Seedco

Innovations in Community Development

October, 2002

Opening the Door: Technology and the Development of University-Community Partnerships

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Prepared by Seedco

October, 2002

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ACKNOWLEDGEMENTS

Consultants Richard W. Roper, President of the Roper Group, and Dr. Randal D. Pinkett, President and CEO of Building Community Technology Partners, LLC, were the primary authors of this report, which was edited by Molly Gordy.

Together with Seedco staff Melissa Magallanes, Leigh Graham, Catherine Gill, and Matt Dunkel, Roper and Pinkett developed and implemented the case study strategy, conducted interviews, and produced the analysis that follows.

We wish to express our appreciation to these individuals and to the Ford Foundation for its financial support of this effort. We also wish to thank the university officials, faculty, students, community leaders, and neighborhood residents that participated in the interviews and contributed to these innovative projects.

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October 2002

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Executive Summary

Introduction

This publication, *Opening the Door: Technology and the Development of University-Community Partnerships,* is the second phase in Seedco's Community Development Technology Initiative (CDTI), a multi-year project designed to assess and enhance the use of information technology (IT) in the community development process.

Seedco's first report in this series, *The Evolving Role of Information Technology in Community Development Organizations,* demonstrated that the field of community development has yet to take full advantage of IT. However, the report showed that when community IT innovation did take place, it was most often in partnership with a university. To more closely examine the interactions between universities, technology, and community development, Seedco undertook the six in-depth case studies that make up this second report. With ongoing leadership from consultants Richard W. Roper and Dr. Randal D. Pinkett, Seedco reviewers conducted interviews with university officials, faculty, students, community leaders, and neighborhood residents. Discussions focused on each university's involvement in the life of its host community, a description of each IT initiative, and the conditions under which it evolved.

The Case Studies

The six cases presented describe innovative IT projects designed to help revitalize distressed neighborhoods. The cases bring to light a diverse range of opportunities and challenges in the accomplishment of this general goal.

- In Philadelphia, the University of Pennsylvania is addressing issues of IT access and content, while also making research and data available to the community.
- In Washington, D.C., Howard University's Project C.H.A.N.G.E. deploys AmeriCorps volunteers to integrate technology more seamlessly into community revitalization activities.
- In New Haven and Los Angeles, Yale and the University of California-Los Angeles have taken steps toward gathering, disseminating, and building community capacity to benefit from data.
- The University of Memphis is mobilizing IT resources as a full participant in the City of Memphis' planning process, including tracking of neighborhood conditions and the provision of technology-training classes in low- to moderate-income communities.
- The Massachusetts Institute of Technology has developed a program combining computer access, courses, and web-based content to build community, empowerment, and self-sufficiency for the residents of a low- to moderate-income housing development.

Key findings

Overall, the case studies show that the combination of universities, communities, and technology can unlock powerful community synergies for the field of community development.

- Technology can open the door to meaningful partnerships. Although the field of community development has yet to take full advantage of IT, the innovations at these six sites demonstrate that technology can play an important role in community development efforts.

- Technology is most effective when utilized as a means to impact community priorities, rather than an end in itself. Using IT to achieve broad community goals can lead to sustainable, long-term collaboration between "town and gown."

- While universities can play a variety of different key roles in community development technology initiatives, the success of these initiatives is dependent on the willingness of the university partner to place the needs of the community first.

- Relationship building is critical. Universities with well-established records of and reputations for civic activism seem to be more effective. Mutual respect and understanding are essential for successful collaborations.

- Planning for the ongoing demonstration of milestones and mutual benefits keeps partners motivated and facilitates the ongoing health of the project.

- Innovative initiatives require creative combinations of funding, staffing, and management in the face of competing interests.

Conclusions

Connecting universities, their surrounding communities, and technology can lead to innovative strategies for community development. Because of community capacity benefits such as the "multiplier effect" of IT knowledge, residents often experience positive repercussions well beyond the conclusion of a given project.

It is critical that key stakeholders work together in a concerted manner to improve distressed communities, but successful project completion should not suggest that a university and its surrounding community have completed their work together. Sustainable community progress requires the ongoing commitment of both sides.

I. INTRODUCTION

Community Development, University Partnerships & Technology

Since the 1960s, the community development movement has spawned myriad efforts to revitalize distressed communities. These initiatives have included housing renovation, workforce development, and improvements in the delivery of social services. Local "anchor institutions" such as universities have often been leaders in this process. Because their resources are rooted in their specific geographic location, universities have a strong vested interest in the healthy development of surrounding neighborhoods.

Despite the inherent interconnection between universities and their surrounding communities, the history of university involvement in distressed communities often has been characterized by a high degree of tension. Many universities have suffered from a reputation as "ivory towers, " where research and education take priority over community needs. When universities do try to intervene in community development efforts, they are often perceived as putting their own priorities ahead of those of local residents.

In recent years, however, the pro-active efforts of many universities have forced a re-evaluation of this perception. Through community-based research, the direct involvement of students, faculty, and staff in revitalization efforts, and financial and programmatic support for community service projects, many academic institutions have taken substantive steps to improve conditions in their host neighborhoods.

Community technology initiatives have played a substantial role in this process. Technology is a field where university-community interests and resources complement one another in meaningful ways, and technology initiatives can serve as a key leverage point to begin converting mutual concerns into action. From building the skills of the unemployed with tailored software to pinpointing community issues with Geographic Information Systems (GIS), Information Technology (IT) is now widely perceived as an instrument of change in distressed communities.

To assess the ongoing role of technology in the community development process, Seedco began the Community Development Technology Initiative. The first step of this process was a survey of 353 community-based institutions to assess their use of technology. The results of that research are documented in Seedco's March 2002 report, "The Evolving Role of Information Technology in Community Development Organizations. "

This survey showed that, while the widespread adoption of IT for daily office tasks has had a positive impact on community groups, relatively few of these groups have gone beyond routine uses of this technology. Responses from groups in the sample indicate that most of their productivity gains from IT are a result of their use of basic IT applications such as word-processing, spreadsheets, e-mail, and the Internet.

While the use of these applications must be seen as a positive development, it is clear that most respondent organizations are not using the technology at their disposal to their full advantage. Our survey revealed cost and training as the primary obstacles to innovative community technology applications. For example, most organizations can find the resources for single purchases of equipment, but few can afford to build or install the IT platforms that would allow them to use

technology in an innovative way. Organizations that adopt innovative IT tools must also have adequate technical assistance to support the use of these tools.

Survey results indicated that technology partnerships between community groups and institutions of higher education were a promising way to develop meaningful community outcomes. This makes sense, since cost and training are two areas where university partnerships can make a tangible impact.

To learn more about the value created by these relationships, Seedco designed this case study report to examine six model university-community partnerships in greater depth. Seedco chose to study six groups that are using technology tools as a means to achieve community development goals. Four of the six groups participate in the Seedco AmeriCorps Digital Divide Project – a network of university-community partnerships recruiting students to provide technology services to local development groups.

The connection of universities, communities, and technology can lead to innovative community development strategies. These cases present beneficial lessons for groups seeking to develop these types of partnerships.

II. EXAMINING UNIVERSITY-BASED INITIATIVES

The Case Studies

The six cases presented here illustrate the diverse challenges and opportunities in merging technology with community development and university partnerships. The projects are designed to help revitalize distressed neighborhoods in Los Angeles, Boston, Memphis, Philadelphia, Washington D. C., and New Haven.

The **University of Pennsylvania (Penn)** is dealing with the issues of access, content, and training through computer recycling, course offerings, and a community information portal, while also making current research and data available to the community in West Philadelphia.

Howard University's Project C.H.A.N.G.E., (**C**onnecting **H**oward and **N**eighborhoods for **G**rowth and **E**mpowerment) deploys AmeriCorps volunteers to integrate technology more seamlessly into community revitalization activities. Host organizations are located throughout Washington, D.C., and include a food bank, health clinic, elementary school, charter school, and a housing development. Howard has leveraged the momentum of the project to establish a hub Community Technology Center (CTC) for access and training.

Yale and the **University of California-Los Angeles (UCLA)** have taken steps toward realizing a local and regional effort to gather, disseminate, and build local capacity to benefit from data. At Yale, their efforts will be focused on capturing a wide range of neighborhood indicators, while UCLA has targeted property- and tax- and disability-related data specifically, with plans to expand their efforts already underway. Both initiatives incorporate not only the provision of information, but also the necessary training and consulting services for community groups to act upon this data.

The **Massachusetts Institute of Technology (MIT)** has developed a program in Roxbury combining computers, Internet access, comprehensive courses, and a web-based system designed to build community, empowerment, and self-sufficiency amongst the residents of a low- to moderate-income housing development. Specifically, MIT's activities were intended to impact local residents in the areas of community-building, public safety, employment, and youth and senior services.

The **University of Memphis** has become a full participant in the City of Memphis' planning process, and is represented on task forces ranging from workforce development and transportation to public safety and social services. At the same time, the University is advancing a supportive technology agenda including tracking of neighborhood conditions and the provision of technology-training classes in low- to moderate-income communities. University activities include the deployment of AmeriCorps volunteers and the opening of a new Uptown Resource Center.

Early Results

Although some are still in the early phases of implementation, these programs illustrate the potential value of technology-focused university-community partnerships. They bode well for the future of IT as a tool for neighborhood revitalization, and for university-community collaboration

around community goals. Although each site faced different challenges and opportunities, positive trends were evident across all cases.

- ***Technology is serving as a catalyst for the development of meaningful community partnerships.***

The University of Memphis has seats on nine of the city's 12 strategic planning task forces, using technological expertise to address issues ranging from workforce development and transportation to public safety and social services.

The City of Los Angeles has hired UCLA to develop a new digital information system to improve the efficiency of the city's housing inspections. Through this system, inspectors are now able to download and input their data directly into handheld computer devices, so that it can be immediately incorporated into a database.

- ***Universities are developing new strategies for community investment of technology resources.***

Engineering students at Penn refurbish old computers, give them to community groups, and help recipients learn to use the technology. They also developed a pilot project at three public schools to replace expensive Microsoft software with free alternatives such as Linux.

Yale administrators are easing longstanding tensions with the community by replacing failed top-down management of information technology assistance with a coalition approach that lets the community set the agenda and share data collected in the neighborhood.

- ***Individuals in low-income communities are gaining a wide range of new technology skills.***

At Penn, 29 AmeriCorps members and a dozen work-study students are helping adults with computerized job training, introducing senior citizens to the Internet, teaching high school students to set up computer labs, and helping teachers develop their own computer literacy.

At Howard, students and AmeriCorps volunteers enhance the job-readiness of women transitioning out of prison by training them in basic information technology. They have also developed a bilingual training curriculum for local Spanish-speaking staff.

- ***Technology is helping to connect low-income residents with information, services, and people in their communities.***

Howard has built a community technology center off campus that is a hub of activities for local residents. Youth who are introduced to computers at an after-school site, for instance, might come to the center to use technology for creating a business plan; graduates of one its introductory skill clinics might come for computerized job training.

MIT offered new computers with high-speed internet access to every family in a local housing development, trained these families in basic IT skills, and linked them to a web-based "Creating Community Connections" network. Co-designed by MIT researchers and residents, this network establishes community connections between residents and nearby merchants, community groups, and service institutions such as libraries and schools.

- ***Community groups are compiling detailed data about local conditions, and using technology to depict, understand, and ultimately act upon this information.***

UCLA operates an innovative and widely used Web site called Neighborhood Knowledge Los Angeles (NKLA). Through this site, community groups can access the latest data for a single property, census tract, zip code, or council district anywhere in the city and are able to display that information on maps.

The University of Memphis deploys AmeriCorps members to collect data in the depressed Uptown neighborhood in an effort to assess the neighborhood's needs and resources. The volunteers used GIS to produce maps of problem properties such as vacant lots, dumpsites, and crime areas.

University Roles in Community Development Technology Initiatives

These early results make it clear that universities and communities can engage in meaningful work together, addressing community development issues such as workforce development, affordable housing, and economic development. Technology can contribute to these efforts in significant ways. Universities tend to play three general roles in the marriage of technology applications to community development goals – **Consultant, Application Service Provider**, or **Catalyst**. Although these roles are not mutually exclusive, each offers a different set of benefits and challenges for the specific technology project, and for the university-community partnership as a whole.

- ***Consultant:***

In this role, the university serves as a resource to community members and organizations providing technology and/or community development training and consultation. Often, the services and courses pertain to systems (e.g., custom applications, GIS, high-end software) or expertise (e.g., statistical analysis, curriculum design, etc.) which can be found at the university and are of potential benefit to the community. Howard's "CTC hub and spokes" model, Yale's anticipated "Regional Data Initiative," University of Pennsylvania's "Digital Divide Initiative," the University of Memphis' "Network Information Center," and MIT's "Reflective Practitioner Fellows Program" all operate in this manner, providing advanced training and/or consulting services to CTCs, CBOs, and residents. Howard, the University of Memphis, and the University of Pennsylvania also engage AmeriCorps volunteers in providing additional assistance.

The consultant role takes advantage of universities' traditional expertise as institutions of education and research. Whether it involves opening up their classroom doors, developing curricula and associated materials, or providing fee-for-service consulting, students, faculty, and staff are well positioned to offer direct assistance to CBOs. Some of the challenges that can arise include: incompatibility between the semester-based academic schedule and a CBO's need for consistent, ongoing support; the sometimes sporadic nature of students' involvement throughout the term, given their academic responsibilities; and the tension between academic research, which often seeks to apply new and innovative techniques, and community practice, which is sometimes better served by established, proven approaches. To overcome these challenges, both parties must ensure that

appropriate solutions are identified, local expertise is developed, and the community's capacity is strengthened during each phase of their interactions.

- ***Application Service Provider:***

In the Application Service Provider (ASP) model, an outside party maintains a technology-based tool for a group of users. In many cases, these tools take the form of online systems delivered via the Web, such as GIS mapping systems or community information portals. As an ASP, universities can almost eliminate the need for full-time technical staff at each user site and lower the total cost of ownership by centralizing the application and associated technical support on campus. Applications being delivered (or expected to be delivered) using the ASP model include NKLA, LILA, and NKCA at UCLA, the Creating Community Connections (C3) system at MIT, InfoR at the University of Pennsylvania, and the RDI at Yale. Community members are able to access and make use of these tools while the university assumes responsibility for maintaining and upgrading the underlying technology.

These systems often function as content aggregators, collecting and disseminating information from various sources and centralizing this information in a single delivery mechanism. For example, NKLA gathers real-time information such as property tax delinquency, building permits, and building code complaints in the City of Los Angeles. The C3 system captures information about the businesses, organizations, and institutions within a 1.5-mile radius of the Camfield Estates housing development in Roxbury, MA, in addition to the skills and interests of residents. InfoR's database is comprised of city, state, federal, private, and nonprofit records as well as university-based research pertaining to West Philadelphia. NKLA, InfoR and the RDI all involve an element of data-repackaging, and all of these systems provide a degree of flexibility allowing users to either query specific data sets or generate customized reports.

The ASP model leverages the sunk costs and existing technology infrastructure that most universities already possess. These resources can include internet service provision, domain name hosting, network connectivity and redundancy, data backup, and storage. The ASP model lets community groups avoid the financial and organizational inefficiencies that would result from replicating these services themselves, since a centralized university provider can either assume these costs or spread them across multiple users. In exchange for increased cost-efficiency, community groups generally sacrifice a measure of control over the data, which is essentially housed on campus. This can lead to political turmoil within the project. It is therefore incumbent on the community and the university to develop well-defined policies regarding data access and ownership, a subject that is discussed in greater detail throughout the cases.

- ***Catalyst*:**

In the role of catalyst, the university assists with the conceptualization, design, and implementation of an initiative addressing a community need. This often requires the engagement of multiple community stakeholders around specific areas of common interest. Engagement of key stakeholders may include identifying partners, convening meetings, obtaining buy-in, and setting goals, as well as other forms of ongoing, direct program support from students, faculty, and

administrators. The role of catalyst may also require proactive steps to demonstrate the potential benefits of technology to residents and local organizations.

