## Contents

**Executive Summary** ......................................................................................................................... 2  
The Opportunity ........................................................................................................................................ 2  
The APM Technology Initiative ............................................................................................................. 3  
Benefits .................................................................................................................................................. 4  
Report Organization ............................................................................................................................ 6

### 1.0 Information Technology: An Overview ................................................................. 7

### 2.0 Methodological Approach .................................................................................. 10  
2.1 Need for the Study ...................................................................................................................... 10  
2.2 Asociación de Puertorriqueños en Marcha ................................................................................. 11  
2.3 Planning Team ............................................................................................................................ 11

### 3.0 Goals of the Study ................................................................................................. 14

### 4.0 Needs Assessment ................................................................................................. 16  
4.1 Community Overview .................................................................................................................. 16  
4.4 Opportunities and Challenges ..................................................................................................... 26

### 5.0 Recommendations and Action Plan ........................................................................ 28  
5.1 Develop a comprehensive curriculum for information technology education, workforce and arts programs ........................................................................................................................................... 28  
5.2 Create a Channel for Distributing and Producing Community Information ................................... 32  
5.3 Provide Universal Access to Information Technology .................................................................... 36  
5.4 Enhance and Create Facilities Dedicated to Information Technology ................................................ 45  
5.5 Integrate public art into the provision of information technology ................................................... 51  
5.6 Plan for Success ............................................................................................................................ 55

### Summary: Organizing for Action .................................................................................. 62

**Appendix - Recent Trends in Community Technology: Best Practices from Around the Country**
APM Technology Initiative

Executive Summary

“A decade ago, technology planning was a novelty for local governments. In most places, it still is. But increasingly, the viability of a community is linked to its access and use of information and communications technologies. Technology today is as vital to economic growth as transportation and utilities systems were in the past. Technology infrastructure and the transportation and economic development policies created to take advantage of it will determine a region’s future. Communities that integrate technology into their strategies and plans will have a distinct edge over those that play catch-up.”1 (Kaylor and Steins, 2004)

The past decade the Information Technology (IT) revolution has produced a sea-change in the patterns and processes by which human beings communicate, do business, and conduct their lives. Similarly, the fabric of our cities and communities have evolved in relation to this change. Physical spaces and places are permeated with virtual information networks that play an ever increasing role in our day-to-day activities, physical and social arrangements, and as we shall demonstrate in this document, ways in which both public and private organizations, governments and non-profits alike understand and plan for urban areas. Incorporating Information technology into community planning is only just emerging with most communities lacking strategic technology plans for using new tools to solve old problems. Information Technology with community planning is particularly critical in economically challenged and socially marginalized neighborhoods where public and private access to Information Technology is minimal. As these technologies are increasingly recognized as a strategic resource for producing livable communities and sustainable economies, the need for a solid community technology plan becomes all the more acute. Building upon the 2002 APM Redevelopment Plan, this study focuses specifically on the role of Information Technology future of APM’s community development and revitalization.

The Opportunity

The Asociación de Puertorriqueños en Marcha target area (APM) is a primarily residential area within the lower Northeast section of Philadelphia. Nestled between the American Street corridor – a former industrial district – and the SEPTA Regional Rail Corridor, the neighborhood has suffered a near 50% population loss in the last 40 years, increasing poverty levels, vacancy and economic isolation concurrent with the loss of local jobs. Despite the influx of Latino families, which now comprise approximately 50% of the population, the neighborhood continues to lose population. The quality of local schools and parks as well as the limited commercial services negatively impacts the ability for APM to retain families and meet their needs.

Like many areas within Philadelphia, this painful transition from its historic industrial base has provided the opportunity for a new future led by the dedication of non-profit agencies, residents and private and public partners. In seeking this new future, APM has led the revitalization efforts of the neigh-

1 APA Magazine, April, 2004
borhood providing social services and education programs as well as physically re-building the neighborhood fabric including over 200 homes and a shopping center at Germantown Avenue and Berks Street. From this activity, a market for new homes is slowly building providing the neighborhood with a growing competitive edge to attract a mix of incomes and new services over other areas suffering similar trends.

Coupled with these efforts is APM’s advantageous location adjacent to Temple University. Historically, the investments, capacity and resources of University staff and students, however, have been strongly separated from APM by the SEPTA Regional Rail Corridor. This has had negative consequences for both Temple and APM. The Temple Regional Rail Station has the fourth largest ridership in SEPTA’s regional rail system, but lacks any public amenities that might serve to connect Temple University to the APM neighborhoods. Unlike the other Center City Rail Stations, the Temple stop has no commercial or retail businesses even though its serves a campus of 25,000 students and is the largest employer in North Philadelphia. Views from the platform of APM reveal a difficult set of challenges to confront, from deteriorated housing and vacant land, to the social and economic differences, which furthers the harsh separation between APM and Temple. Recent efforts, however, are bringing a unique opportunity to bridge this divide. Temple will move the Tyler School of Art into a new facility only a few blocks away from APM. Housing demand generated by the University has spawned a series of new housing projects on the western edge of the SEPTA rail corridor totaling over 300 units of new student housing completed or underway. Finally, APM has sponsored a plan for revitalizing the area around the station which has received widespread support from local partners, City and State representatives and local residents.

The combination of these efforts are seeking to reinforce and build upon the local assets that can assist APM transition to a new future. The APM Technology initiative will help to realize that potential.

The APM Technology Initiative

Information Technology is one of many tools for non-profit organizations and their partners to use in enhancing their community revitalization objectives. All too often technology is viewed as ancillary to the other main issues non-profits face; affordable housing, economic development and workforce preparation. By taking an integrated and comprehensive approach to Information Technology, this initiative will reinforce these other objectives. Technology must be understood as an essential component to community planning and must not be discussed as a separate and isolated undertaking.

The APM Technology initiative will contribute to and expand local economic development efforts, social programs, and public participation as APM continues to move forward with local revitalization activities. It will ensure universal access to Information Technology through a tiered approach from computers in homes to broadband internet access in critical public spaces within the community. Above all, the initiative will seek to change the way that non-profit organizations and their partners plan for local problems and implement neighborhood revitalization activities. In partnership with Temple University and other non-profit organizations, APM will become a national model in ensuring access to technology and creating applications that reinforce the unique characteristics of the neighborhood.
Specifically, the Technology Initiative proposes:

- Providing computers in all new homes as a basic infrastructure.
- Integrating wireless fidelity or “Wi-Fi” for short into APM targeting specific public spaces and institutions in the short-term and providing comprehensive neighborhood coverage in the long-term becoming the nation’s first low-income wireless neighborhood.
- A new GIS system operated and used by APM to track the status of properties in the area and assist local residents in planning for the community’s future through public participation GIS programs.
- Developing youth programs that educate students in new computer software applications from AutoCAD and GIS to creating new web pages.
- Creating an interactive web page for the APM area that includes on-line forums for discussions and collaboration.
- Expanded education programs targeted to technology training and workforce preparation.
- Creating public access in key locations throughout the community through new technology kiosks, interactive digital bulletin boards and public art that elevates the visibility and impact information technology can have within the community.
- Developing a “Media Station” at the SEPTA Regional Rail Station that serves as the hub for local technology initiatives. The media station will act as a public space and community center providing information technology training and new entertainment and after-school programs. It will serve as a portal to programs and activities of value to local residents provided on-line both locally and nationally. With a focus on education and creativity, the media station will enable residents to create art, street furniture and other products for use within the community.
- Investing in fiber-optic infrastructure for sites surrounding the station making the planned office space and housing more attractive. The revenue from these uses will help to subsidize the media station.
- A marketing campaign to elevate both the interest in information technology but also the neighborhood as a whole.

Benefits

The collection of recommendations will bring many benefits to both local and regional residents, the neighborhood and the APM Community Development Corporation. These include:

- Creating a new identity for the APM community as modern and innovative.
- Providing necessary services and programs in locations convenient not just to APM residents but residents throughout Philadelphia.
- Expanding the education and technical ability of residents through partnerships with local service organizations.
• Providing programs and activities tailored to the large percentage of local residents under the age of 18 (30%).

• Fostering an integrated workforce preparation curriculum that leverages the activities of organizations throughout the City.

• Providing opportunities for residents to use technology to expand their personal interests from music to film.

• Reaching a larger percentage of residents through multiple technology access points and targeted marketing efforts.

• Gaining access to sources of funding that will help to accomplish existing goals related to workforce preparation and economic development.

• Creating a location for community collaboration and participation both through on-line initiatives and within the media station.

• Improving the access to local information which will assist future planning efforts and public participation activities.

• Providing a forum for a range of small business development programs and assistance.

• Methodically addressing the “digital divide.”

APM will become a place for residents to access the tools and services needed for success in the 21st Century economy. Combined with transit oriented development and strategic urban design initiatives, Information Technology will help to redefine APM’s future. This initiative is a model for neighborhood revitalization that moves beyond bricks and mortar activities, fusing the flexibility and resources Information Technology potentially provides with complimentary physical investment.

The APM Technology Initiative is a practical vision that can be implemented within the time frame of less than five years. The greatest barriers to implementing the recommendations contained within this document are cultural, not technological nor financial. “Off the shelf” technology is available to implement all of the recommendations and the relative cost of Information Technology is minimal vis-à-vis traditional physical development. The implementation of these activities will rest on leadership and partnerships. With this plan as a guide, APM must lead a strong alliance of partners that are dedicated towards participating in the long-term investment of community revitalization through Information Technology.

The technology initiative will reinforce recent investments like the reuse of the Kardon Building adjacent to the station
Report Organization

To address the myriad of problems facing APM and the deployment of technology initiatives, this report is organized into a series of chapters each based on research and planning sessions with APM.

1.0 Information Technology: An Overview - provides a brief overview of information technology and the challenges associated with its use in revitalization activities.

2.0 Methodological Approach – describes the planning methodology undertaken by the team for this effort.

3.0 Needs Assessment provides a needs assessment of the community based upon its physical and social characteristics, the quality of local technology infrastructure and access to technology initiatives and the perception of local residents regarding the role of technology in the future of APM.

4.0 Opportunities and Challenges summarizes the needs assessment and identifies the critical issues that need to be addressed within the recommendations

5.0 Recommendation and Action Plan provides the key initiatives proposed and the action steps to achieving their implementation over the next few years. A summary chart is provided in the appendix of the report to assist APM in organizing their work and tracking their progress.

In addition, the consultants assembled background research on key technology initiatives around the country. This section - Recent Trends in Community Technology: Best Practices from Around the Country - reviews experiments and projects dedicated to providing technology access and services in different cities and is included in the appendix of this report.
1.0 Information Technology: An Overview

Early examples of information technology include the telephone, which substantially altered how people collaborated and conducted business. Today, information technology is usually thought to relate to the Internet and web-based applications. Web sites, on-line databases and email comprise the majority of major applications associated with this term. Information technology should be viewed within a much broader lens. Cable television for example is one type of technology that facilitates communication within a designated area. Similarly, new software such as Geographic Information Systems (GIS) are substantially enhancing what we can use computers to accomplish. In the context of this neighborhood plan, we are defining information technology as any digital application that adds value to how people communicate and conduct their lives.

Information technologies are playing an ever increasingly role in our everyday lives. Buying goods on-line has become second nature to many as has the ability to accomplish a multitude of functions that traditionally required a physical presence (paying a parking ticket for instance). With advances in cell phone and laptop technology and the rapid expansion of wireless access to the Internet, we are no longer tied to our homes but access services and information from public parks, stores and train stations.

Businesses have also capitalized on information technologies, reaching customers worldwide regardless of the size of the operation. Di Bruno Brothers, for example, a Philadelphia business specializing in specialty foods now has an expanded audience, shipping goods across the nation through their on-line store. Even the manufacturing of items such as steel use information technology to manage, distribute and market products. Retailing, pricing, accounting, inventory, distribution and customer service have been automated through information technology bringing new business models for small and large companies alike.

But the access and use of information technology is not universal. Similar to the segregation and discrimination experienced by many lower income inner-city neighborhoods to public services and infrastructure, access to information technologies is severely limited and often non-existent to families in neighborhoods such as APM. These areas are effectively left out of the digital revolution that has critically impacted our daily tasks including working and accessing services and education, advancing in new careers, and communicating with our friends, families and neighbors. As Janine Shinoki-Clifford of Harvard University has recently pointed out:

“In a technology-intensive and not-too-distant future, where entry level jobs that previously required no special skills will require the ability to utilize some type of digital terminal, and where access to basic life needs will increasingly be melded with a digital interface, the definition of literacy will include the proficient use of a computer and the Internet.”
Without the ability to access information technologies residents in these neighborhoods are outside of the emerging economy and ultimately unable to fully participate in society. According to the US Department of Labor, 8 out 10 jobs will require computer skills, and those that work with computers on average earn 43% more than those that don’t.

Although the digital divide is a recognized issue, the National Telecommunications and Information Administration (NTIA) states “The data reveal that the digital divide – the disparities in access to telephones, personal computers (PCs), and the Internet across certain demographic groups – still exists, and in many cases, has widened significantly. The gap for computers and Internet access has generally grown larger by categories of education, income, and race.” Families earning over $75,000 are more than nine times as likely to have a computer at home and more than 20 times as likely to have access to the internet than families earning $5,000. Black and Hispanic households are one-half as likely to own a computer and two-fifths as like to have internet access than a white family.

The commonly termed “digital divide” has only exacerbated the conditions of many inner-city communities through limited access to information and communication networks. Although technology centers have emerged in various communities to help bridge this “digital divide”, often these centers provide only the most basic of services and cannot address the full needs of urban neighborhoods. They are focused on access without attention to the programs and services necessary to make them useful, sustainable and successful.

For technology to lead to economic and social benefits, it must be used by the community. As such, it is important to understand the barriers that most often prevent people from using information technology. The following six barriers were identified by the Siembab Planning Associates2:

- Fear – Some experience anxiety when in proximity to information technology. Many do not know where to begin and given the other stresses they face, are unwilling to confront this fear. Encountering these devices in a friendly neighborhood environment with technical assistance can help many people overcome those fears and use the tools to become more productive.

- Awareness – Others are simply unaware of their own needs and do not understand what information technology can do for their education, employment prospects, home or business. The initiatives in this plan will help expose residents to what is possible with Information Technology.

- Knowledge – Some residents appreciate and understand how information technology can potentially be used to meet their personal objectives. However, innovation in technology moves quickly and staying atop of current trends is extremely difficult without constant exposure. These residents will benefit from a hands-on experience with new applications and devices with instruction from local experts.

- Skill – Many residents do not master the computers they already own thereby underutilizing the potential benefits they offer. This idea was captured by a joke popular in the 1980s where most people had VCRs with 12:00 blinking because they could not set the timer and, therefore,

could not have the machine record automatically. Skills training will help to elevate local skills and gain more from basic technology like computers and the internet.

- Demand – Many people only require occasional use for many technologies making a purchase of an item uneconomic. For example, some residents will only occasionally surf the web. For these people, high speed data service at home would result in extremely high per-hour costs. Similarly, computer projectors and many computer software applications are not something many residents purchase due to the degree of use and high cost. A shared set of services and technologies can help residents gain access to these tools without purchasing them.

- Cost – No matter how much prices decline for computers and related technologies, there will always be those who cannot afford to purchase the new technologies or services (like the internet) that they could productively use. This plan will seek ways to drive down the cost to each individual affording them opportunities to use information technology to meet their goals.

