

# Chapter 4

Police Department

Information Systems Technology Enhancement Project

**ISTEP**

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## Case Study: Hartford, Connecticut

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## Hartford Highlights

Community policing has been a part of the Hartford Police Department's (HPD) overall strategy since 1988, when the Community Service Officer (CSO) Unit was formed. CSOs meet regularly with residents and business people to discuss crime problems, work with blockwatch and other citizen groups, and facilitate communication between residents and city government. Over the past four years, community policing has been advanced in a number of ways. The department has aggressively sought out partnerships with other agencies such as schools, youth organizations, and other criminal justice agencies. They have increased their neighborhood focus and further decentralized the department around three Police Service Areas (PSAs). They have also instituted weekly COMPSTAT (computerized statistics) meetings, which aim to both increase accountability among area supervisors and foster improved communications between commanders in the three PSAs. Finally, in conjunction with Hartford's new Community Court, there has been a renewed emphasis on quality of life issues and problem-solving within the police department.

The key unit within HPD responsible for information technology – including system operation, maintenance, and development – is the Systems Services Division, which is currently staffed with six civilians. Unlike the vast majority of medium to large sized police departments in the country, the Hartford Police Department has not purchased their main information systems – computer-aided dispatch, case incident reporting, and booking – from outside vendors. Initial versions of these systems were developed by Systems Services Division personnel over a ten year period from the late 1970s to the late 1980s. Many HPD staff view the department's non-reliance on outside vendors as a major advantage, as Systems Services Division staff have been able to customize their systems and add new features as desired.

The police department has substantial experience with two technologies particularly important for community policing – geographic information systems (GIS) and external information systems. They have had a GIS capability since the early 1990s, when the department participated in the National Institute of Justice's Drug Market Analysis Program. Today, computerized maps are an important information support tool for Hartford's COMPSTAT process. In particular, a project funded by an Advancing Community Policing grant from the COPS Office is underway to develop an interactive map-based query tool that will be used during the COMPSTAT meetings.

Perhaps the most unique information technology-related feature of the department is their method of sharing information with community-based crime prevention organizations. With funding from the National Institute of Justice, systems and procedures were developed that provide Hartford community organizations with access to over two years of incident-level crime, arrest, and call-for-service data. The organizations can view and analyze this information using custom crime mapping and analysis software, which is installed in 15 community organization offices throughout the city.





## 1 Purpose and Scope of Report

This case study is one of several produced for the Information Systems Technology Enhancement Project (ISTEP), a project funded by the Office of Community Oriented Policing Services (COPS). The aim of ISTEP is to increase the use of information and information technology in police departments, particularly regarding the implementation of community policing. The case studies document the current state of information technology and the use of information in five police departments: Tempe, Arizona; San Diego, California; Hartford, Connecticut; Reno, Nevada; and Charlotte-Mecklenburg, North Carolina. These case studies are based on a limited review of the status of information technology in the departments. A separate cross-site report synthesizes the findings of the individual case studies. A report on the project's conceptual framework presents the overall ISTEP approach and discusses how community policing demands different types of information systems, analysis methods, and uses of information than those required under the traditional model of policing.

For this Hartford case study, ISTEP staff conducted interviews with the police chief, information technology supervisors and staff, and other command staff and officers throughout the department. ISTEP staff also reviewed internal police department documentation and published reports related to information technology.

The organization of this case study document follows the overall conceptual framework for the ISTEP project. Accordingly, after providing background information on the police department in Section 2, particularly with respect to implementation of community policing, the case study describes current and planned information systems (Section 3), analysis methods (Section 4), and uses of information (Section 5). Section 6 summarizes our findings.

## 2 Police Department Background

### 2.1 Size, Overall Organization, Crime Levels, and Trends

The city of Hartford, located midway between New York and Boston, is the urban hub of Connecticut's Capital Region. Although it serves as the region's major employment, service, government, and cultural center, Hartford covers only 18.2 square miles and has a population of roughly 140,000, making it one of the country's smallest urban areas. Approximately 250,000 to 300,000 people, about twice the population of Hartford, enter the city for some portion of the day for employment, entertainment, or other reasons. Destinations include the headquarters of a number of large insurance companies, including Aetna and Travelers, which are located in Hartford.

The city of Hartford contrasts sharply with the surrounding towns, which are primarily suburban communities with middle- to upper-income populations. Although Connecticut has the country's highest State per capita income, Hartford has for a number of years been one of the nation's poorest cities in terms of the percentage of residents living below poverty level. By 1998, however, city leaders saw signs that the city's long economic decline was ending, fueled in part by the planned move of the New England Patriots football team from Massachusetts to Hartford.



Hartford is divided into 17 neighborhoods, all of which have well-established identities in the city (i.e., a typical resident will know in which neighborhood she or he lives). Reports and statistics produced by the police department and other city agencies are typically organized by neighborhood. Most neighborhoods have had for a number of years one or more grassroots community organizations that focus either on community organizing or on providing services to neighborhood residents.

The Hartford Police Department (HPD) is commanded by a police chief who reports directly to the city manager. Two assistant chiefs command, respectively, Operations and Operations Support. There are three deputy chiefs, with each having overall responsibility for one of the three Police Service Areas (PSAs) in the city. Geographic responsibility, as opposed to shift responsibility, was instituted in the early 1990s. Each of the three PSAs has a distinct identity: the South PSA is largely Hispanic, the North PSA is largely African-American, and the Central PSA encompasses the downtown business district with a high population during business hours and a low population during nonbusiness hours. Overall, the department has approximately 475 sworn officers, down from approximately 500 in the late 1980s and early 1990s.

Throughout the 1990s, Hartford participated in a number of U.S. Department of Justice-funded programs, beginning, in 1990, with the Drug Market Analysis Program funded by the National Institute of Justice. In 1995, Hartford became a Weed and Seed site, focusing its efforts on the Stowe Village public housing development in the North PSA. Also in 1995, Hartford became one of 12 cities awarded funding from the Bureau of Justice Assistance under the Comprehensive Communities Program. The HPD has also received significant funding from the COPS Office, including funding for the Universal Hiring Program and COPS AHEAD.

In terms of crime, Hartford, like many urban cities in the country, experienced a significant decrease in serious crime in the 1990s. For example, from 1987 until 1992, the city had between 20,000 and 22,000 Part I crimes per year. Since then, the number has decreased significantly each year and, by 1997, the city had only slightly more than 12,000 Part I crimes. Hartford's Part I crime rate, however, is still nearly twice the national average.