As catalysts, efforts are being made at the University of Pennsylvania, UCLA, the University of Memphis, and Yale to bring together various community organizations with common sets of interests. These interests are typically centered on data such as city and government records, demographic information, and social and economic trends. As mentioned earlier, many of these initiatives also involve systems supporting the dissemination of this information, as well as capacity-building efforts enabling users to use this information meaningfully. As catalysts, MIT graduate students initiated the Camfield Estates-MIT project and were instrumental in shaping the program's fundraising, planning, and execution. They also assisted with efforts to encourage residents to sign-up for the program. Similarly, Yale graduate students and administrators were key participants in the formative stages of the RDC, and are now involved with the planning of the RDI. Howard, the University of Memphis, and the University of Pennsylvania are playing similar roles, using AmeriCorps volunteers to work directly with CBOs to facilitate the integration of technology into their community work. Penn students are taking a particularly active role, connecting tangible IT infrastructure to low-capacity community groups through their computer refurbishing program.

The role of catalyst is perhaps the most difficult role to manage in a community development technology initiative. On one hand, it positions a university to influence the initiative and promote greater use of technology in community development. However, as discussed later in the "Lessons Learned" section, the universities tend to be more successful when they see their role as more facilitative than directive. This requires that the university help identify key issues without restricting the community partners involved with a project. It demands that universities support and even initiate new programs, without autonomously defining these programs' goals and objectives. To gain maximum benefit, the community must be clear in its direction, and the university must be willing to support this direction in a way that is mutually beneficial.

Key Findings from the Case Studies

Even in cases where these efforts have faced initial setbacks and challenges, local leaders have chosen to learn from their experiences and pursue further project development rather than discontinuing their work. Perseverance and ongoing learning are critical – the development of university-community collaboration is never effortless. Although technology initiatives present special challenges, they can be a tangible way to facilitate this process. Local leaders' perseverance to develop and improve upon technology initiatives indicates that the frustrations of these projects are outweighed by their perceived benefits.

In the cases studied, university-community partnerships tended to enjoy the most success when technology was regarded as a community development tool, rather than an end in itself. Technology resources are certainly much-needed in low-income communities, but local groups must also receive guidance in how to use these resources. By focusing IT investments on specific community issues such as workforce development, affordable housing, or youth and senior services, university-community partnerships can build community technology capacity while impacting broader community development.

The cases indicate that university-community partnerships tend to be more successful when these project goals are driven by community voice, rather than university priorities. This finding should be of particular interest to institutions of higher learning, who will generally derive substantially greater benefits from successful projects than from unsuccessful ones. If universities can put their own interests aside during the initial phases of community partnership, they stand to benefit over the long-term.

Relationship-building and public perception are critical, particularly with a wide range of often-unfamiliar players at the table. A history of tense "town-gown relations" can impede early progress. But if projects are planned to generate early, measurable benefits for both sides of the partnership, these tensions can be minimized. Clear evidence of mutual benefits can greatly facilitate ongoing "buy-in" and program development, particularly if leaders demonstrate creativity and flexibility in resolving critical funding and staffing issues.

University-community partnerships can bring together the resources, strategies, and perspective to generate positive community outcomes, but the most successful cases do not limit this partnership to individual projects. The success of one-time initiatives often fades without follow-up. If, on the other hand, local partners view their work together as an ongoing relationship, they might find that successful projects lead to new shared opportunities. When university leadership exhibits a strong interest in community building, the benefits of university-community partnerships will extend beyond individual projects to generate sustainable community progress.

Report Methodology

Information for this report was collected through on-site meetings with key stakeholders in six community development technology initiatives: the University of Pennsylvania, the University of Memphis, Howard University, the University of California at Los Angeles, Yale University, and Massachusetts Institute of Technology. Under the leadership of consultants Richard W. Roper and Dr. Randal D. Pinkett, Seedco researchers interviewed university officials, faculty, students, community leaders, and neighborhood residents about the projects conducted at each institution. Discussions focused on each university's involvement in the life of its host community, a description of each community technology development initiative, and the conditions under which it evolved. These interviews were supplemented by on-site observations of the target neighborhoods and by background information culled from the Internet.

The following case studies detail the development, strategies, and outcomes of these six partnerships, along with key lessons learned at each site. They are followed by an analysis of the broader lessons learned across the sites, as well as conclusions for the field of community development.

III. CASE STUDIES

CASE STUDY ONE: UNIVERSITY OF CALIFORNIA-LOS ANGELES (UCLA)

Los Angeles, California

Overview

The University of California-Los Angeles (UCLA) conducts a local and regional effort to gather, disseminate, and build local capacity to benefit from data. This initiative targets property- and tax- and disability-related data. The university also provides the necessary training and consulting services for community groups to mobilize this data as a tool for land reclamation and housing development. These programs are administered through UCLA's Advanced Policy Institute (API), a component of the university's School of Public Policy and Social Research. Under the direction of Dr. J. Eugene Grigsby III, a small but technically strong staff advises local government officials on strategic plans for issues such as housing, economic development, transportation, and the environment. The API also provides technical assistance to local community-based organizations.

One of its most innovative and widely used projects is a university-based Web site called Neighborhood Knowledge Los Angeles (NKLA). Through this site, community groups can access the latest data for a single property, census tract, zip code, or council district anywhere in the city and display that information on maps. This project is regarded by many in the community development field as an exemplary use of technology for neighborhood reclamation purposes. This case study describes the role that a university can play in this process, and how such a Web site can be used as a valuable community development tool.

The Collaborators

- ***The University of California at Los Angeles (UCLA)***

The University of California at Los Angeles has an enrollment of 37, 000 undergraduate and graduate students, who can choose from more than 100 fields of study. As one of the nation's top ten research universities, UCLA received $530 million in research support during the academic year 1999-00.

UCLA's School of Public Policy and Social Research was established in 1994, incorporating the departments of Social Welfare, Urban Planning, and Policy Studies. The school has more than 500 students and offers master's degrees in public policy, social welfare, and urban planning, as well as doctoral degrees in social welfare and urban planning. The school's Policy Forum acts as a catalyst for dialogue on critical issues and as a leader in training to improve the performance of public, private, and nonprofit organizations.

The Advanced Policy Institute was created in 1995 as the outreach component of the Policy Forum. The API's programs link academic research with the experience and practical knowledge of policy practitioners and community leaders. It offers training programs to develop community leadership and facilitate professional development, provides technical assistance to community-based

organizations and government agencies, and holds strategic policy conferences that bring together individuals capable of influencing policy-making.

The API varies in size depending on the number of projects it has underway. Currently, the API employs nine people, operating independently but coordinating with other university entities. As at most other universities, UCLA faculty are heavily oriented toward scholarly research and tend to distance themselves from community-focused application of academic resources. API staff members therefore perform most of the work, with modest faculty involvement.

The API is organized as an arm of the Office of the Dean of the public policy school. Its $1 million annual budget is almost entirely soft money, with funding secured principally from foundation or government grants and consulting or contracting. Major grants have included a Technology Opportunities Program (TOP) award of $500,000 from the U. S. Department of Commerce, a Fannie Mae Foundation grant from its University-Community Partnership program, Microsoft Corporation funding, a grant from CommerceNet (a large Silicon Valley nonprofit), and funding from the California Endowment. The API's contracting work comes primarily from the City of Los Angeles and from agencies of the Southern California Association of Governments.

- ***The Community Coalition***

The API's principal partner in this venture, the Community Coalition, is one of the strongest community-based organizations in Los Angeles. Most of its 3,000 members are African-American or Hispanic. Members pay dues of $10 per year. The coalition employs a staff of 35 and operates largely in South Central Los Angeles. API works mostly with the coalition's Neighborhoods Fighting Back initiative, a community organizing effort that focuses on ridding the community of drugs, liquor stores, and one-night-stand motels.

The Community Coalition enjoys considerable political support, especially from several city council members. Its funding is 60% private and 40% government, with Los Angeles County providing most of the government funding. The group works with city agencies including the Los Angeles Police Department (LAPD), the Department of Buildings, the Department of Planning, and the City Attorney's office.

Project Description

The NKLA Web site is devoted to providing the public with access to critical data and information for neighborhood improvement in Los Angeles. As a "mechanism for electronic monitoring of neighborhood conditions," it combines public records from city and county agencies - including property tax delinquency, building permits, and building code complaints - into one comprehensive, easy-to-use Web site.[1] The API routinely updates the site so users can access the latest demographic or property data by census tract, zip code, or council district in Los Angeles.

The API collaborates with community-based organizations in South and East Los Angeles to build interactive asset maps that are available on the site through the use of Geographic Information Systems (GIS) technology. This mapping component – known as I AM LA (Interactive Asset

[1] http: //nkla. sppsr. ucla. edu/Master. cfm?Page=History/Main. cfm

Mapping Los Angeles) – was a pilot project that is now being replicated by other neighborhood groups throughout the city. Initially supported by Fannie Mae's University-Community Partnership Initiative and Microsoft, I AM LA uses live maps to show users properties at risk of deterioration or assets ripe for community development.[2]

Each year the API holds 60 to 70 community-based training sessions on how to use the NKLA site and other web tools to conduct research. As part of its training regimen, the API has developed a "How-to-Kit" for use by groups interested in replicating the site. The API has also developed a Tenants' Guide that provides guidance in how to deal with issues such as rent, eviction, building repair and habitability, and discrimination. The guide directs readers to resources and organizations that offer complaint assistance on these and related issues.

API staff members attribute the Web site's success to a four-pronged approach to making data available to the community. This approach includes:

- Identifying, capturing, building, and updating needed data sets;
- Making information technology user-friendly;
- Having a presence in the community through outreach and training; and
- Being committed to community issues through participation in neighborhood initiatives, including asset mapping and by being responsive to local needs.[3]

A Brief History of NKLA

The idea for the Web site came from the API's associate director, Dr. Neal Richman, who prior to joining the UCLA faculty had directed a community development corporation. Richman began teaching at the Public Policy School in 1991 but continued his work at the grassroots level in Los Angeles to combat housing disinvestment and abandonment. In 1995, Richman helped a group of slum housing dwellers use a U. S. Department of Housing and Urban Development (HUD) grant to buy and manage a cooperative in Pico Union, a large immigrant neighborhood considered one of Los Angeles's most rundown and dangerous areas. In the process of purchasing a multistory tenement, the group discovered a large backlog of unpaid taxes. They were forced to use roughly 40% of a grant acquired to cover the sale price of the buildings to pay that debt.

Intrigued, Richman assigned some of his UCLA graduate students to examine the correlation between tax delinquency and residential deterioration. A pattern emerged confirming that large uncollected tax bills were strong indicators of poor housing conditions and residential decline.[4] Richman theorized that, if there were a way to track these buildings and build a picture of Los Angeles with this information, it would create the means to develop policy to address the issue. He learned of a similar project in Chicago – The Center for Neighborhood Technology's Neighborhood Early Warning System (NEWS) – and sought to replicate it on a larger scale in Los

[2] From API/NKLA info packet.
[3] Ali Modarres, Final Report: Evaluation Report of the Neighborhood Knowledge Los Angeles (NKLA), August 16, 1999 – September 30, 2001. Technology Opportunities Program, Grant Number 06-60-98047. December 2001. Pages 5-6.
[4] http: //nkla. sppsr. ucla. edu/Master. cfm?Page=History/Main. cfm

Angeles.[5] With initial funding from the City of Los Angeles' Housing Department and matching funds from a U.S. Department of Commerce TOP planning grant, Richman and his staff launched the Neighborhood Knowledge Web site in 1996 under the auspices of a new nonprofit resident organizing group.

When the fledgling group struggled to keep pace with the Web site's growing utilization rates, Richman approached Grigsby in 1997 about bringing the project into the API.[6] At that point, the API was just getting started and had few programs in operation, so Richman hired core staff from among the graduate students with whom he had started the project. Many of these former students are still affiliated with the API.

One of the API's early successes was a project undertaken at the request of a community group. Utilizing data and maps from NKLA, the Los Angeles Citizen's Blue Ribbon Committee on Slum Housing was able to propose a new approach to code enforcement in Los Angeles. Its recommendations were adopted and API was hired to develop an electronic system whereby inspectors in the field record their reports on palm pilots and upload this data to a server that generates notices and tracks program progress. This new data are now available on NKLA and approximately $200 million worth of housing repairs have taken place under the program.

Data Collection and Use

API runs the Web site on a Microsoft platform. The primary database is on a sequel server. The coding work is done with Cold Fusion, a mechanism that links web pages to databases. Everything is database driven (rather than HTML), giving the web pages their interactivity. The site also uses ArcIMS software – an ESRI product. ESRI has provided corporate support through donations of free software and provision of technical assistance to the project.

The Community Coalition/Neighborhoods Fight Back program is committed to using the site as a tool to develop and change public policy. It relies on a city zoning code enforcement process known as Nuisance Abatement to make complaints about targeted sites. Neighborhoods Fight Back generates the majority of the information used to make these complaints, accessing additional information from city agencies like the Department of Buildings and the LAPD. To facilitate active involvement by neighborhood residents in the data collection process, Neighborhoods Fight Back created a simple form for residents to complete when filing complaints. These complaints are addressed at public hearings and tend to influence government decision-making.

Neighborhoods Fight Back has incorporated the information it gathers into the Interactive Mapping component of the Web site project. Its relationship with UCLA, therefore, is primarily technology-based and driven by its use of the Web site to monitor and track neighborhood commercial sites.

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[5] NEWS is a Chicago-based online information system operated by the nonprofit Center for Neighborhood Technology (CNT). Community organizations and city and county agencies use NEWS to monitor real estate trends and to combat housing abandonment, commercial decline and financial disinvestment in Chicago's inner city communities. - http: //www. newschicago. org/

[6] http: //nkla. sppsr. ucla. edu/Master. cfm?Page=History/Main. cfm

During the summer of 2001, five Neighborhood Fights Back staff members worked on this initiative and are now training community residents to take over the program. Its parent body, the Community Coalition, encourages the use of information technology by all its staff, and requires them to take a base level of training that equips them to use the Web site for research.

By late 2001, the site was drawing 230 hits per day, with a total of 5, 200 registered users over the period between August 1999 and September 2001. Almost 25% of these users do not specify an affiliation. Of the rest, roughly 20% are students, almost 15% are government employees, 15% are nonprofit employees, and 13% are in academia. Just fewer than 10% are community residents. This latter usage is increasing, however, thanks to API's community outreach and training in the use of site.[7]

Its director, Joseph Devall, says that information technology solves a huge manpower shortage for Neighborhoods Fight Back. Without the Web site, the group would have to rely on countless staff and volunteers to reach all the thousands of people it serves.

Outcomes

The NKLA Web site has had a positive influence on how the API conducts its work and how the University of California at Los Angeles interacts with surrounding communities. Internally, the API now routinely uses information technology as a tool for policy analysis and problem solving. Externally, the API has launched several more technology projects as offshoots of the NKLA Web site. The two most prominent are:

- ***Living Independently in Los Angeles (LILA)***

LILA is a consumer-directed and regionally focused online project to benefit people living with disabilities in Los Angeles County. LILA is a GIS-based, interactive information resource site, created by local residents with disabilities using their personal "expert knowledge" to identify and map local independent living resources. Through collaborative efforts with local governments, the LILA information system also incorporates public databases relevant to the disability community. LILA provides the disability community of Los Angeles County with new information technology tools to empower efforts to successfully merge into the social, physical, and political fabric of their communities.[8] Launched in March 2001, LILA enjoys the same mix of funding sources as the Neighborhood Knowledge Web site, but also received state funding, a first for an API program.

- ***Neighborhood Knowledge California (NKCA)***

NKCA is an online community that brings together state and local government, the business community, nonprofit organizations, researchers, and neighborhood groups directly affected by patterns of disinvestment in the state of California. The program, which is still under development, will be a freely accessible, statewide GIS repository. The project aims to build on the latest innovations in web technology to spur community improvements, encourage new banking opportunities, impact government, public policy, and neighborhood planning efforts, and

[7] Modarres, 20, 22.
[8] Advanced Policy Institute webpage. Http: //api. sppsr. ucla. edu

contribute to new development projects and opportunities for local businesses.[9] The API has a state grant in the amount of $300,000 supporting the initial, start-up phases of this project.