There is increasing evidence that technology initiatives focused upon education, community participation and social expression coupled with physical revitalization efforts can have an immense and sustained impact. Social and community networking both within local community based services and activities, as well as those at larger urban, regional, and national scales of organization are being facilitated increasingly through information technology. Ten years ago it would have been nearly unthinkable for a small grassroots community organization to participate and benefit from national organizations of community groups that are present today. Some non-profit organizations in marginalized communities are not only aware of the need of community networking through Information Technology, but have made it a top priority. The ability to share not only their experiences, but to actively participate through a consulting network of services such as those provided by CTCnet, is a significant asset to grassroots organizations.

This plan seeks to expand these positive developments by furthering ways in which information technology can be used to enhance place-based objectives. As expressed in the TechXchange Coalition’s Regional Strategic Plan for Philadelphia, “technology has begun to gain a strong foothold in the operations and services of non-profits.” At the same time, there are a number of organizations and coalitions dedicated to assisting CDCs to integrate information technology into their revitalization efforts. Without a plan, the full potential of technology cannot be realized nor can it adequately address the specific and unique problems facing APM. For technology to have meaning and purpose, it must be developed from within the community rather than forced upon them. Information technology should not viewed as a homogenizing infrastructure. Much like housing or open space, the most successful and sustainable ventures will reflect the characteristics and values of the community. The comprehensive approach outlined here is necessary and warranted to truly maximize and leverage the potential of APM to become a community of the 21st Century.
2.0 Methodological Approach

2.1 Need for the Study

In August of 2002 a Neighborhood Revitalization Plan for the APM target area was completed. The study included the area between the SEPTA rail corridor, American Street, York and Oxford Streets. Building upon the accomplishments of the APM non-profit Community Development Corporation, (CDC), the plan sought broad participation and buy-in to create an action plan that would frame the activities of APM over the course of the coming years. APM and its partners - the Pennsylvania Horticultural Society’s Philadelphia Green Program, and the Pennsylvania Environmental Council - are moving forward with various elements of the plan from the creation of additional housing, new open space and streetscape improvements.

A critical component of the plan was an emphasis on combining physical redevelopment initiatives with social and economic ones. While the APM target area is physically isolated and characterized by a high degree of vacant land and buildings, it is also socially and economically isolated from services, jobs, education, and access to Information Technology. In order to revitalize the area, a long-term emphasis must focus on the needs of the community. As a means toward accomplishing this goal, the Neighborhood Revitalization Plan called for a Technology Initiative that would comprehensively integrate emerging technologies into every facet of the community as a path towards community empowerment and economic development.

The Neighborhood Revitalization Plan emphasized that a technology plan must accomplish two primary objectives: (1) to ensure universal access to technology in the APM area and; (2) to provide supportive services such that the technology is fully utilized by all members of the community through an understanding of their specific needs. Above all, technology initiatives must become an integral component of the larger revitalization efforts within the community. It cannot be planned for in isolation and must reinforce and expand existing assets and services that make APM unique.

Since the completion of the Neighborhood Revitalization Plan, Mathew Davis, of the Information and Society Research Group at Temple University, has moved forward with various initiatives in collecting information
through discussions, interviews and surveys with residents and community leaders on the needs for the community. Working closely with APM, Mr. Davis has brought together faculty and other experts at Temple University from the School of Communications, Tyler School of Art, and Department of Geography and Urban Studies. He has also initiated a partnership with Delawarevalley.org, a regional Internet provider working exclusively with non-profit community groups, the WHYY Education Connection, and The School District of Philadelphia in Partnership with the Philadelphia Computer Re-use Collaborative.

With this continuing effort of Temple University faculty we believe now is the time to clearly outline the specific objectives and action steps required to implement an innovative and community based technology initiative. This technology plan seeks to coordinate the multiple initiatives underway for the APM area and reinforce the recent and successful physical initiatives taken by the CDC and their partners. It is an action-oriented framework to guide APM and its partners in creatively allocating funds to services that will benefit the community.

2.2 Asociación de Puertorriqueños en Marcha

The Asociación de Puertorriqueños en Marcha (APM) is a non-profit community development corporation operating in a low-income neighborhood in eastern North Philadelphia, to the east of Temple University. APM provides an array of health and social services for its constituents and has been acclaimed for its success as a developer of affordable housing projects and an inner-city shopping center. In 1999, APM acted as the facilitator for development of a Quality of Life Plan with participation from neighborhood residents, local businesses, politicians and community leaders, as part of the Pew Charitable Trusts’ Targeted Neighborhood Initiative. This was followed by the Neighborhood Revitalization Plan completed in 2001. Since the completion of that plan, APM has completed Pradera II – 50 homeownership units - with plans for additional phases of housing. In the fall of 2003, APM also sponsored a plan to revitalize the area surrounding the SEPTA Regional Rail Station which serves the area and Temple University. This plan has gained widespread support and the first phase which includes housing, office, retail and community space is currently in the design phase. These continued efforts to physically revitalize the community are the context within which this plan is created. The planning team reviewed reports and conducted extensive meetings with APM staff to fully understand the full nature of ongoing and future proposals.

2.3 Planning Team

Technology planning is a new field in community revitalization. Technology plans completed to date have often been narrowly focused and isolated from other revitalization initiatives. To expand the traditional scope of technology planning, a multi-disciplinary team of experts was brought together to assist APM in this endeavor. The team members include:

Scott Page - Planner, urban designer and Principal of Interface Studio LLC - an architectural and planning practice based in Philadelphia. He was the project director and author of the Neighborhood Revitalization Plan for the
APM Target Area completed in 2002 and has since worked with APM in creating an urban design plan for the Temple Regional Rail Station and the 9th Street Corridor. He has provided his services to APM on a pro-bono basis through consultation with Mathew Davis at Temple University on the emerging technology opportunities for the community. Scott has worked throughout Philadelphia on community development projects and brings additional experience from large and small-scale revitalization projects across the country. Scott recently completed a county-wide technology strategy in Hudson County, New Jersey for the Office of Strategic Revitalization. He has lectured widely and published three articles on the role of technology in community development in internationally distributed journals.

**Mathew Davis** – Fellow and research scientist with the Information and Technology Research Group (ITSRG) at Temple University, and lecturer in the Department of Geography and Urban Studies. Mr. Davis formerly held the position of Assistant Professor in the Architecture Program at Temple University. Educated as both an Architect and Landscape Architect, he has practiced in both fields in diverse places as Australia, The Fiji Islands, and Europe. He has held the position of lecturer and studio instructor at the University of Pennsylvania and the Swiss Federal Institute of Technology in Zurich, Switzerland. As both academic and practitioner, his recent funded research has focused on Information Technology and the APM area, and has recently been awarded a National Science Foundation Grant to develop GIS skills with North Philadelphia High School students. Professor Davis serves on the International Scientific Advisory Committee for the Wessex Institute of Technology conference and publication series *The Sustainable City*, and editorial committee of the journal *Information, Communication and Society* published with Oxford University.

**Anthony Townsend** - Associate Research Scientist at NYU’s Taub Urban Research Center. As a nationally renowned expert on technology and WiFi development, Anthony has recently completed a Ph.D. in Urban Studies at the Massachusetts Institute of Technology, and holds a Master of Urban Planning Degree from New York University’s Wagner Graduate School of Public Service. He has published widely and organized conferences on the future of wireless technology and is the founder and board member of NYC Wireless – a non-profit organization dedicated to WiFi initiatives. He has served as a consultant to major telecommunications companies and Internet service providers and is executive director of E-menity, a technology development company responsible for the development of a WiFi zone in Bryant Park and Central Station in New York City. Anthony is currently providing assistance to the Korean government in the development of ‘Media City’ outside of Seoul.

**Nina Liou** – Community and economic development planner. Ms. Liou, having worked extensively with housing programs and financial resources, economic development policy and initiatives, and physical planning, provides a core set of services to clients that enable them to make informed and strategic decisions. Her diversity of experience provides her with an overarching perspective that grasps the linkages between residents’ interests, local community and economic initiatives, and larger governmental policies and programs. She has completed economic development plans for counties in Florida and Georgia and for the State of Indiana. Ms. Liou has also worked on city-wide housing strategies and multiple community planning and affordable housing development projects.
Both Scott Page and Mathew Davis have already been involved with APM over the past two years in helping them to develop technology initiatives. Mr. Page has presented findings on the ongoing work within APM at both the Association of American Geographers conference in March of 2004 and at the Inaugural Conference for the Delft School of Design in the Netherlands in June of 2004. Mr. Davis was invited to the World Summit on the Information Society conference in Geneva, Switzerland where the ongoing work in APM was presented. Together, they have written an article due for publishing in 2005.

This team has supplemented their background with additional committed faculty from Temple:

- Michele Masucci, PhD., Department of Geography and Urban Studies, Director of The Information Technology and Society Research Group (ITSRG), and Philadelphia Youth Network (PYN), a community outreach program that works with 7 – 12th grade students in North Philadelphia in after school digital technology education. Dr. Masucci is co-author with Mathew Davis on the National Science Foundation Grant with APM.

- Jan Fernback, PhD., School of Communications and Theater, research explores the meaning of community within traditional social structures, and how idea of community is being transformed through Information and Communication Networks

- Zizi Papacharisi, PhD., research focuses on the residents perceptions to technology and the social consequences of Information Technology among marginalized urban populations

The team began the process through discussions with APM about the goals and possibilities with regard to information technology. The team recognized the need to understand the unique characteristics – both physical and social - of the APM area to guide the recommendations. For this, an analysis was undertaken focusing on physical issues, social characteristics, the availability of technology infrastructure and the current perceptions of information technology from local residents. The team also conducted research into the best practices from around the country relating to community revitalization and information technology. This needs assessment provided the framework around which the recommendations were created.

After the needs assessment was complete, goals and objectives were established with the assistance of APM. From these goals a series of recommendations were created outlining both short and long-term initiatives. The team distributed this draft set of recommendations to potential partners around the region. Their input and level of interest has assisted the planning team in determining the final recommendations and action plan.
3.0 Goals of the Study

The primary goal of the APM Technology Initiative is to use information technology to expand community cohesiveness, empower local residents, support educational programs, market the neighborhood and enhance the existing services provided by APM. In partnership with Temple University and other non-profit organizations, APM will become a national model in ensuring access to technology and creating applications that reinforce the unique characteristics of the neighborhood.

To accomplish this goal, this initiative recognizes that infrastructure and access is only a small part of the challenge. Without supportive services and education, technology will remain underutilized even if it is readily available. These services are what we refer to as “social software.” Therefore, this technology plan also address the necessary services and partnerships required to bring about a comprehensive and innovative community use of technology.

APM operates a computer learning center on Rising Sun Avenue that provides basic computer education services and a Microsoft “Skills for Work” Certificate Program. In addition the Center provides Graduate Equivalency Diploma (GED), English as Second Language (ESL), and Adult Basic Education (ABE), as well as job interview and resume workshops. This plan builds upon this effort as a starting point.

Specifically, we believe that potential services for the APM area must follow four key objectives:

**Education:** Both the Rising Sun Community Learning Center and others across the country have focused upon education as a primary goal. Initiatives in the APM area must fully embrace the best practices of these efforts to overcome the challenges associated with educating people for their futures. APM has expressed a continued need for basic media and information technology literacy, adult literacy programs, and after school programs for youth participants to augment the high school drop-out rate in the area.

**Economic Empowerment:** In terms of workforce development and job skills training, technology must play a key role. Local residents need to learn skills that are marketable locally and be able to use technology to find these opportunities. Technology must be utilized to support existing local businesses and attract new retail and commercial business investment.
Communication and Community: APM is a racially mixed neighborhood. Taking into account the nearby presence of Temple University, it is also an economically mixed neighborhood. Often families and people from different backgrounds fail to communicate even if they live or work in close proximity. Technology initiatives in APM need to foster communication between residents to enable a stronger community spirit and to enhance public participation in community redevelopment projects.

Creativity: Many community technology efforts have provided education but few have sought to tap the potential creativity of local residents. Technology must be used to express the unique characteristics of the community and engage people of all ages. The documentation of oral histories, music production, arts and other efforts are possible and need careful planning to ensure their viability in the neighborhood.
4.0 Needs Assessment

4.1 Community Overview

The APM target area, between York and Oxford, American and 8th Streets, reflects some of the most challenging issues facing the revitalization of Philadelphia’s neighborhoods. As a neighborhood that once provided housing and other services for workers at local industries in the American Street corridor, the area now finds that its role in the local economy has changed. New patterns of employment, a diminished level of services and different social and racial dynamics have altered the physical image of the area.

The area’s extreme amount of vacancy and deterioration has isolated its residents, providing neither the retail services that others in the City enjoy nor adequate park space to serve the area’s children. Although public transportation in the form of buses, local subway service and regional rail service are within a short walking distance of much of the community and concerns of safety deters pedestrian activity due to concerns of safety. This is further reinforced below where survey respondents indicated a low-level of mobility, thus, carrying out their daily functions and needs primarily within the community. As the APM community currently offers minimal services and amenities, the lack of mobility greatly isolates residents presenting a formidable challenge to linking them with supporting programs and education. For these reasons, potential assets within close proximity including Temple University and the American Street Corridor have yet to positively impact the area.

Temple University in particular is a major opportunity. Temple will move the Tyler School of Art into a new facility only a few blocks away from APM. In addition, the housing demand generated by the University has spawned a series of new housing projects on the western edge of the SEPTA rail corridor. In total, there are over 300 units of new student housing completed or underway in this area. But these investments as well as the resources and capacity of University staff and students are separated from APM by vacant land and the SEPTA rail corridor. The Temple Regional Rail Station remains underutilized by neighborhood residents due to perceptions of safety and its seeming disconnect from APM. Unlike the other SEPTA rail stations that serve Temple University, this station has no retail or commercial business, even though it serves
of university campus community of over 25,000. Views from the platform of APM reveal a difficult set of challenges to confront, from deteriorated housing and vacant land, to the social and economic differences, which furthers the harsh separation between APM and Temple.

For technology to have the maximum positive impact on these conditions, it is first necessary to understand what the technology will be used for and subsequently how we will provide access and services.

Social Characteristics and Demographic Profile

As part of our analysis, we reviewed local demographic information to understand the social characteristics of the local population. Since the technology initiative proposed would serve residents well beyond the APM target area, our demographic analysis looked at the geographic area bounded by Lehigh Avenue to the north, Girard Avenue to the south, Broad Street to the west, and Front Street to the east.3

Based upon the 2000 U.S. Census, nearly 36,000 individuals reside in the potential capture area for technology initiatives undertaken by APM. The population as a whole is young with almost one-third of the residents being under the age of 18. These children are evenly distributed amongst the different age groups with slightly more male than female children. However, this trend reverses for older age groups.

The large percentage of children relates to about 5,000 out of the approximately 11,000 households in the capture area or roughly 45% have children under the age of 18. Of these 5,000 households, the predominant family type is that of a single mother with children (63%) with married-couple families accounting for about 28% of households with children under the age of 18.

Only 13% of the population is aged 60 and over, and of this group, 40% live alone. The majority live with other family members, while a very small percentage live with non-family members most likely in an institutional setting.

About half of the population is African-American, and a quarter is identified as some other race4. About 19% identify as being white. Nearly 40% of the population consider themselves being of Hispanic/Latino ethnicity, which is significantly higher than the City of Philadelphia as a whole (8%).