All Part I and II crime has decreased recently, although only at about half the rate of Part I crimes alone: from 1993 to 1997, the number of Part I and II crimes decreased by 19 percent, compared with a 36 percent drop in Part I crime over that time period.

## 2.2 Community-Oriented Policing Background

Calls to implement community policing have been heard in Hartford since the mid to late 1980s, when a massive increase in drug use and the appearance for the first time of open-air drug markets completely changed the drug picture in Hartford. In response to this problem, a Mayor's Commission on Crime was formed in 1987. The Commission's recommendations emphasized that the police, the community, and other city agencies must work together to fight drugs and crime.

In 1988, formation of a new community service officer (CSO) unit in the department was one of the first steps toward implementing community policing. CSOs would not routinely respond to citizen calls for service, but instead would meet regularly with residents and business people to discuss crime problems, work with blockwatch and other citizen groups, conduct public education programs on crime prevention, and facilitate communication between residents and city government. The intent was that one CSO would be assigned to each of the 17 Hartford neighborhoods. Currently, there are 14 CSOs. Based on discussions with neighborhood residents and organizations, the CSO program appears to be quite popular with community residents.

In 1990, with funding support from the National Institute of Justice's Drug Market Analysis Program, Hartford implemented its first attempt at neighborhood revitalization that involved a community policing approach. The basic premise of this program was that street-level drug sales were a key factor in the declining quality of life in urban neighborhoods, and that the best approach to reversing this decay was the combined efforts of the police, the community, and city agencies. More specifically, the program employed a reclamation and stabilization approach. Thus, the police would reclaim a target area by employing a variety of high visibility and anti-drug tactics over a several month period. Once an area was reclaimed, the stabilization phase of the program would attempt to maintain the area in its reclaimed state over the long term through a partnership involving the community, the city, and the police. The program was implemented in four target areas from 1990 to 1992. Unfortunately, the effort, dubbed COMPASS, became largely a police-only project and had mixed short-term results. The COMPASS model, however, was later refined and successfully implemented in the Stowe Village public housing development under the city's Weed and Seed program. In addition, COMPASS introduced the HPD to geographic information systems (GIS) and crime mapping technology.

Following the end of COMPASS in 1992, the HPD introduced area accountability by dividing the city into three police service areas. Day-to-day responsibility for a PSA was given to a deputy chief. Soon after, the HPD received funding from the COPS Office to increase the number of officers devoted to community policing, and special community policing units were formed in each of the PSAs. Substations for each PSA were also built.

In 1995 the city attempted to expand community policing in the HPD with the help of a \$2 million Comprehensive Communities Program (CCP) grant from the Bureau of Justice Assistance. In its CCP proposal, the city acknowledged that "Hartford does not yet have full department-wide community policing," with true community policing basically limited to the CSO unit. In an attempt to involve the community more in community policing, problem-solving committees were formed in each neighborhood. The city also hired an outside consultant to provide problem-solving training to the neighborhood problem-solving committees and to the HPD.

Since then, HPD officials point to four trends that underscore the department's commitment to community policing. First, the HPD has aggressively sought out partnerships with other agencies, such as schools, youth organizations, and other criminal



justice agencies. For example, the HPD was recently awarded a School-Based Partnership grant from the COPS Office. Second, the HPD has increased its neighborhood focus and further decentralized the department around its three PSAs: detectives and other specialized units are now assigned to a specific PSA; crime statistics are tracked on a neighborhood basis; and dispatching has been revamped to provide more of a neighborhood focus. Third, the HPD has instituted weekly COMPSTAT (computerized statistics) meetings, which are modeled after the New York City Police Department's process. The meetings not only attempt to hold supervisors accountable for crime conditions in their areas, but also foster improved communications between commanders in the three PSAs. Finally, within the HPD there is a renewed emphasis on quality of life issues and problem solving. Arresting officers now refer many cases to the city's new Community Court. In addition, sergeants are required to submit weekly memos to the PSA commander and the Assistant Chief of Operations that outline problems identified in their areas and steps to be taken to address the problems.

### **3 Information Systems**

#### **3.1 Information Technology Staffing and Responsibility**

The key unit within the HPD responsible for information technology (IT), including system operation, maintenance, and development, is the Systems Services Division. Organizationally, Systems Services is directly under the Assistant Chief for Operations Support.

Beginning in the early 1970s, an HPD sworn officer headed the Systems Services Division. This officer oversaw development of all the HPD computer systems and was the key person in the department on technology issues. When he retired in 1995, his responsibilities were divided between the senior HPD civilian programmer, who would have responsibility for the computer systems, and a sergeant, who would have responsibility for the radio systems.

In addition to the senior civilian programmer, there are two other civilian programmers in Systems Services, as well as a civilian hardware specialist who configures new hardware and troubleshoots hardware and network connectivity problems in the department. All three of the programmers have been at the HPD for approximately 20 years.

For assistance in developing their 1998 COPS MORE funding request, the HPD (at the urging of the city manager's office) turned to an outside consultant, who conducted a series of group IT meetings with police and other city staff. The proposal requested \$1.7 million for a comprehensive geographic information system and for major enhancements to the HPD's computer-aided dispatch, records, and booking systems.

#### **3.2 Historical Development of Information Systems**

Initial versions of the major information systems in the HPD were developed in-house by HPD Systems Services personnel over a 10-year period from the late 1970s to the

late 1980s. Some modules were written for a now-retired Burroughs mainframe and subsequently ported to an IBM AS/400 mainframe, which is the HPD's current hardware platform for these systems. Other modules were written directly on the AS/400. Three HPD civilian programmers, who are still in the Systems Services Unit, developed these systems over this period, with each programmer taking primary responsibility for one of the three main systems – computer-aided dispatch, case incident reporting, and booking.

Since their initial development, the systems have been enhanced and modified in a number of ways. Currently, an effort is under way to restructure the system databases and make the systems year 2000 compliant.

Thus, unlike the vast majority of medium- to large-size police departments in the country, the HPD has not purchased its main information systems from outside vendors. According to department personnel, the decision to develop these systems in-house was based on the Systems Services commander's belief that he could build a system that was better than any vendor system. Today, many HPD staff interviewed for this project appear to view their nonreliance on outside vendors for the HPD's systems as a major advantage. Systems Services staff have been able to customize their systems and add new features as desired. On the other hand, the HPD is dependent on the three Systems Services programmers to maintain and enhance their major systems. For all practical purposes, they are the only persons who can perform these tasks on a timely basis. Some HPD commanders expressed concern over the dependence on the three programmers, while others felt that having civilian staff who are intimately familiar with the information systems was a huge advantage.