Staff of the California Reinvestment Committee and California Rural Housing Coalition are being trained by API to use the NKCA Web site and to create their own data sets tailored to specific localities. Neighborhoods in Oakland, Stockton, East Palo Alto, Los Angeles, Riverside and San Diego, as well as rural communities in Gridley, Patterson, Delano, Mendota, and Orange Cove will be the focus of NKCA attention.

UCLA, long known as the "University on the Hill" and located in an affluent neighborhood, has struggled to identify ways of contributing in a meaningful way to the larger community. The Neighborhood Knowledge Web site and its offshoots represent a major breakthrough in this regard. UCLA leaders have used the Web site to broaden university involvement in neighborhoods throughout Los Angeles. Facing competition from a high profile community outreach program at the University of Southern California, the Chancellor launched the "UCLA in LA" initiative two years ago. This university-funded web-based service gives community residents access to faculty and student resources throughout the university for assistance with research and information gathering. Both the university faculty and community residents cite the new service as welcome evidence that UCLA wants to become more accessible.

Developing and managing NKLA has created a secure niche for the API within the university and has given it added stature among other departments on campus. The program provides graduate students in diverse fields with rich experience in community outreach. In addition, faculty members throughout the university have begun to appreciate the API as a rich source of information and raw data for their research interests. This has eased their previous reluctance to participate in API activities.

Grigsby is very pleased with the evolution of the API and its work in building information technology capacity. He sees it as having grown from nothing to become very visible within the university, throughout Southern California, across the state, and even nationally.

Lessons Learned

- ***Need for a Funding Base***

Neal Richman would like to see the Advanced Policy Institute and its Web site program reduce their total dependence on soft funds by developing a core operating fund. This would reduce the inordinate amount of time he and Grigsby feel they must spend at present trying to leverage and acquire funds. Now that the API has become more integrated with the university at large, its leaders are hoping that part of this fund could come from the UCLA budget. In the meantime, they advise anyone thinking of replicating the Neighborhood Knowledge model to appoint senior managers with strong fundraising skills and the ability to innovate. They cite these capabilities as vital to the Web site program's success.

[9] Ibid.

- ***Maintaining Stable Staffing is a Plus***

Cultivating cordial and stable relationships is essential to the success of university-community projects. Staff turnover is always a problem in low-salaried community-based organizations. Similarly, graduate student tenure at a university is not typically of long duration. The API has mitigated these challenges in several ways. While graduate and undergraduate students participate in outreach and information technology training, they are not used as core staff. Instead, the API engages individuals who have completed their graduate program to manage its technical and outreach services. While community-based groups like Neighborhoods Fight Back lack the resources to match this approach, they can take care to select as liaisons with the university those individuals who have the strongest long-term interests in working with their organization.

- ***Credibility is an Essential Component to Program Success***

The API has established itself as a valuable resource to government, business, and community leaders in the Los Angeles area. It has the respect of key local stakeholders and is able, for this reason, to help UCLA broaden its community involvement. University leaders are aware of the API's credibility in the community and are eager to use it to constructive advantage. The Advanced Policy Institute has become a point of connection at the university for government, business, and community that was not possible before the institute began its outreach. Programs like Neighborhood Knowledge Los Angeles strengthen the API's ability to serve this "point of connection function" and enhance its value to both the university and the Los Angeles community.

NKLA: A Model of University-Community Collaboration in the Use of Technology

Other universities could learn much from Advanced Policy Institute's development of the Neighborhood Knowledge Web site and its deployment of the site as a community resource. The site provides public access to data that is not available elsewhere. It also integrates and layers data to reveal relationships that otherwise may not emerge. Using the site dramatically increases the ability of community organizations to conduct their own research and collect the data they consider important. NKLA training also helps neighborhood residents become more computer literate and technologically savvy. UCLA has benefited as well from the API's work, gaining new stature in local communities by providing information, technical assistance, and access to technology. The Neighborhood Knowledge site has proved its worth as a valuable tool for community revitalization. The remaining challenge for UCLA is to market it more aggressively so that more community-based organizations and neighborhood residents are aware of it and use it.

CASE STUDY TWO: THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, Massachusetts

Overview

The Massachusetts Institute of Technology (MIT) uses technology to improve youth and senior recreation, community safety, continuing education, and employment opportunities in the Roxbury/South End section of Boston. MIT's program couples computers, Internet access, comprehensive training courses, and a web-based system with efforts to build community, empowerment, and self-sufficiency. The university runs these programs out of a newly created Neighborhood Technology Center. In addition to providing computer training for local residents, MIT worked with the residents to collect information for a database that highlights various community resources in the neighborhood.

The Camfield Estates-MIT Creating Community Connections project is an ongoing effort to build community, empowerment, and self-sufficiency at Camfield Estates, a predominantly African-American, low- to moderate-income housing development in Roxbury, Massachusetts. The project was initiated by graduate students at the Massachusetts Institute of Technology and led by Camfield Estates residents. It was designed to serve as a model for individuals and families in other housing developments by demonstrating how they can use information and communications technology to support their interests and needs.

To achieve this goal, a technological infrastructure has been established at Camfield Estates by offering every family a new computer and high-speed Internet connection. Residents learn how to use this new resource by taking comprehensive courses at a community technology center established on the premises. Once they are computer-literate, Camfield Estates residents can link into an open-source, web-based, community building system called the Creating Community Connections system (C3). Co-designed by MIT researchers and residents, this system establishes connections in the community between residents, local associations, and institutions (e.g., libraries, schools, etc.), and neighborhood businesses.

The project has improved participants' quality of life by increasing their access to services and their awareness of community concerns and activities. For MIT researchers, the project has provided a rigorous research agenda that demonstrates the possibilities of a comprehensive approach to technology and revitalization.

This case study describes the Camfield Estates-MIT project, its early outcomes, and some lessons learned that can be applied to other community development technology initiatives.

The Collaborators

- ***Community***

Camfield Estates is located in the Lower Roxbury/South End section of Boston, MA. Boston is a majority-minority city with slightly less than half of its population comprised of Whites (49.5%), followed by Blacks (23.8%), Hispanics/Latinos (14.4%), and Asians (7.5%). By contrast,

Camfield Estates is a predominantly African-American housing development (75%), with a significant Hispanic population across all races (32%). It is a relatively young community, with approximately 85% of the residents under the age of 55.

Camfield Estates is built on the site of the former Camfield Gardens, a 136-unit apartment complex. The property is governed by the Camfield Tenants Association, one of the strongest tenants associations in the greater Boston area. The association was formed in 1991, when residents at Camfield Gardens organized to stop the U. S. Department of Housing and Urban Development (HUD) from foreclosing on their property. As part of a HUD demonstration program, Camfield Gardens was demolished in 1997; residents returned in 1999 to 102 units of newly constructed townhouses, renamed Camfield Estates. The new development includes a community center, which houses offices and meeting space, as well as the Camfield Estates Neighborhood Technology Center established by this project.

Various Camfield Estates residents and staff have been essential to the Camfield Estates-MIT project. Nakia Keizer, a graduate student at Tufts University, was named the project leader while still an undergraduate at the University of Massachusetts-Boston. Arthur Jones and Karie and Alex Rosa staffed the project during its inaugural summer. Wayne Williams and the staff of Williams Consulting Services, were contracted to manage the Neighborhood Technology Center. The Rosa siblings also provided bilingual assistance to Spanish-speaking residents. Other key contributors include tenant association president Paulette Ford; Donna Fisher, the Director of Community Outreach at Camfield; and Thaddeus Miles, the Director of Public Safety for the Massachusetts Housing Finance Agency.

- ***University***

Based in Cambridge, MA, the Massachusetts Institute of Technology is a recognized leader in engineering, science and technology. MIT's self-described mission is "to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century." The school has a faculty of 900 and roughly 10, 000 undergraduate and graduate students.

The Camfield Estates-MIT project was conceived by graduate students Randal Pinkett, a Ph.D. candidate at the MIT Media Laboratory, and Richard O'Bryant, a Ph.D. candidate in the MIT Department of Urban Studies and Planning, along with their respective faculty advisors, Professor Mitchel Resnick and Professor Joseph Ferreira. The project also received support from the Department's Center for Reflective Community Practice. The Center's director, Professor Ceasar McDowell also served as an advisor.

O'Bryant says the project fit nicely into his department both from an academic standpoint – uniquely integrating housing, community development, and planning support systems – and from a planning perspective, with its emphasis on both community and technology. Pinkett describes the project as a natural extension of existing work by his group, which was instrumental in establishing and now supporting a network of after-school, community technology centers for youth – the Intel Computer Clubhouse Network.

Project Description

- ***The Partnership***

With assistance from faculty, O'Bryant and Pinkett pursued funding while simultaneously seeking a suitable partner – a residential community with both the interest and capacity to play a major role in the initiative. After exploring possibilities with other housing developments in the greater Boston area, they began conversations at Camfield in late 1999, just as residents were returning to the renovated property. The development immediately stood out as an ideal community partner. Its tenant's organization was strong and, unique among local housing developments, its property was equipped to handle high-speed Internet via new cabling wired throughout the buildings. The tenant's association's impending ownership of the property was attractive in terms of sustaining the initiative, and Williams Consulting Services seemed well positioned to coordinate the project's courses.

- ***Funding***

The project was launched in early 2000 with a $150,000 grant commitment from the W.K. Kellogg Foundation. This was followed by in-kind donations from Hewlett-Packard (computers), RCN (cable-modem Internet) and Microsoft (software). Further financial support came from: the Institute for African-American eCulture, through the National Science Foundation's Information Technology Research program; HUD, through its doctoral dissertation grant program; and the U.S. Department of Commerce through its ArsPortalis grant program. The Trotter Institute at the University of Massachusetts at Boston provided programmatic support. These combined resources have sustained the project's efforts thus far.

- ***Project Development***

Pinkett and O'Bryant share a collective interest in the positive role technology can play in underserved communities. They conceived the project as both an individual community development initiative and a longitudinal research study to identify benefits that could be applied to other housing developments.

From Keizer's perspective at Camfield, the goals of the project are to assess how technology can develop, create, and support self-sufficiency of residents and how it can work towards building community in the neighborhood as a whole. From Professor McDowell's perspective at MIT, the goals of the project are threefold: connecting research to the community, making residents feel they have a voice and are invested in shaping the project, and leaving the community with human and technological resources in place.

Pinkett and O'Bryant spent an initial six months building relationships with residents by integrating themselves into the community. By attending meetings, hosting events, building consensus, and setting goals, their aim was to help residents become comfortable with the project prior to introducing the technology.

An initial resident survey identified four important areas where Camfield residents believed that technology could make an impact:

- *Youth and seniors* – Residents believed there were not enough activities being offered for these groups.
- *Community* – Residents wanted more social interaction with their neighbors and to improve communication between residents and the governing tenants association.
- *Safety and security* – Residents wanted to increase the responsiveness of security and the police, and to improve relations between law enforcement and the community.
- *Employment* – Residents wanted to see more employment resources at Camfield, including job postings and vocational training at the neighborhood technology center.

The project began during the summer of 2000. At this time, 66 out of 102 units at Camfield were occupied. Of these, 32 families signed up to participate in the first training group. The tenants association established a resident subcommittee to supervise the project implementation, working in tandem with Keizer, Jones, the Rosas, O'Bryant, and Pinkett, who were collectively known as the Implementation Team. The primary activities in this project were asset-mapping, research, and training for the residents' use of technology. Concurrently, Pinkett and the residents developed the online C3 system.

- ***Asset-Mapping and Research***

Keizer, James, and the Rosas conducted an asset-mapping initiative to identify local resources that could benefit their neighbors, such as childcare facilities and employment agencies, with the vision of providing this information online. The implementation team also developed a survey instrument to obtain baseline data for the research study as well as data that could inform the project plan. They administered the survey via face-to-face interviews with each family. A modified survey was re-administered by the team, Fisher, and the Neighborhood Technology Center staff, one year after residents began the courses. This data was used for comparison to the initial survey and to evaluate the project's progress to-date. Additionally, web logs of residents' browsing patterns were obtained with their signed consent, and server logs were obtained from the Camfield Estates Web site.

- ***Training***

All participating residents enrolled in a mandatory ten-week technology course at the Neighborhood Technology Center. Upon completion, they received a new computer, software, and a high-speed Internet connection, pre-paid for two years. Recognizing that adults were more difficult to recruit than youth, a requirement of the program was that at least one working-age adult from each household had to participate. After residents completed their mandatory training and received their computer, software, and Internet service, optional monthly workshops were held covering specific interests, such as banking online, finding jobs and educational resources, and accessing government resources.

- ***Development of an Online System***

Pinkett worked directly with residents over a period of eight months, developing an online community building system called Creating Community Connections. Available on the Camfield Estates Web site (http://www.camfieldestates.net), the system's main features include resident profiles, discussion forums, a community calendar of events, and a Geographic Information System (GIS) database of the local organizations and neighborhood businesses (which were identified during the aforementioned asset-mapping initiative).

Outcomes

- ***Responding to the Community***

In response to the key issue areas communicated by residents in the initial survey, ("Youth and Seniors, " "Community, " "Safety and Security, " and "Employment, ") project leadership developed a number of focused initiatives. New activities for youth were created at the technology center, including courses on graphics, animation, and Web site design. The center also began offering a "Senior Internet Café" to provide a pleasant social atmosphere for elderly residents to meet and surf the Web. The dormant Camfield Estates newsletter was revived to improve communication and information flow at the development, with paper-based and electronic versions published. Miles, of the Massachusetts Housing Finance Agency, established a "Security Tips and/or Issues" discussion forum on the Camfield Estates Web site. Finally, Williams Consulting helped the center gain accreditation as a Cisco Networking Academy, a corporate philanthropy program that teaches students to design, build, and maintain computer networks. The course is designed to prepare participants for the 21st century workplace by improving their information technology skills. These representatives then return to their communities to teach other residents the same skills in preparation for becoming Cisco-certified network administrators.

- ***New Skills, New Attitudes***

The courses offered at the center have improved residents' cadre of skills. Fisher says they have not only gained skills in technology, but in other areas such as résumé writing and online research. The project has also opened the door to new opportunities. For example, an elderly woman at the development confined to her home by illness uses her PC to communicate with other cancer survivors and to research medical information. However, while there are definitely some success stories, Fisher says there are also residents that have not taken full advantage of the opportunity, instead using their computer to play games or spend time in chat rooms. In general, however, the project has helped bolster participants' confidence in their ability to learn. In one recent example, a resident told Keizer during a follow-up interview that she has found the courage to teach herself HTML as a result of her participation in the project.

- ***Building Community***

Pinkett's research at Camfield focused on the project's community impact – specifically, the extent to which new connections have been established amongst individuals, families, and local resources.

His analysis of the resident surveys revealed progress towards positive change in the community along three lines:

- *Participants have expanded their local ties.* The number of residents who recognize one another by name has increased by 25% as a result of the project, and the number of residents who communicate with their neighbors via telephone and e-mail doubled.
- *Participants have heightened their awareness and use of community resources.* There have been statistically significant increases in accessing the skills and abilities of their neighbors, volunteer opportunities in the neighborhood, social services and programs provided for the community, community activities and events, and employment opportunities.
- *Participants are better informed about what is happening at the development.* Almost half of the participants reported that they are more aware of what is going on at Camfield now than they were prior to the project. The most popular areas of the Camfield Estates Web site were the residents' profiles (31% of traffic), calendar of events (18% of traffic), and the discussion forums (13% of traffic).

- ***Building Empowerment and Self-Sufficiency***

O'Bryant's research at Camfield investigated the project's household impact – the degree to which participating families feel a stronger sense of empowerment or have increased their level of self-sufficiency. He has identified two promising trends that signify a growing sense of empowerment and self-sufficiency:

- *Participants are using the Internet to gather information that addresses basic needs.* He found that 84% of participants reported the ability to find a job online and 74% also reported shopping for clothes and other essential retail goods on the Internet.
- *Participants have been inspired through the use of technology to stay informed locally, nationally, and internationally.* Survey results show that 84% and 90% of participants went on-line frequently or occasionally to obtain local and national information, respectively. Furthermore, 95% of participants said they felt motivated by Internet access to find out more about what is going on in the world.