The presence of the Latino community in the capture area is also represented by the language spoken at home. A review of Spanish spoken at home by age group reveals that they are more likely to be found in the younger age groups, and the younger the age group, the more likely they are to speak English very well or well. For example, of the population 5 and older, one-third speaks Spanish at home. Of these Spanish speakers, 75% speak English very well or well, and 25% speak English not well or not at all. On the

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3 Includes Census Tracts 141, 144, 145, 146, 154, 155, 156, 157, 162, 163, 164, 165, and 166. Because of the utilization of Census Tract information for the demographic analysis, the information occasionally includes areas that extend beyond the boundaries identified above, e.g. between 6th and Broad Streets, the southern boundary is Poplar Street instead of Girard.

4 These individuals are most likely of Hispanic or Latino ethnicity and do not identify themselves as being either white or black/African-American.
other hand, for Spanish-speakers 65 and older, over 50% do not speak English well or not at all, compared to 27% for persons aged 18 to 64.

The population in the capture area is highly mobile, with almost 40% of the populace living in a different house in 2000 than they did in 1995. However, the mobility is localized within the City, with 64% of those living in a different house coming from within Philadelphia. The bulk of the remaining population is from either Pennsylvania or another state in the northeast U.S. This high rate of mobility can be attributed to the fact that 58% of the households in the capture area are renters.

Currently, there are over 8,600 children attending public schools (kindergarten through 12th grade), and almost 4,000 adults enrolled in a college or graduate/professional school program. However, educational attainment levels are very low in the capture area. Of the adults 25 years of age and older, only 29% have a high school diploma, and only 6% have a bachelor’s degree or higher. Over 50% do not have a high school diploma, with 21% have less than a 9th grade education. This is in sharp contrast to the City as a whole where 18% have a bachelor’s degree or higher, and only 8% has less than a 9th grade education.

Among the populace 16 and older, the unemployment rate is very high at 21%, nearly double that of the City. This rate could potentially be much higher in the capture area if a greater percentage of the population was in the labor force. In 2000, 56% of the population 16 and older, or nearly 15,000 people, were not in the labor force. People not in the labor force are persons who not working or actively seeking work. Reasons for not seeking work include being in school, retired, discouraged to look for work and family structure as evidenced by the large numbers of single mothers with children.

Of those who are employed, 27% are employed in the educational, health, and social services industry. Other industries include manufacturing, retail trade, and professional, scientific, management, administrative, and waste management services that each employ approximately 10% of the population. From a gender perspective, 39% of all females employed are in the educa-
tional, health, and social services industry. For those who did work, 42% drove to work either alone or in a carpool, while 35% relied upon public transportation.

The high unemployment rate and low participation in the labor force is reflected in the fact that in 1999, the median household income was very low at $16,899, with 36% of the households having incomes totaling less than $10,000. For comparison the City of Philadelphia median household income was $30,746 with 19% of the households having incomes of less than $10,000. As a result, 46% of the population in the capture area was considered to live below the poverty level – double the poverty rate for the City as a whole with 42% of the population in poverty are children under the age of 18.

While 60% of households had income from earnings, the low median household income and high poverty rate are indicative of low-paying service occupations. Other sources of income include social security (30% of all households), supplemental security (20%), and public assistance (25%).

These social characteristics reveal many challenges the extent of which are beyond what APM can reasonably address alone. This initiative therefore, must seek to use technology to enhance and leverage the activities of APM in fulfilling local needs for skills development, youth programs, workforce preparation and education. But before technology can be fully utilized to assist in these goals, it is necessary to address the current barriers to accessing technology in the APM community.
4.2 Current Access to Information Technology

Infrastructure

High-speed Internet access through both DSL and cable is available in the APM area. The major fiber optic trunkline for North Philadelphia runs down Broad Street is distributed locally from this source. New Temple dormitories at the renovated Kardon Building, and recently completed University Village, both adjacent to the rail viaduct along 11th Street have high-speed Internet and demonstrate a potential as a high-band tie-in to proposed APM developments at the Temple Rail Station. In addition, as Temple works towards a campus-wide wireless access, there is the potential to partner with Temple and bridge this infrastructure to APM’s initiatives along the rail corridor. A closer dialogue with the University will be essential to the future progress of APM’s technology initiatives in this area.

Current Access to Information Technology within APM

There are few public resources in the APM target area that provide access to Information Technology, computer training and educational programs to local residents. Ferguson Elementary School and Wanamaker Middle School have Internet access and offer exposure to Information Technology for students, but are unable to offer a significant contribution to the community as a whole.

Based on a sample of resident surveys and interviews, an analysis of local demographics, educational achievements and high school completion rates, as well as an analysis of national trends in relation to these figures, it is estimated that no less than 70% of the APM area population has little or no access to Information Technology resources. It is estimated that technology literacy rates are at similar levels, particularly in the over 25 adult age demographic. This statistic remains generalized and demands a more thorough study to determine actual computer usage and Internet access in relation to household demographics, income, employment statistics and ethnic background. Although public schools offer exposure to technology, significant drop-out rates, language barriers, and economic hardship suggest that schools have a limited ability to successfully engage a youth population, which represents the most critical demographic group for the future of the community in addressing digital divide and Information Technology literacy. Although numerous success stories abound within the community regarding youths that complete high-school, attend college and advance beyond the difficulties of their community, there is a large area of “at-risk” population whose chances for future advancement could be significantly increased through additional community education programs, after school workshops and mentoring.

Rising Sun Community Technology Center

The APM Community Learning Center on Rising Sun Avenue provides basic computer education services and a Microsoft “Skills for Work” Certificate Program as well as educational programs in Graduate Equivalency Diploma (GED), English as Second Language (ESL), and Adult Basic Education (ABE), as well as job interview and resume workshops. Unfortunately the Rising Sun facility is a considerable distance from the APM area, and draws participants predominantly from neighborhoods outside of APM, and therefore offers little service for residents in the APM area.
Two instructors are responsible for the operation of the Rising Sun Center. Although preliminary surveys indicate a high level of satisfaction of the participants, a number of issues have been identified that necessitate the need for additional study. Considering the number and diversity of courses offered, the staff of two instructors is less than optimal. With regards to successful operation, instruction is only part of the operation of such a center. There exists no marketing or recruitment strategy, and many of the participants arrive to the Center through word-of-mouth, or through the posting of flyers in local public places. In a somewhat desperate strategy, instructors at one point went “door-to-door” to recruit participants.

Assessment of the tech center has been problematic as few records have been maintained regarding enrollment, demographics of participants served, and outreach area. It is critical to the future of the center to regularly collect and maintain this information in order to measure outcomes, monitor enrollment and gain insight to the successful operation of the center. Although a detailed curriculum and well thought-out, structured program for each subject area was available for review, we strongly recommend the center develop a recurrent accounting process, which in addition to collecting demographics of the participants, documents the centers program completion of participants, achievements, and tracks progress following their involvement with the center. Considering the small staff of the center, we acknowledge this can only be achieved through additional resources. However, it must be understood that detailed record keeping is not only a necessity for the management and internal workings of the center, but a critical measure that must be maintained and presented to funding agencies that require this information as part of the application process.

It is clear that the overwhelming majority of local residents do not have access to basic technologies. There is limited demand therefore to attract additional network providers and reduce the cost of services such as the Internet. Access must be enhanced but only in concert with programs and services that meet local needs. To understand these needs, researchers at Temple University have been engaged in surveying local residents to determine their media literacy.

4.3 Computer and Media Literacy within the Community

In order to document the meaning of “community” and the role of Information Technology in revitalization efforts to urban neighborhood residents, members of the APM community were interviewed directly, with other information collected through written surveys. The objective of the survey was to examine and assess the efficacy and potential of the APM Technology Center. Both English and Spanish language versions of this survey were distributed to students in class offered by the APM Technology Center.5

The survey combined both open-ended and closed-ended items, previously used in psychological, social and communication research. Closed-ended items were designed to assess motives for using technology and the center

5 Information is based on 23 completed surveys. This is only a preliminary number, however, as researchers are continuing to survey residents. Updated information from these expanded results will be presented to APM for review as implementation on various initiatives documented in this report proceeds. Age ranged from 23 to 46. Average income was $20,000 or less. Average level of education was higher high school. Average workload was between 20-40 hours a week. Most respondents were single. Average number of dependents was 2. Most respondents had access to computers and technology only from the APM center. Most had not used/were familiar with the technology for longer than a year. Only 5 were enrolled in TANF.
facilities, individual level of satisfaction with one’s accomplishments in life, economic security, mobility, physical health, amount of social interaction within the community, and one’s sense of locus of control (the sense that a person determines his/her course in life rather than being subject to the decisions of others). Open-ended items invited to respondents to elaborate on whether APM had contributed to the individual’s professional advancement, overall satisfaction with courses attended, recommendations for additional courses, level of access to the technology center, and suggestions on the setup of the center. Finally, several items measured demographic and technology use variables.

Motives

Participants in the survey were asked to indicate their degree of agreement with a set of statements reflecting reasons people provide for using the Internet and computer technologies. These statements highlighted the convenience appeal of the technology, and professional advancement, information sharing, entertainment, social interaction, and pass-time opportunities. The majority of respondents prioritized the value of computers and the Internet in assisting them to advance in their career and attain a professional status that matched their career objectives. Respondents also highly valued the information sharing and publishing potential of the Internet. Therefore, for the APM Technology Center population, professional advancement and information sharing were the main reasons for using Internet-related technologies. Respondents indicated that they used technology to get a job, obtain professional skills (Microsoft Office and software skills), to publish a resume online, and to share or look up information.

On a secondary level, participants were also drawn to entertainment, pass-time, habitual, and social interaction uses of the technology. However, it was clear that, for the majority of the sample, informational and professional uses were a priority. This is in contrast to the latest surveys of the conventional Internet user, who uses the Internet as an entertainment, social and informational medium. These respondents viewed the technology in a more instrumental and less habitual manner.

Contextual age

This psychological measure consists of a set of items that assess a person’s life cycle position. Rather than using chronological age, which provides limited infor-

Unedited excerpts from adults interviewed in the APM target area regarding the development of Information Technology in their neighborhood are included below.

46-year-old Latino male: mental health counselor

[Community is] a collectivity. People living together, having the same interests sort of, sharing the same culture, sharing similar values and basically people working together as a group to create a spirit of harmony and coexistence.

I think computers is the next step in our evolution and yes, I’m for it 100% 110% doesn’t cut it, 110%, 150% and I would be a supporter of this concept if it gets here. Of course, we can bring our children there and not only use the center for like training in computers but also if a section is empty I can use it for other purposes too.

Technology is just a resource and so it must be combined with other resources in order to be effective so certain other dimensions like, for instance, a conference room to convene in community and to talk, that would be a resource, counseling services, that would complement technology. Technology would be like a lure to me and so it’s a beautiful concept because we can use computers in that center to lure the community into coming in and while it’s there we can give them parent trainings and we can give them tutorials on different things like school.

45-year-old African American female: postal worker

[The ICT center] could have like children’s day where it’s just children, not with adults, [or] beginners’ classes. It would be good to know actually know how to use the online, that’s basically what I need to know, how to get into the Internet, how to use the Internet. [The center could] advertise help with homework assignments.
movement, this scale allows the assessment of personal growth by examining life satisfaction, social interaction, interpersonal communication, economic security, mobility and physical health. It is frequently the case that people make different uses of technology based on how they evaluate their own progress as individuals and how they feel technology can contribute to this progress. Within this sample, respondents reflected a high level of satisfaction with their life choices and a high degree of optimism with their individual progress so far. Most individuals also enjoyed a moderate to high level of social interaction and interpersonal communication typically within their own community, indicating that there was little need to make use of the technology for social interaction purposes (as supported by the motives findings above). Most respondents considered themselves to be moderately or completely physically fit.

Tellingly, the majority of respondents indicated a moderate to low level of mobility, revealing the tendency to live and function within the community. In addition, most respondents reported a high level of economic security, documenting that several of them had major financial worries, and did not have enough money to buy things they wanted or needed. This corresponds with the tendency to use the technology for the motive of professional advancement, so as to improve one’s personal circumstances. These findings lend a meaningful complement to digital divide studies, and add elements that have not been studied thus far. The low number of surveys returned prohibits statistical analysis or the presentation of statistically significant data. With additional surveys, correlations and regression analyses could be computed that would possibly support this largely descriptive account.

**Locus of control**

This psychological measure, used frequently in psychological, social and communication research examining media and technology use, assesses whether an individual is externally or internally controlled. An externally controlled individual believes that other, external forces determine his/her future. An internally controlled individual, on the other hand, indicates that a person feels in control of professional and personal growth with the majority of individuals typically occupy varying positions within this continuum. For this sample, respondents were mostly internally controlled, and indicated that they were capable of controlling and determining their own course and future in life. However, several of these respondents, while not entirely

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**26-year-old Latino male: school case worker**

I believe in community, I believe we should look out for each other.

I don’t think that they [neighborhood residents] fully realize [benefits of ICT] but having the center would help them fully realize what technology can do for them. [ICT] can open opportunities; especially being that I work in case management, I find more information on the Internet than in my community, you know, and it’s a shame that I can’t just go outside and be like oh, here’s some resources for my area. There’s so much online that I get but not in my area. And getting kids interested in the Internet can open up doors to them.

**46-year-old African American female: supply technician**

The community would benefit from a center where small kids and bigger kids can come together to learn. As far as for educational use, and for employment, even for traveling. Stuff like that. Recreational stuff. I would use [an ICT center] to like come in and if they have like college courses, I would come in there and use that to help me advance, you know, further my education a little. They got online, I guess, college classes where you can get a law degree. Even just [using community technology] to see other countries, you know, to learn more about them.
externally controlled, found that their lives could still be heavily influenced by others (supervisors, family members) and circumstances that they might not be able to control. This could be a result of the pronounced economic insecurity experienced by this sample, although the small number of responses received does not permit generalization. It is possible, however, that the lack of financial stability breeds a sense of unpredictability and concern about what the future holds, which translates into the inability to control that future.

Open ended questions

This set of questions invited comments from respondents on the following:

Has using APM improved your life and/or career and how?

Most respondents provided an enthusiastic “yes,” with elaboration that classes at APM have made them both more cognizant and confident of their career goals and the future of their life. One respondent stated “Yes it has by showing me I could be somebody important,” while another one added “they have [been] giving me the chance to do something with my life.” Several other respondents praised GED and computer classes as being very helpful with professional advancement and personal growth.

Are you satisfied with courses you have taken here? Why/why not?

All respondents indicated a high level of satisfaction and a great respect for and attachment with their teachers, Ruth and Jessica. Several of the responses revealed that participants viewed the center and its staff as more than a facility offering classes and technology, but rather, as place of professional personal guidance, consultation and improvement.

What other courses would be interested in taking?

Respondents were satisfied with the types of courses offered overall. Several indicated that they would like more computer class, without specifying in precisely what type of computer skill. It is estimated, from other information in the survey, that they would like additional time and classes to perfect and polish the skills obtained.
Are you satisfied with the level of access you have to the center (for example, would like to be able to use the center more often, or would you like to use the technology for something other than taking classes)?

All respondents were satisfied with the Center and thankful it existed, Most respondents indicated, however, that they would welcome the opportunity to use the center more often, so as to work on computer skills and professional opportunities.

Are you satisfied with the setup of the center? Do you have any suggestions for improvement?

All respondents were highly satisfied. They recommend more hours, greater access, redecoration and expansion (so as to accommodate more and to create spaces for study and for social interaction), and provision of career and professional consulting services.

With the provision of additional responses, this study has the potential of contributing to and extending digital divide findings, which in addition to the use of technology, examines the motivation for technology use and psychological/social background for an economically challenged community. The preliminary findings indicate that financial instability determines technology use and a person’s expectation of how meaningful that technology can be.

