcomes:

- An updated system: The "old-database" with some new tables to handle information that the division gather during the counseling process, windows to allow the users to introduce the information to the system created in such way that emulates the paper forms that they used,

one query to retrieve general information about cases and one report containing information that the division requires to compile in order to report it into a third party system.

- A training session to the staff members: This training session was provided by the consultant to the staff members that will operate the system. During the training session the mobility counselor capture two example cases.

- A user's guide to provide maintenance to the system: A document containing basic information regardless to the data base operation and the creation of new simple queries

Increased capacity:

Due to the constrains of time imposed by the increased number and details in the workshops introduced by changes in the organization needs, the introduction of this new system was let to the last consultancy week making the consultant unable to have evidence of a real increased capacity. However, within the training, the staff members were enthusiastic about the system. Also it was compared the time that they usually take to make the Intakes report (about 4 hours) against the immediate creation of the same report using some demonstrative data in the system.

Sustainability:

The Staff members are able to operate the system and obtain one particular report and general information executing a query.

The user's guide was created by the consultant and in conjunction with the training session the staff members started using the database.

Risks:

The database system is still a black-box for the organization. Although the documentation includes a model describing the important tables and queries from which they could obtain information, they still do not have enough knowledge to modify, expand or change the data base. Also, in this moment the database has only one report and one query and even when they are enough for daily operation, in the short term they will require to create new ones in order to take real advantage from the system. If they can not expand the scope to solve new problems or to obtain information related to new requirements they will be at risk of stop using the system. So, in order to mitigate these risks a training course in Microsoft Access is imperative.

Support to the new technology management:

These updates to the database enabled the Housing Counseling Division to take up again case management in a digital world. This change helped them to reduce the hand-work and facilitated information sharing within the organization. This capability of sharing information enabled the organization to continue moving towards integrating both divisions and centralize information to

support their mission of creating, promoting and supporting equal housing choice and opportunity in our community.

Task 3: Implement a technology strategic plan

Prior to the start of the consultant work, the organization had based their technology use, purchase and administration in the day to day needs, without any strategy guidance. However, initiatives from the board had driven them to contract the development and implementation of a database that tracks the complaints received by the enforcement division as well as integrate the automatic answer phone hardware that they bought and is still not implemented. These new requirements made clear the need of a technology strategic plan in order to organize them to accomplish them in the best possible way

Outcomes:

- Technology Team: A group conformed by one representative of each division, the executive director and one board member, which is responsible for managing the technology in the organization coached by the consultant.

- Hardware and Software Inventory: A list of all the hardware and software owned by the organization. This inventory includes the item's name, description, and general information such as brand and model among others, and responsible.

- Technology plan: A document which contains the strategy to manage present and future technology with the goal of expanding the organization's capabilities for providing a better service. The index of this plan is described in the Appendix A.

Increased capacity:

The Technology Team was responsible for starting the technology change within the organization. Their first objective was to create the technology plan, and now they are responsible for implementing it and keeping it updated.

With the new inventory the Team was able to identify which software versions are required to standardize their work. With the standard versions they will be able to collaborate in creating their work such as brochures or newsletter, within other staff members. This sharing ability will result in work-time decrease and quality increase of the products that they provide to their customers, because they do not need to go to each other computer in order to review or comment an specific work, they could do this in their own computer.

The technology team wrote the direction that FHP will be taking regarding technology over the next three years in the technology plan. This plan involves buying some software licenses to standardize the work, hiring a technology intern over the summer to develop some communication functionality over their website, develop internal "user guides" to use certain software tools, take some training courses in a particular software, among many others.

Sustainability

The Technology Team was composed by one member from each division in the organization, the Executive Director and one member of the board. This configuration provided different points of view about the organization, and will ensure its continuity and sustainability as all the stakeholders are involved in it.

The inventory was gathered by all staff members, which gave them the opportunity to know how to do that, and what to do to keep it updated. Once a month, the Technology Team will review that the inventory is up to date.