At the same time, the police department has operated and continues to operate their information systems without major assistance from the city's Information Services (IS) Department. Information Services either operates or maintains information systems for most other city agencies. On the other hand, IS purchases all computer equipment for the HPD. Thus, with the exception of purchases under State or Federal grants made directly to the HPD, the HPD cannot purchase their own equipment. This arrangement has been in effect since the mid-1990s.

### 3.3 Information Systems Related to Professional-Era Policing

Computer-aided dispatch (CAD) and a variety of records applications run on one of two HPD AS/400 mainframe computers. All of the applications are written in COBOL.

#### *Computer-Aided Dispatch*

The HPD dispatch center, located in the main HPD headquarters building, performs call-taking and dispatch functions for the HPD, as well as for Hartford's fire department and ambulance services. According to the HPD, approximately 350,000 dispatches of emergency resources are made annually. There are five call-taking workstations and six dispatch workstations in the dispatch center. While only two of the five call-taking positions are usually staffed at any given time, all six dispatch positions are typically staffed – two for fire dispatching, one for emergency medical services (EMS)



dispatching, two for police dispatching, and one for “info channel” requests. The person staffing the info channel position handles requests for information (e.g., warrant searches and name searches) from field units. There is also a supervisor position, from which all call-taking and dispatch operations can be monitored.

The HPD’s computer-aided dispatch system – called HARTBEAT – has been used since 1988. As noted above, it was developed in-house, with the majority of the programming performed by the Systems Services senior programmer.

The CAD functions include all the features one would expect from a full-featured CAD system. For example, ANI/ALI modules automatically display on the call-taker’s screen the phone number and address associated with incoming calls. A call-management function handles calls awaiting dispatch. The system provides dispatchers with a recommended unit to dispatch, based on configurable dispatch algorithms. According to dispatch personnel, the algorithms were updated within the past two years to give a higher priority to the police unit assigned to the area from which the call originated, with the hope that the units could develop more of an area identity – an important community policing objective. Specifically, the dispatch algorithm now suggests holding a low-priority call for service for as long as 45 minutes if the beat car is not available.

Dispatchers provide a basic level of information to police units that are dispatched to a call for service, including the address, type of call, and any other information provided by the caller. In addition, the dispatcher will relay any “responder alerts” associated with that address. These alerts, indicating some special condition at the address (e.g., a dangerous person lives at the address), can be entered by any dispatcher and will appear automatically on the dispatcher’s screen when a future dispatch is made to that address. In addition, the CAD system automatically notifies the dispatcher if the address is one that has generated a large number of calls for service during the past year. Other information – such as whether persons with warrants live at the address or information about the most recent call for service at that address – must be retrieved by the dispatcher using a separate terminal to the in-house records system. Finally, while most patrol cars have laptop computers installed, dispatch information is not transmitted via the laptops; as discussed in Section 3.6, the laptops currently can only query National Crime Information Center (NCIC) and State-level vehicle and person files.

Dispatch personnel report that the system appears to be extremely reliable. One dispatch supervisor indicated that he knew of no instance in which the system completely “crashed” and call-takers and dispatchers had to resort to using the backup card system.

### *Records Applications*

The HPD has a variety of police records applications. Most important is the case-incident reporting system (CIRS), which maintains information recorded on crime and other incident reports completed by officers. Currently, officers complete incident reports and submit copies to HPD records clerks, who enter a subset of the informa-

tion on the forms into CIRS. (As noted later in this section, in the future officers will enter their own reports using laptops.) Among the data elements not entered is the case narrative, a weakness in the current system noted by several officers and supervisors interviewed for this report. Approximately 65,000 records are entered in CIRS each year. As recently as two years ago, there was typically a two- to three-week backlog of incident reports to enter in CIRS. However, the HPD has managed to reduce that backlog to two to three days.

An adult booking system is used in the detention facility at police headquarters to help detention personnel establish the identity of new prisoners, enter identification information about the prisoner, enter arrest charges and related information, record bond and other release information, and prepare paperwork for the prisoner's appearance in court. Approximately 20,000 arrests are processed annually. The HPD recently purchased a live scan system for fingerprinting, but the system only takes the fingerprints and produces the fingerprint card. Eventually, the HPD hopes to upgrade this system so that fingerprint images can be stored and automatically transmitted to State and Federal automated fingerprint identification systems (AFIS). Booking officers use a separate terminal to the HPD's warrant system and the NCIC system to determine if the prisoner has outstanding warrants. Detention staff noted that their inability to identify prisoners based on fingerprints is not a serious problem, since other techniques based on the prisoner's name, nickname, scars, marks, and tattoos provide sufficient information to establish the prisoner's true identity in nearly all cases.

Other records applications in use at the HPD include systems for wants and warrants (in which approximately 6,000 entries are made annually), accidents, field interviews, parking tickets, vehicle towing, and nicknames.

### 3.4 Information Systems Related to Community-Oriented Policing

The HPD has substantial experience with geographic information systems and external information systems, as discussed below.

#### *Geographic Information Systems (GIS)*

Involvement with GIS stems from Hartford's participation in the National Institute of Justice's (NIJ's) Drug Market Analysis Program. In 1992, the HPD's research partner, ENFORTH Corporation of Cambridge, Massachusetts, developed a map-based "DMAP tool," which was a customized MapInfo application. The key user of the system was the HPD's Crime Suppression Unit, which at the time was the key police resource for the enforcement component of the DMAP program, called COMPASS. The tool allowed users to map a number of different types of police records, including the location of drug arrests, citizen complaints regarding drug activity, drug overdoses, and Part I crimes. Although this system fell into disuse within two or three years (in part because of staff turnover), the system introduced the HPD to crime-mapping technologies and led to the creation of a number of mapping-related enhancements to the HPD's main records systems (e.g., including geographic coordinates in the street segment file and the ability to assign latitude and longitudes to all calls for service, crimes, and arrests).



Since then, one of the HPD's three civilian programmers has continued to use MapInfo on a regular basis. He has also learned MapInfo's application development language, MapBasic. In the mid-1990s, the programmer wrote a MapBasic application that automates production of a series of weekly crime maps for distribution to the HPD command staff. The maps show the locations of various Part I crimes in each of the three Police Service Areas. More recently, these maps have been incorporated into the HPD's weekly COMPSTAT information packets.

