

Local Action Committee, TecsChange

Boston, MA

April 11, 2003

M. Forrest Sutton

Advisor: Jolan Rivera

Index.....	2
Abstract.....	3
Summary.....	4
Definition of Problem	7
Project Goals.....	11
Method.....	12
Background.....	14
Results.....	19
Conclusions & Recommendations.....	25
Appendix 1: Request For Donation Form.....	26
Appendix 2: Scope of Work Agreement.....	27
Appendix 3: Technology Plan Template.....	28
Appendix 4:Technology Planning.....	30
Appendix 5: Understanding Licensing.....	34
Appendix 6: Back Ups.....	37
Appendix 7:Virus Checklist.....	42
Appendix 8:Interview Tool.....	46
Appendix 9:Interview Results.....	47
Works cited.....	54

Abstract

Small nonprofits working for social change often have difficulty securing and maintaining their computer systems. The TecsChange Local Action Committee has been helping to set up computer networks for nonprofits since 1999, but would have to revisit these organizations as problems arose. Often these groups would spend money without truly understanding the need, or without strategic thinking about their computer needs. The decisions they were making were wasteful of their already limited resources. Over the course of this project from November 2001 until March 2003, I worked with the Local Action Committee of TecsChange to deliver equipment and services to four nonprofit organizations, determine what nonprofits' technology needs are, and define ways of dealing with the needs that TecsChange cannot deliver. At the completion of this project, TC has a systematic way to deliver goods and services that allows nonprofits to meet their own future needs by giving them the skills to create technology plans that map out their needs for support and maintenance.

Summary

Small Boston-based nonprofits that do grassroots work for social change often find it difficult to secure funding because of their missions. These smaller groups often serve and depend on the communities they work with to keep afloat. They pool volunteers to help with programmatic and administrative support. Working at this grassroots level these organizations can be some of the most effective and certainly the most representative of the communities in which they are involved.

TecsChange (TC) is a volunteer staffed and managed nonprofit located in the Roxbury neighborhood of Boston. TC has been refurbishing and donating computers for over ten years and started to offer technical services, such as setting up networks and advising nonprofits on software, in 1999 under the auspices of the Local Action Committee (LAC). This project has helped the LAC along with the nonprofits that participate in projects more effectively assess the needs of the organizations.

Problem Statement

The high cost of equipment and services often forces nonprofits to divide precious resources between computer services and project goals. They need low cost services and help in planning out their technology planning, so that they can sustainably manage their information systems.

Goal Statement

The goal of this project is to encourage self-sufficiency among nonprofits that participate

in Local Action Committees projects by creating a system that delivers services to nonprofits, gives them the skills to maintain their own systems, and gives them access to the materials that they might need in the future. This will allow these nonprofits to make better use of their limited resources to more quickly resolve issues. By reducing their dependency on the Local Action Committee, the LAC will be able to complete more projects with other organizations.

Current condition(s) of the Target Community

Nonprofits that have worked with the Local Action Committee continue to have problems with their systems because they do not know how to maintain what they have, or seek answers to their issues.

Desired condition(s) for the Target Community

Nonprofits that have worked with the LAC can solve some of their own problems or have avenues to resolve issues as they come up, whether that means finding the answer on their own or retaining a consultant.

Project Product Statement

Systems that the Local Action Committee can use to best define and meet the needs of nonprofits utilizing a volunteer staff. The completion of the goal will be a system that includes training and resources that are continually updated to meet the communities' needs, both that of the TecsChange community and the nonprofits that it aims to help through its projects. The nonprofits receive a blue print for technology that includes not only basic information about their systems, but also what to do if something should go wrong, including whom to contact if they

are unable to resolve their own issues.

Major outputs

The physical outputs will include a scope of work; technology template; supporting documents that introduce non-technical people to the steps involved in creating a plan to manage computers and systems in a cost effective manner; and four nonprofits with working networks and computers that can connect them to the Internet and printers.

Conclusion

The LAC has completed four projects, delivering computers and services or just service to all the organizations. The community-based organizations have expressed that they understand and will use these technology plans in their organizations. TecsChange as an organization is looking to incorporate the use of assessment tools to evaluate need in nonprofits that request projects.

