D.O.G. PROJECT PROPOSAL

Data Organization Guidance for the Pender County Humane Society

Prepared for: **Dr. M. Moallem, MIT522 Spring 2011**
Prepared by: **Chapin Brinegar and Deborah Deale**
Date: **February 15, 2011**
Change Management Proposal & Planning Team Report I

THE CLIENT: PENDER COUNTY HUMANE SOCIETY

Pender County Humane Society is a volunteer based non-profit, no kill animal rescue organization funded by donations, memberships and fees. They are dedicated to improving the lives of homeless and unwanted animals by providing medical care, shelter, and love, while they find permanent homes. They assist with cruelty prevention, overpopulation, and educate the public on caring responsibly for their pets. Pender County Humane Society works alongside other rescue groups in the area, assisting others when needed. On average, the group adopts out around one hundred animals per year, which includes both cats and dogs. They provide a kennel for the animals, along with runs for the dogs and small private rooms for the cats. The group also maintains a small consignment shop on site, which is staffed by volunteers, supplied by the public, and produces enough money to cover the expenses associated with their physical facility.

CURRENT STATE OF AFFAIRS

Like most rescue groups in the area, Pender County Humane Society is being negatively affected by the current economic downfall. They are not bringing in as much money with their store as they have in the past, and they are not adopting out as many animals as they used to. Therefore, they have more animals to keep up with at a time and less money to do it with. This has led to two major problems for the organization.

The group has been looking for ways to bring in some grant money. Currently, they are trying to apply for A Community Shelter Data Grant from an organization called Maddie's Fund. This organization strives to help no kill shelters, such as Pender County Humane Society. In fiscal 2009-2010, they distributed $11.4 million dollars in grant funds. In order for PCHS to apply for the grant, the group must provide large amounts of data on their animals. Currently, the group maintains all animal data in hard copy, paper format. The data needed includes the date the animal was brought it, where it came from, age, breed, gender, age, medical conditions it may have and if it was neutered or micro-chipped. This information has all been collected, but is scattered on various paper forms at the Society, thus making it more difficult to apply for the grant.

Pender County Humane Society is also bringing in, and holding onto animals longer than in the past. The crowded kennels mean more work on the staff. The shelter manager has more dogs and cats to keep up with, therefore more medications to remember and schedules to follow. In addition to data organization, the group really needs some type of alert system to notify them of when an animal has a vet visit or vaccination. Currently, these items are handwritten on paper calendars in their office.

REASON FOR CHANGE

In addition to the changing economy, Pender County Humane Society has several forces, both internal and external, that are bringing about this change. Internally, they are looking to be more efficient. Handwriting out the same data over and over again has become time consuming. Keeping paper records is a hassle and not necessarily the safest method for them. Also, there is a strong desire amongst the staff to apply for Maddie's Grant.

Externally, there are economical, technological and social forces facing Pender County Humane Society. With the economy in a recession, people are losing their jobs and unable to afford their pets. Therefore, there is an increase in homeless animals. As the shelter takes in more dogs and cats, they are responsible for more data as well as the cost of keeping these animals safe and healthy. This is adding to the monetary need of the organization. In addition, less people are using their consignment shop, so less money is coming in to pay their expenses.

Technology is making its way into the shelter slowly. With so many data management programs and pieces of software out there, the group sees a push for change. Lastly, other rescue groups are adopting technology as a tool. Also, peoples' attitudes are changing. They are becoming more accepting of technology. With newer and better tools available, the staff at the society realizes they are falling behind in their record keeping by not adopting electronic methods of data management.

Economic Downturn
Increase in abandon animals as owners can no longer financially care for them. Decreased profits from consignment shop leads to decrease in PCHS funds. Fewer donations to PCHS

Outside Funding Sources
Require statistical data on animals. Expect data reports quickly.

Internal Forces
Additional funding from grant sources. A higher number of residential animals requires better management of animal medical records and scheduled medical needs.
More efficiency in record keeping is needed to maintain the increased animal population.
Staff and volunteers see a need for technological advancement.

RESOURCES AND FUNDING

Pender County Humane Society is a small organization, although it influences many people in the surrounding communities. Their biggest challenge is financial. Current funds are from adoptions, donations and the on-site consignment shop. These barely cover their mortgage and expenses for the property. The group is somewhat at a loss as to where to find funding for an expensive data management system. Therefore strong consideration to cost will be in place. As part of this process, open source software will

be researched as well as the possibility of connecting with a fellow UNCW computer science student in need of a project.

CHANGE MODEL

The Improvisational Model for Managing Change is the most appropriate model for the Pender County Humane Society. This model deals with a change associated with technology implementations that will be ongoing. There is no "end event" for them. Also, it tells us that the organizational changes made during this ongoing process cannot necessarily be anticipated ahead of time.

Since the improvisational model has three different types of change, we narrowed ours down to the opportunity-based category. Opportunity based changes are not anticipated ahead of time but are introduced purposefully and intentionally. And, as the organization starts to find more opportunities and apply them, these will be unplanned changes. The changes in our situation are deliberate in action.

Pender County Humane Society knows ahead of time some of what they will be doing, however

there is no predefined program of change created. Their lack of knowledge with technology and computers, especially in the area of data management, shows us that they have a lot to learn and that this will be an ongoing process for them. They

really desire to start small and build as time goes on. This makes them a perfect candidate for the improvisational model.