In some respects, the HPD is well-positioned to further expand its use of GIS, in large part because of excellent systems and procedures for geocoding their records. First, all data entry systems have address verification procedures, which helps minimize the number of non-geocodable addresses. The systems also automatically associate an address with its neighborhood, census tract, and block, thus facilitating aggregate-type analyses. Most importantly, Systems Services staff have developed geocoding routines (which involved storing the geographic coordinates of the start and end point of each street segment in their geobase) in their AS/400 mainframe applications to assign latitude and longitudes to calls for service, crime, arrests, field interviews, and other police records. Thus, when records are downloaded to a PC for analysis, the records are already geocoded. HPD programmers are also experienced at downloading raw data to personal computers (PCs) for import into mapping programs.

#### *External Information Systems*

The HPD is currently participating in an NIJ-funded project that provides community organizations with unprecedented access to computerized police information. While all police departments share crime information with the public, in most instances what is provided is aggregate information, such as the number of crimes of different types that occurred in various sections of the city (e.g., neighborhoods). Some departments provide incident-level crime information, either over the Internet, in hard-copy format, or on a diskette. The HPD goes one step further by providing to the community both incident-level information (including calls for service, reported crime, and arrest data) and easy-to-use software that can produce different types of reports and maps from the data. Details of this system – dubbed the Neighborhood Problem Solving System, or NPS – are discussed in Section 5.

In addition to the NPS system, the HPD's Vice and Narcotics Division operates a confidential drug tip line, which residents can call to anonymously report drug activity. The tip line was instituted in the early 1990s as part of the HPD's NIJ-funded DMAP program.

#### *Other Systems*

While not ordinarily considered information systems that support community policing, properly configured and well-maintained basic office automation software, coupled with comprehensive and ongoing training, can save an officer or commander a significant amount of time, potentially increasing the amount of time available for community policing. A number of staff interviewed for this project commented on problems related to office automation software, including outdated software, the

shortage of PCs and printers, and the lack of training provided to staff. Some staff have resorted to purchasing their own computer equipment. In general, the quality of PC equipment throughout the HPD appears to vary widely, with only a minority of staff having up-to-date equipment. As noted previously, with the exception of grant monies from the State or Federal government, the HPD cannot directly purchase their own equipment. The City's Information Services (IS) Department procures computer equipment for the HPD. Thus, IS has the difficult job of prioritizing equipment purchases across various city agencies in a budgetary environment in which, no doubt, the demand for equipment far outstrips IS's equipment budget.

### 3.5 Relationships and Experience with Vendors

Because the HPD's main information systems have all been developed in-house, the HPD has significantly less experience with IT vendors than most medium- and large-size police departments. There have been instances over the past 10 years, however, when outside vendors developed IT systems for the HPD.

The HPD has used different resource-allocation software packages to help with patrol scheduling, beat design, and deployment strategies. In 1990, the HPD purchased the Hypercube software package from ENFORTH Corporation of Cambridge, Massachusetts, and used that package for three to four years. The Patrol/PLAN resource allocation package was used as recently as 1997. More recently, Abt Associates, also of Cambridge, developed the Neighborhood Problem Solving (NPS) system for use by community crime-prevention organizations in Hartford. The system enables users to create a variety of reports and maps based on call-for-service, crime, and arrest information. In addition, the HPD hired a vendor for their mobile computing project (see Section 3.6).

Reliance on outside IT vendors may increase in the future, especially if Systems Services programmer staffing levels are not increased. Systems Services supervisors would like to create an additional position, especially for a developer with Windows experience, since none of the current programmers have extensive Windows development experience.

### 3.6 Future Acquisition and Development Plans

This section highlights a few of the HPD's planned system development efforts.

#### *Mobile Computing Project*

Since 1998, the HPD Systems Services Division has overseen a mobile computing project, the goal of which is to equip HPD patrol cars with laptops that enable officers to do direct entry of police reports and to access a variety of information sources. An outside vendor was hired to do the software development work for this project. Systems Services Division staff will develop software interfaces, as necessary, between the mobile applications and HPD data systems.



The first phase of the four-phase project is nearing completion. Many, but not all, of the patrol cars have laptops, and training in the use of the laptops has been provided to staff. Thus far, the main features of the software installed on the laptops include NCIC and State-level person, vehicle, and gun queries, and the ability to retrieve digital mugshots. Patrol officers interviewed have reacted favorably to the laptops and appear to heavily use the vehicle query function. The response time to queries also appeared to be excellent. Maintenance of the systems is a concern, however, and a number of laptops have needed to be repaired because of liquids spilled on the keyboard and other reasons.

Future software modules in the system include incident report writing, development of a regional crime database (with 39 neighboring cities and towns), interfaces to the HPD's CAD and records systems, and mapping.

### *COMPSTAT Information System*

In 1998, the HPD started weekly COMPSTAT meetings, which were modeled after the New York City Police Department's highly publicized COMPSTAT process. One project currently slated for development in 1999 is a prototype on-line information system to support these COMPSTAT meetings. Funding from a COPS Office Advancing Community Policing grant will support this work. The overall goal of the effort is to develop an information system that can be used during the COMPSTAT meetings to display police information on computerized maps. This system will supplement the current COMPSTAT handouts, which include a vast array of statistical and map-based information, by adding an interactive query element to the meetings.

As currently envisioned, the system, which will be usable by HPD staff with minimal computer training, will have a number of features. The most basic feature of the system will be the ability to display police data sets on a computerized street map. The data sets will include citizen-initiated calls for service, reported crimes, field interviews, and arrests. The system will also be able to display non-police data on a map. Users will have the ability to add layers such as neighborhood boundaries, public housing projects, schools, buffer zones (e.g., 1,500 feet) around schools, and other landmarks to the map display. Users will be able to control the display of police and non-police data sets on the map by "turning on" and "turning off" each layer. Users will also be able to easily focus the map ("zoom") on various map features, such as specified neighborhoods, landmarks, and addresses. For example, a user will be able to ask that the map display area encompass only an area within 100 feet of a specified address. Users will be able to specify the desired date and time range of the data to be mapped. Pre-specified date ranges such as "Last 28 Days" and "Last 7 Days" and pre-specified time ranges such as "8 AM to 4 PM" will be provided. Finally, users will be able to select map icons (e.g., an icon representing an arrest) and display in tabular form the information associated with that icon (e.g., the date, time, and address of the arrest).