Definition of the Problem

Target Community

There are several hundred nonprofits operating in the Boston area. Some are affiliated with national organizations and are well funded, while others operate on small budgets and have a difficult time finding funding because their missions of social change are too controversial. These smaller groups often serve and depend on the communities they work with to keep afloat. They pool volunteers to help with programmatic and administrative support. Working at this grassroots level these organizations can be some of the most effective and certainly the most representative of the communities in which they are involved.

TecsChange (TC) is a volunteer staffed and managed nonprofit located in the Roxbury neighborhood of Boston. TC has been refurbishing and donating computers for over ten years and started to offer technical services such as setting up networks and advising nonprofits on software in 1999 under the auspices of the Local Action Committee (LAC). This project has helped the LAC along with the nonprofits that participate in projects more effectively assess the needs of the organizations.

The grassroots level groups that I worked with for this project are Project HIP HOP, a youth empowerment group; Aid to Incarcerated Mothers (AIM); Red Tomato, a nonprofit that helps local farmers find markets for their organically grown produce; and ACE, Alternatives for Communities and Environment, which works in partnership with low income communities and communities of color to achieve environmental justice.

Current Conditions of the Target Community

The targeted communities are the TecsChange Local Action Committee as well as

nonprofits that participate in their projects. The groups that the LAC works with are a number of grassroots nonprofit organizations working to help diverse groups in the community, from students, to small farmers, to women recently released from prison. They all operate on small budgets and are constantly looking for ways to leverage their efforts with technology. They have limited resources so they must strike a balance between their need for this technology and with their programmatic efforts. Many short term solutions are often more expensive in the long run, and a lack of strategic thinking can lead to poor planning and decision making, which can be expensive.

One of the volunteers of AIM approached TecsChange about a donation of computers. They had only two computers that their staff had to share. They needed to connect the system and also to have Internet and e-mail access, something that they did not have at the time. ACE was looking to connect the computers they had to a network, so that they could share documents, printers and an Internet connection. Red Tomato was moving into a new location and was concerned by the cost of connecting all the computers to their network, so they could share a produce inventory system as well as share documents, printers and an Internet connection. Project HIP HOP approached TecsChange about an equipment donation. They had two computers, but needed many more so that their volunteer staff could edit "Rising Times," a bi-monthly newsletter written by teens about activism. These groups were chosen because they operate on small budgets and have well-defined social missions that TecsChange wants to support.

Problem Statement

Increasingly, small nonprofits are using technology to leverage the productivity of a small staff. Technologies such as web sites and e-mail are inexpensive ways for these organizations to communicate. The high costs of computer equipment and services often forces nonprofits to divide precious resources between computer services and project goals. They need low cost services and help with technology planning, so that they can sustainably manage their own information systems.

Assumptions

When nonprofits have proper information they can make better decisions about information systems and better manage them by themselves. With a technology plan in place they can more efficiently manage their own limited resources.

For example, public health organizations use information in campaigns to change behavior, such as campaigns encouraging parents to vaccinate their children, by showing the benefits of child immunization. Campaigns to reduce the use of cigarettes with data on the health risk of smoking have been used for years.

"California had the second-lowest adult rate at 18.4 percent in 1997 after hitting 26 percent in 1984, a drop attributed to the nation's oldest anti-smoking initiative, which began in 1989" (Health Letter on the CDC)

These campaigns can take many forms, print or media ads or health workers talking to people in schools. Why do we keep doing them? The benefits of education are measurable, the effects long lasting and the investment worth the time and money. A Study of a UNICEF education program in Myanmar in 2001 found that of some 300 teachers and students interviewed:

"97% of teachers and 73% of students were aware of the iodized salt campaign. When asked about the benefits of eating iodized salt, 90% of teachers and 37% of students mentioned that it prevents goiter. 81% of teachers and 61% of students said that they requested their homes to use iodized salt. 83% of the teachers were aware of government activities on iodized salt and 78% of them were involved in these activities. 40% of students were aware and 51% of them had already undergone goiter tests at school." (MMRD Research Services 2001)

My assumption for this project is that a campaign both on site and with courses available to nonprofits will give them the information that will help them make better decisions about how they use their limited resources. Other initiatives involving technology training have suggested that even people with 'low' attitudes towards computers can become more efficient with training.