Overall findings indicate that residents regard Information Technology as a key element in neighborhood revitalization. Community members also demonstrate an eagerness to not only use Information Technology to aid in revitalization efforts, but to participate in the design and governance of community media/technology centers. The planning and design of any technology initiative is vitally dependent on initial community involvement, such that it must be first established as a shared public space, brought into the routines of the community as they begin to establish a sense of its purpose. Establishing the use of technology as public space must take precedence over its becoming a space solely for technology.
4.4 Opportunities and Challenges

From this analysis, we have identified a number of key opportunities and challenges.

Opportunities

- APM is one of the City’s most successful community development corporations operating numerous social services and physically re-building the neighborhood. Based on past accomplishments and current capacity of the organization, APM is in position to undertake additional initiatives with the assistance of knowledgeable partners in information technology.

- Temple University is only a few blocks from APM. Its existing infrastructure, recent investment near the Temple Regional Rail Station and the quality and diverse expertise of researchers provides an enormous value to APM in their revitalization efforts. Researchers from numerous academic departments are currently engaged in the APM area focusing on local community building issues and information technology. Temple researchers partnering with APM have received a prestigious grant from the National Science Foundation to develop bi-lingual educational programs in GIS, which is positioned to become a national model for at-risk youth education. Their interest and available resources can greatly assist APM to move forward with a number of information technology initiatives.

- The Temple Regional Rail Station is one of the most active stations in the regional rail system. Although the station is a strong divider between Temple and APM and surrounded by vacant and underutilized land, the recent investment in housing near the station and its proximity to APM makes the station area a strategic opportunity for both APM, Temple and the City of Philadelphia. Focused investment in physical development and Information Technology can reinforce the station and provide a location for Temple researchers and other partners to provide services to residents of APM.

- Broadband Internet service is available throughout the neighborhood via cable and DSL service. Fiber-optic infrastructure is available nearby on the Temple campus. Given this proximity, expanding fiber-optic cables for specific functions within APM will not be cost prohibitive.

- APM is experienced with operating a community technology center through the facility it operates on Rising Sun Avenue. Through this center, APM has assisted many residents in improving their technology literacy and understand some of the challenges in providing skills training and other services through Information Technology.

- Residents indicate a desire for more technology initiatives within the community to enrich their lives. Working with them in planning future initiatives can have an enormously beneficial impact in meeting overall revitalization goals.
Challenges

- A "digital divide" exists that has impacted the ability of many local residents to get on-line. With median incomes far below the City median, many households cannot afford computers or an internet connection.

- The "digital divide" is increasing the marginalization of lower-income communities. More services are moving on-line and more employers require computer literacy for even basic tasks while many residents in and near the APM area continue to be disconnected from on-line activities.

- The social characteristics indicate extreme levels of poverty, low educational attainment, unemployment and a large proportion of children under the age of 18. Addressing these issues and needs will require a long-term commitment and tailored services offered through information technology as well as traditional sources such as APM’s current programs.

- DSL and cable modem Internet access are still in the early stages of development and do not adequately support multi-media and two-way communication services beyond email. Fiber-optic technology to the home is not available but with the growth in on-line content, will be necessary to most homes and businesses with 5-10 years.

- Existing Internet services are out of the price range for most residents in the community. Similarly, computers and software are out of reach of most families. Providing these services to resident’s homes will require subsidy and a sound long-term business approach by APM.

- There are no technology centers within the APM area for residents to gain access to computers or training in software. The Rising Sun center is located several miles north of the neighborhood.

- Vacant land and negative perceptions of the APM area inhibits private investment. APM’s current identity is limited due to these factors and must be addressed as revitalization initiatives move forward.

- There is limited information publicly available regarding the APM area nor on services offered by APM and/or the City. To know what is available, residents must physically enter APM offices.

- There is no City policy encouraging the use of information technology for community revitalization. Resources, planning assistance and partnerships are not available except from a handful of local and regional organizations dedicated to this issue.
5.0 Recommendations and Action Plan

Technology can play multiple roles within community revitalization efforts. As expressed previously, technology must be an integrated component to other revitalization initiatives such as the development of new housing or open space.

The recommendations closely track the main issues identified in the analysis and seek to address a broad cross-section of opportunities relating to information technology. The recommendations have been organized into a series of objectives and key action steps. Beyond simply providing access to technology, we emphasize the need to create the culture that will utilize the technology – what is referred to as Social Software. Education, economic empowerment, community and collaboration, and creativity are the driving principles that guide the following objectives.

It is important to recognize that there is not a magic bullet or one solution to adequately address the myriad of issues and opportunities present in APM. Persistent, coordinated effort in a number of areas will be needed simultaneously. Flexibility to respond to changing conditions over the life of the technology initiative will be essential as will as the continued outreach to nurture community consensus and support.

5.1 Develop a comprehensive curriculum for information technology education, workforce and arts programs

APM currently offers education, language, health services, day care and workforce programs within the neighborhood. In addition, they offer technology courses through their Rising Sun Technology Center located north of the community. To fully align the needs of the community with the opportunities presented by access and education in information technology a comprehensive curriculum for services needs to be developed. The curriculum must account for multiple methods of accessing services as the role of information technology expands in the area. This includes online forums, programs offered through technology centers and traditional face-to-face classes and counseling offered in APM’s headquarters. This is not an effort to completely redefine the services that APM currently offers, rather an initiative to ensure that these
services are maximizing the use of information technology. Through a comprehensive curriculum related to integrating technology into social services, workforce preparation and other services, APM will be able to enhance the provision and reach of existing services, adapt programs to meet the changing needs of local residents and better track the effectiveness of outreach efforts.

**Recommendation 5.1.1 - Undertake a detailed survey of local community perceptions and needs to develop local education and technology programs**

As a first step in the provision of access, it will be necessary to conduct detailed surveys, interviews with community leaders and focus groups. Researchers at Temple University have already begun this process focused upon the perceptions and effectiveness of the Rising Sun Technology Center as documented in the needs assessment. While this process needs to continue to improve the outreach and effectiveness of that facility, a local survey must be undertaken to assess the types of programs and services required locally. Specifically, a local survey would include the following:

- Assess current media and computer illiteracies
- Determine the needs of the community regarding basic education, adult education, youth programs, and job training skills
- Introduce residents the basic concepts and goals of the Technology Plan
- Invite community participation, and identify block representatives for participation in a Community Technology Counsel.

**Key Action Steps**

1. Review and update the existing survey utilized for the Rising Sun Technology Center. Ensure that the survey is community specific.
2. Provide training to designated APM staff to assist residents in filling out the survey.
3. Work with APM staff to effectively distribute the survey in the community.
4. Analyze the data and produce results of community media literacy, individual needs, expectations, and wishes regarding technology in their community.
5. Translate needs into a general curriculum, i.e., introduction to computers and the Internet, specific job training skills, etc.

**Recommendation 5.1.2 - Expand the Curriculum at the Rising Sun Facility**

The Rising Sun Technology Center has a curriculum in place that is a natural starting point for expanding the range of technology services in the short term. The facility has offered services to residents for over 4 years and has built a level of trust with its users. Grants have already been secured for specific new programs and Temple faculty continues to work with the staff at the Rising Sun facility. Expanding programs offered at the facility will further increase its exposure and the number of potential customers. As new facilities are created (Recommendation 5.3), their curriculum should reinforce and
build from that in place at the Rising Sun Technology Center. Further, all of the facilities must be networked providing a seamless level of services across geographic boundaries.

The APM Community Learning Center on Rising Sun Avenue currently provides basic computer education services and a Microsoft “Skills for Work” Certificate Program as well as educational of programs in Graduate Equivalency Diploma (GED), English as Second Language (ESL), and Adult Basic Education (ABE), as well as job interview and resume workshops. We should discuss potential new services.

Key Action Steps

1. Revue present curriculum of Rising Sun Center
2. Create database of participants including program completion rates, job placement, further education
3. Develop benchmark criteria and achievement standards for all courses
4. Enhance job counseling and placement service
5. Develop more aggressive marketing and recruitment strategy
6. Develop online learning module as supplement to in-class program (see section 5.2.2)
7. Add one additional instructor and/ or one additional support personnel dedicated to recruitment, marketing, and record keeping,
8. Provide additional instructional support and mentoring through Temple student interns
9. Develop program in graphic and web design, digital multimedia (video/ audio production)
10. Undertake physical upgrades and facility expansion (see section 5.4.1)
11. Develop fund raising strategy to meet the above goals

Recommendation 5.1.3 - Implement the National Science Foundation ITEST Grant

“Building Information Technology Skills among Inner City Youth in North Philadelphia through Development of a Community Geographic Information System”

Temple University Faculty in partnership with APM has recently been awarded a prestigious 3 – year, $900,000 grant from the National Science Foundation. ITEST (Information Technology Experiences for Students and Teachers) Grant. The purpose of the grant is to create a community Geographic Information System, initiated through a 9 –12 grade after school and summer program. The program will work with working with 90 students per year from the APM area and neighboring communities in attendance at Edison High School. Although this grant was originally produced independent from the Technology Plan, it has become in many respects a model for future educational programs. The ITEST grant has formulized a partnership with Temple University, Brown University Educational Alliance, DelawareValley.org and DCA.net. The services and related funding required for the operation of the
grant has provided APM with an additional level of Information Technology support that will directly impact the educational services, through internet service, student – teacher listserves, email accounts, database management, and website support. In addition, the recognition of the program by the National Science Foundation places the curriculum among the most highly recognized youth science programs in the Nation, with the potential to become a national model of integrated Information Technology and science education.

**ITEST Project Summary**

This proposal seeks to develop information technology literacy as a catalyst for urban regeneration in distressed inner-city neighborhoods in North Philadelphia. We plan to implement a Youth-based project that provides 90 at-risk high school students per year with 120 hours of instruction in Information Technology, spatial analysis, cartographic and design skills through their creative involvement in developing a Community Geographic Information System (GIS). Instruction will be provided in a community-based after school program at the Asociacion Puertorriqueños en Marcha (APM) Rising Sun Avenue Community Technology Center. Program participants will also have the opportunity to participate in a two-week long summer intensive program based at Temple University’s main campus.

The objectives of this program are to enhance student technology literacy and provide integrated Information Technology and math-science training that involves developing database creation and management skills, spatial analysis skills, environmental assessment skills for urban contexts, and web design skills. In addition the cartographic component and landscape analysis will offer a creative component in working with computer graphics and multimedia. The goal of the summer intensive program is to build on skills gained in the after school program by training and coordinating students to gather community information, develop a GIS, analyze information, produce community planning initiatives that reflect an understanding of local environmental quality and display maps on the student-designed and managed web site.

This program aims to develop job skills for the growing market of Information Technology and GIS for business, community and environmental planning efforts. And, it seeks to empower participants and members of the community in community organizing and greater involvement with city and state governmental agencies.

**Key Action Steps**

1. Preliminary recruitment of students from Edison High School from the Summer Development Institute (SDI)
2. Review of ITEST curriculum in accordance with SDI outcomes (August - September 2004)
3. Develop ITEST website and instructional material (August – September 2004)
4. Recruitment of Temple student mentors (September 2004)
5. Distribution of student enrollment packets to Edison students (September 2004)
6. Set up Rising Sun facility, coordinate with ongoing programs (August – September 2004)

7. Begin program, modules 1 & 2 (mid-October 2004)

8. February 2005 - modules 3 & 4

9. Summer 2005 – Temple intensive program (module 5)

5.2 Create a Channel for Distributing and Producing Community Information

Managing information is an increasingly important task for organizations of all types. Web-sites, signage programs and marketing efforts are now all commonplace tools for neighborhoods and cities to promote and educate both residents and visitors to specific amenities, services and events. Information Technology plays a critical role in this process but is often over-looked as a key component in helping people gain access to local and regional information of interest. This objective has two key recommendations:

- Internal Access to Information: coordination, organization and dissemination of information to APM staff, including community databases, demographics, and neighborhood statistics

- Dissemination of information and services to APM residents and to a larger audience via an interactive web-site

Recommendation 5.2.1 - Create and maintain a GIS database for community planning efforts

The cornerstone of the internal information management system for APM is the development of a Community Geographic Information System (GIS) Database. APM is large organization with over 200 employees, separated into a number of facilities and agencies whose operation and efficiency will be greatly enhanced through the development of an integrated GIS information management system. GIS is used extensively in a wide-range of community applications including community planning, economic analysis, public safety and health and human services. We strongly recommend that APM invest in this endeavor, but are aware of the complexities and related costs of the reorganization of existing information systems for APM as a whole. Our recommendations focus on the development of a Community GIS in the division of Housing and Community Development (HCD), aimed specifically towards enhancing the agency’s physical revitalization efforts. APM - HCD has for several years desired to develop this capability, partnering with GIS initiatives of the Philadelphia Association of Community Development Corporations (PACDC) to survey, document and monitor vacant land and future development projects. Given adequate resources, APM is poised to move quickly and effectively in the development of a Community GIS.

APM has recently made significant steps to make GIS a integral part of their operation, acquiring funds for the purchase of an high-end workstation, a mobile tablet computer, and GIS software to facilitate the in-house development of a community GIS. Faculty from Temple University, under the supervi-
sion of Mathew Davis, Adjunct Professor, and Michele Masucci, Associate Professor of Geography and Urban Studies, have launched a graduate student internship program that will provide APM with student interns over the course of the summer and through the next year. It is also envisioned to engage youth in this project through the Philadelphia Youth Network (PYN), directed by Professor Masucci. In addition, Jay Cohen of Delawarevalley.org and DCA.net, APM’s Internet service provider, will provide training and support for an integrated web-based data management system to be implemented as APM’s GIS capabilities become operational. APM has recently created a staff position of community organizer, which we recommend should play an integral part in the recruitment of resident participation in the GIS process and together with the Temple internship program, assist with the coordination of resident survey information.

A review of APM’s needs has identified the following recommended uses of GIS:

**Housing and Community Development**

- Monitor property parcel exchanges
- Management and maintenance scheduling of held property
- Manage existing rental and home ownership properties
- Management of open space and vacant parcels, greening and streetscape improvements
- Identify existing healthy housing stock for preservation as well blighted and vacant parcels for rehabilitation and/or demolition
- Target areas for new affordable housing

**Economic Revitalization**

- Identify service area of retail and commercial facilities, identify underserved areas in need of these amenities
- Analyze local and area demographics to determine potential market for commercial and retail development
- Identify new optimal locations and service type for new retail and commercial uses

**Social Networks**

- Build a shared understanding of current conditions among neighborhood residents and community development partners
- Identify specific target areas of community concern related to public safety, health and environmental hazards
- Catalyze and expand community support systems and facilitate new community partnerships
- Increase public participation in community matters through a public information network facilitated through a community website
Current Status of APM Community GIS

A significant amount of base information has been collected by Temple faculty and students and is currently being assembled into a Community GIS.