Lessons Learned

- ***Understand the Community's Needs***

After the initial group of 32 families completed the courses, a second round was offered in January 2002 to the 48 out of 80 families still eligible for the project. Only eight families elected to participate, many of them Spanish-speaking residents who responded to a Spanish-language flyer after the first registration. Subsequent resident outreach revealed that this low response was due to skepticism of the project's usefulness, time-constraints, or health-related conditions preventing involvement. The most commonly cited reason for not participating was a perceived lack of relevance for the need for technology training.

Consequently a major effort was made to demonstrate relevance and clearly articulate the potential benefits of technology to residents' lives. As a result, the number of participants in the second cohort increased from eight to 27, with those families unable to attend receiving one-on-one instruction in their homes. Yet the second group experienced greater difficulties in completing the technology courses than their predecessors, due to lower levels of literacy and language proficiency. This group took twice as much time for only half of the participants to complete the courses. In hindsight, project leaders now recognize that the curriculum was ill-equipped to deal with these challenges; they should have done a better job assessing participants' abilities, particularly when designing the curriculum for the second group. With planning underway for a possible third round of training, a new approach to the courses is being designed to address these issues.

- ***Respected Leadership Builds Trust***

Mutual trust is the essential underpinning of a successful university-community partnership. The individuals representing the university must present themselves as being sensitive to the community's needs. Due to the students' efforts to build relationships and involve community members in project planning and implementation, the residents eventually came to view the researchers who ran the project as "O'Bryant and Pinkett," rather than as "MIT." The two students took care to develop trustworthy personal connections with Camfield residents, which led to a mutually beneficial rapport. Keizer has been pleasantly surprised by their interactions. He says O'Bryant and Pinkett are both community-oriented and have always had the best interests of residents in mind. He believes it is through their efforts that the full resources of both MIT's Department of Urban Studies and Planning and its Media Laboratory were made available to the project.

Similarly, respect for the community's leadership is vital in achieving resident buy-in to the project. At Camfield, the involvement of Camfield Tenants Association President Ford, Thaddeus Miles of the Massachusetts Housing Finance Agency, Keizer, Fisher and other key individuals has been significant in gaining support from other residents for the project. Keizer says, for example, that his participation with the initial resident interviews was instrumental in convincing some participants to sign up for the project because they knew him personally, as a neighbor, and trusted his judgement.

- ***Begin with Sustainability in Mind***

More often than not it is the university that provides technology resources and expertise. To begin with sustainability in mind means developing a plan to maintain these resources and to build local expertise as early on as possible. The up-front cost for technology is just one component of the total cost of ownership for technology, which includes upgrades, maintenance, and repair. Therefore, providing equipment without training can actually increase the financial burden on a nonprofit organization. Furthermore, when applications are developed such as the Creating Community Connections system, it is imperative that the skills needed to manage such systems are cultivated within the community.

At present, staff members of the Neighborhood Technology Center help maintain Camfield's technological infrastructure. They make visits to residents' homes to assist with problems and continue to offer courses on troubleshooting and repair. MIT continues to host the Creating Community Connections system as an Application Service Provider (ASP) – meaning they maintain the hardware and software while Camfield residents maintain the content.

MIT is taking steps to institutionalize the project by increasing Camfield's capacity for long-term project management. McDowell concedes that it would be easier to do so if the initiative were faculty-driven, but the reality is that Pinkett and O'Bryant did the relationship-building. The University has also named Camfield Estates as one of the partner communities for the Reflective Practitioner Fellows program, which provides a unique opportunity for local leaders to spend a focused period of time on the MIT campus analyzing their work. As part of this effort, Keizer was selected as a Reflective Practitioner Fellow for the 2000-2001 academic year, and Ford, Miles, Fisher, and Williams were selected for the 2001-2002 academic year. The hope is that the Fellows program will not only strengthen ties between Camfield and MIT, but also build the local capacity needed for the project to continue moving forward.

CASE STUDY THREE: THE UNIVERSITY OF MEMPHIS

Memphis, Tennessee

Overview

The University of Memphis has technology experts sitting on each of the nine task forces that are creating a citywide strategic plan for coordinated service delivery and economic development in Memphis, Tennessee. The University also sponsors related projects in four struggling Memphis neighborhoods: in Frayser, Hickory Hill, and White Haven, AmeriCorps volunteers are working with local police officials and neighborhood residents to map the frequency and location of crime. In the Greenlaw/Manassas area known as "Uptown," the University has opened a resource and technology center that gives classes in computer and job-hunting skills.

Of special note is the University's focus on meeting neighborhood technology needs within this community-wide initiative. The program enjoys success on the ground, and has shown the potential for much broader influence. The following case study highlights the University's multi-level efforts to mobilize technology around community goals.

The Collaborators

Memphis is the largest city in Tennessee, with a population of 650,100. It is a bustling crossroads of commerce, serving as a port of entry, a rail and air distribution center, and a leading hardwood, lumber, cotton, poultry, and livestock market. A number of corporations, including Federal Express, have their national headquarters in the Memphis area. Minorities comprise 64% of the city's total population, with African-Americans making up 61% of the city's total and Hispanics at 3%. The White population in Memphis is 34% of the total population.

The University of Memphis is one of Tennessee's two comprehensive institutions of higher learning. It has an enrollment of approximately 20,000 students and awards more than 3,000 degrees annually.

The University began taking an active role in community development in 1995 with the creation of the Center for Urban Research and Extension (CURE), an affiliate institute of the School of Urban Analysis and Public Policy. Now that role is becoming institutionalized. CURE Director David Cox was recently appointed as Assistant to the President and the Provost, with a charge to promote community development involvement throughout the University. These activities will be funded by hard money from the University's operating budget, a stable source of financing not afforded by soft grants.

The University is working closely in its community development activities with Memphis Housing and Community Development. Additional partners include Memphis residents and community stakeholders, Shelby County government, and private and corporate foundations.

Project Description

- ***Background***

The strategic planning process now underway in Memphis evolved from the local housing authority's Transformation Process, a catalytic initiative launched by the agency's director, Robert Lipscomb in September 1999. It is based on the premise that housing improvements are the heartbeat of neighborhood revitalization. The secondary assumption is that promoting human capital development among the city's poor residents benefits the city's prospects for economic development. The Transformation Process was organized around 14 task forces that addressed a broad range of issues including workforce development, public safety, health, transportation, social services and others. Leaders from both the public and private sectors were enlisted along with neighborhood residents to chair several of the taskforces. The overarching goal of the Transformation Process was to give residents a voice in neighborhood revitalization efforts and to prepare them to eventually assume ownership.

The Transformation Process was so successful that the Memphis Housing Authority decided to replicate it. The result was the City-Wide Strategic Planning Initiative, launched in September 2001. This program bolsters the strength of Community Development Corporations that are barely 10 years old with expertise from the University of Memphis, the Chamber of Commerce, and a number of neighborhood-based service organizations.

The Citywide Initiative is co-chaired by the mayor of Memphis, the president of the University, and the president of the Memphis Chamber of Commerce. The current initiative differs organizationally from its predecessor by using only nine task forces instead of 14. However, it focuses on the same issues as the Transformation Process, including workforce development, economic development, housing, safety, and transportation.

- ***The University's Role in Memphis Community Development***

The University of Memphis initiated its direct participation in community development when Lipscomb asked Dr. Stanley Hyland, the director of the School of Urban and Public Policy, to evaluate the effectiveness of the Transformation Process.

That initial commitment has grown to the point where the University now has representatives on all task forces of the Citywide Initiative. It is particularly significant that David Cox serves as co-chair of the Information Sharing Subcommittee. While working at the U.S. Department of Housing and Urban Development (HUD) in 1998-99, Cox noticed a lack of information sharing between grantees despite the existence of rich databases. He made efforts to broaden and deepen information sharing at the agency, with few results. Cox concluded that promoting information sharing between and among local agencies was much more likely to be successful than reforming a federal bureaucracy.

- ***The University's Use of Technology in Community Development***

Cox is ideally placed to foster collaboration among community leaders and stakeholders in Memphis by virtue of his technical expertise, his position with the Offices of the President and Provost, and his role as chair of one of the Initiative's key committees. The collaboration that has

emerged with respect to information technology functions at three levels: on the ground, citywide, and systematically.

- ***On The Ground***

At the local level, the principal use of technology is in making public data accessible to city residents. The University addresses this need with its Digital Divide project, which is sponsored by Seedco and administered by David Cox and CURE. The project deploys AmeriCorps volunteers throughout Memphis to develop and implement asset and crime mapping projects using the Geographic Information Systems (GIS).

In three Memphis neighborhoods – Frayser, Hickory Hill, and White Haven – AmeriCorps volunteers are working with local police officials and neighborhood residents to map the frequency and location of crime. In a fourth neighborhood – the Greenlaw/Manassas area known as "Uptown, " volunteers helped local residents prepare for the February 2002 opening of a resource and technology center by collecting data from area residents. Volunteers worked closely with a local elementary school principal to identify the kinds of services the center should offer. They also conducted a "windshield survey", devised by a sociologist affiliated with CURE, which identifies all land parcels in the Greenlaw neighborhood. This will be used as a baseline in assessing changes in the status of the neighborhood's physical condition.

The Uptown Resource Center houses 14 computer workstations with connections to the University of Memphis network. It also offers training in IT. Venessa Spearman, the University's program administrator for community outreach, is based at the Center to assist neighborhood residents.

The Center is part of an overall strategy to provide residents of poor neighborhoods with access to information from governmental agencies that can be used to advance revitalization efforts. This Internet access brings government closer to the people it serves and enhances local residents' use of government resources to achieve community improvement goals.

It is worth noting that the University is also using its mapping capabilities to evaluate HOPE VI housing revitalization underway in the Uptown and College Park communities. This work involves tracking resident mobility and monitoring physical changes taking place in these neighborhoods as housing is rehabilitated or rebuilt over the next two years.

- ***The Citywide Initiative***

The Information Sharing Subcommittee is evaluating neighborhood-focused information sharing efforts, with particular attention given to who has and who should have access. Representatives on this committee are both producers and users of information. They include the city's chief of information technology and staff from the Memphis Department of Housing and Community Development, Shelby County Office of Planning and Development, University of Tennessee Medical School, United Way, Memphis Light, Gas & Water, and First Tennessee Bank.

Recommendations from this committee will help the city determine which local agencies should share information with community residents and how this can be accomplished. The information

will be routed through the library, linked to the Center, and made available via dial-up Internet access.

- ***Systematic Change***

Both the city and county governments are engaged in other IT-related planning initiatives. The Shelby County Commission hopes to have a GIS network for information sharing among county agencies in place by June 2002. The city is in the early stages of working on a similar initiative. Neither of these efforts includes the suburbs, however, and there is concern that the two systems may not be compatible.

To lessen the potential for incompatibility or redundancy, David Cox is seeking a $4.8 million foundation grant to pay for the rationalization of all information-sharing throughout Memphis. This money would cover not only the costs of hardware and software, but also the transaction costs to negotiate information-sharing agreements at all levels. This planned collaborative would broaden information access throughout the Memphis metropolitan area.

Federal Express is sponsoring another initiative that furthers neighborhood capacity building in the use of technology. The company is building an "Emerging Technology Complex" at the University of Memphis. Current plans call for including a room with the latest personal computer technology for use by the community. The building may also contain a GIS operations room, to access data. The commitment of corporate dollars to this effort will enhance the prospect that cutting edge technology will be accessible by community residents.

Outcomes

The potential for broadened use of Information Technology by Memphis neighborhood residents and community groups is great. It is too soon to tell the extent to which the promise will be realized or how soon it will be achieved, however, given that discussions with potential donors are still incomplete.

Still, some outcomes in Memphis are already evident, such as the effective use of mapping. The mapping activity underway in Memphis is central to the City-Wide Strategic Planning Initiative, in that it locates resources and suggests where they should be deployed. It is also used to identify high-crime areas and distribution of Section 8 Housing. City officials are using this data to identify points of overlap between crime and subsidized housing, and Lipscomb sees the Center as a model to be used elsewhere in Memphis. Indeed, it is already being replicated. Construction of a second center is planned in the neighborhood of Orange Mound, and property surveys are underway in six additional neighborhoods around the University.

Additionally, technology is being used in the Initiative to help develop an inventory of the responsibilities of each local government agency and how each carries out its work. The purpose of this inventory is to gather data that will permit the development of a comprehensive citywide overview of programs, projects, activities, and services that may impact neighborhood revitalization. This inventory will be processed in early 2002 in order to identify gaps in services and resources affecting physical infrastructure, social services, race relations, and other important

aspects of Memphis' push for coordinated community development. Leaders of the Initiative maintain that through it they are "trying to use the power of data" to communicate the need for change.

Lessons Learned

- ***The "Democratization" of Data: Availability and Cost***

Many public agencies now recognize that some of the data they produce has market value. Agency managers who view data production as a potential revenue generator for the agency may wish to take advantage of the opportunity. Any revenue generated could pay for the cost of producing the data, and could replace taxpayer money currently being used for this purpose.

But charging for access to data that has been produced at taxpayer expense makes the most sense when costs are shifted to the private sector. It may well be appropriate, for example, to charge real estate firms for access to public data when these firms use the data to make investment decisions. In contrast, the imposition of fees for access to data by residents of low-income communities is likely to deny them access to essential public information.

Memphis has had to confront this issue as it has attempted to make public data broadly available. Public agencies are competing to see who bears the cost of data collection, and debating whether it should be borne by the information gatherers, or shared among agencies that use the data. As this struggle continues, officials are giving thought to providing some level of public subsidy to those who need data for important public purposes but lack adequate resources to obtain access. University of Memphis officials are participating in these discussions.

Of equal importance, local agencies are struggling with data control, management, confidentiality, costs of production and related issues, assessing their influence on decisions about what information they should share and how they should go about this activity. All of these issues have surfaced as Memphis has moved to make data more available to the general public and to specific communities.

- ***Citywide Commitment to Community Development and Systematic Change***

There is a very high level of commitment to neighborhood improvement and community development throughout the Memphis region. Local residents and community leaders have joined in these efforts in positive ways and all levels of the community evidence strong "buy-in" to revitalization efforts in the area. This is reflected in strong city and county support for the University's efforts to meet community technology needs. The buy-in may stem from the historically strong relationships among community leaders – Memphis is not a city of transplants. Or it may stem from the University's willingness to follow the community's lead in defining local needs and its responsiveness to the community's request for support.

- ***Personal Relationships Matter in Town and Gown Cooperation***

The partnership between the city of Memphis and the University of Memphis is relationship-driven. Robert Lipscomb of Memphis Housing and Community Development and Stanley Hyland of CURE were colleagues on several local community boards. In addition, Lipscomb said he "clicked" with

the University's new president, Dr. Shirley C. Raines, who took office in May 2001. Furthermore, Lipscomb and Mayor Willie W. Herenton grew up together in South Memphis and share a penchant for running government like a business. They also understand the economic and social problems besetting large segments of the African-American community in Memphis. Both men are graduates of LeMoyne Owen College and both value public/private partnerships and University participation. Herenton recruited Lipscomb from LeMoyne Owen College to head the Memphis Housing Authority, which later merged with the Department of Housing and Community Development.

- ***Support within the University's Leadership is Critical to Successful Community Engagement***

The installation of Shirley Raines as president of the University of Memphis ushered in an era of enhanced cooperation between the University and the community in which it is located. Raines has a history of working at urban universities. Her demonstrated interest in community partnerships and outreach was a factor in her selection. The University's trustees wanted a new leader for the University who would improve the relationship between town and gown. Raines' elevation of CURE's director to a position in the president's office and her explicit support for the University's involvement in community development have inspired many more University faculty to engage in in community activities.

By serving as co-chair of the city's Strategic Planning Initiative, she is leading by example as well as giving substance to her stated commitment to broader University engagement with the city. Programs like the Digital Divide project take on additional significance in this context. Faculty and staff involved in such programs feel greater recognition.

Lastly, by financing projects directly from its operating budget rather than grants, the University achieves two important objectives: it provides a stable source of funding, and signals the depth of its commitment to its host community.

