City Scan Hartford

Narrative portion of Technology Opportunities Program proposal

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EXECUTIVE SUMMARY

The goal of the City Scan Hartford project is to empower the community by creating tools for residents and city officials to exchange information about neighborhood issues. The project has two parts: the field portion, through which residents will document a broad range of neighborhood conditions (e.g. abandoned buildings, dumping, potholes), and the on-line component, through which residents will vocalize opinions, concerns, and suggestions via the Internet. The field portion of City Scan project will:

- Work with neighborhood groups to identify priority issues;
- Employ local high school students to collect data for each neighborhood using mobile computing technology: Pocket PCs, digital cameras, global positioning satellite receivers (GPS), wireless modems and custom-designed software.
- Train neighborhood residents to create powerful reports and maps using the visual database created from the field data.
- Synchronize the data from each neighborhood to create a citywide database of city problems housed at CPEC.
- Assist groups to advocate for neighborhood improvements using the data.

In supplement to the field data, the on-line portion of City Scan will:

- Gather data regarding residents' opinions on municipal services and other quality of life issues through on-line surveys that are integrated into a broader community information site.
- Create an interactive system to submit and track residents' complaints to city hall. This data will be open to public scrutiny both record by record and as aggregate complaint statistics.
- Create a customizable on-line mapping function so the public can view data visually
- Aggregate, analyze and publicize data collected in the field and on-line.

Neighborhood groups and local government officials will use the results of these data collection efforts to discuss problems and potential solutions. Improving communications and making municipal officials more accountable will increase the speed and effectiveness with which the city responds to problems, thus making the community a better place to live and work.

Each of Hartford's seventeen distinct neighborhoods has a well-established Neighborhood Revitalization Zone (NRZ) Committee. Initially, the City Scan project will focus on these neighborhood groups as the project's end users. Hartford 2000, the citywide coordinating agency for the NRZs, will join CPEC and three other partners for the project: Citizens' Research and Education Network, Hartford Public Library, and the City of Hartford's Department of Human Services.

The City Scan Hartford project builds upon a successful pilot program CPEC conducted in 2000 to collect data with one NRZ. The resulting data is currently being used by citizens to negotiate with the city for neighborhood improvements, especially in the area of securing or demolishing abandoned buildings. This proposal would allow CPEC to scale the project citywide and greatly expand our empowerment tools through the use of the Internet. We also foresee the potential to replicate this project to other communities as the field City Scan software is readily adaptable and easily customized to collect data on local conditions in any city or town.

PROJECT NARRATIVE

PROJECT PURPOSE

Problems

Urban blight: Hartford is a classic example of urban decline. Middle-class flight to the suburbs, increasing tax burden on a small geographic area, a concentration of the region's social problems, and a declining number of well-paying manufacturing jobs all contribute to the difficulties facing Hartford and many other cities throughout the country. Hartford is atypical, however, in that its population is declining. The city's population in 1950 was over 177,000. It is presently around 130,000, a decline of more than 25%. Therefore, Hartford has a major problem with abandoned housing and the decay of its neighborhood commercial areas. The primary visual evidence of this decline is the tremendous increase in vacant properties, and its associated issues of vandalism, graffiti, litter, dumping, and overgrown vegetation.

Concentration of social problems: The lack of resources of Hartford's residents makes this dilemma much more difficult to solve. According to the 1990 Census, twenty-eight percent of city residents live below the poverty line, making it the fourth poorest city in the nation. Children fare even worse – Hartford ranks second worst in the United States in terms of child poverty. Among Connecticut's six major cities, Hartford has the highest percentages of poverty, single parent families, births to teens, unemployed young adults, crime, and school dropouts.

Lack of local government responsiveness: Throughout the city there is a sense of frustration with local government in Hartford, as it struggles with the delivery of basic services. The perception that Hartford city government is unresponsive is best described by Peter Adomeit, a professor at the Western New England College School of Law:

> *"What I've seen happen over the years is that various problems would arise within the city which, for whatever reason, were not being addressed by city government. It could be as simple as a street corner that had a lot of drug dealing, or it could be a business person trying to get permits, or a recent problem the city's had with rats. The people who had these problems were not getting them addressed by the city. So what I've seen happening is that they call the Hartford Courant and columnists write about the problem, which creates public exposure, and that hopefully causes the city to address the problem. Which is why I refer to this [Hartford] as a 'strong-columnist' form of government."*[1]

Solutions

City Scan Hartford will create the tools citizens need to begin solving these problems. The project helps residents prioritize issues, document the extent of these neighborhood problems, negotiate with the city to address the problems, and communicate the success and/or failure of these actions to the public, via the "strong-columnist" approach.