- Streets and street centerlines
- Parcel outlines with area calculations
- Building footprints with area calculations
- Public transportation (rail, bus routes, bus stops)
- Fire hydrants
- Zoning classification
- Census data by blockgroup
- Mapping of Past, Present and Future Community Development Projects

Key Action Steps

1. In partnership with Temple University, expand community database with field survey for the following data sets:
   - Detailed building condition assessment
   - Vacancy / occupancy
   - Parcel Ownership
   - Census data by block and individual parcel
   - Inventory of APM held property
   - Photographic inventory of buildings and parcels

2. Establish consultant or part-time staff position to oversee implementation of a GIS / information management

3. Provide training to APM staff

4. Create full-time GIS staff position - establish funding source to support position.

5. Coordinate with other CDC’s, CTC’s, and City agencies, such as the Mayor’s Office for Information Systems (MOIS) to access and update local databases

6. Maintain the community youth education program in GIS (see 6.1.3) through continued external funding source after NSF award period (after 2007)

7. Develop mapping of CTCs in North Philadelphia to demonstrate areas by Information Technology

Recommendation 5.2.2 - Develop and interactive web site for the APM community

It is difficult to find a professional organization that has not placed considerable effort in developing and maintaining a web presence. Similarly, as a common protocol in our current information and technology dependent society, web presence for non-profit organizations should no longer be considered a luxury, but a vital aspect of their effective operation. Acknowledging APM’s
expressed need for a website we have identified the following initiatives and recommendations:

**Representation**

The website should first act as a vehicle of representation for APM, describing the mission of the organization, community outreach programs, and display of accomplishments. This advertisement should be directed to those would will benefit from APM’s services, potential funding agencies that often inquire into an organization's track-record of achievements and organizational capacities, as well as other agencies that could potentially consult and contract with APM. It is also envisioned that the APM community website operates as a vehicle to communicate with other non-profit organizations with similar agendas and needs to learn and benefit from each other’s experience.

**Community Information Network**

A Community Information Network would serve a multitude of functions within the community, that in addition to providing information to the organization’s various services, it should become a venue for public discussion forums and posting of community events. Similarly, the website is envisioned as a vehicle to promote cultural heritage, civic pride, and a venue for creative community expression particularly among neighborhood youth. The development of community based media projects have the potential to induce social and civic cohesiveness and project a positive self-image back to the community, as well as to a broader audience. As APM’s Information Technology initiatives in community education move forward, we recommend that the website is utilized in both classroom settings as well as on-line and distance learning courses. The online learning module recommended for the Rising Sun Technology Center would utilize the web-site as the primary vehicle for distributing information and classes and facilitate communication between technology centers, schools and community centers.

**Supporting Local Business**

Many community websites provide additional services to their community as a means of advertising for local businesses that otherwise may be hard-pressed to develop this capacity on their own. As a support mechanism for local businesses, we recommend that APM place energy and resources in the development of this capacity, and that such a service to be provided at a nominal fee that would in return support the maintenance and management of the community website.

APM currently has a web site, assembled through the assistance of Temple University Faculty and Student interns, through a Temple University sponsored grant, which will expire in September of 2004, and further funding is needed for the maintenance and updating of the site. At present the web site serves to describe the organization and represent both past accomplishments and future developments. However, APM seeks to expand the services
offered through this web site as a vehicle to promote local businesses, be a portal for online learning and support to their educational programs, become an portal for a Public Participation Geographic Information Systems and community database. It is also envisioned that as educational programs expand into more advanced graphic communication and arts programs, that the site also support student web projects, as well as the beginning of an narrative history project for the community. Just a few of these efforts demand the presence of a full-time webmaster, with part-time assistance needed from Information Technology and database consultants.

Key Action Steps

1. Establish position of webmaster through consultancy or dedicated staff position.
2. Create community bulletin board to display and advertise cultural events, job listings, educational opportunities
3. Provide web presence for local businesses
4. Develop e-commerce potential for local businesses
5. Develop online surveys that feed into APM community database and Community GIS
6. Develop online learning module to support Rising Sun Center, and develop future applications and opportunities for advanced distance learning curriculum to enhance capabilities for future technology education programs and facilities.
7. Open youth GIS project to greater community participation
8. Develop online Community History Project through photographic collections and oral histories.

5.3 Provide Universal Access to Information Technology

The majority of the residents in the APM area do not have the means to access a computer or the Internet either from their place of residence or from a local public access point from within the community. The ability, therefore, to learn job skills and utilize the multitude of resources available through Information Technology is non-existent.

Information technology cannot have a direct impact if those that it is meant to serve do not have adequate access. It is estimated that the overwhelming majority of APM residents have no access to technology and therefore limited opportunity to learn necessary skills. Universal access must be ensured over the long-term to provide the framework for the programs and services recommended in this initiative. For instance, private access to the Internet is traditionally accomplished in one of two ways, via cable service from the local cable company or through DSL service from the phone company. Both of these services, however, are not universally available and often prohibitively expensive for lower income families. Universal access must encompass all aspects of Information Technology including computers and basic hardware,
software applications, internet services through traditional dial-up connections to high-speed broadband service and skills training to ensure effective use of these tools. Access in this sense also encompasses tools often not affordable for individual consumption including film and music production technologies that can be shared across a community as well as more commonplace items such as digital cameras and laptop computers.

It is important to note, however, that universal access can take many forms. The cost in providing computers and access to the internet, for instance, needs to be aligned with the projected amount of use. In other words, all access is not created equal. To make the best use of limited funds, we recommend taking a tiered approach to providing access whereby the expected level of use is matched with the appropriate infrastructure and level of service. This ranges from simple applications within homes such as computers and email service to comprehensive broadband services, multiple software applications and various tools within shared facilities.

Recommendation 5.3.1 - Provide computers in all new homes as a basic infrastructure

As APM continues to physically revitalize the community with new affordable homes, technology should be integrated into this investment to increase awareness and interest in local services and programs. Computers are rapidly becoming a basic infrastructure and there are opportunities for APM to begin matching these tools with residents who are investing in the area by purchasing new homes. The Pennsylvania Housing Finance Agency (PHFA) allows through its Low-Income Tax Credit programs to include the cost of a new computer within the overall construction budget. APM should utilize this program for their upcoming tax-credit projects proposed in the community. It should be noted, however, that providing computers will mean little without training and affordable access to on-line content. Each family that receives a computer through this initiative should receive skills training within local technology centers.

While this strategy works well for new construction, retrofitting existing homes with computers is also a goal. To accomplish this goal, APM must work closely with the Philadelphia Computer Re-use Collaborative who has set-up and operated a successful program to not only provide refurbished computers to families but also to provide a network of qualified individuals and organizations to assist in maintaining them for the families. Through the School District of Philadelphia and in partnership with the Parent Assistance Desk initiative, the Educational Technology Group (ETG) for the School District conducts 10 hour workshops for parents/guardians to learn about using computers. Parents who attend all 10 hours of instruction are eligible to receive a refurbished PC at no charge. Through grants and partnerships with AmeriCorp, the results of the program illustrate an increase in test scores for children that participated in the program. For APM to promote educational opportunities for the high number of children living in the community, a close collaboration should be formed with Re-use Collaborative. A neighborhood survey and other initiatives described in this document will lay the groundwork for setting up an applicant list for refurbished computers.

**Key Action Steps**

1. Develop a short curriculum for basic skills training for the computer and internet
2. Coordinate with PHFA on the limitations and guidelines of the Tax-Credit program
3. Perform design and cost feasibility with architectural consultants
4. Develop a maintenance and service structure with local Information Technology consultants for ‘trouble-shooting’ and system management
5. Work with the Philadelphia Computer Re-use Collaborative to develop a plan for extending the program within the APM community

**Recommendation 5.3.2 - Develop wireless access for the entire neighborhood**

The wireless network is an alternative to fiber-optic technology for providing high-speed internet access that can be prohibitively expensive depending upon the objectives for its ultimate use within the community. Although fiber technology will be necessary for specific uses such as the media station described below, Wi-Fi can be used to enhance access throughout the community over time.

While licensed wireless data network services such as Verizon Express are available throughout the project area, these services are costly and slow. Therefore we recommend the use of Wi-Fi, an unlicensed wireless technology that requires no monthly subscriptions. Wireless services will therefore be free for specific locations within the community that brings with it a number of advantages. As a free service, there are limited costs in maintaining user accounts or individual services. The danger of making wireless a paid local network is the cost in customer services as well as customer expectations that are often associated with any paid service like cable television. As a free network covering specific and strategic locations within the community, wireless technology will provide basic access as an alternative to paid services such as DSL. While this is often a concern for business usage due to security, numerous networks have been set-up around the country for individual use and seen success in terms of both the number of users and the enhanced value to the physical places Wi-Fi is available.

While the 802.11b flavor of Wi-Fi is widely used today, 802.11g is quickly become the dominant standard. 802.11g offers higher speeds for slightly higher cost and will provide a longer working life for the network. We recommend using multi-frequency Wi-Fi services that includes 802.11b, 802.11g and 802.11a.

We recommend that only enterprise-grade wireless equipment from respected manufacturers such as Cisco Systems or Symbol Technologies. While much less costly consumer-grade gear is available, it requires far more support and maintenance and cannot handle large number of users or hostile environments such as public outdoor locations.

The Temple University train station platform should be the first location for the deployment of wireless Internet access in the neighborhood because of its high density of potential users. Transit facilities throughout the US and the
world are increasingly providing wireless access as an amenity to the traveling public, and North Philadelphia commuters could greatly benefit from the ability to check email and browse the web while waiting or disembarking from trains.

There are two possible strategies for deploying wireless service at the train station.

The first option will require cooperation from the owner of the station (SEPTA). This option requires approximately $3,000 in equipment costs and $600 in annual recurring telecommunications charges (for DSL service). It will require permission to co-locate five pieces of equipment in the station:

- Wireless equipment enclosure - This enclosure should be mounted on the station platform, preferably high up on one of the vertical roof support columns, or the roof beams.
- Wireless antenna - The antenna will protrude from the top of the wireless equipment enclosure and is approximately 6 inches in length.
- Network interface enclosure - This is an identical enclosure to the wireless equipment enclosure (both are approximately 2 cubic feet in volume), and must be located at the termination point of the phone line.
- Phone line - A standard Verizon telephone line must be present for provision of DSL connection to the Internet.
- Conduit - A secured, shielded CAT-5 cable run of no more than 250 feet must be provided between the network interface enclosure and the wireless equipment enclosure.
- Electrical power must be provided to both enclosures.

The second option for providing wireless service to the station involves placing a directional antenna array atop a nearby building with a clear line of sight to the station platform. This option is not preferred because of the additional engineering design and equipment cost required to produce the same signal coverage.

As neighborhood residents become more familiar with the concept and practice of wireless Internet access, the setup described above can be replicated at additional sites throughout the neighborhood as needed.

Recommended locations include:

- Temple Regional Rail Station
- The Cousin’s Supermarket, parking lot and development site at 5th and Berks Street.
- The new school proposed at 8th and Berks Streets including the proposed park across Berks
- New housing development associated with APM’s homeownership initiative.

Costs and logistics will be nearly identical with Phase I for each additional site.

Antenna location considerations will vary for each site, but one attractive
option is the use of utility poles or streetlamps for mounting wireless equipment. Clearly, this will require permission from the city or utility company but offers a ready-made mounting infrastructure for expansion of the wireless system with easy access to the required power and telecommunications networks. Alternatively, rooftops and eaves can be used, but this will require individual negotiations with each property owner.

This network can be expanded by deploying additional hotspots near existing locations that utilize wireless repeaters to expand the network to provide coverage throughout the neighborhood and inside residential and commercial buildings.

Wireless repeaters greatly simplify the expansion of existing wireless infrastructure by simply relaying wireless data from one transmitted to another. Thus, no additional DSL lines are needed to extend wireless Internet access to a larger area (see diagram below). This greatly reduces costs by eliminating additional recurring communications charges for each new hotspot.

City of Philadelphia Wireless Initiatives

During the final drafting of this report, the City of Philadelphia has press-released an initiative to provide the City of Philadelphia with internet access through a wireless mesh network. According to city’s chief information officer, Dianah Neff this service will be provided for free or at a significantly reduced cost to current market-rate broad band. At a proposed cost of $10 million, the initiative will offer high-speed internet access to all of Philadelphia’s neighborhoods.

“If you’re out on your front porch with a laptop, you could dial in, register at no charge, and be able to access a high speed connection,” Neff said. “It’s a technology whose time is here.”  

While the specifics of this plan have yet to be released, the APM Technology Plan initiative is poised to become a pilot project for the initiative’s delivery.

Installation and Maintenance Costs

Public wireless networks require significant skilled resources for installation, maintenance and technical support. The general rule of thumb for computer networking projects is that equipment should account for roughly 15% of total project costs. Based on this estimate, we recommend budgeting of approximately $10,000 – 15,000 in the first year per hotspot for installation, maintenance and technical support. After the first year, these figures can be reduced by as much as 75 percent to $2500-4000.

Potential Sponsors

Equipment vendors are the most likely source of support for a wireless neighborhood project beyond the traditional local partners and foundation sources. In recent years, vendors such as Cisco, Symbol, and Intel have all donated

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large amounts of equipment to ambitious public wireless deployments in cities such as New York, Seattle, Cleveland, and elsewhere.

Key Action Steps

1. Determine initial distribution point and secure permission for equipment enclosure
2. Ensure that ADSL service is available for the Wi-Fi equipment enclosure (APM has DSL service but initial meetings with Verizon is necessary to determine the potential issues with linking into the local phone lines)
3. Conduct fundraising activities to raise capital for installation and maintenance of the Wi-Fi hotspot(s)
4. Determine basic parameters of the network (opening web-page and security measures for instance)
5. Partner with an internet service provider like DCA.net to arrange and manage the system

Recommendation 5.3.3 - Provide access to information technology in public spaces

While ensuring access to on-line information from home and community centers is important, we recommend augmenting specific existing and proposed public spaces in the neighborhood with Kiosks and display screens that carry a variety of functions. Off the shelf technology is available and cost effective to bring specific services to plazas, retail storefronts, and schools. This will have a number of specific benefits including access to specific services to anyone within the neighborhood; reinforcing key public spaces with additional uses provided by information technology and; marketing of both the neighborhood and the revitalization efforts.

A simple example of this recommendation is an ATM machine. Traditionally, they are used solely to access bank functions but new kiosks are available that greatly expand the potential functions that can provide in public spaces. The following are some of the kiosk/ATM options that have been announced in the last few years.6

- ATMs that allow consumers to transfer money to someone else. Western Union Financial Services Corp. announced a plan to offer money transfer via a network of ATMs owned by American Express in April, 2001.
- Many of the installed base of ATMs are used to sell postage stamps and prepaid phone cards. In the future, ATM customers will also be able to get news headlines, stock quotes and conduct limited e-commerce transactions such as buying concert tickets or applying for a credit card. Wells Fargo Bank announced in May, 2000 plans to hook up thousands of its ATMs to the Internet, becoming the first U.S. bank to attempt to transform its ATMs from simple cash dispensers into full-fledged financial kiosks.
- Easy Wireless launched in 2000 an e-tailing kiosk that serves as a virtual warehouse, learning center, and interactive media center providing continual advertising opportunities. It provides consumers a choice of 3,000 wireless accessories using a touch screen monitor.

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6 Examples courtesy of the Siembab Planning Associates
• Bank of America began, in 2000, to install talking automated teller machines to serve blind customers in its largest markets.

• In 2000, HUD developed “Next Door” kiosks which display information about buying homes with the help of FHA insurance, locating affordable rental housing, finding homeless shelters, learning about HUD programs in the community, getting job training, and economic development assistance.

• Visionics announced in 1999 a new generation of ATMs that use biometric technology to verify the identity of the consumer. One planned application is for cashing checks by individuals who do not have a regular bank account.