New Opportunities for Funding

Additional Funding for more technology, animals & Staff

More Technically Savy Staff

We also recognize a *fear factor* present in a few key stakeholders. The Improvisational Model emphasizes the importance of employees having a say in this change thus increasing *buy-in*. This was a primary reason not to use the Unfreeze, Change and Refreeze Model. After meeting with a key stakeholder, we recognized the psychological safety needs but contend that a more subtle change that encourages an ongoing process of change would be more effective. Also setting the stage for future adaptations and change.
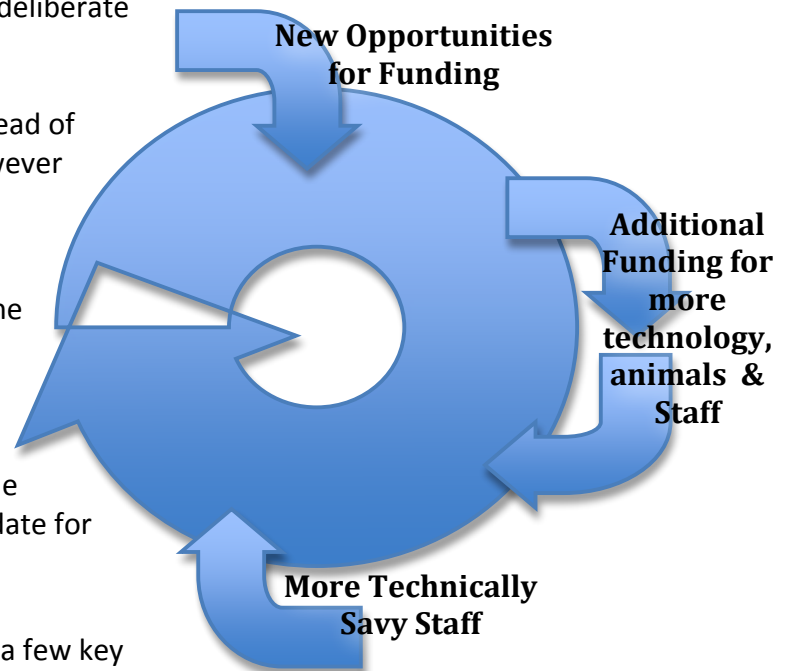
CHANGE MANAGEMENT TEAM

A change management team, containing representatives who will be affected by the plan, will be committed to seeing successful results. The team will be led by Debbie, the shelter manager, and Norma, the bookkeeper for the organization. Debbie is the individual who works the most with the data in the organization and Norma is the most technologically savvy of the staff. Also included will be Gloria, the Society's president and Robert who is a volunteer with the group. Gloria has the most experience with the organization and is very knowledgeable about processes and procedures. Robert had a strong technological background in graphic design and has a desire to help the organization.

Team Members	Team Positions
Debbie, Shelter Manager	Team Leader, will provide data needs and other relevant information
Norma, Bookkeeper	Will provide technical knowledge and be a resource for statistical informational needs
Gloria, President of shelter	Feedback and Support
Robert, Volunteer at Shelter	Feedback and Support
Chapin Brinegar, graduate student	Integral in development and implementation of new technology
Deborah Deale, graduate student	Integral in development and implementation of new technology
PCHS Donor, to be determined	Feedback and Support
Volunteer with another local shelter, to be determined	Feedback and Support

RIPPLE EFFECT

A data management system seems like a small change to many where computer usage is just part of a system, but in contrast this is a large-scale change for PCHS. Initially this will affect both the shelter manager and the bookkeeper and be somewhat time-consuming as they learn to use the new system. Robert, the volunteer who is technically savy, will be needed to aid in any potential impediments to the process as well offer helpful advice and encouragement. As this process continues to ease up the manager's time, the other staff and volunteers should be able to count on her for other duties. Both the bookkeeper and the president will also see how quickly and easily they can sort data for their purposes and help in the search for more funding. As with many non-profit groups, PCHS is closely tied with to other shelters in the area. Word will quickly spread regarding their new system. And so the ripple of this seemly *small* change will spread and grow.

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Data Organization Guidance for the Pender County Humane Society

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Resource Analysis Report II

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STANDARDS FOR PCHS

Pender County Humane Society is a non-profit organization located in Burgaw, North Carolina. As an organization that provides care to animals, it is required to abide by the North Carolina General Assembly's Animal Welfare Act. During the implementation of the technology change at PCHS, it is required to meet the data management policies of the state, while still maintaining a high level of care to the animals. For the purposes of our technology plan, we will be examining the following areas and ensuring their implementation: proper use guidelines, software use policies, data management policies and privacy policies as they pertain to North Carolina State Law.

STANDARDS TO BE CONSIDERED

Pender County Humane Society has not yet created or clearly defined any proper use guidelines for themselves. This is due to the fact that technology is not their focus. Their focus is on providing care and shelter to homeless dogs and cats. However, as they continue to operate, they are seeing a need for technology implementation. This requires policies and guidelines to be put in place for the proper use of technology resources. We recommend that Pender County Humane Society adopt the following guidelines:

Proper Use Guidelines

User Account/Authorized Use: Only the shelter manager, accountant and president of the Pender County Humane Society are to use the computer located in the shelter office. Usage of the computer is only for PCHS needs.

Security: At all times, a lock screen should be in effect. The lock screen will require an ID and password to gain access to the computer. This password should be changed every 90 days to ensure it is not compromised.

Rights & Responsibilities of Users: Users will only use technology resources for Pender County Humane Society related business. This will include data management, Internet searches relating to the shelter, word document creation and any other marketing or accounting needs.

Abuse of Computing Resources: It is the responsibility of the staff to ensure proper use of the shelter computer. This requires that they follow the proper use guidelines as well as report any abuse to the shelter president for her investigation.

Software Use Policy

Pender County Humane Society, in coordination with the DOG project, will only use software created by other companies. These companies include Microsoft, Mozilla and ASM. We recommend that Pender County Humane Society ensure that they are using fully licensed copies of the software. They will abide by the licenses and policies of the software companies as well as appropriate software backup policies.

EXISTING STATE OR FEDERAL TECHNOLOGY STANDARDS

Pender County Humane Society must abide by the North Carolina General Assembly "Animal Welfare Act", which was created in 1977. This act ensures that animals are provided with humane care while confined in pet shops, kennels, public and private shelters and auction markets.