- ***Responding to Community-Defined Needs Fosters a Positive Relationship***

University of Memphis faculty and staff take their cues for community involvement from local leaders' requests for assistance. The University's role in each project is shaped by representatives of the target community – not by what the University has determined are that community's needs. This relationship is one that city leaders consider appropriate and the University has found acceptable. Further, civic leaders interpret the University's willingness to play a supportive and not directive role as an expression of its desire to establish a relationship of mutual respect.

CASE STUDY FOUR: THE UNIVERSITY OF PENNSYLVANIA

Philadelphia, Pennsylvania

Overview

The University of Pennsylvania (Penn) has launched a series of initiatives as part of a large-scale effort to revitalize the neighborhoods immediately surrounding its West Philadelphia campus. While community leaders have historically viewed the University with a degree of suspicion, there is a growing understanding that the University is making a concerted effort to emerge from behind its walls to sponsor neighborhood improvements. The University has invested in local housing restoration, area retail development projects, lighting installation for 1,200 West Philadelphia properties, and an incentive plan to entice faculty and staff to take up residence in West Philadelphia. The University has also extended its working relationships with community-based organizations in the acquisition and use of information and information technology for neighborhood development purposes.

Specifically, the University has opened a Center for Community Technology in West Philadelphia, staffed by graduate students and AmeriCorps volunteers. Staff recycles and refurbishes old computers for public use, offers technology-training classes, installs free software in schools, and operates a community information portal. This case study describes two projects – the "Digital Divide Initiative" and InfoResources – that enhance the University's responsiveness to the needs of its surrounding community. These projects aim to bridge the gaps in information access and use experienced by West Philadelphia neighborhoods.

The Collaborators

- ***The University of Pennsylvania***

One of the nation's oldest and most distinguished institutions of higher education, the University of Pennsylvania is located on a 260-acre campus in West Philadelphia, a section of the city that has experienced substantial economic distress. In the year 2000, the University's operating budget was approximately $3.05 billion and its endowment surpassed $3.2 billion. With a workforce of over 22,000 employees, of whom 4,000 are faculty members, the University is the largest private employer in Philadelphia and the fourth largest in the Commonwealth of Pennsylvania. More than 9,000 undergraduates attend Penn on a full-time basis; an additional 400 attend as part-time students. There are more than 8,400 graduate students pursuing advanced degrees and training in various professional programs.

- ***Center for Community Partnerships***

The University's principal connection to West Philadelphia development is its Center for Community Partnerships (CCP), established in 1992. The Center, headed by Professor Ira Harkavy, facilitates University-community service programs and serves as a liaison between the

community and the University. Harkavy says the Center's activities are based on "three core propositions":

- Penn's future and the future of West Philadelphia/Philadelphia are intertwined.
- Penn can make a significant contribution to improving the quality of life in West Philadelphia/Philadelphia.
- Penn can enhance its overall mission of advancing and transmitting knowledge by helping to improve the quality of life in West Philadelphia/Philadelphia.

As the Center's director, Harkavy reports to the Office of the Vice President for Government, Community and Public Affairs, and to the Provost. Harkavy has been a fixture at the University since his days as a student protester in the 1960s, when he began forming relationships with community leaders in West Philadelphia. Over the years, he has worked diligently to break down the barriers that separate the University from the community.

- ***Philadelphia/West Philadelphia***

According to recent Census data, Philadelphia is approximately 40% African-American, 50% White, and 6% Hispanic. The city is divided into 25 neighborhoods, which are highly segregated by race. African-Americans dominate many of the city's older neighborhoods, except for eastern North Philadelphia and parts of South Philadelphia. Hispanic neighborhoods stretch along a corridor on the eastern side of North Philadelphia.[10]

According to the Philadelphia Planning Commission's *Plan for West Philadelphia*, approximately 220, 000 people, or about 14% of the city's population live, shop, and work in West Philadelphia. There are slightly more than 80, 000 households in the 14 square miles area that comprise this area. Residents of West Philadelphia are 82.5% non-white. Thirteen percent of the housing units in West Philadelphia are vacant and the housing ownership rate for the area is below 50% – 10 percentage points below the citywide average. The area has experienced substantial economic decline over the past few decades as middle-class residents moved out and poverty, property deterioration, and abandonment increased. These trends, although not pervasive, are persistent and have affected the quality of life in the larger West Philadelphia community.

Several of the city's major colleges and universities are located in West Philadelphia, including Drexel University, the Philadelphia College of Pharmacy and Science, and the University of Pennsylvania.

Project Description

- ***University Involvement in West Philadelphia***

After decades of criticism for perceived detachment from Philadelphia, the University has begun to acknowledge that, as an urban institution, Penn is in a unique position to make community involvement an academic and institutional strength. Since assuming office in 1993, University

[10] Neighborhoods of Philadelphia, http: //philadelphia. about. com

President Judith Rodin has made partnering in the revitalization of West Philadelphia one of the six academic priorities proposed in her strategic plan for the institution. President Rodin has also mandated that all faculty members who do research in neighborhoods provide feedback to the community regarding their findings.

The University has also begun emphasizing academic involvement in West Philadelphia through its academically-based community service model. Through the Department of City and Regional Planning, Penn students spend one semester working in a community-based organization to identify and research problems confronting the low-income area it serves. At the end of the semester, each student group submits a report of key findings - often involving Geographic Information Systems (GIS) mapping - to the partner community-based organization.

- ***The Digital Divide Project***

The Center for Community Partnerships is working to make computers and other information technology more readily accessible to residents of the West Philadelphia community. The Digital Divide project began in the year 2000 with a Seedco grant, made possible by funding from the Corporation for National Service (the government agency in charge of AmeriCorps). The Center's 40-person staff, which is composed primarily of Penn students, is working on four interrelated activities:

  - Establishing a computer-recycling center;
  - Installing hardware and computer networks at local schools and community and faith-based centers;
  - Providing software training and computer literacy classes for community residents; and
  - Training neighborhood residents as "trainers" to ensure the long-term provision of technology education in the community.

Harkavy and the Center's Associate Director, Cory Bowman, conceived the Digital Divide program as a complement to existing community development projects related to health, education, and the environment. "Our technology strategy is not different from the [Center's] overall strategy," says Harkavy. "It's just a different tool to achieve that strategy."

- ***InfoResources***

InfoResources is a collaboration of the CCP, the University's Library System, its Cartographic Modeling Laboratory, and the Wharton GIS Laboratory. The project, known as InfoR, is the first stage of what is to become the nation's largest online database focused on a local area. The University's stated mission when it launched the project in the spring of 2000 was to "promote a data partnership with community-based organizations in West Philadelphia and eventually, thereby, foster community ownership of information accessed through the project."

InfoR aims to achieve its goals by:

- Offering free data services that support collaborative projects among community stakeholders.
- Consolidating and making available demographic, social, and economic information, as well as information on physical conditions relevant to West Philadelphia.
- Making faculty research and student studies accessible to the public.
- Acting as a portal to link all West Philadelphia-related web information.
- Serving as a data intermediary by packaging data for data providers and users.

The information gathered for inclusion in the InfoR database is obtained from the Census Bureau, municipal records, and corporate or civic associations, as well as from ongoing University research. InfoR's Web site enables users to manipulate an array of data addressing such variables as housing type, age and assessments, resident education levels, health, income, employment, crime statistics, and environmental conditions. These variables can then be sorted by neighborhood, tract, and zip code. Ultimately, the data may be used to determine correlations between trends in health, education, real estate, and business development.

The InfoR initiative dates back to 1994, when the West Philadelphia Partnership, a community-based nonprofit, developed the West Philadelphia On-line Information system. Penn officials knew they could not play a leadership role in the community development arena, but could lend financial support and organization resources to community-inspired projects. The University considered the West Philadelphia Partnership an ideal contact point because its board of directors is made up of community organizers and activists drawn from most of the area's lowest income neighborhoods. So in 1995 the University used funding received from a Community Outreach Partnership Center grant to help the West Philadelphia Partnership expand its online information system. By the year 2000 they had launched several data projects and identified GIS as a key tool in making data accessible to the community.

Dr. Sidney Wong, a Penn professor of city planning who has taught courses in quantitative reasoning, information technology, and economics, began working with the West Philadelphia Partnership on establishing InfoR. He supervised an evaluation of different community information network models as part of a course called "IT and Economic Development." Based on this evaluation, Wong concluded that the role of InfoR should be to focus on data collection and presentation, leaving the tasks of data analysis and evaluation to the community.

Wong then began to elicit information from the community on their data needs and how InfoR might help meet them. A grant extension permitted him to add six researchers to his project, and Wong assigned them to investigate the potential value of GIS mapping. At the same time, Wong signed a Memorandum of Understanding with the University that allowed InfoR to use the Penn Library server. Finally, a prototype Web site was posted live for community comments in the fall of 2000. Early in 2001, the InfoR staff hosted two focus group sessions with community stakeholders to elicit feedback on the Web site's navigation and presentation. This emphasis on

community input was typical of every step of the project. At present, InfoR operates with a modest budget of approximately $20,000 per annum and has no full-time staff members.

Outcomes

- ***Digital Divide Project***

Since the launch of the Digital Divide project in 2000, the Center has accomplished the following:

- Established a computer-recycling center on campus known as "The Shop." Six Penn students staff this facility, where they receive computer donations and prepare them for use at community sites in West Philadelphia. As of April 2000, The Shop has received donations of more than 500 donated computers, of which 300 have already been allocated to community-based organizations.
- Overseen the opening of several computer labs and the on-site installation of cost-effective alternative software. The group of students working on this project scouts potential sites within the community and then coordinates with The Shop to install computers. This team also investigates the uses of alternative software platforms to save money. For example, the group calculates that it has saved more than $13,000 by installing Linux instead of Windows at four school-based computer labs.
- Assisted the School District to obtain Learn and Serve grants at two high schools, thus laying the groundwork for school projects about service and technology. In one of the two schools, two Penn students currently work in conjunction with a teacher in order to help mentor students in the areas of computer repair and maintenance, web design, print media, and community outreach. At the other school, a pair of students have teamed up with a teacher to launch an "Eco-Tech Learn and Serve" initiative. Through this project, students will create an online magazine dedicated to environmental issues, develop an oral history Web site relating the history of West Philadelphia's community gardens, and assist in the production of a documentary film. Penn has also launched a media arts studio where local high school students can learn high-end computer-based video production.

- ***InfoR***

The most significant accomplishment of InfoR was the launch in 2001 of its Web site, http://westphillydata.library.upenn.edu. Using GIS technology, this site provides users with data maps, socioeconomic data tables, and resource links. The site is designed to support the work of individuals involved in grant proposal writing, project development, and community revitalization. InfoR staff is currently inputting 2000 Census information into the database.

InfoR also initiated its first data partnership in the summer of 2001, with the neighborhood's White Rock Baptist Church. The project entailed mapping community assets and the service needs of the senior citizen population in West Philadelphia. The four Penn students working on this project surveyed and mapped three neighborhood blocks.

Lessons Learned

- ***Personal relationships grounded in consistent communication and mutual respect provide a valuable basis for town-gown cooperation.***

Ira Harkavy's track record as both academic and community leader has been the deciding factor in establishing a successful partnership between the University and the community. He was already known and respected in the community before he assumed the Center's directorship. It was critical to the success of the University's outreach efforts that they not be perceived as reflecting a "*noblesse oblige*" attitude. Harkavy's desire to make mutual respect the cornerstone of the relationship between town and gown ensured that his projects would be well received. His emphasis on listening to community leaders in determining the Center's agenda persuaded many former skeptics to welcome a broader role for the University in revitalizing West Philadelphia.

Harkavy says the Center's Digital Divide projects have succeeded because they are rooted in strong partnerships, a process that he says requires "constant collaboration and communication." Constant communication ensures that the Center designs computer projects that are "not too high-tech, " but rather "appropriate-tech" says Harvaky. Within the University, Harkavy says he's had to nudge faculty to embrace the idea of "democratic data." This is essential to convince skeptical community leaders that "the university isn't taking the data and running."

- ***A sense of shared benefits is another critical component of a successful university-community relationship.***

Center staff members say all their projects are grounded in the belief that both University and community benefit from the partnership. By working in the community, both student and faculty researchers gain access to essential raw data that furthers their work. Positive working relationships between the partners make it possible for University researchers to conduct neighborhood-based observations, to interview local residents and community leaders, and to gain access to local data that would be difficult if not impossible to obtain by other means.

On their side, struggling neighborhoods gain access to helpful University resources. They benefit from the Penn students, faculty, and administrators who apply their skills and talents to mitigate local problems, and from receiving information and technical assistance services and training in the use of Information Technology. Harkavy says that the concept of "democratic data" – information that is made accessible to users beyond the University campus – is critical to the success of Penn's community-based technology projects. He insists that all university researchers must understand that their work, if facilitated by access to community resources, must be shared to some extent with that community. While this is not a traditional mode of behavior among researchers, it is a model that is finally taking root at the University of Pennsylvania.

CASE STUDY FIVE: HOWARD UNIVERSITY

Washington, D.C.

Overview

As the major institution of higher education in the predominantly low-income communities of Northwest Washington, D.C., Howard University plays a key role in the area's social and economic development. Howard is the only one of the six universities studied in this report whose student body shares some racial and ethnic common denominators with the surrounding neighborhood. Yet, Howard's demographics have not prevented tensions from arising between the institution and the host community.

After Howard unilaterally expanded its hospital into the adjacent neighborhood, community leaders accused the University of arrogance and exploitation. The University's incoming president, H. Patrick Swygart, responded by establishing the Center for Urban Progress in 1995 and the Howard University Community Association in 1996.

The Center for Urban Progress (CUP) is run by an interdisciplinary group of faculty, staff, and students. Its self-described mission is "to mobilize the Howard University community to address urban crises – locally, nationally, and globally – through the development of academic programs and community leadership training, applied research activities, technical assistance, and direct project implementation." CUP programs include the Community Development Leadership Program, the Small Business Development Sub-Center, and the Workforce Development Program.

The Howard University Community Association (HUCA) is the principal point of contact between the University and the residents of the neighborhoods surrounding its campus. HUCA runs a wide range of programs, which include organizing student volunteer efforts and community meetings; supporting community design and planning activities; and serving as a clearinghouse for information about University-sponsored programs, activities, and public services.

CUP and HUCA have collaborated on multiple community development projects and have recently begun incorporating information and communications technology into their work.

With funding from the U.S. Department of Education, CUP and HUCA opened a Community Technology Center (CTC) based on a "hub and spokes" model. The CTC (the "hub") provides training and support services to a network of twelve community-based organizations (the "spokes"). Through financial support from Seedco, this assistance also involves placing AmeriCorps members on the staff of local community-based organizations and providing support to the technology center. While all of the "spoke" organizations have incorporated some degree of technology into their programs, the level of integration varies dramatically among sites.

This case study describes the early experiences of CUP and HUCA in establishing the CTC/AmeriCorps program as a viable model, and shares the lessons learned from Howard's efforts at integrating technology into the work of the community-based organizations.

The Collaborators

- ***Community***

Washington D.C. has an estimated population of 572, 059 according to the 2000 census. The majority of the city's inhabitants are African-Americans (60.0%) and Whites (30.8%), with a relatively smaller number of Hispanics and Latinos (7.9%).

Ironically, while Washington's per capita income ranks third in the country when compared to states, its poverty rate is 1.5 times the national average at 19.9%, and its child poverty rate 1.7 times the national average at 33.7%. These figures indicate the distinctive social, economic and ethnic make-up that characterize the D.C. neighborhoods. District communities range from affluent areas to impoverished urban centers, with the area surrounding Howard's campus representing one of the most distressed.

Howard is located in Ward 1 of the District of Columbia, one of the poorest sections of the city, and one of the most diverse. The population breakdown for this area is 49% African-American, 26% Hispanic, 21% White, and 3% Asian, with a median household income of $35,200 (compared to the citywide figure of $39,792). The per capita income in the areas targeted by Howard's community development efforts ranges from $8,360 to $20,904.

- ***University***

Howard University was founded in 1867, soon after the end of the Civil War. The institution was named after its founder, General Oliver O. Howard, a Civil War hero and, at the time, Commissioner of the Freedmen's Bureau.