As evident from this list, technology is becoming smaller and more mobile. We have the opportunity to bring an extensive amount of services and information to any space we wish. New York City has included custom designed ATMs within subway stations that provide specific, local services. Within APM, it is recommended that ATMs and digital kiosks address the following specific functions:

• Access to the APM web-site as discussed in Recommendation 5.2

• Provide information on local events and news

• Access specific City services such as permitting, education and information on local programs

• An interactive map of the area that describes the location of stores, services, parks and other amenities

• A digital bulletin board that enables people to post comments

Security for ATMs in public spaces is an issue in any location. While closed-circuit television (CCTV) is one means of providing security, implementing and managing a CCTV network can be costly. We recommend, therefore, targeting public spaces that already generate public activity or can be secured in evening hours. Within the APM community this includes the Ferguson School, the new Catholic School proposed at 8th and Berks Streets, outside and / or within the Cousin’s Supermarket, and outside the new APM headquarters at 5th and Norris Streets. The rail station is also an excellent opportunity as a Temple security guard is present at the Berks Street entrance. ATM’s can be integrated into new housing developments provided a strong homeownership association is created that can provide community policing / townwatch efforts to oversee their security.

Key Action Steps

1. Develop content for the ATMs including community information and related services associated with the web-site (Objectives 5.1 and 5.2)

2. Research costs for materials, fabrication and programming

3. Conduct interviews with firms specializing in the development of specific ATM services

4. Coordinate with local partners for potential funds for planning, design and fabrication costs
5. Seek specific grants to assist with the implementation and maintenance of the ATMs

**Recommendation 5.3.4 - Consider becoming an Internet Service Provider (ISP)**

As APM continues to engage local residents in technology initiatives, a local demand for internet service will be generated greatly above what currently exists. Traditionally, these families would purchase internet service from Verizon (the Local Incumbent Exchange Carrier or ILEC for short) or a competing service like cable modem through Comcast. We believe that the potential development around the Temple Regional Rail Station including the Media Station (described below) raises an additional opportunity for APM to become an Internet provider themselves. With the influx of new uses and users, APM would open up another revenue stream that would enable them to subsidize service to specific community assets such as the Media Station. Specifically, becoming an ISP brings the following advantages:

- Ability to offer a low-cost or income scaled service and access to the internet
- Offer competitive and below market rate Information Technology service to attract retail and commercial interest to the community
- Ability to support local businesses and develop e-commerce among local businesses
- Ability to collect revenue from retail and commercial
- Ability to establish and maintain autonomy from corporate commercial providers

Just as APM has facilitated a greater level of local services and housing opportunities, becoming an ISP will enable a community based level of control over an important infrastructure. This would allow APM to directly assist local community members to access services, becoming a direct link between service and customer and having more control as to how the infrastructure is utilized.

As plans for the station area move forward, becoming an ISP will help off-set two costs associated with providing broadband, voice and data services. First, there is the internal infrastructure of fiber-optic lines and local Ethernet that would serve the tenants within the building. For a project the size of the current proposal on the block between Norris, Berks, 9th Streets and the rail corridor, the implementation costs of providing fiber-optic lines is estimated to run between $200,000 and $300,000 (estimates are based on other local projects of similar size). As this is an upfront investment commitment, this estimate would normally be folded into the overall construction budget. By becoming an ISP, there is flexibility in how this investment is recovered. Costs can either be passed along to tenants or, alternatively, collected through user fee revenue from the provision of voice (telephone through

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9 A note on infrastructure – basic technology such as T1 and T3 lines are anticipated for even robust technology programs as proposed within the Media Station. Fiber-optic lines from the street will not be required for the Media Station or tenants unless a data center is interested in the office space. Most data centers, however, will pay to bring in their own fiber-optic lines.
internet service – Voice over Internet Protocol or VOIP for short) and internet services. Depending upon the final program of the project, a likely strategy will include both methods.

Investing and taking control of infrastructure can also bring benefits in terms of attracting tenants. By providing high-quality infrastructure, the building can be marketed to small businesses that require a high level of connectivity. Each tenant will have a choice between Verizon services and those offered by APM enabling economies of scale and savings for each end user. This will increase the value of the office space to serve a wide range of needs including technology based companies.

The second costs to consider are those related to maintenance and the provision of services. Normally, each user will pay for their level of service. While this will not be an issue for student housing or office space, any affordable housing units and the Media Station will require subsidy to pay monthly voice and internet services. Without an income stream to help off-set these costs, they become an operating line item that drains uses like the Media Station of funds that could better be utilized for staff and other programs. As an ISP, APM will be able to use revenue from other tenants to off-set these costs, providing a more equitable distribution of resources.

While APM does not have the capacity to undertake this level of management, there are local resources that can operate the ISP on behalf of the organization. DCA.net has extensive experience in providing and managing these networks and would make the ideal partner for this venture. APM would receive a percentage of the profit each month to off-set specific costs and DCA.net would be the primary entity responsible for all aspects of the ISP.

Becoming an ISP is something that needs to be considered now even though the ultimate realization of such a venture would likely happen as larger projects are under construction.

Key Action Steps

1. Organize a series of meetings with DCA.net to discuss possible arrangements and a business approach for the ISP.

2. Coordinate with Verizon to determine where outside infrastructure will be provided to the new development(s) (this is often called the demarcation point where the internal infrastructure of the buildings links with the external network managed by Verizon)

3. Generate expected types and level of services for the Media Station based upon recommended programs and services. DCA.net and other experts can assist in developing a checklist for necessary bandwidth of service.

4. Analyze cost-effectiveness in relation to traditional commercial ISP – this will be based upon the final program and expected tenants within the first large development near the station.
5.4 Enhance and Create Facilities Dedicated to Information Technology

As noted throughout this document, the most effective way of integrating technology into the daily lives of residents is to introduce and educate them within a communal and neighborhood setting. Community Technology Centers (CTCs) have emerged throughout the country to serve this very purpose. However, as indicated in our research into CTC best practices, many have suffered from being isolated from other revitalization initiatives, a limited curriculum or poor design. Despite the challenges posed by the implementation of these centers, the potential benefits are enormous in social, economic and physical terms.

Recommendation 5.4.1 - Expand the Rising Sun Technology Center

The Rising Sun Community Learning Center is housed in a complex of structures covering some 15,000 sf, of which about one-third is currently being used. After four years in operation, the center is in the process of reorganization. It is in need of an upgrade in technology as well as physical expansion to meet the growing demand for the services it provides. The site has enormous potential to offer additional services beyond the educational services and health counseling it currently offers. These additional services are currently under consideration in a collaborative effort with Temple Faculty as described in Recommendation 5.1.2.

Key Action Steps
1. Review hardware and software requirements in relation to curriculum
2. Upgrade or replace existing computer workstations
3. Upgrade existing software on all computers
4. Establish wireless network in facility
5. Add additional computer lab and additional large classroom in existing storage area
6. Purchase instructional support technology and multimedia projection equipment

Recommendation 5.4.2 - Create a temporary location for classes and computer access within the APM neighborhood

As stated in the discussion section of this report, at present there is no public access computer facility within the APM target area. Beyond providing this much needed service to the community an interim facility serves to develop a presence of Information Technology within the community that will serve to familiarize residents with the concept and goals of the larger plan and future developments. This facility would also allow the APM to test programs, develop curriculum, and would provide APM with additional support to enhance their internal Information Technology capacity. It would act as a pilot project for the community, the results of which would provide insight for future technology planning and implementation through direct interaction with residents. This center would also serve as a secondary or support facility for some of the needs of the ITEST education program.
Key Action Steps

1. Propose use of an existing building as part of 7th Street Tax credit developments
2. Develop program usage for facility - educational programs, and walk-in use
3. Coordinate with the Rising Sun Technology Center on curriculum, service delivery and staffing needs
4. Acquire new staff to operate center, including instructional student interns from Temple University

Recommendation 5.4.3 - Develop a “Media Station” as the hub of local information technology initiatives and community revitalization efforts

For APM to fully realize the potentials of Information Technology as a means of community revitalization, it is of fundamental importance that APM move forward quickly to develop one or more public access technology centers within their target area. Although several proposals have been discussed in recent years regarding the program and location of a new technology center, the SEPTA Regional Rail - Temple Station represents without question, the optimum location for this facility.

It is at the Temple Rail location that the idea of a “traditional” community technology center is transformed into a model of regional and national significance. The objectives of this facility are of multiple purpose and significance to both APM and the Temple University Community. The primary objectives of this faculty are:

- Capitalize on the station as a gateway both to Temple, APM and the City
- Create an public interface between Temple University and APM
- Create a shared-use facility for neighborhood residents as well Temple University students and faculty that combines training, education and production
- Create a community entertainment facility and ‘theater park’ to showcase projects created in the center, as well as invited performances from other communities and artists

As other programs and uses including housing, retail and commercial uses have been proposed, we envision this center or Media Station as a both physical and programmatic anchor of the development of the station area. The Media Station will augment what is proposed as a dense, mixed-use transit-oriented development, bringing services, education, the arts and a community public space at the doorstep of the rail station. Besides transforming a vacant and

Illustrative plan for station area
underutilized stretch of land adjacent to a critical transportation asset into an active and supporting use, this location will benefit the Media Station itself by enabling residents from across the City to easily access the center via the rail station. The Media Station is proposed as a 20,000 s.f. facility and function as a multi-use Information Technology Education Center, a media arts venue for community based projects, and a leaseable production facility for other non-profits and arts organizations.

It is envisioned that four levels of services will be offered at the Media Station.

## Basic to Intermediate levels of Information Technology Education Programs
- Introductory programs in computer skills and software applications
- Computers for seniors
- After school programs for neighborhood youth
- “Work-skills” certificate programs to train and broker clerical skills
- Resume services, job counseling, and placement services
- Training aimed at local business in information management and e-commerce

## Advanced Media Arts
- High-level production training in digital video, film, and music
- Intensive creative media arts programs and workshops in film, media, and music
- Web design and computer graphics training
- Leaseable Production Space and Media Arts Production Technology Services
- Production facilities and office space can be leased to other community based organizations and non-profit arts organizations, as well as commercial media-arts organizations
• Support a non-profit “media co-op” to provide low- or no-cost Information Technology advice, counseling, as well as discounted hardware and software to community residents, local business, and Temple students

• Community-run co-op (farmers market)

**Public and Community Gathering Space**

• Location for community meetings and events

• Space for entertainment and after school programs including web-cast lectures, movies, concerts and virtual field trips to key institutions like the Atlanta Zoo and the Museum of Modern Art

• Invites nationally and internationally recognized artists to work with local artists in installations

The Media Station will require staff, a steering committee, and adequate space for programs.

**Staffing needs of Media Station**

• Director of CTC

• Assistant Director – facilities / business manager

• Administrative secretary

• Two administrative support staff

• Information Technology systems administrator

• Assistant Information Technology administrator (between the two positions advanced web design, software programming ability, knowledge of networks and hardware installation and repair is required)

• Two part-time Information Technology staff or students interns

• Director of Curriculum development (may also be instructor)

• Four full-time instructors

• Two instructors responsible for introductory courses in computer applications to intermediate business certificate programs, and distance learning

• Two instructors in advanced multimedia applications to include web design, graphic design, digital video, and digital audio applications

• Two part-time student instructional support interns
Steering Committee / Advisory Board - Membership in this committee should include:

- Director or Assistant Director of CTC
- Director of curriculum development for CTC
- APM Community Organizer
- Faculty member from Temple University
- Director or Assistant Director of Housing and Community Development
- Member of APM Board of Directors
- External Information Technology consultant (i.e. DCA.net, Delawarevalley.org)
- Local business leader
- Two community representatives / neighborhood block captains
- One or more representatives of principle funding organization(s)

Spatial requirements

- Two basic to intermediate level classrooms with 20 workstations
- One advanced level computer classroom with 20 workstations
- One high-end media production lab with 10 workstations
- Audio production lab with sound stage
- Two classrooms each with 25 desks
- High-end production computer lab with 5 high-end workstations
- Small conference room 10 - 15 person capacity
- Large conference / seminar room 20- 25 person capacity
- One medium “black box” multi-purpose performance/installation/studio space for 50 people.
- One large “black box” multi-purpose performance space/installation/auditorium for 100 people
- Informal community media room equipped with 15 workstations
- Four offices for administrative personnel
Office for instructors

Cafeteria / restaurant adjacent to community media room

Storage room(s) for mobile AV -multimedia equipment

Server room

Public gallery/installation space –associated with foyer / entrance, adjacencies to plaza and community media space

Public plaza to bring visibility for the project and outdoor space for events

For the Media Station to be a sustained success it must have stable and innovative leadership that is composed of local and regional partners. A key recommendation in this regard is to set up a non-profit (501c3) organization to operate, maintain and market the Media Station’s services and activities. While APM will need to play a key role in filing initial paperwork and bringing together partners for a Board of Directors, their role once the non-profit is created should be in an advisory capacity through participation in the board. The primary objective of the non-profit will be to enable the Media Station to be financially self-sufficient with income generated from services, potential provision of internet services as a local Internet Service Provider (ISP) and grants from long-term partners. A comprehensive business plan will need to be created to direct these activities and market the proposal to partners.

In terms of the physical realization of the facility, there are two components. The raw space will be provided as a part of the overall development on the block bounded by 9th Street, Berks Street, Norris Street and the SEPTA rail corridor. Currently, the overall development proposal for this parcel of land is over 200,000 sq. ft. of space including housing, office space, retail and two levels of decked parking. The raw space will then need to be fit-out to meet the specific requirements and needs of the overall program. Grants can be obtained to pay for both the design and implementation of the interior fit-out including equipment.

Key Action Steps

1. Form steering committee

2. Initiate spatial programming and schematic design with consultants (architectural, engineering, Information Technology, etc.)

3. Involve the community from the outset of the planning process through surveys, interviews, focus groups, block meetings

4. Plan educational curriculum

5. Form partnerships with local media / creative arts organizations

6. Hire a consultant to produce the business plan

7. Develop schematic designs for the Media Station’s interior space and outdoor plaza

8. Form marketing team, initialize fundraising plan

9. Define specific staffing needs and job descriptions

10. Create an autonomous non-profit to operate, maintain and market the Media Station
5.5 Integrate public art into the provision of Information Technology

Outdoor movie theaters and public art are often used to help residents experience a close attachment to the community. They are also used as marketing for the neighborhood, elevating their image and role within the city. Public art traditionally focuses on sculpture or murals, both of which can have a positive impact. In other cities, however, integrated technology and public art initiatives have been used to greatly increase the value and interest in specific places. “Media artists” across the globe have aggressively imprinted their work within public spaces over the past decade. A well known contemporary example of the genre is the work of Rafeal Lorenzo-Hemmer whose “Vectorial Elevations” enabled people to adjust the direction of large searchlights mounted over a square in Mexico City over the Internet. The project has won extensive praise for enlivening and marketing the square as well as creating a unique means for people to participate with the installation.

APM has a long history of supporting public art most notably through the number of new murals throughout the community. We believe that given the importance technology will play in the future of the APM community, the role of public art should be expanded to include information technology, bringing information and digital services to public spaces in a unique expression of local values.

Recommendation 5.5.1 - Create a demonstration project that visibly elevates the presence of information technology in key public spaces

Despite a strong presence in other cities, there have been few experiments that fuse public art and technology in Philadelphia. Building from this initiative, we recommend pursuing opportunities for using public art as a means of enhancing the ways in which information is distributed in public space. The opportunities should be considered ‘demonstration projects’ that are highly visible and represent the face of APM’s innovative revitalization activities.