While Hartford faces many challenges, it is not without its strengths. The city's Neighborhood Revitalization Zone Committees (NRZs) are major assets in each of Hartford's seventeen neighborhoods. These committees are made up of residents, property owners, local business

[1] Rob Gurwitt, "Rudderless in Hartford," Governing, September 2000. http://www.governing.com/9hart.htm.

people, and members of other community based organizations who work together to improve the quality of life and economic potential of the neighborhood.

While these residents' groups are fairly effective, they lack three essential tools:

1) the ability to document problems in a compelling and manageable way;
2) a way to track the status of their efforts to solve these problems; and
3) a way to make city officials more accountable.

The City Scan Project provides these tools to neighborhood groups, trains them in their use, and supports them every step of the way, from identifying neighborhood priorities, to following up on city officials' promises.

More specifically, City Scan Hartford proposes to use two complementary approaches to address neighborhood problems. First, CPEC would create a mini-network of all the NRZs and enable them to collect data in the field using mobile computing technology: handheld Pocket PCs, wireless modems, digital cameras, and global positioning satellite receivers. The outcome of this phase would be a visual database of all problems identified in the city complete with photographs and a place to track information on the local groups' responses. The strength of the database lies in its ability to show change over time: rescanning an area and showing either improvement or a lack thereof creates a strong accountability tool for the citizens in their interactions with city agencies. Through support from the Alfred P. Sloan Foundation, CPEC has already developed the mobile computing technology package and tested it in one Hartford neighborhood and city parks. Local residents have responded with rave reviews. The data is currently being used by the NRZ to negotiate with the city for improvements, especially in the area of securing or demolishing the most dangerous abandoned buildings. (See letter of support from Parkville NRZ Chair David Morin, Appendix T, and media clippings, Appendix I-K).

In the second phase of the project, the field data would be supplemented by a web-based system. The on-line component of City Scan would have two parts. The first part would gather information about many specific issues affecting the quality of life in Hartford through on-line surveys that are integrated into a broader community information site. For example, when looking up Hartford Little League game schedules on the Connecticut Community Network site, an Internet user would be offered the opportunity to answer three survey questions on the quality of youth baseball fields in the city. The second part would create an interactive system that would track residents' complaints to city hall. This data, stripped of personal information to maintain individuals' privacy, will be open to public scrutiny both record by record and as aggregate complaint statistics. The database will consist of linked tables that will store and post identified constituent issues, municipal agency responses, and actively inform involved parties of the status of unresolved issues. (See Appendix G for a detailed system flowchart.) Then data in the database will be aggregated and analyzed by CPEC staff and made available to the public.

Outcomes

CPEC and its partners have identified seven outcomes that the project will seek to achieve:

1) Reduce the number and severity of the city problems identified during the first summer of scanning by 5% by the third year as measured by the records in the database.
2) Improve the effectiveness of communications between NRZ members and city officials
3) Increase NRZ capacity by training members in data collection and analysis tools.

4) Provide useful technical skills and experience to Youth Survey Team Members.
5) Improved the quality of life in Hartford as measured by before and after surveys of residents.
6) Increase individuals' involvement in local government process by soliciting residents' opinions about city services.
7) Improve the quality of local decision-making by providing data and tracking tools.

INNOVATION

The City Scan Hartford project has its roots in four earlier projects. The most recent of these is CPEC's City Scan pilot project funded by the Alfred P. Sloan Foundation This project was implemented in one Hartford neighborhood and five city parks last year and will be implemented in Stamford during 2001. The project also builds upon a 1997 TOP grant to the South George Street Community Partnership for the York Community Asset Network, but City Scan moves beyond YorkCAN's asset mapping by tracking both problems and the steps taken toward their resolution. City Scan is based on the innovative ComNET project by the Fund for The City of New York. City Scan builds upon ComNET's technology by using digital video, wireless data transfer, and GPS accuracy. It also expands upon a 1998 TOP grant to UCLA for Neighborhood Knowledge Los Angeles, which uses web-based mapping to show local issues. However City Scan enlarges this to include the mapping of survey data and field data collected with the Pocket PCs. The on-line component also builds upon and improves upon existing municipal sites by moving beyond email to creating a public record for assessing municipal performance. This portion of the project is an extension of a current CPEC project to provide on-line databases and forums in three other Connecticut communities, also funded by the Alfred P. Sloan Foundation.