Howard University's mission statement says its goal is "to provide an educational experience of exceptional quality at reasonable cost to students of high academic potential. Particular emphasis is placed upon providing educational opportunities for African-American men and women, and for other historically disenfranchised groups. Furthermore, Howard University is dedicated to attracting, sustaining, and developing a cadre of faculty who, through their teaching and research, are committed to producing distinguished and compassionate graduates who seek solutions to human and social problems in the United States and throughout the world."

Howard has awarded over 93,000 diplomas during the life of the University, and currently has over 10,000 students enrolled in its undergraduate and graduate schools. Its operating budget is approximately $600 million and the school's endowment currently stands at $330 million.

The University-Community Partnership

President Swygert has made "enhancing national and community service" one of the four overarching goals set forth in Howard's strategic plan, called *Strategic Framework for Action II*. Notwithstanding, the University's role in developing the neighborhoods surrounding the campus is a continuing source of debate and controversy. According to the Dean of the College of Arts and Sciences, Dr. James Donaldson, there is a good deal of polemic regarding the degree to which Howard's involvement in its surrounding community should be academic or participatory. One

contingent of the University community believes Howard's principal obligation is to provide its student body with an intellectual and theoretical foundation. Another faction believes students can – and should – learn through action as well as thought and reason.

An outspoken member of this latter group is Donaldson, who has used his successive positions as mathematics professor and Dean to press for a more active University role in community revitalization. Donaldson, while Chairman of the Joint Research Advisory and before he became Dean, administered the Mordecai Wyatt Johnson Award Program. CUP received seed funding in 1995 in a competition under this program. CUP Executive Director Rodney Green, an economics professor, has woven community development issues and projects into Howard's curriculum as well as increased the school's support of local community development corporations and nonprofit organizations.

While CUP's funding is derived primarily from grants, the Howard University Community Association receives considerable funding from the University and its Director, Maybelle Taylor Bennett, reports directly to the Office of the President. HUCA has dedicated much of its resources to the physical redevelopment of real estate in the neighborhoods surrounding the University. Its most significant achievement to date is the LeDroit Park Initiative, a 151-block redevelopment project coordinated by Howard University and Fannie Mae.

CUP and HUCA have done much to strengthen Howard's relationship with its community neighbors. Both entities have received national recognition of their efforts, including six awards to CUP from the U.S. Department of Housing and Urban Development (HUD) for its work forming partnerships between the University, community-based organizations and community development corporations. HUCA's LeDroit Park development has drawn such widespread acclaim that Fannie Mae is replicating the project in at least fifteen other states.

While neither CUP nor HUCA was established with a focus on information and communications technology, both Green and Bennett recognize the gravity of the technology gap facing many local neighborhoods. Bridging this gap has become a major priority in their respective agendas. Green and several other staff and faculty members received training in Geographic Information Systems so they could make GIS-based studies of neighborhoods in Northwest Washington, D.C. They regard these studies as the first step in leveraging technology for community development.

Project Description

- ***The CTC/AmeriCorps "Hub and Spokes" Model***

The Community Technology Center functions as a training and capacity-building hub to 12 community-based organizations. Katherine Clute serves as its director, and is assisted by an advisory group of five Howard faculty members.

Howard Philosophy Professor Charles Verharen helped CUP obtain seed funding for this project from the U.S. Department of Education in the year 2000. Green and Bennett then secured additional financing from Seedco to place AmeriCorps members in the 12 community groups to strengthen the "hub and spokes" model. AmeriCorps members will receive training at the

technology center, and will then help the groups use information technology to improve service delivery.

This idea was an elaboration of a recently completed HUCA program – Project C.H.A.N.G.E. (**C**onnecting **H**oward and **N**eighborhoods for **G**rowth and **E**mpowerment) – that gave the organization significant experience with managing AmeriCorps members and volunteers. In that program, a select group of AmeriCorps students recruited, trained, and coordinated the efforts of hundreds of student volunteers at their assigned community-based sites, which included public schools, health clinics, and after-school programs for low-income residents. Project C.H.A.N.G.E. was financed by grants from the Corporation for National Service to George Washington University, which passed the funds on to HUCA. Unfortunately, this funding source was cut off in 2000. HUCA was therefore looking for a way to continue its AmeriCorps program when it partnered with CUP to found the Community Technology Center. Together, Green and Bennett broadened the focus of Project C.H.A.N.G.E. to include the use of information technology by community groups. The result was the AmeriCorps Digital Divide project.

- ***Technology and Community Development Challenges***

In keeping with their previous work, CUP and HUCA aim for a holistic approach to community development at the participating Digital Divide sites. The individual programs embrace not just technology, but also workforce development, school mentoring and literacy. Unfortunately, not every Project C.H.A.N.G.E. site wanted to incorporate Information Technology. As a result, many were dropped, and some, but not all, were replaced. The current list of participants includes 12 sites – each with a different focus, ranging from health care to primary education.

The "spokes" range considerably in their current capacity to incorporate Information Technology into their activities. For example, at Bread for the City, a community center that provides food, clothing, social services, medical care, and legal services to the homeless, the AmeriCorps member offers assistance with résumé writing on a single computer for a few hours per week. At the Gage Elementary School, the AmeriCorps member assists children with homework and introduces them to the basics of Microsoft Office and other desktop applications. These two programs are just beginning to incorporate computer technology into their sites' direct service delivery.

On the other end of the spectrum, the AmeriCorps member at the Maya Angelou Charter School assists with their intensive, high-tech training for teenagers – including courses on Cisco networking and Web site design. This effort has expanded the scope and capacity of the charter school to the extent that it won a Technology Opportunities Program (TOP) grant, a highly competitive award from the U.S. Department of Commerce. Similar plans are in place for the Garfield Terrace public housing development to host an eight-computer laboratory, including a wireless network.

Two factors explain the different levels of technological sophistication amongst the CBOs. The first is a philosophical difference of opinion among the Digital Divide program staff regarding the appropriate role of Information Technology in community development. Some staff members see IT as integrally supportive of human services, since it can lead to tangible increases in organizational capacity and innovation in community development. For example, IT initiatives can create job

opportunities for disadvantaged workers. But other staff members see technology as relevant only as a tool for isolated skill development, such as résumé training for the unemployed. As a result of these differences, some AmeriCorps members have not received adequate training and support to fully integrate technology into their site's work.

There is also a significant disparity in technological capacity among the sites. A few of the "spoke" organizations already had plans and resources in place to advance a technology-supported agenda, such as the Maya Angelou Charter School. But most, like Bread for the City, lack the capability and the strategic resolve to weave technology into their programs and activities in a meaningful way. Consequently, many of the AmeriCorps members saw their role reduced to their former status with Project C.H.A.N.G.E., where the sole focus was on human services. At this point, it does not seem that the technological aspects of Howard's program have reached their full potential.

- ***Looking Forward: Expanding the Model***

In the future, the Digital Divide project leaders hope the "hub" will coordinate the entire network by:

- More effectively training the AmeriCorps members in technology and service delivery;
- Bringing weaker sites up to speed; and
- Providing more advanced training for those spokes showing a greater IT capacity.

Towards this end, the hub will assume direct management of computer labs at several sites where there is a perceived need for public access to computers but the institutional ability to run a project of this type does not currently exist.

The Center's former director entertained the possibility of contracting with the city as well as the University (for example, as a Cisco trainer). An AmeriCorps member is researching viable fee-for-service options. Other plans call for placing community-based trainees in internships to give them hands-on experience. Clute stressed, however, her belief that all successful revitalization is rooted in the local organizations. For this reason, the hub will shy away from supplanting the role of community-based groups in neighborhood development.

Lessons Learned

- ***Be Flexible but Focused***

A successful community-university partnership must be responsive to the needs of the community at all times. Green believes strongly that academic research should never take precedence over community service. He was willing to reduce his objectives as the project progressed rather than jeopardize the trust that CUP and HUCA have earned from the community.

Bennett subscribed to the same philosophy by training AmeriCorps members in "people skills" such as team building, communication, and volunteer management, as well as in skills relating to Information Technology. She realizes that these AmeriCorps members must be able to adjust to

new environments and work with a variety of people in order to have a positive impact at their sites.

Clute, the former CTC Director, took a similar approach, using the technology center's resources to support objectives deemed important by the community-based groups - even when these goals diverged from those of the University. She recognizes that the technology center will only be as viable as its level of acceptance by the community.

This flexibility has paid dividends. While there is still internal debate over the exact role technology should play in revitalization efforts, all Digital Divide staff members agree that its use – whether for training or innovations in service delivery – is a core component of the overall initiative.

- ***Deliberate Steps Can Smooth the Integration of Technology***

Introducing technology requires a shift in the organization's social environment and culture. It is often unrealistic to expect that every organization is prepared and even interested in making these changes. This was particularly true for Howard as evidenced by the attrition of participating organizations during the transition from Project C.H.A.N.G.E. to the Digital Divide project.

CUP and HUCA took deliberate steps to weed out disinterested organizations and identify those that were amenable to change. They also provided AmeriCorps members with the technical, management, and leadership skills to facilitate change in the partner organizations. This training curriculum is an area where they will continue to make improvements as they learn more about how to do this work effectively. Follow-up training and refresher courses are essential for sustaining the program. Green and Bennett firmly believe that technology alone, without the necessary training of how to make productive use of it, is a wasted investment.

- ***Regard Technology as Supportive of Program Goals***

Information Technology is but one of many powerful tools that can be used to promote revitalization. However, since innovative community technology implementation often presents more initial challenges than other community development strategies, it can be easy to overlook the myriad ways in which technology *could* support program goals.

Technology is only as useful as the goal it serves. Howard's emphases on social issues such as education, employment, health care, and the environment have certainly improved the quality of life for local residents and the community-at-large. The skeptics at Howard have a strong point; technology should not take precedence over their established mission in the community. However, this does not necessarily imply that community technology development is not worth pursuing. Indeed, through further exploration of the ways in which technology might support their established program goals, Howard could do even more toward the fulfillment of their mission in the community.

CASE STUDY SIX: YALE UNIVERSITY

New Haven, Connecticut

Overview

In the late 1990s, Yale University assumed a leadership role in establishing the Regional Data Cooperative (RDC) – a community-university technology project designed to help local community groups collect, analyze, and share data on a regional basis. The initiative quickly encountered a series of stumbling blocks. Among the most challenging obstacles the group faced were the residual suspicion of the University among some community groups, a lack of adequate funding, and a reluctance on the part of data-users and data-generators to give up control over the information they acquired.

The following case study provides an overview of the RDC and its early accomplishments, and highlights the challenges faced by the university and community partners in establishing it as a successful model. The case study also describes the RDC's latest incarnation – the Regional Data Initiative – which is attempting to learn from these lessons and determine a more suitable approach to the University's involvement in a community development technology initiative.

The Collaborators

- ***Community***

The City of New Haven is the second-largest city in the State of Connecticut, just behind Bridgeport, with an estimated population of 123,626. The 2000 Census lists its racial composition as Whites (42%), African-Americans (37%), and Hispanics (17%, any race). The city is home to a growing hi-tech and biotech industry that has attracted more than $1 billion in private investment in recent years. Yet in 2000, New Haven's poverty rate was more than triple the state average, at 21.3%, and its 3.3% unemployment rate a full percentage point higher. New Haven's per capita income is more than $10,000 less than the statewide average. These figures are of such concern that New Haven was one of fifteen cities to be declared an Empowerment Zone by the federal government in 1999.

- ***University***

Founded in 1701, Yale University is the third oldest institution of higher education in the nation. The University occupies a 290-acre campus, as well as more than 600 additional acres of playing fields, golf courses, and nature preserves. The current student body totals more than 11,000. With a staff of 7,500 and 3,000 faculty members, Yale is the tenth largest employer in the state of Connecticut and the largest employer in New Haven. Yale's tuition exceeded $26,000 in the year 2000. At the same time, the University's endowment was valued at $10.1 billion. Yale's current President is Richard Charles Levin. A long-time New Haven resident, Levin has made Yale's civic role in New Haven a priority of his administration. In 1995, he created the Office of New Haven and State Affairs, and appointed a new Vice President (one of only 7) to manage this portfolio.

Project Description

- ***Getting Started: The Regional Development Cooperative***

In 1993, Yale was invited to a gathering of community members. The meeting was convened by Cynthia Farrar, then at the Community Foundation for Greater New Haven, a philanthropic organization dedicated to improving the quality of life in the region. These stakeholders came together to discuss their need for valuable, up-to-date data that could inform both policy decisions and community development projects in the New Haven area. With initial funding from Yale, an informal working group, termed the Data Cooperative, was formed. With additional grants from the U. S. Department of Housing and Urban Development (HUD), the Data Cooperative hired Yale sociology graduate student Dan Ryan to demonstrate the value of pooling and analyzing information, with a special focus on mapping data.

In 1994, Farrar left the Community Foundation to assume a position as Special Assistant to the Secretary of Yale (who was then in charge of the University's New Haven initiative). In this role, she helped coordinate the initial activities of the still-informal RDC, including the involvement of Yale graduate students such as Ryan, who worked directly with local organizations (primarily in the New Haven Empowerment Zone) to assist them with their data-related needs. In addition to working with these groups, the RDC also published "New Haven Maps '95," which included pictorial representations of neighborhood and regional characteristics along the lines of health, social services, and employment. To disseminate information more broadly, Ryan also created New Haven Online, a Web site stored on the server of Yale's StatLab.

As Ryan prepared to leave Yale to take a teaching position, Farrar engaged local leaders in the process of formalizing the data initiative. In 1999, with leadership from the Chamber of Commerce, the Community Foundation, the Regional Growth Partnership, New Haven Savings Bank, and other stakeholders, a new 501(C)3 organization called the Regional Data Cooperative (RDC) was created. RDC's mission was to gather, distribute, and assist community groups in making use of data that could guide program development, implementation, and evaluation. The concept was fairly straightforward. Resident groups and public officials would provide information such as survey results, services being provided, evidence of changes due to interventions, incidence of certain problems, or inventories of resources. In return, the Cooperative would analyze this information to answer questions posed by the contributor, often in combination with other data archived by the RDC, and make non-confidential versions and analyses of this data publicly available. The RDC would help organizations make better use of information while building a database that would enhance the entire community's ability to answer key questions. A relationship with the New Haven Free Public Library was also established with the idea that the library (and its 13 branches) would eventually act as the portals for community access to data.

The RDC continued along this path, but almost ten years and two short-term Executive Directors later, it is still not off the ground. Today, along with some student support, the RDC is primarily staffed by Jim Farnam, a Partner with Holt, Wexler & Farnam, LLP, a consulting firm. Farnam was contracted in 2001 to facilitate discussions among core members of the RDC, with the eventual goal of refocusing and reorganizing the group's efforts. In retrospect, all participants

agree that what went wrong with the RDC provides valuable lessons for others looking to do similar work.

- ***University-Community Relations and Relationship-Building***

From a relationship-building perspective, the RDC fought an uphill battle from its inception. New Haven residents generally consider the University indifferent to improving the social and economic conditions of the surrounding community. They argue that Yale has traditionally segmented itself from the City in an elitist fashion, and that recent efforts to reverse this direction are motivated primarily by a desire to generate positive publicity. Defenders of Yale, including students, faculty, administrators, as well as an increasing number of local leaders, maintain that the University has taken a number of steps to improve university-community relations, all with the best interests of residents in mind.

Given Yale's standing in the community, it is not surprising that the RDC was met with a degree of skepticism when the University was perceived to be the driver behind the project. New Haven residents say the project was marketed in a way that failed to make clear the benefits to the community. They also contend that decisions about who could access data and what kinds of data to collect were made in a top-down fashion and lacked sufficient community input. The community's hesitance to believe in the good intentions of the University was further exacerbated by the University's refusal to give up publishing rights to the data collected by the RDC. This policy is a standard component of all University contracts, and has to do with principles of academic freedom. Furthermore, from the University perspective, this policy was a win-win situation that aimed to allow the RDC to take advantage of faculty expertise while enabling faculty members to access information that would be useful to their research.