Under this act, Section .0100 outlines record keeping and licensing with regards to animal shelters. In order to abide by this act, operators of all animal shelters shall maintain records on all dogs and cats. These records must include the following data: origin of the animal, description of the animal, location of the animal, disposition of the animal, and thorough records of veterinary care. (See chart below for details outlining the requirements.)

Section .0103 of the NC Animal Welfare Act requires regular inspection of the records. An Inspector from the NC Agriculture Department can come in to observe these records at any time. Therefore, the shelter manager must make these records available during all business and cleaning hours as listed on their license application. These records shall be maintained for a period of one year after the animal is released.

If the shelter fails to provide the required records, they can lose funding as well as their license. Therefore, it is critical that they keep accurate and up-to-date records on each animal that comes through their doors.

Animal Welfare Act Standards

NC Dept. of Agriculture: Animal Welfare Administration Code	Vaccinations for Cats & Dogs	Cats and dogs need to be vaccinated at four months of age for rabies. All dog and cats four months of age and greater must be currently vaccinated against rabies. The initial vaccination last for one year. The next vaccination is good for three years if your veterinarian uses a three-year vaccine. A licensed veterinarian must administer the vaccination.
	Required Data	Origins of Animals: where the animal is from & when it was taken in
		Description of Animal: species, sex, age, breed, color markings
		Location of Animal: where it was taken from
		Disposition of Animal: where and when incidents occurred (include name & addresses)
		Record of Veterinary Care: treatments, vaccination records, & medications
	Accessibility of Data	Unannounced inspection shall occur at least twice a year.

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	Records must be easily accessible & on-site.
	All records shall be maintained for one year after animal is adopted out.

CURRENT TECHNOLOGY RESOURCES

Hardware: Pender County Humane Society makes use of two computers to assist its organization. One computer is housed inside the shelter office. The shelter manager is the only individual to use this machine. The second computer belongs to the organization's accountant, Norma. This computer is located at her home. Although it is her personal computer, it is used for accounting procedures as well as excel record keeping for finances and other shelter needs.

Specifications for the HP computer located in the shelter office at PCHS:

*	*
	Specifications Part Number: HP Pavilion 752n Model: P8564A The following table provides the specifications for the HP Pavilion 752n desktop computer.

Processor	P4N 2.0 GHz/400
Chipset	845GL
Memory	RAM- 512/2100 DDR (2x256), Maximum 1GB, Speed PC210(two available drives
Hard Drive	60GB
Optical Drive	DVD ±RW, 16X multi-format dual layer drive

	Diskette Drive	1.44MB (3.5 inch)
	Video	Integrated into Chipset, no AGP Slot
	Audio	AC97 Audio
	Network Support	10/100BT Integrated on Motherboard
	Modem	Cheetah 2 Modem
	Power Supply	300 watt
	CD-RW Drive	32x10x40
	External Connectors	One PS/2 keyboard port One PS/2 mouse port One parallel port One serial port Six USB ports (four rear, two front) One 1394 port
	Drive Bays	Five total: • Two external 5.25-inch • One external 3.5-inch • One internal 3.5-inch • One 3.5-inch "other"
	Weight	35lbs
	Monitor	○ HP Pavilion F70 LCD

Specifications for the Gateway computer located at Norma's home:

*	*
	Specifications Part Number: 1009488Gateway GT5453E Desktop Computer Model: GT5453E The following table provides the specifications for the Gateway® GT5453E desktop computer.
	Processor	AMD Athlon™ 64 X2 4200+, Dual Core processor with AMD64 • Operates at 2.2 GHz • 2 × 512 KB L2 cache • 2000 MHz system bus
	Chipset	NVIDIA® GeForce® 6150SE
	Memory	Installed: 1024 MB DDR2, 533 MHz, (PC4200) dual channel 512 MB DIMMs) Expandable to: 4 GB total memory (4 DIMM DDR2 slots)
	Hard Drive	320 GB, 7200 RPM, SATA II hard drive Support for up to two hard drives

	Optical Drive	DVD ±RW, 16X multi-format dual layer drive • Write max: 16X DVD±R, 6X DVD-RW, 8X DVD+RW, 4X 40X CD-R, 24X CD-RW • Read max: 16X DVD-ROM, 40X CD-ROM
	Media Card Reader	15-in-1 high speed digital media manager supporting the • Compact Flash (CF) I, II • IBM Microdrive™ (MD) • SmartMedia Card (SMC) • Memory Stick™ (MS) • Memory Stick Duo (MS Duo) • Memory Stick PRO (MS PRO) • Memory Stick PRO Duo (MS PRO Duo) • Secure Digital™ (SD) • Mini Secure Digital (MiniSD) • Multi Media Card (MMC) • RS Multi Media Card (RS-MMC) (need adapter) • Multi Media Plus Card (MMC Plus) • Multi Media Mobile Card (MMC Mobile) • xD-Picture Card (xD)
	Video	NVIDIA® GeForce® 6150SE integrated graphics Up to 128 MB of shared video memory
	Audio	Integrated 8-Channel (7.1) High Definition Audio
	Network Support	Integrated 10/100 Mbps Ethernet LAN
	Modem	56K ITU V.92 ready fax/modem
	Power Supply	300 watt
	Add-in Card Slots	One PCI Express ×16 (graphics interface) One PCI Express ×1 Two PCI conventional
	External Connectors	One PS/2 keyboard port One PS/2 mouse port One VGA monitor port One parallel port One serial port Six USB ports (four rear, two front) Two IEEE 1394a port (one rear, one front) One RJ-45 Ethernet LAN port Eight audio jacks (six rear, two front)
	Drive Bays	Five total: • Two external 5.25-inch • One external 3.5-inch (with a docking bay for optional G removable USB hard drive) • Two internal 3.5-inch (hard drive)
	Physical	15.5 × 7.25 × 16.5 inches

	Dimensions (H × W × D)		
	Weight	24lbs	
	Monitor	Gateway FPD2275W 22-inch widescreen high-definition LCD	

Software:
Both computers run on Windows with the XP operating system. The shelter computer maintains Thunderbird for its email, which is Mozilla's open source version of Outlook. The treasurer's computer has Outlook installed. Both computers have Microsoft Office installed on them.