Technology

City Scan Hartford combines innovative technology applications to help solve common problems that occur in many cities and towns. In the field phase, the mobile computing technology uses four different pieces of hardware: Pocket PCs, wireless modems, GPS receivers, and digital cameras (please see the Project Feasibility section and Appendix F for more technical details). The Pocket PCs are used to collect data on neighborhood conditions using customized software. Each Pocket PC will be equipped with a wireless modem to upload data outside of normal office hours to the citywide database housed at CPEC. Given the expected rate of improvement in wireless technology over the next three years, we expect to develop the capacity to utilize wireless networks to also download data to the field to improve citizen input and data gathering. During data collection, the Pocket PCs will be fitted with Global Positioning Satellite (GPS) receivers. This technology is used to record the exact longitude and latitude of a specific condition, required for accurately mapping conditions that are not associated with a street address (conditions within parks, for example.) A photograph of each condition is taken with a digital camera and then downloaded and synchronized with the data collected in the database. While the use of any one of these pieces of hardware with City Scan would be considered innovative, it is the use of all of them together that truly puts this project on a different plane from its predecessors.

Additional hardware for the project will include laptops to be used by the neighborhood groups to analyze the data. Each of these laptops will be equipped with the customized City Scan

software, Access 2000 database software for report creation, and ArcView Geographic Information System (GIS) software for creating maps of the various neighborhood conditions. These "community laptops" can be checked out of local library branches by residents, allowing greater access to this hardware, which is in itself innovative for a public library.

The on-line component of City Scan Hartford takes existing web technology, such as that used in the private sector by courier companies to track packages, and applies it to the sphere of government–constituent communications, something that has not been done anywhere else in the nation. City Scan also improves upon the private sector process by allowing all users, not just the company's management, to see the aggregate performance measurement statistics. The on-line component moves beyond just emailing complaints to the creation of an on-line database of complaints/inquiries and satisfaction rankings. This will empower the general public to access and use this data to assess how well the government is performing its duties. Combined with an on-line mapping ability to document the location of problems, the Internet becomes an important component for sharing data collected in the field and via on-line surveys with the wider community. The mobile computing technology will also be useful in filling in the gaps in on-line survey data. For example, if we find that on-line responses for a particular neighborhood are lagging, we will intensify our outreach efforts and also supplement the data by surveying residents door-to-door.

DIFFUSION POTENTIAL

CPEC has already shown that it can disseminate the City Scan project beyond Hartford. The approach is being tested in Stamford, Connecticut, a community with very different problems and organizational infrastructure than Hartford. The project was also implemented in New Britain, Connecticut in October 2000 as part of our testing of the GPS technology. The pilot project has received a "MOBY", a national award for mobile computing technology, and national media coverage.

The City Scan approach can be used to document problems in any community, from small rural towns to large cities or counties. The problems described above are not limited to Hartford. Every town has areas where these tools can be applied to improve the quality of life. The field City Scan software is readily adaptable and easily customized to collect data on local conditions in any city or town. Local citizens can decide what they are most interested in knowing about their community and then use City Scan to document, track and analyze these issues, even if it is an issue entirely unique to their town. CPEC recognizes that technology should not be the tail wagging the dog – technology should provide tools that empower citizens in their neighborhood improvement efforts. The project does not need to create any new organizational infrastructure to succeed – it can fit within any existing configuration of neighborhood organizations.

In addition, City Scan technology can be reconfigured to meet any budget. For example, we have successfully used digital video as a means of data collection, or a community might choose to only use the Pocket PC without the wireless modem or GPS options. City Scan is a cost effective and simple way for citizens and local government agencies to communicate.

Because CPEC feels that the City Scan methodology can be used in many different settings, we have worked to increase the visibility of the project since the inception of the pilot project through conference participation, media attention, and documentation distribution. We are proposing to continue and greatly expand our use of these three diffusion methods.

City Scan has been very successful in garnering media attention (see Appendix I-K for sample media articles). Throughout the three years, staff will work with print and electronic media to promote City Scan. CPEC staff will prepare a "How to do City Scan in your neighborhood" document which we will disseminate via our website and at conferences. The Principal Investigator and the City Scan Project Director will attend a minimum of ten national e-government, community and economic development, or technology conferences during the three-year period to present the City Scan process to a national audience. The conferences at which CPEC would seek to present include the annual conferences of the following organizations: International City/County Management Association, National League of Cities, National Main Street Center, International Downtown Association, National Low Income Housing Coalition, NeighborhoodsUSA, National Neighborhood Coalition, National Community Development Association, National Association of Community Action Agencies, PCExpo, as well as meetings coordinated by the project's funders, including those of TOP grantees and the Managing for Results Conference sponsored by the Sloan Foundation. In addition, CPEC will capitalize on our convenient location between New York and Boston and seek to present at five national conferences in these locations.