The Technology plan was created by the Technology Team capturing the most important requirements in the two divisions of the organization, ensuring that nothing was left out of it. In this way, the organization will be really interested in follow and keep updated the plan. Also, the technology plan includes a list of available resources that could help the organization in order to maintain this plan in the future.

Risks

In this moment there are no risks faced on this outcome. However a potential risk that could happen in the future is that the Technology Team could get dissolved or stops paying attention to keeping the inventory and the technology plan up to date in order to make the technology decisions.

Support to the new technology management

The Technology Team was the first step in this new technology management in the organization. The first action that the Team made was the creation of the inventory that enabled them to define the direction of the technology plan. With the inventory created, the Technology Team defined their needs and possible solutions which were the starting point to define their technology strategy to take advantage of the available technology.

IV. Recommendations

A. Vision

The Fair Housing Partnership (FHP) mission of creating and promoting equal housing choices in the community could be enhanced in a large scale by the technology in order to:

- Reach more users to promote the fair housing

- Promote new channels to provide assistance to clients

- Increase the participation of landlords, testers, clients and other organization in the fair housing creation

- Integrate the division's systems and take advantage on the joint information

- Reduce the amount of recapture and handwork during the assistance process

The Fair Housing Partnership has a really good technological infrastructure and systems to support their daily work, however, sometimes the lack of experience or knowledge in using some particular tools prevent them from taking full advantage of their tools. Some of those knowledge gaps were solved with the workshops provided by the consultant; however in terms of their website they still have some significant gaps.

The potential in the website of Fair Housing Partnership is huge. It could enable the organization to reach more users, obtain extra feedback from them, provide them new resources, and obtain electronic donations among others.

B. Goals

After the implementation of the selected consulting tasks, I finally recommend FHP to do at least the next three improvements over the next three years:

Recommendation 1: Expand the training services using Podcast in their website.

a. This goal is focused on publishing the multimedia materials used by the organization to their workshops in their website, making them available to the general public. These materials will be published as a Podcast. Podcast "is the distribution of audio or video files, such as radio programs or music videos, over the Internet."[1]

b. The website is a great communication channel for the organization. As users get more comfortable and find better information in it, the organization will be reaching their mission of

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[1] http://en.wikipedia.org/wiki/Podcast#Mechanics

providing fair house to everyone. One important enhance that could be easily introduced is the use of Podcast.

The mission of the FHP is in part to educate and to provide instruction to the general public in terms of fair housing. To accomplish this FHP provides a set of free workshops. Many of those workshops involve some multimedia material that the organization has in VHS or DVD format. If the organization makes available such materials to the public through their website, they would be able to reach more users and fulfill their mission in a better way.

c. In order to be able to use this technology FHP needs to follow the next step:

1. Create a list of the material that they want to publish.

2. Find those materials.

3. If the material is in VHS format convert it to Digital (mpeg format)
   To convert the VHS format to MPEG format, the organization could take advantage of the analog to digital converter that one of the staff members has.

4. In case that FHP would only require to publish audio they will need to create an mp3 file.
   To create an mp3 audio file I recommend the installation of Audacity software

   • Download the software and the LAME MP3 ENCODER from:

   • http://audacity.sourceforge.net/download/beta_windows.

   • Install the software following the wizard

   • Open Audacity

   • Open or Record a new audio stream

   • In the File menu select the export to MP3 option

   • Select the Podcast directory in the local machined, give a name to the file and save it

5. Save the digitalized material in a folder called Podcast in the local machine

6. Copy all the content of the Podcast local folder to the website. The current website contains a Podcast folder under public_html created in order to maintain all the podcasting materials. Is recommended to create a new subfolder for each group of podcasts published. This groups could be based on the goal of the podcast or any other criteria defined by FHP

7. Create or modify the webpage adding a "link" to the material.

Each video published in the website must be as much 5 minutes length in order to maintain the attention of those customers who are watching it. Also, each video must be at most 20 MB in order to make more possible for the customers to download and see them.

d. Outcomes.