Human Resources:
The shelter manager utilizes the shelter computer for PCHS daily needs. However, if an issue should arise, she contacts either Robert (volunteer webmaster for PCHS) or Larry, a volunteer who is the treasurer's husband, and a retired engineer with computer experience. Since both computers are outside of warranty, no technical assistance is provided.

There is no training group associated with PCHS. When new policies or procedures arise, the volunteers and staff work together to train each other. This is very informal. Their small size and cohesive nature of the group allows for a certain level of informality. Their common vision of helping the animals is the stitching that holds the fabric together.

Facilities:
The shelter is located at 1407 North Carolina Highway 53 West in Burgaw. The shelter is composed of one central building where all the animals are housed as well as the staff areas, including the office.

Internet:
AT&T provides the shelter's Internet service.
The service is DSL and the cost is $39.95 a month.

Web Site:
The shelter has a website, which is located at www.penderhumane.org. This website is maintained by Robert, a volunteer for the shelter, who serves as the Webmaster.

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This site offers a brief overview of the organization and what it does as well as some photographs of facility and animals. The organization realizes their webmaster is a volunteer and therefore view this site as a web presence. The website does not require any data organization and therefore falls outside the focus of this project.

Network:
At the current time, PCHS does not have any type of network in place so this is not applicable. The two computers used do not "*talk"* with each other nor do they share data.

CURRENT PRACTICES

Data Collection
Currently, this is written on a paper form, which is color-coded. (See appendix 2)
The various forms include:
Green Form - Medical Records
Blue Form - Intake Records
Pink Form - Vaccination Records
These are stored in a filing cabinet in the shelter office. The treasurer will frequently take these forms and compile data into an excel spreadsheet for her statistical purposes. These statistics are then used when the organization applies for grant money.
Data must be onsite and available as it is checked twice a year during the audit by the NC Animal Welfare Inspection. These visits are unannounced, which require data to be organized and easily accessible.

Medical Record Maintenance & Alerts
Data is hand written on one of several color-coded forms, depending on the data.

Shot records are kept by writing date of vaccination and affixing the accompanying sticker from vaccination vial. Reminders for animals needing vaccinations are recorded on a paper calendar in the office (see photo).

Calendar Maintenance
A large calendar is currently used to alert staff of upcoming vaccination needs. The shelter manager maintains this. It is handwritten and located in the PCHS office.

Training

No training for computer use is present. The current manager indicated she had previous computer experience from taking a computer course. If the shelter manager has questions, she calls a volunteer for help.

Computer Usage

Only the shelter manager uses the computer in the shelter office. Because it is password protected, no one else can use it. She uses the computer to do basic Internet searches using Internet Explorer. Sometimes, she will do research on other animal facilities, look up information on medical issues with regard to current animals in the shelter, and to conduct research on animals that are posted on various pet web sites. The shelter manager only utilizes the Internet for searches related to animals and the shelter.

She will also use Microsoft Word to type up various word documents. Sometimes she types up communications or flyers for usage at the shelter. These are all very basic documents.

The shelter manager will also use a program called Thunderbird, which is an open source version of Microsoft Outlook. She uses it only for sending and receiving shelter emails.

The shelter's treasurer utilizes her own personal computer for shelter business. She uses it to respond to and write emails, by using Microsoft Outlook. She also uses various aspects of the Microsoft Office Suite. She will compose word documents and flyers, but she mainly uses Excel. She uses Excel to keep financial and accounting records for the shelter. She maintains data on donations, grant money, funding, expenses and adoption fees collected. In addition to her accounting data, spreadsheets are kept on the animals themselves. She is basically doubling up on what the shelter manager has done in the shelter; only she is putting the data together in a chart. This can then be used for applying to grants and for other needs.

IDENTIFIED GAP

Current Conditions	Desired Conditions (technology goals)	Data on which they are Based
Data Management		
Lack of staff efficiency and accuracy in collecting data on incoming animals	Staff use a data system to collect data on incoming animals in a timely manner and with minimal errors	Observations of current performance, analysis of work-flow, interview with employees
Lack of ability to quickly pull and organize data in a timely manner	Staff will utilize data system to export and sort data	Analysis of current work-flow, interview with shelter's accountant, analysis of grant requirements
Lack of animal identification number in data records (Appendix 1)	Each pet will have pet identification number.(North Carolina Department of Agriculture)	Analysis of past inspections done, courtesy of NC Agriculture Website Archives
Policies and Procedures		
Shelter Manager has basic use policy for other staff, but there is a lack of *official* policy and procedures.	Complete Computer Use Policy that defines acceptable usage and policies of both hardware, software and data management.	Technology Inventory Interviews with Staff
Staff Development		
Shelter Manager possesses basic knowledge and skills for Internet Explorer and Thunderbird Email.	Staff has knowledge and skills for new data management software.	Interviews with Staff
Shelter Manager has little understanding of backup methods and some computer maintenance tools.	Staff is able to backup data in multiple locations as well use basic computer maintenance tools to ensure computer runs smoothly.	Technology Inventory Interview with Staff
Technology		
Lack of Off-Site Backup for Data Keeping	Off-site Backup of Data	Technology Inventory

The above table was a great visual tool that clearly and briefly outlines our gap analysis. It is understood that the current state at the PCHS is moving along without many problems. The recommended and desired conditions are a combination of goals set by the president and treasurer, NC Dept. of Agriculture Standards, and a vision of how the shelter can accommodate future growth and potential funding resources.