PROJECT FEASIBILITY

Technical approach

The system has been designed to easily integrate into Office 2000, which includes Access 2000 the database software most widely used by nonprofit organizations. Throughout the pilot testing of this project, which began in January 2000, CPEC tested different hardware and software configurations and form factors. The primary criteria for selecting the current package were ease of use with minimum training and the ability to capture data accurately and accessibility. (See the Technical Specifications in Appendix F for a discussion of specific technology choices). The project budget includes both maintenance and upgrading of the various components of the mobile computing package given the rapid changes in the field of mobile computing. We have identified no technical barriers to the expansion of the City Scan project at this time.

Applicant qualifications

For nearly 60 years, CPEC has been part of Connecticut's nonprofit community. First as the Connecticut Public Expenditure Council, the organization reviewed and reported on state and municipal budgets and expenditures. Later, as state agencies were created to conduct similar functions and state budget reviews, CPEC changed its organizational focus and its name to the Connecticut Policy and Economic Council. While the organization still provides comparison data on municipal budgets, CPEC has branched out to include reviews of school district expenditures, created resource guides for parents in economically challenged areas, and conducted program evaluations of State judicial programs. Our crowning achievement however, revolves around our City Scan initiative. CPEC currently receives funding from the Alfred P. Sloan Foundation for the implementation of a pilot City Scan project in Hartford and Stamford,

and CPEC has far surpassed expectations with its success. A TOP grant would allow CPEC to expand this project from one neighborhood to all seventeen, and to continue to learn from and inform others about how to implement this type of citizen-based data collection and communication project. (A description of the relevant experience of key CPEC staff can be found in Appendix L. A description of each of the primary partner organizations can be found in Appendix M.)

Other measures of a project's feasibility include the appropriateness of its budget to the proposed tasks, the adequacy of the timeline, the project's efforts to safeguard privacy, and its sustainability. The City Scan Hartford budget and time estimates are based upon CPEC's experience over the past year implementing the pilot project, both in terms of the staffing and technology costs. (See Appendix A for an overall project timeline including major milestones, Appendix B for a detailed list of tasks, and the Budget Narrative located after the Appendices for additional detail.) The privacy issue primarily applies to City Scan in relation to the posting of data online. City Scan On-line has various layers of privacy protection built in, from allowing users to post data anonymously, to stripping all identifiable information prior to posting. The field level data will include address information for location purposes but will not contain the names of individuals or businesses.

Regarding project sustainability, the on-going costs to continue the project will be minimal beyond hardware and website maintenance. After the three-year period, laptop maintenance costs will become the responsibility of the Hartford Public Library. The mobile computing hardware will be upgraded and maintained by CPEC as a part of our efforts to expand this approach to other cities. We will continue to make this hardware available to the Hartford community. CPEC's goal is to empower the community, and plans to gradually hand over the Hartford project to local community based organizations in the final six months of the project. However, since CPEC is located in Hartford we will continue to play a supporting role in the city as we continue to test new technology here. Throughout the course of the project, the Sloan Foundation and additional sources will be approached to provide funding to maintain the City Scan website.

COMMUNITY INVOLVEMENT

Because the mission of CPEC is to empower citizens, community involvement is our lifeblood. All of our projects originate from the community and its needs. Throughout the past year of pilot testing the City Scan project in Hartford, community involvement has been a prerequisite in the planning and implementation. All project decisions are made by citizens, or with the citizen in mind. This proposal is in direct response to the strong interest expressed by the NRZs in using City Scan technology in their neighborhood. CPEC is pleased to collaborate in this project with four well-established, well-respected, enthusiastic partners: Hartford 2000, Citizens' Research and Education Network (CREN), Hartford Public Libraries, and the City of Hartford's Department of Human Services. (Please see Appendix P-T for letters of support from these organizations).

To foster communication and the commitment of stakeholders, a ten person advisory committee will guide the project. The committee will be made up of representatives from each partner agency and additional city residents and will meet every two months during the three years of the

project. While this regular meeting between all the project's partners will serve as the formal avenue for communicating and maintaining relationships, CPEC will initiate extensive informal contact as well.

Hartford 2000

The role of Hartford 2000 will be to participate in the project's advisory committee and to support and direct citywide advocacy efforts using the City Scan data. Because CPEC is not an advocacy organization, our primary goal is to create a set of tools for use by the NRZs and Hartford 2000. Hartford 2000 is a very small organization and would not be able to take on the added tasks of increased coordination and advocacy efforts without the support of the TOP grant through which it will receive $10,000 a year.