After FHP publishes their workshops as a Podcast, they will be able to refer users to those in stead of having to wait until a new workshop is scheduled. This technology will allow the organization to make fewer workshops and reach more people. As they reach more people they will be fulfilling their mission in a new way. Also, the organization would require schedule fewer workshops which will give them additional time to produce more and better materials.

In order to measure the amount of customers that use this new service, the organization would be required to monitor the website statistics offered by their webhosting provider. Those statistics are available through the administrative console in: http://pittsburghfairhousing.org:2082/ These measurements will allow the organization to quantify the impact of this Podcasts and to redefine the number of workshops required.

This outcome provides a huge advantage to the organization and requires a low investment because right now the organization owns all resources.

e. The required resources to complete this goal are:

Internal resources

The technology team will define the person responsible for the implementation of this goal.

This activity requires:

- Space in the website

- A webpage with links to the media

- A converter machine to digitalize VHS tapes or a Digital Camera

- Software to create or convert mp3's and mpeg's

External resources

In case of having problems the organization could refer to:

- Wikipedia: An excellent source to find detailed information about what is and how it works a Podcast.(http://en.wikipedia.org/wiki/Podcast#Mechanics)

- Audacity: An excellent free software to create voice podcasts. Their site includes a complete user guide and useful links (http://audacity.sourceforge.net/)

- Podcasting News: Is a website dedicated to podcasting. It includes many articles and news that could be useful as future reference (http://www.podcastingnews.com/articles/How-to-Podcast.html)

Budget

Software:	Free	
Converter:	Free (the organization is able to borrow it from a the Testing Coordinator)	
Website:	Although FHP already has a website, the costs for the increased usage of bandwidth and disk space could increase the price for the web hosting. In the administration console of the web site indicates that the current services include unlimited space and band with, however FHP should contact the provider in order to confirm this information.	
Webpage:	Free, FHP has all the required resources in order to create it.	

Recommendation 2: Hire an Intern to manage the technology in the organization

a. The FHP could benefit from having an intern working half time from six to twelve months with their Information Systems. This intern will report directly to the Executive Director, Peter Harvey, and his activities would involve:

Update the website

- Implement an interface with the system to allow clients to submit their Intakes, I&R's or simple questions on line.

- Implement a section to allow people to register themselves as testers

- Implement a section to allow testers to read their assignments, submit their results, etc

- Implement a database of subscriptions to the newsletter

- Implement a section with apartments information

Maintain the FHP PC's

- Backup the present information

- Format the hard drives

- Install Operating system and other software tools

Create a Microsoft Access database to control the hardware, software and suppliers inventory

Implement an Intranet Shared Spaces to allow online collaboration between all staff members

Implement the automatic phone response system, making the interface between this and the case management system.

The focus of this Intern should be to make himself obsolete to the organization through training some of the staff members in the maintenance of their web site, databases, intranet, etc.

b. FHP has some technology gaps which prevent them of taking advantage of the technology that they have. Although some of the staff members had made huge efforts to use the technology, their lack of experience and there other responsibilities impede their ability to use their technological tools. Having an IT intern will allow the organization to convert the website into an effective communication channel with their customers, keep in good shape (updated, secure, etc) their hardware and software, use their intranet with shared spaces, among others, which will increase their interaction with their users and their performance in solving their cases.

c. The set of abilities that FHP requires in a consultant are easily found in a college student. The adequate profile for this job must include:

- o Pursuit of an undergraduate or graduate degree in Computer Science, Information Systems or related disciplines

- o Demonstrated academic achievement with a GPA of 3.0 or greater.

- o Experience in the following areas:

    - o Database development and design, particularly Microsoft Access and MySQL;

    - o Website development, HTML, Java Scripts, forms, etc

    - o Administration of Windows XP and Windows 2000

    - o Administration of Windows domains and networks

- o Good interpersonal skills; proficient oral and written communications skills;

d. Outcomes.