Survey responses were collected at both the beginning and end of an introductory computer course. Results suggest that training significantly improved Internet self-efficacy for males and females. Respondents with 'high' and 'low' attitude toward computers seem to equally benefit from training programs. (Torkzadeh 02)

Project Goals

Goal Statement

The goal of this project is to encourage self-sufficiency among nonprofits that participate in Local Action Committees projects by creating a system that delivers services to nonprofits, gives them the skills to maintain their own systems, and gives them access to the materials that they might need in the future. This will allow these nonprofits to make better use of their limited resources to more quickly resolve issues. By reducing their dependency on the Local Action Committee, the LAC will be able to complete more projects with other organizations.

Desired Condition for the Target Community

The Local Action Committee of TecsChange will be able to provide a template that will include a technology plan and background information on each of the topics - virus prevention, making back-ups, software licensing and why and how people create technology plans and what they should include (see Appendix 3).

This technology plan template will allow the organizations that use it to better understand why and how to put together their own technology plan that brings to together everything from how to maintain what they have now, how to plan for the future, and how they will resolve any issues that will arise. If the groups follow the plan and make arrangements for each point it brings, it will allow anyone in the organization to find the answers to questions such as , 'who do we call if there is a problem?' and 'what do we do if a computer crashes and I lose all my data?'

Method

Project Product Statement

The Project Product is a system to be used by the LAC and the groups that are involved in LAC projects that stresses assessment and planning as outlined in the technology plan template (see appendix 3). Completion of the goal will be a system that includes training and resources that are continually updated by the nonprofit's technology person to meet the communities' needs, both that of the TecsChange community and the nonprofits that it aims to help. The nonprofits involved in LAC projects receive a blueprint for technology that includes not only basic information about their systems but also what to do if something should go wrong, whom to contact if they are unable to resolve their own issues.

Major Outputs of Successful Completion

With the Local Action Committee of TecsChange I worked with four groups in the Boston area delivering equipment and services, to determine what the nonprofits' technology needs are and to help define ways of dealing with the needs that TecsChange cannot deliver. At the completion of this project, four nonprofits will have technology better than they had before, and the resources to better manage their technology in the future. The nonprofits also received a blueprint for technology that includes not only basic information about their systems but also what to do if something should go wrong, whom to contact if they are unable to resolve their own issues.

In addition to these benefits, the physical outputs for building on this success in the future will include:

Tools for TecsChange to improve their work with nonprofits:

- A scope of work document that outlines what TecsChange and the Local Action Committee have agreed to provide to nonprofits.
- A protocol that the Local Action Committee can use to screen nonprofits served by their volunteers.
- Involving and training TecsChange volunteers in setting up and configuring networks for nonprofits (one of the most requested service that TC has).

Resources for nonprofits to improve their technological capacity:

- A system and materials that guide a nonprofit through creating a technology plan that will help them deal with everyday problems such as maintenance as well as long term planning and deal with minor and major issue that arise.
- Training and reference materials that will help nonprofits to think more strategically about their technology and how it impacts their work
- Work sessions for the students and nonprofits, both benefit one from training and one from work done.

It will be critical for the Local Action Committee to continue to meet, and for the work that LAC does with the nonprofits to continue. Each of the small projects is a piece of the larger picture. As the LAC delivers services and works directly with the community they will help define their needs, which the LAC will in turn channel back into the end goal of the project.

Background

How I got involved in this project

For 10 years TecsChange has donated refurbished computers to local and international nonprofits. But, outside of one project in 1996 with Grassroots International, TC did not offer professional services, such as setting up networks or making software recommendations. In 1999, TC formed the Local Action Committee (LAC) with two volunteers and started taking on networking projects, at first because some of the groups were offering financial compensation and TC was looking at ways to increase its revenues. In August 2000, I began volunteering with TC as a tutor for the Computer Repair Course, and became involved in the LAC in 2001. By then, the LAC had completed three projects, and was looking for a way to improve their work with nonprofits.