Citizens' Research and Education Network (CREN)

CREN will also participate on the advisory board, and support the dissemination efforts within the City of Hartford. CREN will train students on how to conduct door-to-door surveys to supplement the online surveys. In addition, CREN will help to ensure that the project continues to meet the needs of the community by holding a minimum of two focus groups a year with Hartford residents. CREN will pay particular attention to the needs of those groups who may be under-represented within the NRZ structure, such as parents of young children or immigrants who do not speak English. CREN will receive $15,000 a year from the project budget to support their role in this effort.

Hartford Public Library

The Hartford Public Library is a natural partner for the project since it is the primary provider of free computer training and Internet access in the community. The library's two Neighborhood Technology Centers will be the location for all end user computer training, conducted jointly by the library's technical support staff and City Scan staff. At the library, citizens will learn to use the mobile data collection tools and to access the Internet-based resident surveys, both at scheduled trainings and on an ad hoc basis. All ten library locations will also support the use of "community laptops" for data analysis and report creation by the NRZ members. These computers will be available to be checked out of the library by community residents who have participated in the City Scan training. The Library will provide in-kind support for the project from the contributions of their staff and the use of their training space. The relationship is mutually beneficial: the Library will increase awareness and use of library services and it will keep the laptops at the end of the project and can continue to lend them to city residents.

City of Hartford Department of Human Services

One of the responsibilities of the Department of Human Services of the City of Hartford is to implement a citywide comprehensive youth employment program funded from state, local and private sources. Typically, these jobs range from manual labor, work in summer camps or day care centers and clerical positions. The Department is enthusiastic about the opportunity to place students in part-time jobs that provide a meaningful learning experience and technology training and will provide in-kind support for the Youth City Scan Survey Team Members in the form of salaries for the youth, space and youth development expertise.

Support for end users

CPEC recognizes that the best technology in the world is meaningless unless people use it. To ensure that City Scan meets the needs of its end users, the project will provide training and extensive individual support for the NRZ participants. Youth Survey Team Members will be instructed on how to use the mobile computing technology package and to evaluate neighborhood conditions consistently. NRZ members will be trained to use the laptops for data analysis and report creation, with in-depth training in Access 2000 and ArcView software. While the initial focus of these trainings will be NRZ members, we will open them to any city residents as the project progresses. The NRZ committees will also receive support from CPEC's Outreach Director in how to use the data to negotiate with city officials to improve neighborhood conditions. Training will also be provided to individuals and organizations on how to use the on-line component of City Scan through CPEC's community outreach efforts and the on-going work of the Library. Planning for all training efforts will be guided by the advisory committee to ensure that they meet the needs of their audience. In addition to formal training, City Scan staff will provide ongoing technical support to end users to help with any aspect of the project.

EVALUATION

Curriculum Research and Evaluation, Inc. (CRE) will serve as the project's evaluating arm (please see Appendix N – O for their proposal and a list of their credentials). The goal of the evaluation will be two fold: one, to guide the ongoing implementation of the project to make any necessary mid-course corrections; and two, to evaluate the efficiency and effectiveness of the City Scan project. There will be three components of the evaluation: 1) two telephone surveys of citizens to assess quality of life issues in the neighborhoods, one conducted at the outset of the project and one at the end; 2) regular process evaluations involving interviews of end users and key stakeholders every four to six months; and 3) a final evaluation of the project's process and outcomes. The final evaluation will include an assessment of the neighborhood data collected via the handheld computers and the Internet. These tools will create their own record of what measures have been documented and how they have changed over time. Additional data will be collected via on-line surveys as an integral part of the project's web interface. CRE will produce a final report by the end of the grant period that will be shared with TOP, program staff, partners and key stakeholders as well as with the public in general.

The evaluation will seek to answer the following questions: Has City Scan improved the quality of communications between the city and citizens? Do the end users find this information useful in tracking community conditions? Have the number of citizens using the web-based system to report problems increased? What effects did the program have on the quality of life in Hartford's neighborhoods? What are the lasting benefits of the program? What problems were encountered during the course of the program? What the major lessons that were learned? Did the project lead to the achievement of its goals and objectives?

In summary, the receipt of a TOP grant would allow CPEC to expand an innovative, award-winning pilot project citywide, empowering residents across Hartford to improve their neighborhoods. The City Scan model holds tremendous potential for use in cities and towns across the country as a way to using cutting edge technology to help underserved communities.