The new the staff member will be required to deliver the following artifacts to the CEO

- o Analysis of the current website, inventory, phone response system and intranet situations

    This outcome consists of a document including the current status of those components including measurements of their use, performance, risks, etc.

- o Plan to implement all the required changes

    This outcome consists of a document showing the objectives, strategies, risks and measurements involved in this task. This document must be written in non-technical words in order to ensure that the rest of the staff at the organization will understand it.

- o Fortnightly work reports

These reports must include all the activities done in the past two weeks, indicating the time spend in each activity, problems faced, decision made, etc

- o Final report, user guide and disaster recovery plan, at the end of each major activity

  These reports must be a complete documentation of the steps taken in the development of the solution and all the required knowledge to use the solution.

e. The required resources to complete this goal are:

Internal resources

- Access to all the PCs and Servers in the organization
- Access to the website
- Access to the network
- Assign a PC, email address and domain account

External resources

Website URL	Description:
http://www.studentaffairs.cmu.edu/career/	Carnegie Mellon University Career Center. On the left hand side there is a link titled "Information for Employers". From here Ms. Molloy could obtain all the information necessary to hire a student from Carnegie Mellon University to help with the project.
http://www.hr.duq.edu/	Duquesne University Office of Human Resource Management. From here a person could obtain information about how to hire a student from Duquesne University.
http://www.hr.pitt.edu/contact.htm	University of Pittsburgh Office of Human Resources – Contact Page. This page contains the contact information for the University of Pittsburgh Office of Human Resources. Any one of the phone numbers listed could be contacted to obtain information on how to hire a student from the University of Pittsburgh to help with the online database.

Source: Consultant report "Rodef Shalom Congregation Library", by Andrew Dubois and the universities WebPages.

Budget

        The organization could take advantage of some requirement that some universities in the area imposed to their students, such as complete a minimum of community work prior to graduation. In this case the service will be free.

        In case that the organization did not found any student in this situation, an average payment for a student making this kind of activities is $10-$15 per hour.

Recommendation 3: Train staff members on information management in Microsoft Access

a. Staff members in the Housing counseling division, will be trained with online tutorials and workshops to create and modify queries and reports in Microsoft Access and to understand how it works in order to maintain their Housing Counseling system effective.

b. With the updates and modifications made to the Housing Counseling tracking system, the division will be able to handle all the information of each case in digital format. This system enables them to search and obtain information in a simpler way. However, because of the time constraints of the consultancy, there are a limited set of queries and reports created to retrieve information.

The training on information management in Microsoft Access will enable the organization to create their own queries and reports or export the data to Excel to analyze it. Also will give some basic information about how does Microsoft Access works in order to enable them to make the required changes or modifications in order to maintain it updated. This complementary training will help the organization to take full advantage on their system, and make more sustainable the consultant task.

c. In order to obtain a good training on Microsoft Access FHP should do one of the following things:

- o Take the following online tutorial (*see external resources*)

    Introduction to Microsoft Access

        In this tutorial, the staff members will understand Microsoft Access basic concepts such as what is a table, what is data row and column, what is a report, etc.

    How to make queries in Microsoft Access

        In this tutorial, the staff members will be able to create queries to retrieve particular information from different Microsoft Access tables

    How to create reports in Microsoft Access

        In this tutorial, the staff members will be able to create reports from tables or queries in order to present information to other people.

- Take specialized workshops to make queries, reports or particular changes to the system. There are many organizations that provide these workshops. In the external resources section, I list some organizations that provide particular courses focused in creating the recommended capabilities in Microsoft Access.

After each workshop or tutorial, each staff member must be able to create his/her own "user guide" including what was learned. Although, is recommendable that after the training the staff members take some sort of exam designed to measure the acquire knowledge, I do not recommend to pursue any kind of certification in the use of the tool, since creating databases is not the core business in the company.

It is strongly recommend that at least one staff member in the organization acquire advance knowledge to use Microsoft Access.

d. Outcomes.