We recommend focusing an initial demonstration project on the two main public spaces currently within the APM community – the Temple Regional Rail Station platform and the Cousin’s Supermarket. These two spaces represent the most active and consistently vibrant areas of the community. As noted previously, the rail station has the fourth largest ridership in SEPTA’s regional rail system utilized almost exclusively by those commuting to and from Temple University. The supermarket has become a center for the community itself, providing necessary services for primarily local residents. Informal surveys also reveal that the supermarket
is increasingly being frequented by those from outside the community, namely a growing clientele from the Temple campus. We believe that Information Technology can be used to provide a stronger linkage between these spaces and the people that use them.

We recommend creating a digital and interactive interface at each location linked to one another through Information Technology. We envision these installations as public display screens designed to enable users in each location to see one another through real-time video and communicate through written posts (instant messaging). Additional functions could include programming to enable users to download information about the neighborhood and surrounding areas, access to information on local programs and services and, a digital bulletin board that posts events and other community announcements. The overall intent of this demonstration project is twofold:

- To use these interfaces to communicate local information in a more visible way than a simple ATM or Kiosk can accomplish and,
- To begin to bring together different groups of people that despite the fact they are separated by only four blocks, rarely interact or understand one another.

The role of public art will be to make the interfaces more visible and attractive, thus, encouraging people to use them. The artist (or artists) should be chosen through an open competition that solicits initial designs and approaches in response to a short competition brief distributed over the internet. A jury comprised of local designers, artists, APM representatives and local residents should evaluate submissions and choose a winner in an open process. This selection process has the benefit of ensuring APM with a varied and creative set of responses as well as elevating the visibility of the community and APM initiatives to a much larger audience both within, and outside of, Philadelphia. In a similar vein, such an event could evolve into an seasonal or yearly exhibition or “festival” exhibiting the work of both local and nationally recognized artists.
There are a few major challenges that need to be overcome to realize this idea.

- **Security** – These visible interfaces need to be secured. The rail platform already has security but the Supermarket will require a unique approach to solving this issue. One option is to place the interface within the supermarket itself. Another option includes using the glass of the supermarket itself as the screen. New technology developed at MIT enables standard glass to be projected upon and operated like a touch screen pad. This would enable people outside the supermarket to view the information and interact with the interface.

- **Cost** – Using off the shelf technology as much as possible will greatly reduce costs in implementation. However, to satisfy the multiple functions these interfaces should play, some design and programming will need to be done specific to this situation. The level of grant funding should determine an overall budget for the project. As a piece of public art, APM will have access to additional funding streams for the effort.

- **Permission** – APM will require permission from both SEPTA and the Cousin’s Supermarket for the interfaces. The amount of space permitted for use needs to be determined early to give artists parameters for the scale they can work within.

- **An Unknown Quantity** – Unlike a sculpture or mural, this demonstration project is more difficult to completely imagine in its final form. The end functions, size and appearance will be determined through a collaborative planning process. Although some may discredit the approach simply because it is not a common amenity, APM and its partners must present a compelling vision for the effort at each stage of planning and implementation.

This initiative must build upon other recommendations made in this plan. The ability to develop and enhance local education programs or create a strong on-line presence through the web-site for instance, will have an impact on the amount of services provided through these interfaces. The chosen artist will need to work with a partner that can undertake the technical aspects of the proposal from the installation of the point to point linkage between the two interfaces as well as programming specific functions such as real-time video and instant messaging. It should be noted that the suggested functions for the interfaces described above can and should be challenged by local residents and the artists themselves to ensure that the final result will be creative, innovative and useful to APM, APM residents, and as well Temple University students and faculty.

**Key Action Steps**

1. Initiate discussions with SEPTA and Cousin’s Supermarket regarding potential permission for utilizing space for public art.

2. Set aside funds to pay for a designer to oversee all aspects of the competition organization, fund raising and background material. The amount of money required for this task is estimated to be small but invaluable to ensure the process moves along smoothly.
3. Review specific experiments in utilizing technology for community-based public art installations.

4. Undertake a fundraising campaign for the design competition as well as implementation funds.

5. Create a promotion package with a multimedia graphic presentation developed by the artist to assist in further implementation fundraising efforts.

6. Develop an initial competition brief for distribution. The brief should describe the overall intent of the project, constraints, and role of the winning artist in the implementation of the project.

**Recommendation 5.5.2 - Utilize the roof of the Kardon Building to create a digital gateway to APM and Temple University**

The area around the Temple Regional Rail Station already acts as one gateway to Temple University. The visual attractiveness of this gateway is currently diminished, however, by the visible presence of vacant land and buildings around the station. APM and its partners have made a commitment to redeveloping the area around the station thus maximizing this excellent transportation resource. In so doing, the area should be recognized as not only a gateway to Temple University, but also one for APM and the City of Philadelphia. The area should seek ways of promoting local revitalization efforts including this technology initiative.

The Kardon Building – a former ten-story warehouse on Berks Street – is an attractive and highly visible structure from the station. Recently converted to student lofts, the building has already spurred a flurry of additional housing projects on the west-side of the rail corridor as student demand for housing remains strong. The large structure formerly used for billboards on top of the Kardon Building is an opportunity to extend its presence and create a unique gateway for the area. We recommend exploring the possibility of utilizing this structure for a flat screen / projection video that illustrates images of Temple University and APM and provides local news and other important information. It would represent a forward-thinking community and create a memorable gateway to the community. Coupled with proposals by APM to landscape the vacant viaduct and develop new mixed-use buildings around the station, this area would become one of the most unique gateways to the City.
Key Action Steps

1. Discuss with the owners of the Kardon Building possibilities for roof access and utilization for the video screen. (note: Temple owns the property, Philadelphia Properties has the lease)

2. Research flat screen technology and discuss the challenges in implementation from other cities that have successfully utilized large video formats for public spaces.

3. Create a promotion package with a multimedia presentation to help others understand the approach and benefits.

4. Identify potential funding sources

5.6 Plan for Success

All of the above recommendations are only possible with a sustained commitment and continued planning to augment these proposals as new opportunities arise. The greatest challenge in implementing technology initiatives is not financial nor technical but cultural. Technology initiatives most often fail due to a lack of momentum from key participants. They are often not an integral part of a comprehensive revitalization program and therefore are generally viewed as ancillary to other issues such as housing or park space. The APM Technology Initiative is an innovative step in community technology planning and must be sustained through a consortium of active organizations, partners and residents that can weather any changes in leadership or new challenges that may arise.

Recommendation 5.6.1 - Create an APM Technology Resident Counsel

All of the recommendations described in this document are for the benefit of local and regional residents. The ultimate utility of the Media Station will require their input and collaboration to ensure that the design, program and operation meet the needs and the objectives of the overall community revitalization effort. For this purpose, we recommend creating a Technology Resident Council that will participate in all aspects of planning and implementation. The Council should have an elected president that will be the primary contact and channel for distributing information about the initiatives to the community.

Key Action Steps

1. Circulate Executive Summary and create a “flyer” for announcement. Post on the APM website and circulate through block captains, local business, churches, etc.

2. From community surveys (see section 5.1.3), identify community members with computer experience, and those interested in serving on council

3. Appoint interim organization committee chair from APM staff or consultant, conduct first meeting and arrange a monthly meeting schedule

4. Create three to five member board through nomination and voting process, with an additional 10 - 12 member council of block representatives, if necessary form sub-committees
5. Compose charter and bylaws of counsel
6. Distribute to community

**Recommendation 5.6.2 - Develop local, regional and national partnerships**

Many local needs, specifically related to information technology, cannot be met by one organization. Technology enables partnerships and the provision of services across neighborhood boundaries potentially bringing a far greater range of services to APM. For this reason, the curriculum, as well as other services, must be developed with the assistance and resources of local partners willing to extend and share services.

Market rate consulting services are often out of reach to CDCs with limited technology budgets. Numerous non-profit technology groups offer no or low-cost technical assistance and help in networking. Through these networks, Community Technology Centers (CTCs) in the process of capacity building can learn from others past experiences and successful programs. Technology has become a medium not only for learning and communication, but a forum of creative potential, with many arts and cultural organizations developing a new presence through the medium of the Internet and web based applications.

By bringing together knowledgeable partners in all aspects of technology planning and implementation APM has the potential to become a clearing-house of information on community technology initiatives reinforcing local efforts with similar agendas such as the WHYY Technology Forum and the United Way’s Teaming for Technology initiative. A serious effort must be made to leverage the success and resources from other technology centers across the City into one help network that fosters a collaborative spirit in bringing technology services into the forefront of community revitalization. A list of existing and potential partners is located on the following page.

**Key Action Steps**

1. Distribute APM Technology Plan to potential partner organizations and institutions
2. Develop press release and/or media event, invite representatives from above mentioned organizations
3. Complete GIS inventory and assessment of CTCs in North Philadelphia, analyze areas of underserved populations
4. Identify and recruit partners in cultural and creative areas for collaborative projects, engagement in educational programs, and participation in future development efforts
5. Developed better organization and centralization of shared community information, resources, and Information Technology assistance.
6. Network with North Philadelphia CTCs to coordinate services, educational and cultural programs
7. Propose an information “clearing house” for Philadelphia CTCs, i.e. “North Philadelphia Technology Initiative”
<table>
<thead>
<tr>
<th>Name of Organization</th>
<th>Services / activities</th>
<th>Partnership Role*</th>
<th>Contact/ Address</th>
<th>Web</th>
</tr>
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<tbody>
<tr>
<td><strong>Non-Profit Information Technology Consulting Organizations</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>delawarevalley.org*</td>
<td>internet service, website development, database assistance</td>
<td>ISP for APM, webserver, email, ITEST support</td>
<td>Jay Cohen 215-875-3303 <a href="mailto:jbcohen@phila.k12.pa.us">jbcohen@phila.k12.pa.us</a></td>
<td><a href="http://www.delawarevalley.org">www.delawarevalley.org</a> <a href="http://www.refurb.phila.k12.pa.us">www.refurb.phila.k12.pa.us</a></td>
</tr>
<tr>
<td>CTC.net, CTC-philly.net</td>
<td>IT network infrastructure consulting, conferences</td>
<td>conferences, information clearinghouse</td>
<td>Lorelei Narvaja 215.665.2427 <a href="mailto:lorelein@uwsepa.org">lorelein@uwsepa.org</a></td>
<td><a href="http://www.ctcnet-philly.org">www.ctcnet-philly.org</a></td>
</tr>
<tr>
<td>United Way / Team4Technology/</td>
<td>IT support to nonprofits in the Phila region, best practices, survey</td>
<td>training, assessment, CTC support, funding, survey info.</td>
<td>Lorelei Narvaja 215.665.2427 <a href="mailto:lorelein@uwsepa.org">lorelein@uwsepa.org</a></td>
<td><a href="http://www.uwsepa.org/team4tech">www.uwsepa.org/team4tech</a></td>
</tr>
<tr>
<td>NPowerPA</td>
<td>IT network infrastructure consulting</td>
<td>IT network infrastructure consulting</td>
<td>Lisa Shulock Exec. Director <a href="mailto:lisa@npower.org">lisa@npower.org</a> 1211 Chestnut Street, Philadelphia, PA 19107</td>
<td><a href="http://www.npowerpa.org">www.npowerpa.org</a></td>
</tr>
<tr>
<td>pacdc.org*</td>
<td>GIS database assistance, IT support</td>
<td>GIS database assistance, IT support</td>
<td>Rick Sauer <a href="mailto:rsauer@pacdc.org">rsauer@pacdc.org</a> 1314 Chestnut St. Suite 700 Phila., PA</td>
<td><a href="http://www.pacdc.org">www.pacdc.org</a></td>
</tr>
<tr>
<td>Nonprofit Technology Resources</td>
<td>Computer and network consulting, refurb computers, training</td>
<td>consulting, training, used computer hardware, and tech. support</td>
<td>Stan Pokras 1524 Brandwyine Street Philadelphia PA 19130 <a href="mailto:pokras@NTRonline.org">pokras@NTRonline.org</a> 215-557-1559</td>
<td><a href="http://www.ntronline.org/">www.ntronline.org/</a></td>
</tr>
<tr>
<td><a href="http://www.phillyneighborhoods.org">www.phillyneighborhoods.org</a></td>
<td>Neighborhood information Clearinghouse</td>
<td>Community Website links, city policies,</td>
<td><a href="http://www.phillyneighborhoods.org">www.phillyneighborhoods.org</a></td>
<td><a href="http://www.phillyneighborhoods.org">www.phillyneighborhoods.org</a></td>
</tr>
<tr>
<td>Philadelphia Cares / Partners In Technology</td>
<td>Refurbish Hardware, Network, Training, Strategic Planning</td>
<td>consulting, training, used computer hardware, and tech. support</td>
<td>Christian Jackson 2155644544 <a href="mailto:matthias@philacares.com">matthias@philacares.com</a> 100 South Broad St. 19110</td>
<td><a href="http://www.philacares.com/volunteer/monthly">www.philacares.com/volunteer/monthly</a> pit.htm</td>
</tr>
<tr>
<td>Greater Philadelphia Urban Affairs Coalition</td>
<td>Business, econ devel, education, health</td>
<td>Business, econ, education, health</td>
<td>Sharon Matlack Turner President (215) 851-1702 <a href="mailto:smtturner@gpuac.org">smtturner@gpuac.org</a></td>
<td><a href="http://www.gpuac.org">www.gpuac.org</a></td>
</tr>
<tr>
<td><strong>IT and Network Consultants</strong></td>
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<tr>
<td>dca.net*</td>
<td>networking consulting, internet service, webhosting</td>
<td>WIFI feasibility and IT infrastructure</td>
<td>Keith Duncan <a href="mailto:keith@dca.net">keith@dca.net</a> 1204 West Street 302-295-4715 Wilmington, DE 19801</td>
<td><a href="http://www.dca.net">www.dca.net</a></td>
</tr>
<tr>
<td><strong>Governmental Organizations</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Mayor's Commission on Technology (MCOT)</td>
<td>Advising Mayor and City Council on IT issues</td>
<td>develop city-wide IT policy; support conferences, workshops, press</td>
<td>Carole I. Smith, Exec. Director, 1401 JFK Boulevard, Room 1080, Philadelphia, PA 19102, 215.686.4460</td>
<td>ncot.phila.gov</td>
</tr>
<tr>
<td>Neighborhood Transformation Initiative</td>
<td>Blight elimination and redevelopment</td>
<td>Adoption of APM Plan as NTI strategy</td>
<td>Patricia Smith, Director <a href="http://www.phila.gov/nti">www.phila.gov/nti</a></td>
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<td><strong>Non-profit Arts and Media Organizations</strong></td>
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</tr>
<tr>
<td>Big Picture Alliance</td>
<td>Non-profit youth film and digital video education</td>
<td>curriculum development, instructional support</td>
<td>Jared Martin 315 Walnut Street, Suite 1616 Philadelphia, PA 19107 <a href="mailto:jared@bigpicturealliance.com">jared@bigpicturealliance.com</a></td>
<td><a href="http://www.bigpicturealliance.com">www.bigpicturealliance.com</a></td>
</tr>
<tr>
<td>Scribe Video Center</td>
<td>Non-profit film and video artists workshop</td>
<td>educational programs, instructional support, internships</td>
<td><a href="mailto:inquiry@scribe.org">inquiry@scribe.org</a> 1342 Cypress Street, Philadelphia, PA 19107 215.735.3785</td>
<td><a href="http://www.scribemedia.org">www.scribemedia.org</a></td>
</tr>
<tr>
<td>Fabric Workshop</td>
<td>Non-profit Museum and gallery</td>
<td>educational programs, collaborative exhibitions, internships</td>
<td>Marion Boulton Stroud, Dir. <a href="mailto:kippsys@fabricworkshopandmuseum.org">kippsys@fabricworkshopandmuseum.org</a></td>
<td><a href="http://www.fabricworkshop.org">www.fabricworkshop.org</a></td>
</tr>
<tr>
<td>Mural Arts Program</td>
<td>City-wide mural arts, youth educ., workshops</td>
<td>arts and media education programs</td>
<td>729 Mount Vernon Street Philadelphia, PA 19130 <a href="mailto:info@muralarts.org">info@muralarts.org</a> 215.685.0750</td>
<td><a href="http://www.muralarts.org">www.muralarts.org</a></td>
</tr>
<tr>
<td>Visceral Cinema</td>
<td>Digital Video and Film</td>
<td>Instructional Support, workshops</td>
<td>Adam Meadvin 610.408.0341 <a href="mailto:visceral_cinema@yahoo.com">visceral_cinema@yahoo.com</a></td>
<td>NA</td>
</tr>
<tr>
<td>Philadelphia Arts in Education Partnership</td>
<td>arts and media education programs</td>
<td>collaborative media arts programs, workforce development</td>
<td>Pearl B. Schaeffer, Exec Dir, <a href="mailto:pschaeffer@uarts.edu">pschaeffer@uarts.edu</a> (215) 717-6596</td>
<td><a href="http://www.paepp.net">www.paepp.net</a></td>
</tr>
</tbody>
</table>
Recommendation 5.6.3 - Develop an ongoing fundraising approach

There are multiple sources of funds available both locally and nationally for technology related initiatives. In addition, even traditional sources of community revitalization funds such as Pennsylvania Low-Income Tax Credit program has added line items to pay for specific technology enhancements as a part of their projects. Keeping track of the array of funding sources and what they are targeted for will be key in ensuring that APM is receiving all of the funds that are possible to assist with the development and implementation programs. Temple University faculty have already collected information on major funding sources (a list is included in this document). This information needs to be updated annually. As APM has limited capacity to undertake this level of research and grant writing, which will be an essential component to the sustainability of technology initiatives, we strongly recommend APM hire a consultant to provide specific grant writing services. The grants the consultant will pursue must be determined by local priorities as well as the likelihood of success based upon the relationship between the objectives of the grant agencies and specific APM projects.