In order for Pender County Humane Society to implement the proposed change, some additional equipment will be necessary. Although the shelter computer is able to accommodate the change, an external back up device must be purchased. An external hard drive will ensure data is kept secure and will provide duplication should something happen to the shelter computer.

In addition, the staff will need to be trained on the new software that is being implemented. The staff that will need to undergo this training include the webmaster, the shelter manager, the president and the treasurer. These individuals have responsibilities that would include this data management change plan. In addition to learning the skills to operate the software, significant attention should be paid to behavioral and emotional objectives. As we have learned through our analysis, a fear factor is present. This should ensure a successful implementation of this innovation.

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Appendix 1 – Most Recent Animal Welfare Inspection

Appendix 2: Current Animal Intake Forms

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Data Organization Guidance for the Pender County Humane Society

Prepared for: Dr. M. Moallem, MIT522 Spring 2011
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Technology Plan Report III

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EXECUTIVE SUMMARY

Pender County Humane Society (PCHS) is a volunteer based non-profit, no kill animal rescue organization located in Burgaw, North Carolina. Donations, memberships and fees for adoptions provide funding. PCHS is dedicated to improving the lives of homeless and unwanted animals by providing medical care and shelter while searching for permanent homes. Pender County Humane assists with cruelty prevention, overpopulation, and the education of the public on caring responsibly for their pets.

Pender County Humane Society must abide by the North Carolina General Assembly "Animal Welfare Act", which was created in 1977. This act ensures that animals are provided with humane care while confined in pet shops, kennels, public and private shelters and auction markets. As a part of this Act, PCHS must maintain up to date records on all animals that enter the shelter. A member of the North Carolina Agriculture Department can visit to collect these records at any time. If the shelter fails to provide the required data, they can lose their funding as well as their license. It is critical that PCHS keep accurate data on every cat and dog they serve.

As the economy continues to suffer, Pender County Humane Society feels the effects. They are not bringing in as much money through donations as they have in the past. In addition, they are taking in more stray animals, and for longer periods of time. While PCHS continues to grow, and as technology becomes a necessity, the staff sees a need to keep more accurate records, increase efficiency, and provide for safe data backup. With the ability to share and export data, Pender County Humane Society will have the opportunity to apply for more money through grants. They will save time searching for and retrieving data records, giving them more time to provide care for the animals.

The technology plan consists of a new system for safely backing up data as well as the implementation of new data management software. The software is called Animal Shelter Manager and is an open source software package designed specifically for animal organizations. It allows for the collection and organization of data as it relates to animal intake, adoptions, medical treatments, reporting, accounting, scheduling of staff and includes a diary to track various information on each animal. The system is flexible and can be configured to meet the needs and workflow of Pender County Humane Society. In addition to the Animal Shelter Manager software, our plan will include the addition of an external storage of data that will be kept off site to ensure data is safely stored.

TECHNOLOGY MISSION & VISION

Pender County Humane Society (PCHS) provides tremendous value to the surrounding community. It is critical to the community for PCHS to keep their status and continue to provide care to homeless animals. As the number of animals coming into the shelter increases while funding decreases, it becomes more difficult for the organization to operate. As a division of the NC Department of Agriculture, they must adhere to strict data management and record keeping guidelines. If the shelter does not meet these demands, they can lose their funding and be forced to shut down. It is critical that they implement changes in order to run more efficiently, thus allowing them more time caring for homeless dogs and cats.

To better understand the needs of both the staff and the organization itself, we conducted a needs analysis. Due to the small size of the organization, interviews, document analysis and on the job observations were conducted. By learning more about the staff's abilities, budgetary concerns and needs in terms of data entry and shelter maintenance, we devised an implementation plan to best fit their mission and vision. The below mission and vision statements reflect the purpose for the organization, as well as the direction they are headed as they implement change.

Mission Statement
Pender County Humane Society is dedicated to the rescue and betterment of homeless and unwanted animals by providing care, medical attention, and shelter, while seeking permanent loving homes.

Vision Statement
Pender County Humane Society, working as a team, in learning and using appropriate technology tools and resources, will build a better environment and increase efficiency to more effectively serve homeless pets.

Goals
The primary goal of Pender County Humane Society's technology change is to run the administrative and data collection functions of the shelter more efficiently and accurately. By keeping more organized and safely stored records, the Shelter Manager will save a lot of time. This will allow her to spend more time caring for the animals, administering medications and maintaining the shelter itself. There are three goals that make up this technology plan, which are outlined below:

- Pender County Humane Society Staff will utilize and correctly follow computer policies and procedures
- The shelter will run efficiently and accurately by way of full implementation of the new Animal Shelter Manager (ASM) Software
- An off site backup of data will occur correctly and regularly

IMPLEMENTATION PLAN

TEAM MEMBERS INVOLVED

The team members needed for this implementation plan include the original change management team as well as some stakeholders from outside the organization, to provide different perspectives. Our team is made up of The Pender County Humane Society President, Treasurer, Shelter Manager, Webmaster, two volunteers, the project coordinators (UNCW Graduate Students), shelter donors as well as volunteers from other local rescue groups.
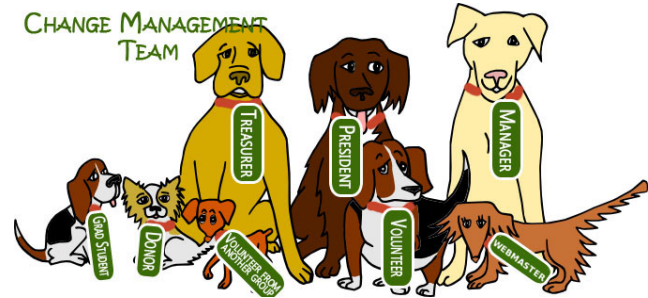
IMPLEMENTATION PHASES

This implementation plan offers a timeline, which includes step-by-step procedures to be completed by the PCHS staff. The plan will be implemented in a phased approach over the next several months. We recognize this change is a big step for the Shelter Manager, therefore the phased approach will offer a means of developing confidence before moving to the next level. The plan is broken up into the following three phases below. (Also see Appendix 1 for Implementation Chart)

Phase 1: Creation & Implementation of Policies and Procedures as related to Technology Use (June 2011-July 2011)

Phase 1 is an introduction to the technology change. At the time of needs assessment, Pender County Humane Society did not have any formal Standard Operating Procedures in place. This lack of policies had caused problems recently when the former Shelter Manager left the organization, leaving the remaining staff unaware of how to handle various tasks. The President and Treasurer have been slowly starting to create and implement policies. The technology change brings some new data security issues and a need for computer related policies.