Members of Yale's administration maintain that despite this institutional position, they had no desire to publish RDC data and that their involvement was meant to be responsive to the needs of the community, not the faculty. In addition, before a contract between the RDC and Yale was completed, distinctions were negotiated to make it more acceptable to those suspicious of Yale's intentions. It is generally recognized that Ryan, who had a strong understanding of data analysis, made a considerable effort to reach out to community groups by inviting them to ongoing training sessions. However, while the turnouts were impressive, critics said he did not always organize the sessions in a way that was meaningful for attendees. Despite the efforts of Ryan, Farrar, and others, negative perceptions of Yale's intentions hampered the development of necessary relationships in the community.

- ***Data Collection and Use***

In addition to causing problems in building relationships, negative perceptions of Yale's intentions also led to a lack of consensus regarding the RDC's core activities and operations. The disagreements focused on issues such as which kinds of data to track, how to make data meaningful to community groups, and who would own the data collected.

From the outset, different organizations were interested in different sets of data, making it difficult to identify and agree upon a common set of indicators. Decisions had to be made as to the nature of data to be collected (e.g., education, employment, economic, etc.), the level of analysis (e.g.,

block, neighborhood, country, etc.), and the frequency of collection (e.g., quarterly, annually, etc.). Based on these decisions, different organizations would have to assume greater initial responsibility than others for providing data. The need to re-format data for delivery to the RDC would create an additional administrative burden on the chosen groups. Since some individuals would be able to obtain, use, and benefit from the data without contributing to the Cooperative's overall efforts, the concept was slow in taking root.

The partners also struggled with the issues of how to balance needs-based data - which highlights community problems such as poverty and crime rates - with asset-based data, highlighting the community's strengths and capacities such as resident skills and nonprofit resources. Some RDC members argued that needs-based data was readily available from existing data sets or third parties, while asset-based data was difficult to obtain and often required primary data collection. Others argued that needs-based data presents an incomplete and skewed reality and that the RDC had a responsibility to present a complete picture of the community. This debate slowed the progress of the RDC.

Participants also voiced concerns about relinquishing ownership of their data. Despite the reality that this concept is integral to the workings of any cooperative, groups such as the City Plan office and the New Haven Police Department expressed qualms about public access to data. Community groups attributed this hesitation to a fear of public accountability. At the same time, local nonprofit organizations such as Empower New Haven, responsible for overseeing activities in the New Haven Empowerment Zone, expressed a desire to control the timing of the release of data. They argued, for example, that if a workforce development organization conducts an evaluation revealing an increase in unemployment, this group should retain the opportunity to understand contributing factors and devise strategies to address the problem before sharing the data publicly. With members of the working group unable to fully accept the cooperative as a mutually beneficial endeavor, the RDC encountered yet another hurdle to overcome.

- ***No Resources, No Results: The Chicken and the Egg***

Garnering enough resources to run the program was also problematic. At the initial RDC meetings, Farrar encouraged all partners to consider their level of commitment and support. It soon became clear that people were willing to support specific projects based on a fee-for-service, but were reluctant to offer general operating funds. Participants' reticence to commit funds partially stemmed from the aforementioned mistrust of Yale and concerns about ownership and control of data. However, other participants were reluctant to contribute funds to the RDC until they saw evidence of its output such as reports and analyses. These combined factors engendered a "chicken and egg" scenario, in which no one wanted to contribute resources until something was accomplished, and nothing could be accomplished until resources were contributed.

Understaffed and underfunded, the second executive director, Dan Klepper-Smith, was forced to move to a completely market-driven, fee-for-service model in order to maintain the RDC's operations. With a background in consulting, he aggressively sold the RDC's services on a per project basis. This move concerned certain partners who debated whether the RDC would then prioritize profitability over community service. RDC staff felt that, in the absence of start-up capital to incubate the model, they were left with no other choice. The RDC continued to work in

this manner, performing work for members on a project-by-project arrangement, until the model could no longer sustain itself.

- ***Getting Started Again: The Regional Data Initiative***

In 2001, Etha Henry of the Community Foundation for Greater New Haven and Robert Santy of the Regional Growth Partnership formed the Regional Data Focus Group, bringing together representatives from a number of organizations involved with the RDC. Santy had been deeply involved in the evolution of the RDC from the beginning and was, at that time, serving as Chair of the organization's Board. Jim Farnam was hired to coordinate the discussions and help reassess the feasibility of a regional data effort.

Having reached consensus on the need for such an effort, the Focus Group convened the Regional Data Initiative Work Group comprised of many of the same organizations from the RDC. This group included the South Central Regional Council of Governments, the City of New Haven City Plan Department, the Community Foundation for Greater New Haven, Empower New Haven, the Greater New Haven United Way, the Regional Growth Partnership, the New Haven Free Public Library, and Yale University. As a result of these conversations, the RDC has been recast and reborn as the Regional Data Initiative (RDI). With the planning process now underway, the RDI has already established objectives for the first year of operations.

During this initial period, the RDI will function as a publicly available, custom data reporting system that can be used by members of the New Haven community in support of public policy, program design, and evaluation. Unlike the RDC, this vision for the RDI is based on an initial, explicit focus solely on data warehousing and reporting. The RDI will identify data sets, both needs-based and asset-based, that respond to the specific needs of its founding partners. The RDI will also begin to cultivate relationships with local residents to design a Neighborhood Indicators System that can produce neighborhood-level statistics and reports. All of this information will be made available through the New Haven Public Library Web site.

Once the Work Group has evaluated its progress against these objectives, a follow-up plan will be developed. This plan will likely expand the RDI's scope of work to include activities – some old, some new – such as continuing to organize and collect data for partners and the Neighborhood Indicators System, and providing technical assistance on data analysis. This will be done on a per project basis and in support of collaborative efforts between members of the greater New Haven community. Needless to say, in setting out to establish the RDI, the members of the Work Group are determined to build upon the lessons learned from the RDC.

Lessons Learned

- ***Community-Led, University Supported: Clarify Appropriate Roles and Responsibilities***

One of the keys to a successful collaboration is to clarify expectations, roles and responsibilities. For community-university partnerships, this often means allowing the community to play a leadership role and the university a supporting one. The overarching goal for any community-based initiative should be to improve the community. Therefore, the community should determine its

agenda first, and then consider how the university can be supportive in ways that are mutually beneficial. For university-community partnerships to work effectively, both parties must ultimately benefit from the partnership. The community can benefit by leveraging the resources of the university – intellectual, financial, or otherwise – in their efforts to effect neighborhood change. The university can benefit by informing the work of students and faculty, strengthening ties in the community, and achieving greater synergy between their community involvement and other campus activities.

This is not to suggest that the university cannot play a role in helping to organize, plan, and even conceptualize an initiative. Quite to the contrary, the difficulties experienced by the RDC were not the direct result of Yale's early leadership in coordinating the effort. In fact, Farrar originally conceived the RDC concept at the Community Foundation for Greater New Haven, before she accepted her current position at Yale. Moreover, Farrar has argued from the outset that a successful data cooperative would require a separate organization and a community board.

Rather, the RDC's difficulties were the result of community members' perception that the interests of Yale, such as the desire to generate academic research and positive publicity, were being placed above those of the community. This suggests that, once community members have been assembled, the proper role for a university should be more *facilitative* than *directive*. University officials should work with the community to understand their interests, allow those interests to set direction for the collaboration, and *then* determine how to align themselves in support of this direction.

Even in a facilitative role, it is debatable whether Yale, given its history of controversial community-university relations, could have avoided a negative perception in the eyes of community members with respect to their involvement. This lesson learned has led the Work Group to develop a board and governance structure that reflects an interest in community needs first and foremost.

Members of the RDI Work Group also agree that this second attempt to realize a regional data effort will be better served if it is no longer a freestanding entity. Instead, they believe it should be hosted by an organization that has broad interests in the community, a good reputation throughout New Haven, and an organizational mission that is synergistic with the goals and objectives of the RDI. At present, the candidate organizations to house the RDI include the South Central Regional Council on Governments and, interestingly, the Community Foundation for Greater New Haven, among others.

The ideal role for Yale would then be to draw on the time and talent of the student body, and to provide community access to physical information technology resources. The University could pave the way for mutually agreeable faculty involvement by ensuring that the academic research performed on behalf of RDI clients is driven by community priorities.

- ***Establish Momentum with Early Success – Identify Realistic, Achievable Goals***

As mentioned previously, members of the RDC were reluctant to buy into the concept until outputs were produced. Other than the "New Haven Maps" publication and consulting projects conducted for specific partners, the RDC's outputs were forever elusive. Furthermore, the choice

of the New Haven Free Library as the home of the data was problematic, as the Library lacked the resources for long-term technology upgrades and the hiring of technology-literate employees. One of the ways to establish momentum in a collaborative effort and overcome this hurdle is to identify a few realistic and achievable goals that can be accomplished in a reasonably short period of time.

Going forward, therefore, the RDI Work Group will limit the number of projects it undertakes during its first year of operation and focus its energies on a few realizable milestones. First, the members will identify areas for primary data collection and obtain a limited set of secondary data, both key steps towards setting up the Neighborhood Indicators System. The data will be drawn from the following categories: economy, employment, environment, education, health, housing and home ownership, human services, and safety. An inherent challenge in amassing this data, however, is that much of the information housed by the City is not properly formatted and will require serious attention before it is ready for digestion. Second, the Work Group will plant the seeds for a regional data warehouse by aggregating local data in the following defined areas: home ownership (e.g., loan applications, property values, building permits, etc.), commercial development (e.g., tax delinquency, vacant properties, etc.), and employment/poverty alleviation strategies (e.g., employment needs to TANF recipients and other poor residents). Projects such as business development, including openings and closings, and commercial/retail space inventory, including vacant non-residential space, are also under consideration.

By restricting their work to this set of activities, the Work Group expects to make incremental progress toward fulfilling their vision for the RDI. They believe that early evidence of progress will be more effective in generating buy-in from member organizations.

- ***Begin with Sufficient Seed Funding***

The RDI's future plans also include the establishment of a more sustainable funding model. To begin with, the members of RDI must embrace their role as funding sources. The members of the Work Group represent those organizations deemed to have a vested stake in the success of the RDI. Collectively, they share in their roles as both data users and data producers, and they agree that they can all benefit from sharing information amongst one another. Consequently, each organization must be willing to provide operating support grants that will constitute the RDI's core base of funding.

A number of ideas have also been discussed to augment this base funding. First, the Work Group will attempt to meet the information needs of local funders, and then assemble this into a comprehensive and integrated database. This will expand the RDI's capacity to support particular projects deemed important by its members. Second, the Work Group has begun discussions with the Funders' Collaborative, a partnership of 22 funders in the region, to gauge their interest in supporting the RDI. The Collaborative is host to the Collaborative Capacity Building Project, whose interests overlap with the aims of the RDI. Third, in the spirit of the RDC, it is anticipated that the RDI will again seek to diversify its income by conducting projects on a fee-for-service basis. However, this will only be considered after the RDI's operational baseline has been firmly established. Lastly, it has also been suggested that the Community Foundation for Greater New Haven designate a fixed percentage of each of its awards to cover the costs of services provided by the RDI, thus ensuring an ongoing source of revenue for the initiative.

Regardless of the RDI's composite funding landscape, all participants acknowledge that its core support must be secured at a level and for a period of time sufficient to build its capacity and produce results.

- ***Start Small then Grow***

From the beginning, the RDC concept was too large in size and scope. The number of organizations involved made it difficult to reach consensus on critical matters such as the types of data to be collected and disseminated. The RDC members also had trouble maintaining focus as they tried to obtain, share, and analyze data for a diverse constituency across a diverse set of indicators.

When compared to the RDC, it is believed that the relatively smaller number of organizations participating in RDI (eight) will enable the group to sustain a regional data effort without losing direction or becoming unwieldy. The RDI will also limit the breadth of data it pursues by focusing on the aforementioned projects such as the Neighborhood Indicators System and data collection in the areas of homeownership, commercial development, and unemployment/poverty alleviation. In doing so, the RDI will restrict the number of data sets in each area. This will avoid complications that may arise from seeking an unmanageable amount of data.

Once a baseline level of operation has been established, the RDI does plan to expand both its membership and the scope of its work. But this will be done incrementally, in response to the initiative's ongoing development and commensurate with its capacity to do so.

IV. CONNECTING UNIVERSITIES, COMMUNITIES, AND TECHNOLOGY: LESSONS LEARNED

Seedco's survey report, "The Evolving Role of Information Technology in Community Development Organizations," indicated that the connection of universities, communities, and technology can lead to innovative community development strategies. Universities and their surrounding communities complement one another in meaningful ways, and technology initiatives can be a tangible way to build these ties.

The cases examined in this report support our survey findings. Many of these community technology initiatives have already seen measurable progress toward achieving outcomes. Others have been forced to re-evaluate their efforts due to challenges and setbacks. But tellingly, even the most troubled sites have used their experiences to pursue further project development, rather than discontinuing their projects altogether. Each of the universities and communities in this report maintains the belief that they have important work to do together, and that technology can play a meaningful role in this process.

The projects described above shed light upon the inner workings of technology-focused university-community partnerships. Their range of experiences and strategies indicate that there is no single "best model" for unlocking the powerful synergies between universities and communities. However, as described in Section II, universities have tended to take on three general roles in the development of community technology partnerships, each of which presents specific benefits and challenges: *Consultant, Application Service Provider,* and *Catalyst*. Local stakeholders interested in initiating university-community partnerships can draw valuable lessons from the similarities and differences in these six universities' different approaches. What, then, have we learned about the relationship between universities and their surrounding communities, and how can technology contribute to this process?

Technology opens the door.

By nature of their sheer physical proximity, universities and communities are inherently interconnected. Technology offers a powerful leverage point around which these groups can convert their mutual concerns and interests into progressive action. Catalyst organizations, such as the API at UCLA, can become a key point of connection for university, government, business, and community. Serving as a specific Application Service Provider, such as NKLA, strengthens this "point of connection function" by adding value to both the university and the community.

For example, using technology to integrate, layer, and depict data benefits both university and community by providing new perspectives on local assets and challenges. Community groups can use this knowledge to inform ongoing program development, but they often lack the tools and expertise necessary to develop such IT applications. Universities generally possess these resources in abundance, and they have strong incentives to bring these resources to the table. Community IT projects often deliver data that academic researchers could not access through other means, and student involvement in community partnerships greatly enhances the overall educational experience.

Whatever role they choose to play, universities have found that IT can be a high-yield community investment. For example, each community member trained in office applications, web design, or hardware maintenance can pass along their knowledge to others in the community. The spread of IT expertise produces a powerful "multiplier effect" throughout the community, particularly when such peer-learning is institutionalized on a programmatic level.

Community technology partnerships also benefit universities by enhancing their image, stature, ties to local infrastructure, and the synergy between community involvement and campus activities. As we saw between UCLA and the University of Southern California, these factors can represent a competitive advantage over other universities. Moreover, universities have found that many types of community technology investment require little additional spending. For example, many schools are continuously buying new hardware and software to meet perceived academic need. For schools playing the role of local catalyst, there is often an abundance of "outdated" but functional resources that can be redistributed to the community at minimal cost.

Community groups' and residents' relatively low levels of IT expertise make technology a high-yield investment. It is clear that community-focused technology projects offer special opportunities for university-community partnership. However, these projects also present special challenges for many of the same reasons. Technology can facilitate the development of meaningful partnerships, but the introduction of technology into the work of community-based organizations is rarely quick or easy. It can require the redefinition of roles and responsibilities by staff, the establishment of new information and communications channels, and even a shift in the organization's social environment and culture. It is unrealistic to expect that every organization is prepared for, or even interested in making these organizational changes, especially if they are unaware of the potential benefits. For these reasons, it is essential to identify which groups are most interested in using IT, and whether their primary technology goals are administrative or programmatic. Failure to do so will result in wasted time and money, and risk creating more tensions between town and gown than existed prior to the partnership.

This was particularly true for Howard, as evidenced by the attrition of organizations during the transition from Project C.H.A.N.G.E to the Digital Divide project. The staff at Howard took deliberate steps to insure that organizations participating in the Digital Divide project were amenable to change, as well as being genuinely interested in using technology. Unfortunately, this meant that some strong community partners chose to discontinue involvement with the program. To help facilitate technological change in the remaining partner organizations, Howard worked to develop AmeriCorps members' non-technological skills (such as management and leadership), as well as their IT knowledge.