With this special training, the staff members will ensure the sustainability of the "case control" database delivered by the consultant in the consultant task two. Also, they will be able to improve the quality of their reports and usage of the information captured into the system.

Each staff member trained must be able to:

- Create new reports and queries in the Microsoft Access database.
- Export information from the Microsoft Access database to Microsoft Excel or Microsoft Word.
- Create new tables to store new information.
- Create new forms to allow users to capture and obtain the new information.

These outcomes could be classified as satisfactory if the staff members could create one table with information new information; make a query and a report retrieving information combining information from 2 different tables; and sending the results of a query to Microsoft Excel.

e. The required resources to complete this goal are:

Internal resources

Staff member's computers with Microsoft Access installed

External resources:

Tutorials

- Reports Tutorials, http://databases.about.com/od/tutorials/l/aareports1.htm
- Creating simple queries http://databases.about.com/od/tutorials/l/aaquery1.htm

- Complete tutorials in "Bay City Public Schools tutorials":
  http://www.bcschools.net/staff/AccessHelp.htm

- Complete tutorials in "Technology Tutorials",
  http://www.sfubusiness.ca/motmba/courses/bus756/shared/pages/tutorials.html

- Advance tutorial of Richard Holowczak, ,
  http://cisnet.baruch.cuny.edu/holowczak/classes/2200/access/accessall.html

Workshops

- The Bayer Center for Nonprofit Management at Robert Morris University
  (http://www.rmu.edu/bcnm) provides Microsoft Access Basics focused in practical
  solutions. They also have a large collection of technical courses.

- Manufacturers' association (http://www.manp.org/professional-training/computer-course-catalog/) provides Microsoft Access Basics and Advance courses

- "Clarion\Venago Education Resource Alliance" (http://www.cvera.org) provides
  Microsoft Access Basics and Advance courses

- Mt. Ararat Community Activity Center, Inc., (412-441-1819) provides a variety of
  technology courses

Budget

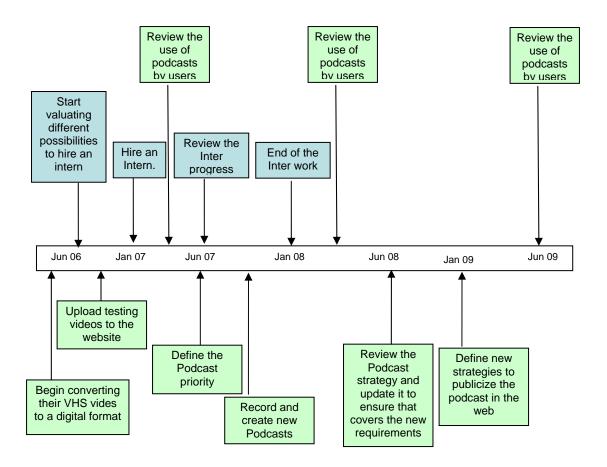|	
Tutorials:	Free
Workshops:	Each basic course is around $400 and each advanced course is Prices vary depending on the organization, the amount of participants, the location, etc. For example, in the Bayer Center for Nonprofits Management their current courses are between $50 and $200 each, and in Manufacturers' association each basic course is around $400 and each advanced course is around $300

Time Line

References

Consultant report "Rodef Shalom Congregation Library", by Andrew Dubois.

http://en.wikipedia.org/wiki/Podcast#Mechanics

http://www.manp.org/

http://www.andrew.cmu.edu/course/15-391/index.html

About the consultant:

Gerardo Avilez-Alonso (gavilez@cmu.edu), is a graduate student in Information Systems Management at Carnegie Mellon University. He has a bachelor degree in computer science from the Instituto Tecnologico Autonomo de Mexico. He has a background experience of more than four years working in IT departments in the banking sector. After graduation he is interested in an executive management position in the IT department of a large scale company.

Appendix A.

Fair Housing Partnership, Technology Plan Index

1. Technology vision statement
2. The organization (Mission and programs)
3. Technical environment
4. General Inventory of Hardware and Software
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6. Activities
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