In this phase, the Shelter Manager will be introduced to the impending changes and will be able to have a sense of ownership in the process of creating computer related SOPs by working alongside the President and Treasurer as they create them. The Shelter Manager already has experience with the importance of computer usage policies; therefore her input will be valuable to personalizing the policies and procedures. Rather than creating policies from scratch, a template of basic computer policies and procedures will be used. The Shelter Manager, while working with the President and Treasurer, will be included in the revision of these generic policies to

fit their organization's needs. As the Shelter Manager is the only employee allowed to use the computer, it is not necessary to conduct any training during this phase.

Phase 2: ASM Software Implementation (July 2011-August 2011)

During this phase, the Animal Shelter Manager (ASM) software will be downloaded and installed. The current hardware is compatible with the recommended software. The software will be downloaded from the ASM website. Upon installation, the Shelter Manager and Treasurer will download and read through the user manual (See Appendix 6, Figure 1), which was designed by the creators of the software. Next, the Webmaster will provide mentoring via a hands-on work session and assist the ladies in inputting some data. The Webmaster has been given the software in advance and is already comfortable using it, as he has very extensive experience with data management related products. The Shelter Manager and Treasurer will put in the data of any dogs and cats that have stayed within the shelter, as far back as one year, to satisfy the requirements of the NC Agriculture Department. The data collection fields provided by ASM (See Appendix 6, Figure 2) satisfy the needs of the organization. Once completed, the Shelter Manager will enter the data on all animals currently staying in the shelter. To ensure accuracy, she will export the data to an excel spreadsheet for verification by the Treasurer. In addition to guidance from the Webmaster, should extra support be required, there is a message board (See Appendix 6, Figure 3) which provides answers to frequently asked questions and other support from the software creators. The ASM staff, providing prompt responses to posted questions and concerns, actively monitor this service.

Phase 3: Backup Implementation (September 2011-October 2011)

This phase will increase data security as well as provide the ability to share data between the involved parties. As outlined in the SOPs, an off-site backup is needed. The recommendation is to use Carbonite© (Carbonite, Inc., 2010-2011), a remote backup product (See Appendix 7, Figure 4). To begin, the Treasurer will set up an account, providing payment information, with Carbonite©. Once this occurs, the Webmaster will work with the Shelter Manager and Treasurer on setting up the system. Carbonite© offers good instructions for setup and has resources for technical support in place (See Appendix 7, Figure 5). Following the first backup, the Shelter Manager and Treasurer will work together to setup a schedule for regular backups. Given the Treasurer's need to access data for future funding opportunities, she will practice accessing the data from her home computer. This will also provide a method of checking to ensure the backups are being performed on schedule and according to the SOPs.

COMMUNICATION PLAN

Communication is key with any change. In order to create awareness, understanding and acceptance of the Implementation Plan, it is important to put together an organized, thorough communication plan. This will also enhance the relationship between PCHS, its stakeholders and the community.

The Communication Plan (Appendix 2), outlines in detail when, who, how and what will be communicated throughout the entire process. Given the small size of the organization, the change management team encompasses most of those involved. A few outside individuals have been added to offer their experience and expertise. Included in the change management team are the following members: The PCHS Shelter Manager, Treasurer, President, Webmaster, two Project Coordinators (UNCW graduate students) and two volunteers from the shelter. In addition to this team, a volunteer from neighboring animal rescue groups and a PCHS donor will be included in the Communication Plan.

The project coordinators will be responsible for communicating with the change management group and other stakeholders. As coordinators, they will keep everyone up to date, ensure various communications occur, and will document both the communications as well as any feedback received.

The communication plan, as outlined in table form, shows the various stages of communication necessary. The majority of these circumstances call for face-to-face meetings or email, because that is the preference of the Pender County Humane Society staff.

INFRASTRUCTURE

The implementation plan was created to fit the current resources of Pender County Humane Society. The solution we are recommending is aligned with the shelter's current technology infrastructure. The shelter currently utilizes a Hewlett Packard desktop computer, which maintains an operating system strong enough to run the Animal Shelter Software and Carbonite back up required in the plan. The second computer, located at the Treasurer's home, a Gateway, is also capable of running the software and the backup system. Both computers maintain a secure Internet connection, with satisfactory speeds and download/upload times. There is no networking system in place, as it is not necessary for PCHS's needs.

PROFESSIONAL DEVELOPMENT

As part of our needs analysis, we observed the various staff members while on the job. We also conducted interviews to learn more about their current skill levels. The

two staff members primarily utilizing technology are the Treasurer and Shelter Manager. The Treasurer is able to use the Microsoft Suite on an intermediate level. This includes using excel to organize data. She also has experience using Quicken and other budgetary related software. The Shelter Manager's technology skills are not as strong. She can use Word for creating documents and flyers for the shelter. She does not have much experience with Excel, other than plugging data into fields. Both staff members are apprehensive about change, however both are interested in improving the efficiency of the shelter.