After I met with Sangha Tibet, a Tibetan cultural center in Somerville, and the Center for Boston Public Housing, it became clear that the problems they were having had more to do with planning than with anything else. Sangha Tibet had a number of computer savvy volunteers who had changed the network and software running on many of the computers. They are lucky to have volunteers with these skills, the only problem was that some changes were made by one volunteer, and others by another volunteer, leaving the coordinator confused about which computers did what. Documentation on what software was where and what changes had been made was needed to make their system function better. At the Center for Boston Public Housing, one computer was unable to print and behaving oddly so they moved it to be a public access computer and replaced the workstation with a new one. When an LAC member looked into it, it turned out the computer had a virus, which was now on all of the computers on the network.

Both of these projects had been complete for at least six months, yet they continued to vie

for the LAC's limited time because the organizations did not have the tools to record changes made, or a way to understand what could be going wrong or how to resolve their own issues. The original idea was to have something that we as volunteers could refer to when we went to a new nonprofit or a group that someone else had worked with, but needed us to go help with an issue. After starting to formulate what information we would put together we realized that the nonprofits themselves were going to be better able to answer questions about how they would use the document, and that they, too, would benefit the most from it. As soon as this realization was made we started including recommendations from the nonprofits, not only the one that we were dealing with, but also those that we were either just giving equipment or were planning projects with.

To address these problems, TecsChange has been working on a technology plan that outlines what information a nonprofit will need. We also direct them to helpful web sites, such as techsoup.org, where much of the information we are giving them is from. We find that they need this direction, because of the vastness of the Internet.

"now that information is available so quickly, so ubiquitously, and so inexpensively, its not surprising that everyone is complaining of information overload" (Shapiro,1999: 6)

We have completed six projects since I became involved with LAC, including the four that made up my CED project. We have another four in the planning process and two on hold while we wait for an organization, which is not ready to go ahead at this point.

Other people & organizations associated with this project

Project HIP-HOP (Highways Into the Past: History, Organizing & Power)

Uses the history of resistance to racism and injustice to empower young people to recognize themselves as agents of social change. Also, youth involved in the program put out a bi-monthly

newspaper to help educate other youth on issues dealing with social justice. The organization has one full time staff member and a youth volunteer staff. Miarima White-Hammond was our contact and the only employee. They requested six computers along with a laser printer to be used mainly by students to assist them in the creation of "Rising Times" and technical assistance to set up these computers and network them in their office with access to the Internet. The role was to request the equipment and help setting up and configuring the equipment. Their concern was that they needed this equipment, but had no money for the projects.

Aide to Incarcerated Mothers (AIM)

Works with women, their children, and the people and institutions that affect them, both inside and outside the prison system to keep families whole, healthy and self-sufficient. They offer programs to facilitate visitation, and reentry programs that help women make the transition back into the community with financial, moral and legal support. They offer legal aid, clinical services and HIV/AIDS education, while offering service to the families of incarcerated women. Carolyn Ogandaz is the administrator and our contact at AIM. They requested five computers and a printer.

Red Tomato

A small nonprofit based in Canton, MA that helps farmers find markets and brokers sales to food coops, grocery stores and restaurants. Focusing on the local produce's freshness and organics, RT attempts to create lasting relationships between farmers and buyers. Red Tomato's mission is "Helping family farmers and ecological farmers stay in business and to offer consumers access to locally grown produce". Marla Rhodes was our contact. She fills many roles at Red Tomato an

organization of 7 full time employees with an additional 4 drivers during the summer produce season. Red Tomato requested help in setting up and configuring their network

Alternatives for Community & Environment (ACE)

ACE is a grassroots environmental organization that works with communities to achieve lasting environmental, public health, and economic benefits. ACE is working in partnership with community organizations and residents to achieve environmental justice by: Educating citizens on their rights and opportunities for involvement in environmental and public health decision making; Developing the capacity of neighborhoods to take control over problems affecting their health and environment; Creating systemic solutions to address the unequal distribution of environmental burdens and to promote safe, sustainable economic development. Penn Loh is the executive director at ACE and our contact there. ACE requested a network and e-mail server.