This system will operate in the HPD's new COMPSTAT conference room, which will include systems for projecting computer output onto wall-mounted screens. If the prototype system produces the expected results, the HPD hopes to obtain additional

funding to extend the accessibility of the system to other HPD staff, beyond those attending the COMPSTAT meetings.

#### *Database Redesign and Y2K*

Systems Services Division programmers are currently working on modifications to the three major police information systems – computer-aided dispatch, case-incident reporting, and booking – that involve a redesign of the system’s underlying databases. As part of this effort, the programmers will modify the systems, as necessary, so that they are year 2000 compliant. The primary weakness that these enhancements are attempting to overcome is that each of the major systems – including CAD, case-incident reporting, and booking – exists in a separate database. Thus, a name or address search of all the HPD’s information systems requires individual searches in each of the major systems. When the redesign is completed, all the major systems will be linked, so that a single name or address query will search all the major information systems.

## **4 Analysis Methods Used**

### **4.1 Professional-Era Analysis Methods**

As noted in the previous section, the HPD has invested considerable resources in developing, operating, and maintaining their CAD and records systems. This section summarizes the extent to which computerized information is accessible to HPD staff. The discussion of access to information provides a useful context for a review of the analysis methods being used in the department.

HPD staff generally use one of four methods for accessing computerized information. The first method is terminal access to the HPD’s AS/400 mainframes via the HPD’s token ring network. Terminals are scattered throughout the headquarters building and are at a number of remote sites, including the PSA substations and the local FBI headquarters. At these terminals, staff can access the HPD master menu. From the choices on the master menu, screens can be displayed to allow queries against a number of different applications, including the criminal history system, the case-incident reporting system, the CAD system, wants and warrants, and field interviews. The search capabilities for these applications vary from searching just one or two fields (e.g., a name can be entered and queried) to searching any field in the database (e.g., the field interview system allows one to search any one or more fields). Common queries include retrieving criminal history records on a specified offender and retrieving information related to a specified crime or incident. The Crime Analysis Unit has a separate query menu, as discussed later in this section.

This terminal-based system is relatively easy to use and the query response time is good. The system could be improved in a number of ways, however. For example, the number of terminals is limited; there are only two for the entire patrol division – one for the patrol commanders and one for the patrol officers. Another problem with the current system configuration is that some terminals did not have printers attached to them. Also, a number of staff commented that they wished that the case-incident narratives were automated. Finally, a number of officers and supervisors noted that a sig-



nificant amount of training is necessary to enable staff to effectively use the terminals; for new recruits, this could be accomplished by including training in the use of this system at the HPD training academy.

A second method of access is relatively new but will be increasingly important over the coming years: access to computerized information from laptops in the police cruisers. As noted in Section 3, currently the laptops can query NCIC and Connecticut State criminal justice systems and retrieve digital mugshots.

Third, the output of some canned reports are routinely distributed to HPD staff. The most important of these reports is the weekly COMPSTAT report, which is distributed to attendees at the weekly COMPSTAT meeting, as well as to other HPD commanders. The reports are approximately 100 pages in length and consist of a variety of weekly, monthly, and yearly counts, pin maps, and lists. The HPD command staff view the COMPSTAT process as critical to their goal of increasing command staff accountability.

Finally, staff make requests for special reports. Requests appear to be made frequently by the senior command staff (e.g., for reports for discussion at a city council or community meeting), by investigative staff (e.g., for a list of active warrants in a particular neighborhood), by HPD staff preparing grant applications, and by the media. Requests for special reports go through the Crime Analysis Unit. If Crime Analysis staff are not able to fulfill the request themselves, the request is passed on to one of the programmers in Systems Services. Because these programmers designed and programmed the systems, they can respond to a wide variety of requests in a timely manner. For example, the programmers were able to tailor the COMPSTAT reports to specifications provided by the command staff. The response time to requests for information appears, in general, to be good, considering that the requests go through the channels described above. In fact, many command staff interviewed expressed complete satisfaction with respect to their information requests. Nevertheless, more complicated requests and requests from the media or the community must be prioritized against the programmers' system development and maintenance tasks. In addition, it appeared that some HPD staff were somewhat hesitant to request special reports, in part because they perceived that it was a burden on the Crime Analysis and Systems Services staff.

### *Crime Analysis*

The HPD's Crime Analysis Unit consists of a sergeant and three officers. No civilian staff are in the unit. The crime analysis staff, who work at the main headquarters building, have all been assigned to this unit within the past two years. The analysts recently attended a conference of the International Crime Analysts Association to learn more about crime analysis and how other departments structure this unit.

Compared to other HPD staff, crime analysis staff have an expanded set of menu options for querying and running reports based on data residing on the AS/400s. Most of these menu options run canned reports that crime analysis staff use to prepare internal and external HPD reports, including Uniform Crime Reports (UCR), month-



ly Part I crime statistics, and public-housing-development crime reports. In addition, menu items exist for reports required by different Federal grants (e.g., arrest totals in the Stowe Village public housing development for the Weed and Seed project). Some reports are downloaded into a PC-based spreadsheet, where crime analysis staff reformat the data and compute various totals. In addition, crime analysis staff periodically prepare Crime Analysis Bulletins.

Crime analysis staff do not have access to raw police data. As a result, many requests for information from HPD staff that are funneled through the Crime Analysis Unit are in turn forwarded to the programmers in Systems Services. The ability to “slice and dice” raw data is required for more sophisticated types of crime analysis. For Hartford, providing crime analysis staff with raw data would require not only systems development work, but also technical training for crime analysis staff on how to manipulate raw data.

## 4.2 Community-Oriented Policing Analysis Methods

The types of analysis relevant to community policing – community analysis, problem analysis, program evaluation, and policy analysis – have been undertaken to a limited degree at the HPD. In most cases, they have been performed in conjunction with a Federal grant program that explicitly calls for this type of analysis. For example, Abt Associates recently completed an evaluation of Hartford’s Weed and Seed program. The evaluation report included the results of neighborhood resident surveys and analyses of computerized police department data.