Similar challenges were evident at MIT, where only eight families out of a possible 48 elected to participate in the second round of courses. Technology can be an intimidating field, and many who are unfamiliar with it do not fully understand its potential benefits. This lack of community interest in technology was a definite challenge, but it also represented a significant opportunity to re-evaluate the project's efforts and connect more meaningfully with residents. Once staff realized this, they made a concerted effort to articulate the benefits of technology through letters, face-to-face conversations, and telephone outreach. Consequently, MIT was able to increase the number

of families participating in the second round from eight to 27, and some of the project's staunchest opponents have now become its greatest proponents.

Technology initiatives show significant potential to bring together university-community partnerships, but community technology also presents its own challenges. Technology in and of itself is no cure-all; some of the organizations described in this report have achieved valuable program outcomes, while others have struggled to get off the ground.

Technology is a means to an end.

"Stand-alone" technology projects can achieve positive results, but the six initiatives described above tended to accomplish more when technology was regarded as a community development tool, rather than an end in itself. Technology initiatives tended to be most effective at building university-community partnerships and fostering community development when they were linked to existing community goals.

By linking IT initiatives to community priorities such as education, healthcare and housing development, university-community partnerships were able to clearly demonstrate the value of technology. They were also able to focus and maximize their IT investments, targeting technological capacity-building to those areas that would most directly impact the community. Training community groups in technology for its own sake can be good, but then the groups lack support in how they might actually *use* their new capacity. Using technology in support of mutually established community goals tends to produce more tangible results, since community groups can thus gain independent capacity. This was evident no matter what role the university chose to play in the development of community IT capacity.

For example, Howard University's project links technology capacity to social issues such as education, employment, health care and the environment. Similarly, at MIT, project leadership developed technology applications around the key program areas: "Youth and Seniors," "Community," "Safety and Security," and "Employment." Combining technology capacity with critical local concerns, these projects work on multiple fronts to improve the quality of life for residents and the community-at-large.

But as these cases illustrate, different initiatives can choose to prioritize very different community objectives. These decisions often play a major role in the ultimate success or failure of the project.

The needs of the community come first.

It can be expected that any partnership should be mutually beneficial. But when that partnership develops around a community-focused initiative, the overarching emphasis must be on improving the community, not furthering the university's priorities. Indeed, the cases indicate that the more organically a university-community partnership has developed from community priorities, the more successful it has been. So while a university's interests cannot be discounted over the long-term, evidence suggests that universities will benefit *more* if they can initially de-emphasize their

own priorities, because they will derive greater benefits from more successful community initiatives.

This is not to suggest that the university should not play a role in helping to organize, plan, and even conceptualize an initiative. These roles can be particularly critical when a university chooses to act as a Catalyst for the development of community technology partnerships. But once community members have been assembled, the cases suggest that the university's role should be more *facilitative* than *directive*. University officials will likely experience much greater long-term success if they work with community members to understand their interests, allow those interests to set the collaboration's direction, and *then* determine how to align themselves in support of this direction. This approach fosters an atmosphere of trust by avoiding the appearance of arrogance or patronization by the university.

In a prime example of this strategy, the Camfield Estates-MIT Creating Community Connections Project conducted a formative assessment using residents to conduct interviews with their neighbors. This identified the community's desire for activities in four specific program areas. Project leadership then undertook specific technology strategies to address each of these issues. By facilitating the initial development of community goals, then taking a more active role in the implementation of IT initiatives, university researchers fostered a high degree of community "buy-in" without sacrificing the university's long-term research interests.

Of the six cases studied here, the University of Memphis plays the largest role in city planning and community development. Yet the University's participation has grown only in response to specific requests for assistance. Moreover, the extent and type of the University's participation in each project is shaped by the city's governmental and community leaders, not by what the University has determined are the community's needs. This relationship is one that city leaders consider appropriate and the University has found acceptable. Because civic leaders interpret the University's willingness to play a supportive and not directive role as an expression of its desire to establish a relationship based on mutual respect, they are comfortable granting them an expanded role.

Yale's RDC project suffered as a result of too little attention to these factors in University-community collaboration. When New Haven community leaders found Yale's early leadership overly directive, it fed longstanding perceptions that Yale's own interests – such as conducting research or generating positive publicity – were being placed above those of the community. But even in a more facilitative role, it is not clear how easily Yale could have won over members of the New Haven community.

Relationship building is critical.

It is no coincidence that the three smoothest launches occurred in cities where the universities had well-established records of civic activism. Conversely, the two projects requiring the most revision occurred at sites with a long history of town-gown tensions. And in one case, university representatives converted a lukewarm reception to a warm one by using trusted community members as surrogates.

In Los Angeles, UCLA's Advanced Policy Institute was already a connection point for government, university and community leaders. Consequently, these relationships did not have to be created in order to generate support for the Neighborhood Knowledge Web site. The technological component added by NKLA simply expanded the Institute's established role in the community.

Similarly, Ira Harkavy's long history of community organizing in West Philadelphia earned him a warm reception when he returned as director of the University of Pennsylvania's Center for Community Partnerships. Community leaders and residents bought in quickly to the university-sponsored technology projects because they trusted that Harkavy had their best interests at heart.

In Memphis, the longstanding friendship of Memphis Housing and Community Development's Robert Lipscomb with Stanley Hyland, from the School of Urban Affairs and Public Policy, paved the way for the University's prominent inclusion in the citywide strategic planning process.

In Boston, MIT could not have persuaded skeptical residents to participate in the Creating Community Connections project without the involvement of trusted local leaders including Paulette Ford, President of the Camfield Tenants' Association; Thaddeus Miles, the Director of Public Safety for Massachusetts Housing Finance Authority; Donna Fisher, Camfield's director of community outreach; and Nakia Keizer, the resident project leader. Furthermore, MIT graduate students Richard O'Bryant and Randal Pinkett extended themselves to residents in a way that demonstrated their genuine interest in the community's well being. This made a noticeable difference in their abilities to connect with certain residents on a personal level and to "sell" these residents on the value of technology.

Due to Yale's reputation in New Haven, efforts to build the RDC repeatedly dissolved into suspicion and distrust. But if a university is able to recognize the reality of its situation and plan its project accordingly, as Yale is attempting with the RDI, it has the opportunity to turn around public perceptions. In a major step, the RDI's new board and governance structure is non-Yale-affiliated, reflecting an interest in community needs first and foremost. Yale has also decided to pursue a more limited, manageable number of community partnerships for the RDI. A university's history in the community counts; but with sensitive relationship-building and careful planning, a negative past does not necessarily preclude a positive future.

Clear and early results keep the project on track.

Initiatives that recognize this lesson early on can make substantial headway towards overcoming stakeholder tensions and hesitation. The potential benefits of innovative IT applications can overcome even the most ingrained skepticism, but these benefits must be readily apparent from the project's earliest stages.

For the university, this means structuring the project in a way that offers faculty and students tangible motivations to stay involved. Good will can go a long way in a project's initial stages, but it is hard to sustain student and faculty investment unless they believe they can do academically viable research in their fields. From the community's perspective, the project should offer benefits that outlast the duration of the project. The university should foster self-sufficiency by providing technical and managerial training as well as hardware, and by sharing raw data and access to

restricted Web sites. Most importantly for both sides, these benefits should be incremental and measurable. Front-end planning for the achievement of clear, short-term milestones can greatly enhance project "buy-in" by reinforcing that a project is on the right track.

This type of reinforcement is critical in IT initiatives, where unfamiliarity can often lead to reservations and apprehension. The potential for disruptive turmoil is particularly great when universities serve as Application Service Providers, since local groups are forced to give up ownership and control of key data. In this type of initiative, clear and measurable milestones provide necessary evidence of mutual benefits, maintaining stakeholders' confidence and keeping the project on track. These types of milestones must be planned for in advance.

At the University of Pennsylvania, strong planning and positive working relationships have facilitated a level of community perspective that faculty and student researchers could not have attained through other means. Meanwhile, the community is benefiting from an influx of technology resources and expertise, while community groups are gaining access to valuable public data sets. Through close dialogue and careful planning, Penn's projects have maximized the benefits to both university and community.

In New Haven, the failure of Yale's RDC pointed out that these benefits must also be both manageable and measurable. Their original goals were overly ambitious, and the project lacked consistent, concrete milestones. Stakeholders grew frustrated when technology did not produce ground-breaking results, and the project crumbled under the weight of its expectations.

To develop a university-community partnership, it is important to identify a small number of realistic, measurable goals that can be accomplished in a reasonably short period of time. This will help build project momentum, solidify stakeholder "buy-in," and inform further project development.

Innovative projects require innovative management.

The development of manageable project goals raises two critical questions: who is going to get the work done, and who is going to pay for it? Each university-community partnership will have the opportunity to draw upon different pools of resources, and will face different challenges to the acquisition of these resources. But in order to accomplish project goals and reach their potential, initiatives must develop creative combinations of funding and staffing in the face of competing interests. This is particularly critical in technology initiatives.

Even at universities like Howard, Penn, and UCLA where the basic infrastructure is in place to initiate community outreach, individual projects are still often forced to rely on soft funds. While grants can be found for the initial stages of a project, any sustained initiative requires a stable, renewable source of operating funds. IT projects often require this type of ongoing support for critical project operations, but the time spent to acquire and leverage these funds can interfere with directors' primary programmatic responsibilities.

In some cases, data collection costs have fallen on the data gatherers. In Memphis, public agencies are in debate with one another about who will be forced to incur these costs. At Yale, the

disproportionate burden on specific institutions contributed to the dissolution of the RDC. But Yale's RDI plan has developed a different strategy, redefining Work Group participants as data *users* rather than data gatherers.

Data users can represent a sustainable funding source for information-based technology initiatives. In many cases, the data collected will have significant market value to individuals beyond project stakeholders. Project managers who view data production as a potential revenue generator may wish to take advantage of this opportunity, since any revenue generated could potentially pay for data gathering.

This strategy might make the most sense when the data generated exhibits value to the private sector. For example, data fees paid by real estate firms might facilitate projects geared toward the residents of low-income communities. However, as Yale discovered from their fee-for-service RDC model, this strategy raises concerns that the initiative will prioritize profitability over community needs.

These types of funding issues are particularly critical in technology initiatives, which often face high costs for hardware, software, and training. Just as importantly, university-community partnerships often struggle to maintain the stable staffing that can critically influence the overall success of a community technology initiative. Staff turnover is always an issue in community-based organizations. Similarly, graduate student tenure at universities is typically of limited duration.

In Los Angeles, UCLA addresses this problem by using graduate students as non-core staff, then hiring selected students as core staff once they earn their degree. While the Community Coalition lacks the financial resources to follow suit, they carefully select the individuals who serve as links to the university to insure that these individuals have a long-term interest in the project.

Local residents often make significant contributions to university-community partnerships. This is particularly critical when the university is playing a Consultant role; in this scenario, the initial seeds of IT expertise must come from the university, but ongoing investment is necessary to increase local capacity and decrease dependence upon the university. In the cases studied, projects' prospects of success were significantly bolstered when residents participated in mapping assets, conducting interviews, analyzing data, aggregating content and soliciting the involvement of their neighbors. While initially less skilled, community-based researchers offered greater continuity than their student counterparts, who often left the project after one or two semesters. At the same time, residents were able to increase their employability by acquiring the technical skills needed to complete the project. But it is important – psychologically as well as economically – to compensate all staff for their time. Resident participation requires additional financial resources to ensure sustainability and "buy-in."

Many cases also use the AmeriCorps program as a source of funding and labor power. The Corporation for National Service offers this program as a federal support for student service to the community. AmeriCorps member service must be direct, rather than planning- or research-based, so they are of limited value in project development. Once an initiative is on its feet, however, many sites have found AmeriCorps members to be a valuable source of skilled labor.

With creativity and flexibility, university-community partnerships can cobble together the financial and human resources to generate mutual benefits. But once these projects are successfully realized, this should not suggest that universities and communities have completed their work together. Indeed, their efforts might open opportunities for collaboration that would have been previously impossible. To maximize their mutual benefits, universities and communities must take steps to work together on an ongoing basis.

Sustainable relationships require commitment at the highest levels.

In many cases, the residents of a community will live with the effects of a project long after the university has completed its participation. Programmatic strategies for sustainability, such as the IT training "multiplier effect" discussed earlier, can spread and deepen valuable knowledge throughout the community. However, technology can also complicate a university-community initiative's sustainability, since more often than not, the university provides the necessary technology resources and expertise.

It is critical that successful projects start with sustainability in mind, since the benefits of individual university-community projects will fade without continued attention. Community technology resources, for example, will eventually become outdated and require new investment. As well, the foundations of knowledge and good will gained by universities tend to lose value if they are not built upon. Ongoing research is more valuable than one-time studies, and universities gain little esteem from one-time community interventions. However, these first steps might open new doors for collaboration, and neither side can fully predict the mutual benefits that might be available in the future. So while individual projects might run their course quite successfully, this is not the end of the story. For universities and communities to get the most out of their partnership, it is critical that they develop ongoing relationships.

The case studies clearly indicate the power of university leadership to mobilize resources and rally support from both university and community. A university president, chancellor or provost can foster community development in myriad ways not open to individual faculty members or departments. As well as allocating physical, financial, and technical resources, university leadership can also make large-scale institutional decisions such as offering college credit for fieldwork or funding community research directly from the school's operating budget. In many cases, these efforts require subtle changes in a university's perceived educational mission, which require the commitment at the highest levels. Through their words and actions, university leaders shape the climate of the interactions between community members, faculty, and students.

At the University of Memphis, this leadership started with the trustees, who selected Shirley Raines as president in part because of her commitment to community engagement. Raines delivered on that promise by incorporating community-building into the university's strategic plan, academic curriculum and operating budget. While funds for special projects are sought from foundation and government, faculty and staff time devoted to community activities, typically, are not linked to such funding. This point is reinforced by the fact that much of the university's engagement with community development has shifted from CURE, which operated exclusively on soft money, to the Provost's office, which does not. Community engagement is now a core administrative unit in the

university's budget. Moreover, Raines' vocal support for community issues has encouraged faculty and graduate students to donate their time and expertise to community development projects.

Similar efforts have been underway at the University of Pennsylvania, where the attention focused on establishing links with neighborhoods is a direct result of the election of Judith Rodin as president and chief executive in 1993. Through the strategic planning process she initiated, she spearheaded the first serious university-wide outreach to distressed neighborhoods. Under her leadership, the university's faculty was encouraged to share the results of relevant research with community residents, and to view Philadelphia's community resources as academic assets upon which the faculty could draw to advance their scholarly interests.

Howard University President H. Patrick Swygert has outlined long-term plans for improving distressed communities of Northwest Washington D.C. in his *Strategic Framework for Action II* document. By creating two new on-campus institutions with their own budgets, the Center for Urban Planning and the Howard University Community Association, Howard ensures that its support for improving the lives of its neighbors outlasts the life of any individual project. Through the combination of a vocal leadership, careful planning, and the resources to get things done, universities can maximize the benefits of community partnership and generate sustainable progress.

V. CONCLUSIONS

Connecting universities, their surrounding communities, and technology can lead to innovative strategies for community development. Because of community capacity benefits such as the "multiplier effect" of IT knowledge, residents often experience positive repercussions well beyond the conclusion of a given project. The experiences of these six cases will help key community stakeholders develop mutually beneficial initiatives and plan for the challenges that might arise.

It is critical that key stakeholders work together in a concerted manner to improve distressed communities, but successful project completion should not suggest that a university and its surrounding community have completed their work together. Sustainable community progress requires the ongoing commitment of both sides.

This report is intended to stimulate ongoing dialogue around new opportunities for community capacity-building. Technology is one way to facilitate this process, but it is not the only way; meaningful community collaboration can be developed wherever university resources complement community need. The community-university partnerships studied regard technology simply as a new tool for addressing longstanding socioeconomic inequities. As community groups and academic institutions develop ongoing relationships, they will continue to discover new areas of mutual concern and new leverage points for maximum impact.