Other interesting information

In addition to meetings with the four primary nonprofits (Project HIP HOP, Aid to Incarcerated Mothers, Red Tomato and Alternatives to Community and Environment), we also met with eight other organizations, some of which had already completed a project, some that will have projects in the future, and others that we planned a project with but that are indefinite. We used the Request for Donation (see Appendix 1) as a starting point, and as we spoke with these groups or did service, we would often ask them about issues that would arise and what the Local Action Committee could do to resolve the issues that they were having.

Meetings were held with all parts of the TecsChange community, including the Local Action Committee and the Steering Committee and the Computer Repair Committee.

Information was gathered from other groups delivering services to nonprofits, as well as

resources for training and resource guides. A web server was set up to host the works in progress so that all the volunteers could read about what has been done and to post problems that other Local Action Committee members can offer suggestions.

Results

Phase I: Determine nonprofits' needs: Assessment

All projects that the LAC is involved with have the same first stages. The groups fill out a Request for Donations (See Appendix 1). From there we discuss the group at the Local Action Committee. If they have a social mission, are under funded, and we feel we can meet their needs, someone from the Local Action Committee calls and sets up an appointment.

The appointment involves a discussion with the group about their needs and hopes and we try to set expectations about what we can do for them and what role we play and what the budget is for the project. If we are donating the time we still may need to buy hardware or other equipment. Once this is completed, we schedule a second meeting in which we do a site assessment. We look at the physical location and what we will need to connect the network, how, where and when. At this point we discuss an install date, almost always on a Saturday so that we can have maximum participation of our volunteers.

Phase II : Deliver goods and services

- Project HIP HOP felt that they needed 5 computers to accommodate their staff; we located 5 along with 2 printers. The LAC then went through the Project HIP HOP office and determined which of the network hubs would work, then connected up the network, configured the computers and a dial-up connection shared through a Linux computer on the network. The work started in November of 2001 and would continue for two additional months.

- Red Tomato had all the computers they would need, so we set up all the computers on the network and configured each of the computers. They also needed us to set up two servers. On both we installed the system software and configured each for its duty. The first was a Windows 2000 server that would host a database program for the produce industry, the other was a Linux server that would allow the staff to share a dialup connection and act as a print and file share server. In April of 2002 we did the site visit and the work at Red Tomato.
- AIM needed 6 computers and two printers all connected to a wireless network. We configured all the computers at TecsChange before moving them over to the AIM office. Once there we made sure all the configurations were working and installed some software that they had purchased. We returned in a month's time to configure the Internet connection and e-mail address. A few weeks after that I returned to do some training of one of their staff members on a database program called Filemaker Pro. In May of 2002 we started working with AIM, we had configured the Internet and setup all e-mails by June of 2002.
- ACE was also a networking project. We ran the wiring through their location to all of the computers and made sure that everyone was able to connect to the network and the Internet. I returned a few months later to setup an additional server that they used to send mail.

Phase III: Help define ways of dealing with needs that TC cannot deliver

Tech Plan

One point that we stress to all the groups that we work with is that we cannot offer long-term support to these organizations. To this end, the Local Action Committee has given all the nonprofits the tools to create Technology Plans that catalog what they have, how it is connected, and what software they have for work and for preserving/defending their work, such as backup and anti-virus software and plans.

In each case we spoke with each group about other sources of technical support. Most had worked with computer consultants in the past, and with AIM we were even able to recommend a consultant that they have since worked with. The idea is not that they can solve all of their own problems, but that they can have access to resources that will help them resolve issues. Three of the four groups were interested in increased capacity for an individual in their organization. One felt they were now at a scale where they should hire a consultant to come in and resolve issues.