An initiative just beginning in the North PSA funded by the COPS School-Based Partnership program will expand community policing-based analysis methods at the HPD. Under this program, a problem-solving approach will be utilized to analyze crime problems at a school in the North PSA, to develop and implement solutions to the problem, and then to assess the impact of the actions taken. The specific problem under investigation is the safety of elementary school children while on their way to and from school. A recent Weed and Seed survey identified this problem as one of the most serious confronting school children. A partnership with a nearby middle school will be formed as part of this effort.

## 5 Use of Information

The ISTEP conceptual model identifies seven information domains that are critical to the successful implementation of community policing. The seven domains are community interface, inter-organizational linkages, work-group facilitation, environmental scanning, problem orientation, area accountability, and strategic management. In each of these domains, information technology can, if properly applied, greatly enhance the effectiveness of community policing.

Each of the five police departments that ISTEP staff have visited excels in one or more of the seven domains and, by design, the case study reports emphasize those particular domains. The HPD, as noted in Section 3, has a unique technology-based approach to sharing information with the community that presents a possible model for other



departments with respect to the community-interface information domain. Section 5.1 provides an overview of this approach, while Section 5.2 discusses the other six information domains.

### 5.1 Community Interface

#### *Origin*

The origin of Hartford's community interface is linked to the city's Comprehensive Communities Program (CCP). In 1994, Hartford became one of 12 cities to receive a CCP grant from the U.S. Justice Department's Bureau of Justice Assistance. According to Hartford's CCP proposal, the project sought to mobilize the community, to expand community-oriented policing by involving the entire department, and to develop community-oriented government. A key component of Hartford's strategy was the formation of problem-solving committees in each of the city's 17 neighborhoods. In many neighborhoods, the problem-solving committees consisted of residents who were already active in the existing neighborhood organization. In other neighborhoods, problem-solving committees represented entirely new structures in the neighborhood. The committees were charged with identifying and prioritizing neighborhood problems and, with the help of city agencies, implementing solutions to the problems. Large neighborhood-level meetings of residents and other stakeholders were held to select members of the problem-solving committees, many of whom were active participants in community organizations that existed prior to CCP.

CCP provided assistance to the problem-solving committees in a number of ways, two of which are particularly relevant to this report. First, the problem-solving committees were eligible to receive personal computers, including standard business productivity software and a laser printer. Many problem-solving committees immediately took advantage of this offer; others took over two years to acquire their computer. Second, CCP provided funds for an outside consultant to conduct problem-solving training courses for the problem-solving committees. The courses focused on recognizing problems, analyzing problems, developing strategies, implementing strategies, and assessing results. This same consultant provided problem-solving training to the HPD.

#### *Information Needs Assessment*

In conjunction with the problem-solving training, representatives of the problem-solving committees met with CCP, HPD, and Abt Associates staff to determine what types of information would be most useful for helping them do problem solving. A brainstorming session produced a long list of information that the problem-solving committee representatives felt would be useful. The list contained three general types of information needs:

- On-line discussion group information. Representatives expressed a desire for a mechanism that allows problem-solving committees to discuss neighborhood problems and solutions to those problems.

- Text information. Problem-solving committee representatives wanted access to a host of basic information sources, including:
  - Neighborhood resources
  - Telephone list of city agencies
  - City Council meetings and agendas
  - List of blockwatches
  - Apartment/property owner associations
  - City budget
  - City ordinances/codes
  - Problem-solving committee problems and solutions
  - City services directory
  - City policies
  - Zoning board agenda
  - School services
  - Parks and recreation services
  - Economic development activities
  - Church resources
  - Adult education information
  - Health Department services
  - Library information
  - Community group activities
  
- Database information. Problem-solving committee representatives indicated they wanted access to information stored in databases that could be tied to specific addresses. The list included:
  - Reported crimes
  - Arrest reports
  - Police calls for service
  - Anti-blight list
  - Demographic information
  - Property ownership information/tax records/foreclosures
  - Housing court records
  - Licensing and Inspection records
  - Standing complaints

To meet the first and second types of information needs, an Internet-based CCP network was established. Trinity College in Hartford provided e-mail accounts for the problem-solving committees and other CCP officials, provided space on their server for a CCP Web home page, and set up a CCP e-mail distribution list, or LISTSERV. The City also made Internet software available to the problem-solving committees.

With respect to information stored in databases, a subsequent meeting was held with representatives of the HPD, the problem-solving committees, CCP staff, Abt Associates staff, and representatives of the various city agencies to determine whether the desired



information was automated and, if so, whether the data were complete, accurate, and timely. Unfortunately, it was determined that, with the exception of police calls for service, crime, and arrest data, other information was either not automated or out of date by several months, although projects were under way to improve the quality of the data. By contrast, police calls for service and arrest records were entered in real-time (i.e., while the call-taker talked to the person calling 911 and while the offender was going through the arrest booking process), and reported crime information was typically automated about one week after the police officer submitted his or her completed crime report.

At about this time, the National Institute of Justice released a solicitation seeking proposals designed to support community policing technology. Specifically, NIJ sought to fund efforts designed to improve police-citizen cooperation and communication and increase police and citizen ability to solve community problems in an innovative manner. Abt Associates, with the support of the HPD and the Hartford CCP project, subsequently applied for funding to develop a Neighborhood Problem Solving (NPS) System that community organizations could use to help them with their problem solving. In light of the findings of information needs assessment, the proposal called for developing a system that would provide the problem-solving committees with access to police calls for service, crimes, and arrests. The proposal was eventually funded and work started in mid-1997.

### *System Development*

Development of the system's functionality began with a survey of the problem-solving committees to determine what type of police information would be most useful, and what would be the most useful formats for presenting this information. Based on written survey responses and follow-up telephone conversations with respondents, it was clear that the respondents felt that the three types of computerized police data – calls for service, crimes, and arrests – were all potentially useful for problem solving. In addition, respondents expressed a desire to have five basic types of reports in the system: a detail list that shows in tabular form information about each event (i.e., calls for service, crimes, or arrests); a “top 10” list that shows the 10 most common types of events; an event trend list that compares the number of different types of events in two different time periods (e.g., year-to-date 1998 vs. year-to-date 1997); a time trend graph that shows the number of events by day, week, or month; and a map that shows the geographic location of events, with the size of the icon proportional to the number of events at that location.

In order to take advantage of the latest software development tools, Abt Associates staff decided to develop the Neighborhood Problem Solving System for the Windows 95 and NT operating systems. In terms of system software, an approach that emphasizes the use of pre-existing software “components” was employed. The specific tools that were used included Microsoft Visual FoxPro, Blue Marble Geographics GeoView LT OCX, and Microsoft Graph.