Key Action Steps

1. Prioritize / categorize funding needs
2. Hire consultant or staff position as grant writer
### FINAL REPORT

3. Identify various major and minor funding agencies,

4. Sponsor forum with invited prospective support agencies and foundations

5. Create timeline of the various granting cycles

6. Research foundations grant programs, focus large capital investments towards grant agencies priorities (an initial list is provided on the following pages)

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Funding Priority</th>
<th>Funding Range</th>
<th>Deadline</th>
<th>Process</th>
<th>Contact</th>
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<tr>
<td><strong>Philadelphia Regional Foundations</strong></td>
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<tr>
<td>William Penn Foundation</td>
<td>1) Promote Sustainable Regional Development - &quot;Community development models&quot;; 2) Arts &amp; Culture</td>
<td>$10,000 - 2,000,000</td>
<td>open</td>
<td>Letter of intent</td>
<td>Two Logan Square 100 North 18th Street, Philadelphia, PA 19103</td>
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<tr>
<td>Philadelphia Foundation</td>
<td>operating budgets under $1.5 million, 1) Public/Community Development; 2) Arts, Culture, and Humanities; 3) Education</td>
<td>$3,000 - 50,000</td>
<td>Nov. 1</td>
<td>full proposal</td>
<td>Lynette E. Campbell, Vice President for Programs, 1234 Market Street, Suite 1800, Philadelphia, PA 19107</td>
</tr>
<tr>
<td>Brooke J. Lenfest Foundation</td>
<td>1) Youth and Adult education, 2) Improving employment opportunities through technology</td>
<td>mid-November 2004</td>
<td>full proposal</td>
<td>Five Tower Bridge, Suite 450, West Conshohocken, PA 19428, 610-828-4510</td>
<td></td>
</tr>
<tr>
<td>PNC Corporation</td>
<td>Educational and developmental opportunities for children and youth, community development</td>
<td>open</td>
<td>full proposal</td>
<td>PNC Bank Center, 1600 Market Street, 3rd Floor, Philadelphia, PA 19103, 215-568-5152</td>
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<tr>
<td>Arcadia Foundation</td>
<td>Family, youth, disabled, seniors, community arts, historical, conservation and ecology</td>
<td>Sept 1 - Nov 1</td>
<td>full proposal</td>
<td>105 East Logan St., Norristown, PA 19401 610-275-8480</td>
<td></td>
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<tr>
<td>Cigna Foundation</td>
<td>Nationwide</td>
<td>$10,000 - 200,000</td>
<td>open</td>
<td>2 - page proposal</td>
<td>677 Christian St., Bryn Mawr, PA 19010 610-933-6900</td>
</tr>
<tr>
<td>Dolfiner-McMahon Foundation</td>
<td>Youth, disabled, seniors, community arts, historical, conservation and ecology</td>
<td>open</td>
<td>short proposal</td>
<td>100 Liberty Plaza, 4th Floor, New York, NY 10006 212-708-6200</td>
<td></td>
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<tr>
<td>1957 Charity Trust</td>
<td>5 county Philadelphia area for youth, disabled, seniors, community arts, conservation and ecology</td>
<td>open</td>
<td>Letter of intent</td>
<td>PO Box 540, Plymouth Meeting, PA 19462 610-828-8145</td>
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<tr>
<td>Independence Foundation</td>
<td>Culture and the Arts, Health and Human Services, Fellowships in the Arts Program</td>
<td>open, review done in cycles</td>
<td>Letter of intent, Program Inquiry</td>
<td>Independence Foundation, Offices at the Bellevue, 200 S. Broad Street Suite 1101, 19102</td>
<td></td>
</tr>
<tr>
<td>COMCAST Foundation</td>
<td>Literacy and reading, volunteering, and youth leadership that create significant and measurable results</td>
<td>open</td>
<td>Letter of intent</td>
<td>Abt: Executive Director, 1500 Market Street, East Tower, 33rd Floor, Philadelphia, PA 19102</td>
<td></td>
</tr>
<tr>
<td>Pew Charitable Trusts</td>
<td>1) Information Initiatives, 2) New cultural collaborations that will have significant impact on the regions cultural profile and civic life</td>
<td>open</td>
<td>Letter of intent</td>
<td>Donald Kimmelman 2005 Market Street, Suite 1700, Philadelphia, PA 19103 215-575-4848</td>
<td></td>
</tr>
<tr>
<td>Local Initiatives Support Corporation</td>
<td>Organizational development, economic development, youth education</td>
<td>open</td>
<td>Letter of intent</td>
<td>Carole Palace, case for building, 718 Arch Street Suite 500 S Philadelphia, PA 19106</td>
<td></td>
</tr>
</tbody>
</table>

### National Private Foundations

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Funding Priority</th>
<th>Funding Range</th>
<th>Deadline</th>
<th>Process</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Markle Foundation</td>
<td>Information Technology for Better Health, Interactive Media for Children, Policy for a Networked Society</td>
<td>high: $1,881,278, ave: $10,000-$100,000</td>
<td>Board meets: Mar, July, and Nov before Dec 1</td>
<td>Letter of intent/invitation</td>
<td>10 Rockefeller Plz., 16th fl., New York, NY 10020-1903</td>
</tr>
<tr>
<td>RGK Foundation</td>
<td>Community, Education</td>
<td>high: $1,000,000; ave: $1,000-$10,000</td>
<td></td>
<td>Letter of intent</td>
<td>75 Rockefeller Plz. New York, NY 10022 212-765-4357</td>
</tr>
</tbody>
</table>

### National Corporate Foundations

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Funding Priority</th>
<th>Funding Range</th>
<th>Deadline</th>
<th>Process</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT Foundation</td>
<td>Development and delivery of curricula, with an emphasis on science, math, engineering, technology</td>
<td>high: $705,000, average: $5,000-$10,000</td>
<td>open</td>
<td>Letter of intent</td>
<td>590 Madison Avenue, New York, NY 10022</td>
</tr>
<tr>
<td>IBM International Foundation</td>
<td>Teaching and Learning with Computers, PhD’s in engineering/computer sciences</td>
<td>$5,000 - 10,000</td>
<td>Dec. 1</td>
<td>Letter of intent</td>
<td>Corporate Community Relations and Public Affairs, 590 Madison Avenue, New York, NY 10022</td>
</tr>
<tr>
<td>Oracle Help Us Help Foundation</td>
<td>Education; Youth development</td>
<td>$5,000 - 10,000</td>
<td>Letters of intent</td>
<td>Oracle Giving 500 Oracle Pkwy, Malistro SOP11, Redwood Shores CA 94065, 866-860-4357</td>
<td></td>
</tr>
<tr>
<td>Raytheon Company Contributions Program</td>
<td>Women, under-represented minorities, disabled people, and economically disadvantaged people, preparing to enter careers in math, science, and technology</td>
<td>high: $705,000, average: $5,000-$10,000</td>
<td>open, review in cycles</td>
<td>Letter of intent</td>
<td>Carol J. Ramsey, Corporate Contributions, Waltham Woods, 670 Winter St., Waltham, MA 02451-1449, 781-522-3000</td>
</tr>
<tr>
<td>Time Warner Foundation</td>
<td>1) Equipping Children for a Better Future; 2) Extending Internet Benefits to All; Civic Participation, Communities and Arts</td>
<td>high: $300,000; average: $100-$500,000</td>
<td>Application website</td>
<td>Letter of intent</td>
<td>75 Rockefeller Plz. New York, NY 10019, Kristen Powers</td>
</tr>
<tr>
<td>Hitachi Foundation</td>
<td>Community development; Education; Elementary school/education; Youth development</td>
<td>high: $151,366; ave: $10,000-$100,000</td>
<td>board meets spr, summer, fall</td>
<td>letter of intent</td>
<td>Barbara Dyer, President &amp; CEO or Renata Hor, 1503 22nd St. N.W., Washington, DC 20037 202-457-0588</td>
</tr>
</tbody>
</table>

**Sources of funds**

APM Technology Initiative

59
**Recommendation 5.6.4 - Develop a comprehensive marketing strategy for the APM area and the Technology Initiative**

Developing a marketing strategy for the technology Plan fit seamlessly within the marketing strategy of the community as a whole and reflect the concerns hopes and aspirations of the community. Often these concerns are simple; safe streets, good schools, good jobs, affordable housing, but must also embrace how residents envision their community in five or ten years.

It is important to again reflect on the fundamental goals of this study in that technology is no panacea for the complex problems of city neighborhoods, but a means by which a community can better address those fundamental concerns A market strategy should therefore act as both be a means of internal reflection to the community, as well as a vehicle of representation to the outside world.

The marketing strategy should reflect upon both the 2002 plan and this study, and in many respects become a synthesis of the two documents. The marketing strategy should include a community brochure, and have a distinctive web presence which incorporates the goals and aspirations of the community. Marketing should include resident viewpoints - “Community Voices” – to ensure that the product will also promote new services to local residents. Other items integral to better promoting the neighborhood and the Technology Initiative include:

- A description of the physical aspects of the community and its transformation over the past 10 years,
- A description of APM past, present, and the future incorporating an overall vision for the community
- An up to date ‘Current State of Affairs’ or snapshot of the community, including recently completed and soon to start physical revitalization projects and social services

The marketing effort must incorporate Information Technology as a fundamental means of promoting the efforts of APM and its partners. The public demonstration project and the potential video screen on top of the Kardon Building will play a key role locally in advertising the community and Temple University.

The Central Philadelphia Development Corporation (CPDC) is undertaking focused community marketing efforts in six neighborhoods across the City. CPDC has gained an enormous amount of knowledge and experience in managing the overall process in creating these neighborhood snapshots and slogans. While this effort differs in many ways and is attempting to reach very different audiences, the CPDC marketing initiative should be viewed as a local resource.
Key Action Steps

1. Create promotion packets or brochures for the Technology Plan.

2. Create community brochures annually that provides an overview of events, activities and the voices of local residents within the community.

3. Incorporate local information about revitalization efforts and proposed projects on the APM web-site.

4. Foster strong connections between all partners involved in APM’s revitalization including Information Technology organizations, banks, foundations and residents.

5. Develop an annual event at the proposed theater park at 6th and Norris Streets dedicated to public art, technology and the youth programs underway through the ITEST grant.

6. Create a PR Newswire release regarding the Technology Initiative for distribution through local and national press.
Summary: Organizing for Action

This plan has sought to integrate Information Technology into the APM community in a comprehensive manner and reinforce the multitude of existing initiatives undertaken by APM and its partners. As mentioned previously, implementing Information Technology initiatives is a cultural challenge and not necessarily a financial one. Foundations, lenders and other partners must see these initiatives as critical to the overall revitalization success of the community.

Recognizing the breadth of what is proposed, we have created a summary of key recommendations as an addendum to this report in excel format. The summary is not intended to replace the key action steps outlined for each recommendation in the document but envisioned as a means to track the implementation progress and organize resources to ensure critical actions are taken. It is a tool that should be continuously updated by APM as initiatives move forward.

Within the attached summary, we have outlined priority projects and long-term projects based upon the needs assessment and the level of funding required to implement these initiatives. We would like to emphasize a few action steps which impact many recommendations both in the short and long-term. The following initiatives are viewed as critical first steps to transform this study into action, raise awareness and build capacity for implementation.

- Develop a marketing strategy to focus awareness and build partnerships towards the implementation of initiatives. This includes ensuring that potential partners have access to the plan and pushing for national media exposure through print and the web. (A Philadelphia Inquirer story on this plan was already picked by nationally by Planetizen - an on-line forum for planners, architects, developers and politicians.) APM should play a more active role in the Community Technology Centers Network (CTCnet) and participate, and potentially host a CTCnet regional or national conference. A series of meetings and local summits should be held with institutions and agencies most directly involved with the development of community technology resources to include: City officials to discuss the plan for City-wide Wi-Fi; local non-profit and service agencies engaged in technology planning and services; foundations interested in workforce preparation, education and/or public art initiatives and; national foundations and organizations specializing in technology provision and services.

- Undertake a grant-writing campaign to raise funds for necessary staff as the majority of recommendations require some level of staff support. As APM’s staff capacity is limited to what it reasonably can accomplish given the extensive services it currently manages, it is crucial to develop long-term partners to assist in implementation of the proposed initiatives. Initial funds should be secured to hire two grant writers on a limited time and materials basis. It should be noted that Temple faculty are already experienced in grant writing as evidenced through the recently awarded National Science Foundation grant of $900,000 for programs within the APM community. $10,000-$15,000 will cover the expenses and time for a
grant writer to put together two to three grant large grant proposals, (a series of longer term, sustainable funding efforts over $100,000 per annum) as well as a number of smaller grants to cover short-term projects, consulting fees, and start-up costs.

- As the Media Station is understood as a cornerstone and catalyst to many of the long-term goals of the plan, it is critical to seek planning funds to hire a consultant to prepare a business plan and programming approach to the Media Station. As this initiative will be an important component of the overall revitalization efforts in the community, planning must begin now to determine programmatic options, management and the institutional support required to ensure its long-term success. $20,000 will secure a highly qualified professional with experience in technology centers.

Support for this effort is necessary and warranted. The success of APM as a Community Development Corporation has demonstrated commitment and foresight to undertake this strategy in a comprehensive manner towards the revitalization of the neighborhood. With the increasing awareness of the need to integrate Information Technology into community strategies, this plan provides a strong framework for action that addresses both current and future needs of the community.

Acknowledgements:

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Nina Liou, Community & Economic Development

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