Interviews

The first section of the interview tool was devoted to determining if the process, equipment and services met expectations. When asked if the computers and services met their needs, the answer from all groups was an overwhelming "Yes." Project HIP HOP said that it was vital. As part of their mission is driven by technology, having a way for multiple people to do research on the Internet and write articles was vital. AIM, who had the most dramatic change, from two to seven computers all connected to the Internet, said they were using their new capacity to connect to state government agencies to download forms and to better stay on top of

changes in state codes that affect their constituency. All reported an overall improvement in what services they deliver.

We then asked about our 'Process', from the initial meetings until the work is finally completed. All reported that they learned a lot from the process, and that we did set expectations. Time was the biggest complaint. The length of time between start to finish took longer than expected in half of those responding. In some cases this was the fault of a third party, other than the nonprofits or the LAC. In two cases the Internet service providers were slow or did not complete all work, so this added days or weeks to the process.

The next section was about the usefulness of the instruction given at the time of the install or shortly thereafter. We asked what issues they had resolved using these skills. Some of the projects were relatively recent, so not having a lot of issues is to be expected. Three of the four had been able to resolve minor issues with loose wires on the network; two reported being able to resolve issues with the Internet service provider or email.

Technology Planning

All of the groups were unfamiliar with technology planning before we introduced it to them. They were all interested in the concept and all have the form and supporting documents that have been put together to date. The first question is about whether they know what a tech plan is. The next few go on to ask about several elements that would go into a tech plan, so that when we get to the end of this session we point out that they have already started planning a technology strategy. The last two questions in this section ask how comfortable they are in finding answers to the problems they encounter and resources they are comfortable using. They all reported a high confidence level in being able to find answers to their own solutions. All four

responded that they were more likely to use online resource than either books or cd-roms, leading us to believe that we should recommend web sites over other media.

Future Needs

This final portion of the interview tools ask what planning they have done for the future and what they would like TecsChange to offer as trainings. This was an open-ended discussion; mostly people didn't feel there was much that could be added because of the volume of information already being presented.

Why is this project CED?

- The community of nonprofits comes to us, they initiate and by working with us on the resolutions to their projects they help to build the system we ultimately use
- Economic by reducing the financial cost they occur
- It is development because we are building capacity in these organizations

Has project purpose goals changed since you began this project?

Yes, we had originally hoped to include the TecsChange Computer Repair Committee students in each project to increase what they were learning, but found the scheduling was not possible.

We had selected five groups to work with, one of which did not happen because they lost their location and as of yet have not been able to secure funding for an office.

Identify any two factors or conditions that if they had been different would have increased your ability to complete your project?

The process from the first contact to the delivery of service takes longer than one would want. TecsChange as an organization needs to look for organizations that are willing to pay for service, as many funding sources have waned. The organization as a whole is looking at computer infrastructure assessments as a way to help nonprofits better help themselves. The class was created by others at TC, but they will be using the tools developed during this CED project in the course.

Identify one unexpected thing that occurred that significantly affected your ability to complete the project and achieve the stated goal(s).

TC is sponsoring a needs assessment course for its volunteers and is stressing these skills as something that TC could offer to nonprofits. The course is based in part on the materials I have put together for it. We are looking at increasing the training component of the organization, and cutting back on computer donations as the cost of equipment drops.

What two things would you suggest to someone doing a similar project?

Be realistic about timelines. If it is going to take 60 hours to complete a single project and you are working strictly with volunteers, then that will take at least 4 to 6 months for each such project. Be ready to spend much of the time training people in the nonprofit about what each piece of technology is and how to use it. Training is the most important component of any project.

Recommendations

The groups all favored online resources over other sources of information, such as books or CDs. We need to expand the information on the Tech Plan to include routine maintenance that could be done by staff members.

Conclusion

Training is the overwhelming thing that people want more of, and they want it on a wide variety of topics. Some groups felt that their whole organization should have some basic review and training while others felt that individual training on more advanced hardware, software and networking would work. All had grouped the information that would be part of a technology plan together, and most expressed an interest in maintaining the Tech Plan once we left.

TecsChange as an organization is interested in promoting self-reliance in all those that we work with, we feel that the method outlined in this document helps us reach that goal in our projects.