In terms of the overall design of the user interface, two main options were considered. The first “fill-out-the-form approach” involves presenting the user with a form, pre-

sumably on a single computer screen, that the user fills out according to the desired report. This approach was used in the initial version of the Chicago Police Department's ICAM system, a system used by Chicago police officers to produce maps and crime reports. The second approach – the “wizard” approach – involves a series of screens, each of which presents the user with a small number of options. The user goes from screen to screen selecting choices and then generates the desired report. Many commercial software programs use this approach for installing their software and for completing complex tasks. After discussions with users and with Abt Associates computer training staff, the wizard approach was selected. In retrospect, this approach worked well. Each time the system was demonstrated to potential users, they immediately felt that they could easily run the software.

One important difference between an analysis tool developed for internal police use and one developed for use by community groups involves the issue of what data to make available to the users. While much of the information a police department collects and maintains is “public” information and, technically, available to the public, police departments routinely withhold certain information from public view, such as information about ongoing investigations, juveniles, and victims. In addition, one frequently used method of partially withholding crime information is to publish the block where crimes occurred, rather than to the exact street address. HPD staff, in considering what information they would allow the problem-solving committees to access, also considered the difference between providing information in hard-copy format and providing it in an electronic database that can be easily queried and aggregated. The HPD decided that no identifying information on arrestees, suspects, or victims would be included in the system. The only person-specific information allowed would be the arrestee's age, race, and sex. The reason that identifying information was not provided on arrestees is that, in many of these cases, the charges will eventually be dismissed and, hence, the HPD did not want an arrest-based electronic database with identifying information to contain inaccurate criminal history information. Also, the specificity of the location information would vary, with the street number and street name provided for arrests, but only the block and street name provided for calls for service and crimes. On the other hand, geographic coordinates of the street number and street name are available for all three data types.

### *System Implementation*

Programming of the NPS system began in November 1997 and a beta-test version was available for installation in Hartford in February 1998. This version was installed and tested by staff at the Blue Hills Civic Association in Hartford. Blue Hills staff made a number of recommendations and identified a few bugs. An additional round of software modifications were subsequently made, and the final version of the software was released in June 1998.

When the system was installed, Abt Associates staff provided users with hands-on training, a user manual, and the most recent 25 months of citizen-initiated calls for service, reported crimes, and arrests for their geographic area of concern. These areas range in size from a few city blocks to about two square miles. Data updates are provided every two weeks. When the updates are delivered, the data are approximately



10 days to 2 weeks old (e.g., a delivery of data on February 1st will contain all calls for service, crimes, and arrests through approximately January 20th).

The NPS software has been installed on 18 computers located throughout the city of Hartford, 15 of which are located either at community organization headquarters or at community policing substations (i.e., offices located outside of police headquarters that are used primarily by police community service officers). While technically the computers in these locations housing the NPS software are available for public use, the targeted users in this project have been staff and members of community organizations, rather than the general public. Having a targeted set of users distinguishes this project from one that installs an NPS-like system at public kiosks for the express purpose of providing information to the general public.

At each installation site, there are one or more targeted users – persons who have been trained in the use of the system, who receive and process the data updates, and whose use of and reaction to the system will be monitored over time. Typically, these targeted users show other persons at their organization how to use the system. In some cases, the targeted user is a full-time staff member of a community organization. Some organizations, for example, have full-time staff that are community organizers assigned to specific neighborhoods. In other organizations, the target users are members of the neighborhood problem-solving committee who have other full-time jobs.

The configuration in the Blue Hills neighborhood is unique. In that neighborhood, the NPS system is installed on the computer at the Blue Hills Civic Association, the main grassroots community organization in Blue Hills. This computer supports the work of the Civic Association. The NPS software is also installed at a local college, where students provide support to a group of eight Blue Hills blockwatch captains. The students use the NPS system to prepare a four-page handout that depicts crime conditions in all of Blue Hills and in six subareas of Blue Hills. Each blockwatch captain receives the handout every two weeks.

Across the problem-solving committees, the system has been used in a variety of ways and for a variety of purposes, with the following results:

- The overall reaction to the NPS system has been favorable. Users have praised the system's ease of use and believe that the system provides valuable information to community groups.
- The frequency of use of the NPS system varies widely across the users. Some organizations appear to use the system regularly, on a weekly or biweekly basis. Others use the system more sporadically, in response to the needs of special projects. Others, while they express a high degree of interest in the system, appear to use the system infrequently, if at all. This variation in use was expected and in many ways mirrors the frequency of use of mapping software in police departments.

- Of the five report types available to users (i.e., the detail list, the top 10 list, the event trend list, the time trend graph, and the pin map), the pin map appears to be the most widely used report type.
- Of the three data types available to users (i.e., calls for service, crimes, and arrests), there does not appear to be a preferred data type across the various organizations. Some organizations appear to be most interested in calls for service; others appear to be most interested in arrests.
- The reports that users produce from the NPS system have been used in a variety of settings, including internal community-group planning meetings, neighborhood-wide meetings, meetings with police officials, and blockwatch meetings.
- Those reports appear to serve a variety of purposes, including finding out information about crimes on a specific street, locating properties that have multiple arrests associated with them, encouraging residents to report more crime to the police, informing residents about specific crime problems, and determining what action the police have taken in response to information provided by community groups on hot spots.

## 5.2 Inter-Organizational Linkages

The HPD has worked closely with other government agencies on a number of projects, many of them funded through the U.S. Department of Justice. The best example is the city's Weed and Seed project, which started in January 1995 in the Stowe Village public housing development. The HPD is the grantee on this project. The HPD teamed with other agencies and organizations to implement a number of youth, social service, and employment programs in Stowe Village. A particularly successful partnership was established with the State Department of Social Services. DSS opened an office in Stowe Village in 1996 and has since worked with HPD and Hartford Housing Authority staff to help secure employment for a number of Stowe Village residents. The HPD has also worked closely with the Board of Education, in particular the administration of the elementary school that is adjacent to Stowe Village. This relationship will expand under a School-Based Partnership grant that the HPD recently received from the COPS Office, as noted in Section 2.

## 5.3 Work-Group Facilitation

In the HPD, work-group facilitation has occurred primarily at the command level, through the COMPSTAT process, rather than at the officer level. As noted earlier, all senior level commanders attend weekly COMPSTAT meetings to review crime statistics, existing problems, and ongoing problem-solving efforts in each of the three Police Service Areas. Less formal attempts are also under way to increase communications between other units.