Due to this implementation being on a very small scale, a combination of just in time support as well as the mentoring model will be used at PCHS (see Appendix 3 for more details). The organization has its own Webmaster, who has extensive experience with both types of technology implementation, therefore he can provide coaching and mentoring to the shelter staff. It was also noted that the Shelter Manager already views the Webmaster as a *mentor* when technical issues are involved. Incorporating the Mentor Model as the staff development method will maximize this already established relationship. In addition, both the ASM software and the Carbonite service provide online support as well as user manuals and job aids, thus providing just in time support.

TECHNOLOGY SUPPORT SERVICES

Currently, PCHS employs the skills of two volunteers for technical support as well as the customer service support provided by their Internet Service Provider. The Webmaster, a volunteer, has an impressive resume covering many aspects of software and hardware skills. The Treasurer's husband, also a volunteer, has committed to provide technical support for their home computer, which the Treasurer uses for PCHS duties, by signing a letter of commitment.

The technology plan to be implemented will require little changes to the current support. Both the ASM software and Carbonite© offer good forms of support both for the initial phases and on-going support.

- ASM Developers provide the following technical support for little cost:
  - User manual ($15 to download a more detailed manual)
  - Message Boards
- Carbonite© provides the following support included in the annual fee:
  - Detailed Support Articles
  - Troubleshooting Guide

AT&T will continue to be the ISP and PCHS will continue to use their support services as included in the monthly fees.

EVALUATION

A formative evaluation of the implementation plan will be ongoing in nature. Two outcome goals were established:
- Shelter is running efficiently and accurately by way of full implementation of ASM software.
- PCHS staff are utilizing and correctly following all computer policies and procedures.

There are intermediate goals, which provide check points, indicators and benchmarks to ensure the plan is on track. (See Appendix 4 for Evaluation Chart)

A final, summative evaluation of this implementation will occur six months after completion of implementation. After the change plan has been in place, it will be important to evaluate its effectiveness. To do this, we will use our initial problem for the guiding question:

- Has PCHS fully implemented the new data management policies and procedures?
- Is PCHS able to quickly retrieve accurate data needed for grant funding opportunities?
- How has PCHS scored on NC Agricultural Department investigations since implementation?

Answers to these questions should be reviewed after the change has been in place for one year, June 2012. It will be important to examine multiple sources for this. Interviews with Treasurer, president and Shelter Manager will be important tools for evaluation. This will be combined with document analysis as well as results from grant applications.

PROJECT BUDGET

Pender County Humane Society is no different from any other non-profit organization in that funds are always limited. The poor economy is making it even more difficult for the organization to raise money. When the conversation to solve their problem began, both the President and the Treasurer were very upfront about the lack of funding. By finding a solution to this current data management issue, the organization will have the ability to apply for more funding.

To meet the President and Treasurer's request, this proposed solution and plan requires very little funding (see Appendix 5). Maximum use was made of volunteers and their skills, as determined by interviews during the Front End Analysis.

REFERENCES

Animal Shelter Manager
http://sheltermanager.sourceforge.net/home.php

Carbonite, Inc. (2010-2011). *Carbonite*. Retrieved Arpil 2011, from Carbonite: www.carbonite.com

APPENDIX 1: Implementation Plan Chart

Goals & Benchmarks Work Flow Goals	Description of Strategies/Activities to Achieve Goals & Benchmarks	Timeline	Budget
Shelter is running efficiently and accurately by way of full implementation of new technology	**Shelter staff will download and install both ASM and Carbonite technology tools to allow for efficiency in the shelter office.**	**July 15, 2011 thru October 15, 2011**	**$90 total**
Benchmarks • ASM Software is downloaded and installed on Shelter Computer	• Webmaster will download and install Animal Shelter Manager (ASM) software	July 15, 2011	Free software
• Shelter Manager and Treasurer complete training of basic functionality of new software	• Webmaster will train Shelter Manager and Treasurer on inputting data into ASM software as well as basic functionality.	July 30, 2011	$20.00 for manuals
• Treasurer and Shelter Manager have successfully put all animal data as required into ASM	• Shelter Manager and Treasurer will participate in work sessions to enter all animal data for 1 year from current date.	Aug. 31, 2011	
• PCHS will complete purchase of an account with Carbonite© Backup Service	• Webmaster will train Shelter Manager and Treasurer to use Carbonite©	Sept. 30, 2011	$60.00/year subscription fee
• Off-site backup for data is correctly and regularly occurring	• Shelter Manager and Treasure work together to set up schedule for backups	Oct. 15, 2011	
PCHS staff are utilizing and correctly following all computer policies and procedures.	**Staff will take recommended procedures guide, review it and tailor it to the shelter's needs, thus putting formal guidelines in place.**	**June 15- June 30, 2011**	**$10 total**
Benchmarks: • PCHS staff review	• Treasurer and Shelter Manager to review and	June 15, 2011	

recommended computer policies and procedures	make recommendations of general Computer Policies and Procedures		
• PCHS staff alter recommended procedures and make changes based on their needs	• Final Approval of Computer Policies and Procedures at monthly board meeting.	June 30, 2011	$10.00 for binder and printing costs

APPENDIX 2: Communication Plan Chart

Stage/Objective	Stakeholder	Format	Vehicle	Frequency	Messenger
Mission & Vision	Change Management Team, additional donors	Written & Verbal	Face to Face, Email	One Time	Project Coordinators
Gap Analysis Results	Change Management	Written & Verbal	Face to Face, Short Report	One Time	Project Coordinators
Solution Selection	Shelter Manager, President & Treasurer	Verbal & Written	Email, Face to Face follow-up	Twice	Project Coordinators
Implementation of Computer Policies and Procedures	Shelter Manager, President & Treasurer	Written & Verbal	Email, Face to Face	One Time	Project Coordinators