### 5.4 Environmental Scanning

Recent attempts at environmental scanning have involved conducting residential surveys. Examples include the surveys of youths living in Stowe Village, conducted for the Weed and Seed project. The initial survey, conducted in 1996, identified the most desired after-school and summertime activities. The results of this survey helped prioritize which programs to fund under Weed and Seed during the subsequent year. The youth survey conducted in 1997 asked youths to rate the seriousness of a number of different problems. Harassment and threats received while walking to and from school rated as the most serious problem for students at the school adjacent to Stowe Village. As a result, this particular problem has become the focus of the HPD's School-Based Partnership project.

### 5.5 Problem Orientation

As discussed in Section 2.2, the HPD believes that it has developed a problem-focused orientation over the past three to four years through the use of the COMPSTAT process, through increased decentralization, and through new procedures that require weekly descriptions of problems and solutions in assigned areas. Within the field police force, a problem orientation exists most forcefully within the Community Service Officer (CSO) unit. CSOs assigned to neighborhoods work with residents and community groups in the neighborhood to identify problems and craft solutions to those problems. Recently, CSOs and neighborhood groups have utilized the Neighborhood Problem Solving System, described in Section 5.1, to help identify and prioritize problems. One technological approach to problem identification is a feature in the HPD's CAD system that identifies the locations in the city that generate the most calls for service. As noted in Section 3, the CAD system automatically notifies dispatchers when a call is generated from one of these locations.

### 5.6 Area Accountability

As noted earlier, each of the three HPD deputy chiefs has 24-hour-per-day operational responsibility for one of the Police Service Areas in the city. Detectives and other specialized units are now assigned to a specific PSA. Accountability for these areas is enforced through the COMPSTAT process. Also, as noted, the HPD's data systems are structured so that area-specific reports can be easily created by the Systems Services programmers.

### 5.7 Strategic Management

The department's overall goals, as well as a review of the previous year's performance, are outlined in the HPD's Annual Report and its Community Policing Plan. As noted, the current emphasis in the department at the senior command level is on the COMPSTAT process, and on using that process to enforce accountability among the command staff. Another important related initiative is a new quality assurance audit program designed to ensure that citizens are satisfied with the level of service they receive from patrol officers responding to calls for service. Patrol commanders must conduct

audits of two randomly selected calls for service per tour. The HPD developed a questionnaire that commanders administer via telephone to persons requesting a police response.

## 6 Summary

This case study has been based on a limited review of the HPD's information systems and on how personnel throughout the department use the information in these systems. Based on this review, a number of recommendations can be made that can guide future development work and funding requests.

The first recommendation concerns the main HPD information systems, which are housed on the department's AS/400 mainframes and include the CAD system, the case-incident reporting system, and the booking system. Unlike most mid-size police departments, the HPD developed its own systems, rather than purchasing them from a vendor. The systems appear to be extremely reliable and, given that the original system developers are still on staff at the HPD, there are few, if any, technical obstacles to modifying and enhancing these systems. When they were developed in the 1980s, the systems were no doubt considered state-of-the-art. However, considering the lifetime of a typical police information system, the HPD's main data systems are old. While we do not recommend replacing or phasing out these systems, the HPD must take steps to preserve its significant investment in these systems. An obvious first step, and one that is already under way, is making these systems year 2000 compliant. A second step is to develop a plan to recruit, hire, and train additional computer programmers in the event that one or more of the current Systems Services programmers are no longer available. For all practical purposes, the current programmers are the only ones who can make major changes to the system or make minor changes in a timely manner.

Aside from maintaining the existing major information systems, the most urgent need is to increase the accessibility – and hopefully, as a result, the utilization – of information in the HPD's data systems. Specific recommendations for achieving this are as follows:

- Expand query capabilities on AS/400 terminals. There are terminals scattered throughout HPD headquarters and at the police substations that provide authorized staff with limited access to the main data systems. The HPD should place a high priority on expanding the query capabilities on these terminals. At a minimum, there should be field-based query capabilities – that is, the ability to search on any field or combination of fields on the screen – for all applications, most importantly the case incident reporting system, wants and warrants, and booking. Field-based querying is currently only available for the field interview application. The number and type of “canned” reports could also be increased. Expanding this base level of query capability will encourage all staff – from patrol officers to the senior command staff – to increase their use of the information in these systems.



- Provide the Crime Analysis Unit with the ability to analyze raw data. The Crime Analysis Unit currently does not have access to raw CAD and records data that could be manipulated with PC database or statistical software. Providing this type of access could be accomplished by performing a daily download of a multi-year data set (for trend analysis) or a two to three month data set (for operational or investigative purposes) from the AS/400 to a database (e.g., Microsoft Access) on a CAU PC. Given proper technical training and software tools, CAU staff could use the raw data to perform more sophisticated analyses, which could potentially impact resource deployment, ongoing investigations, crime prevention activities, and other operational decisions made by HPD commanders.
- Develop the COMPSTAT information system and consider expanding access to the system. Weekly COMPSTAT meetings are the HPD's primary mechanism for strategic planning and for ensuring command staff accountability. With a grant from the COPS office, the HPD is planning to fund development of a prototype map-based information system to support these meetings and supplement the 100-page COMPSTAT meeting packet. If HPD commanders react favorably to this new system, the HPD should consider making this system accessible to staff throughout the department on their desktop PCs.
- Ensure that the mobile computing project is fully funded. The HPD has embarked on an ambitious multi-year mobile computing project. Once the project is completed, patrol officers and other field units will have access to a vast array of computerized information from their patrol cars. It is critical that this project be fully funded.

For each of the systems, it is essential that funding be secured not only for equipment and development efforts, but also for adequate training and maintenance of hardware and software. Equally important is developing clear expectations for the sworn staff as to how the information access through these systems should be used.

A final recommendation concerns basic office automation capabilities at the HPD. Major improvements are needed in PC hardware, office automation software (especially word processing), and communications software (including e-mail and networking). For example, properly configured word processing software (e.g., with templates for all HPD forms and memos) and a timely and relevant computer training program would reduce time spent on paperwork and enable staff to commit more time to community policing. An e-mail system would ensure delivery of important messages (resulting in greater accountability for new orders), encourage communications between units within the HPD, and allow greater communication with the community and other city agencies, all of which are critical for effective community policing.