Implementation of ASM Software	Shelter Manager, Treasurer, Webmaster	Verbal & Written	Face to Face with Email follow-up	Twice, or as needed	Project Coordinators, Webmaster
Implementation of Backup System	Shelter Manager, Treasurer, Webmaster	Verbal & Written	Face to Face with Email follow-up	Twice, or as needed	Project Coordinators, Webmaster
Evaluation of Implementation	Change Management Team & Volunteers	Verbal, Written, Presentation	Face to Face, Presentation and Short Report	One Time	Project Coordinators, President, Shelter Manager

APPENDIX 3: Staff Development Chart

Phase	Model(s) Being Used	Description of Use
Phase 1: Computer Policies and Procedures Implementation (June-July 2011)	N/A	There is no training needed during this phase because the three PCHS members who will be using the policies are creating them together.
Phase 2: Animal Shelter Software Implementation (July-August 2011)	Just In Time Model	The Animal Shelter Manager online message boards and user manual will serve as just in time assistance to the PCHS staff. Message boards are actively monitored by developers.
	Mentor Model	This will be training in the form of one on one mentoring. The Webmaster will be working alongside the Shelter Manager and Treasurer to ensure they understand the new software. This model will allow them to work at their own pace.

Phase 3: Carbonite Back Up Implementation (September-October 2011)	Just In Time Model	The Carbonite online support services and user manual/job aids will serve as just in time assistance to the PCHS staff.
	Mentor Model	This will be training in the form of one on one coaching. The Webmaster will be working alongside the Shelter Manager and Treasurer to ensure they understand the new back up service. This model will allow them to work at their own pace.

APPENDIX 4: Evaluation Chart

GOAL	INDICATOR	BENCHMARK	MEASURE
Outcome Goal: Off-site backup for data is correctly and regularly occurring	The Shelter Manager regularly practices backing-up data.	Carbonite software is in place and running regular backups by October 31, 2011.	Dates of Backups are displayed in Carbonite Report
Intermediate Goal: Data is properly backed up	Service has run a successful backup	First back up is successfully complete by October 15, 2011	Treasurer is able to access up to date data from Carbonite on specific animals.
Intermediate Goal: Training is conducted	Training session with Webmaster has taken place	Training is completed by September 30, 2011	Verified by Carbonite report that training has occurred and practice backup was successful.
Intermediate Goal: PCHS will complete purchase of an account with Carbonite Backup Service	There is proof of purchase of new Carbonite system.	Carbonite backup service is installed by September 15, 2011.	Account log-in and ID information is present.
Outcome Goal: Shelter is running efficiently and accurately by way of full implementation of ASM software.	The Shelter Manager can pull data on any animal at any given time; and all information is accurate and present.	All of the NC State required data is present by August 31, 2011.	State report on NC Department of Agriculture site will have positive outcome (scored well).
Intermediate Goal: Shelter Manager has successfully conducted input of current data	Shelter Manager enters data in as animals arrive at shelter.	All animals presently in shelter are in the ASM data management system by August 31, 2011.	Data is exported for visual observation.
Intermediate Goal: Treasurer and Shelter Manager have successfully put all past animal data required into ASM.	Treasurer can locate past animal data.	This data has been put into the system by August 15, 2011.	Data is exported for visual observation.

Intermediate Goal: Shelter Manager and Treasurer complete training of basic functionality of new software	Initial training session has taken place. Both Shelter Manager and Treasurer can accurately input 1 animal record.	This first session has occurred by July 30, 2011.	Verified by observation
Outcome Goal: PCHS staff are utilizing and correctly following all computer policies and procedures	Policies and Procedures binder is accessible in PCHS office.	Staff have read, understood and signed off on new policies by July 31, 2011.	Staff signatures are present verifying their understanding and commitment to new policies and procedures.
Intermediate Goal: PCHS staff alter recommended procedures and make changes based on their needs	President, Shelter Manager and Treasurer create first draft by making changes to recommended document.	President and Treasurer make changes by June 30, 2011.	Verify via face to face meeting and review of changes
Intermediate Goal: PCHS staff review recommended computer policies and procedures	President, Shelter Manager and Treasurer have printed copies of recommended computer policies and procedures.	President and Treasurer review procedures by June 15, 2011.	Verify via meeting in person

APPENDIX 5: Budget Chart

Item	Projected Cost
ASM Software User Manual	$15
Carbonite Account (per year)	$60
Printing Costs	$15
TOTAL COST FOR FIRST YEAR	**$90**
ON-GOING YEAR TO YEAR ESTIMATED COSTS	**$60**
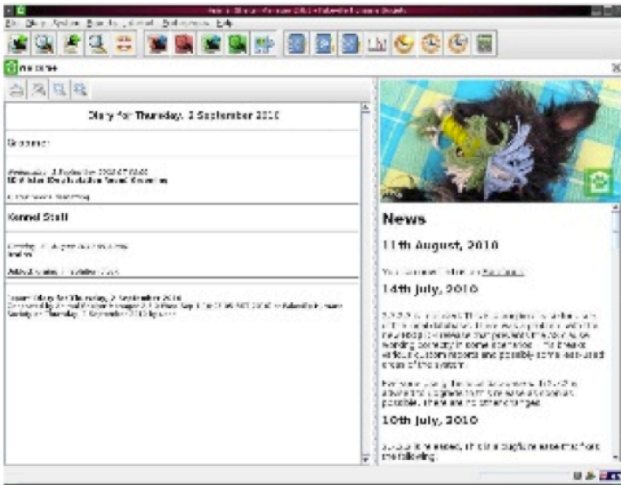
APPENDIX 6: ASM SCREEN SHOTS

Figure 1: Downloadable User Manual

Figure 2: ASM Data Entry Screen

Figure 3: ASM Online Support Message Board

APPENDIX 7: CARBONITE SCREEN SHOTS

Figure 4: Carbonite© Website

Figure 4: Carbonite© Support Site