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Crime Prevention Project (CPP), Guatemala

Activity Report: Short-Term Technical
Assistance Assignment on Development
of a Crime Observatory

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Development of a Crime Observatory
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Summary of Goals and Objectives

The goal of this assignment was to conduct interviews and fact-finding activities as a way to assess the capabilities of local institutions, potential sources of crime-related data, and institutional relationships that may be involved in developing a Crime Observatory in Guatemala.

The full Terms of Reference (TOR) document is found as an attachment to this report [Redacted]. The main tasks specified in the TOR were:

1. Interview key stakeholders who represent the interests of the national and municipal governments, along with other partnering organizations, to understand the context and environment in which the Crime Observatory will be established.
2. Collect information on data sources, including data availability, timeliness, geographic scale, and content. Investigate the data sources' utility for analyzing crime incidence and trends.
3. Learn about the institutional relationships among the key agencies involved in establishing a successful observatory.
4. Present initial findings and recommendations at the conclusion of the site visit.
5. Develop a final report that contains a summary of activities, findings, and recommendations.

Activities

- **Monday, May 9: Meeting with the Myrna Mack Foundation and Central American Business Intelligence (CABI)**

CPP project team members met with staff from the Myrna Mack Foundation and from CABI to discuss (1) the overall goals of the Guatemala Crime Observatory and (2) the approach they propose on how to implement and carry out the Crime Observatory activities. This included a discussion about relevant past activities conducted by these organizations, as well as a review of some of their proposed overarching goals for the project. The attendees stated their interest in improving access to data sources and access to results on crime trends and criminal activity. They want the observatory to serve as a trusted source for disseminating credible crime and safety data and findings. The group also highlighted their interest in making data available and fostering research in the academic community on violence and violence-prevention topics. They view developing recommendations for policy-based strategies as a longer-term goal.

- **Tuesday, May 10: National Statistical Institute (Instituto Nacional de Estadística)**

The National Statistical Institute (INE) is responsible for the national census, which was conducted in 2002 and will be administered again in 2012. INE also conducts a national

household survey (of approximately 14,000 household respondents); the upcoming household survey will include for the first time questions on perceptions of violence from citizens (the survey instrument is available for review). INE has ongoing data collection activities on the issue of domestic violence (physical, psychological, sexual incidents), for which they indicated they “routinely” compile data from the National Civilian Police (Policía Nacional Civil, PNC) on both lethal and nonlethal incidents of domestic violence. The data are collected nationally, with some coverage gaps. INE has produced multiple reports on domestic violence using these data. The RTI team observed that data for the national census are aggregated to fairly small geographic data-collection zones (similar to census tracts or block groups in the United States). These data collection zones are available as a layer in a geographical information system (GIS).

- **Tuesday, May 10: National Justice Commission (Comisión Nacional de Justicia)**

The RTI team met with staff from the Comisión Nacional de Justicia to understand their recent activities and results of their initial research into the operations of the Guatemalan criminal justice system. In their review, they examined the underlying legal framework of the justice system, collected and analyzed a snapshot of data from various agencies, and wrote a report and recommendations based on their findings. The Justice Commission plays a key role because of its legal status and because the various agencies of the criminal justice system are members of the Commission. The Commission does not collect primary data itself, but has the skills and mandate to understand the overall workings of the criminal justice system from outside any particular agency.

- **Tuesday, May 10: Ministry of Health (MINSALUD)**

RTI staff met with staff from the Ministry of Health to discuss the availability of injury and mortality data in Guatemala. There are 47 hospitals in the country (7 in the capital). They have some processes in place for collecting injury data, which from a violence perspective mainly encompass domestic violence and violence against women. Information flows from the bottom up; the Ministry has a paper instrument that is completed at the local level (hospital staff, etc.). Aggregate information is then entered into a database file (some larger hospitals in Guatemala City have electronic systems but these are not integrated with each other). The instrument includes whether the patient visit was for a repeat or new visit, demographic information, and checkboxes for domestic violence-related incidents or violence against women. Aggregate counts are collected at the municipal and district level and all are combined into a single aggregated count (domestic violence/violence against women). Overall these data might be useful at a national level, but the hospital system has very limited capability to capture information on other violent injuries for purposes beyond domestic violence or violence against women. For fatality data, information on homicides, suicides, and natural deaths is collected from death certificates. Variables in the fatality data include demographic data, date/time of death, type of death, location (address/municipality), and weapon type (in narrative).

- **Wednesday, May 11: Public Ministry (Ministerio Público, MP)**

RTI met with staff from the Public Ministry, who demonstrated the Integrated Computing Services (Servicios Integrados en Computación, SICOM) data system. It covers crimes from

1999 to present and can produce data on both crime incidents and victims. Data elements include the crime type, incident date/time, weapon involvement, incident location, modus operandi (MO), and information on evidence involved in the crime. Gang indicators are not captured systematically in the SICOM database. Producing statistics on “clearance rates” (proportion of crime incidents that result in arrest) is possible using the SICOM data. The MP staff reported that they are confident the SICOM data are national in coverage and are consistently captured even in rural areas. The MP does not have a process for routinely compiling data and disseminating to the public; this is done on an ad hoc basis by request. There are five MP offices in Guatemala City. MP staff indicated that many crime victims report directly to the MP as opposed to the PNC (the MP facilities had a large room for crime victims to report the occurrence of a crime). The MP data are divided into zones, which do not correspond to the PNC’s geographic policing units.

- **Wednesday, May 11: Court System (Organismo Judicial)**

The Organismo Judicial (OJ) tracks information on cases that are processed in the court system, which includes both criminal and civil cases filed by the Public Ministry. Data elements include the MP reference number, class, the judge assigned to the case, and adjudication outcomes by crime type. The existing systems contain records for cases that will go to trial. The same system is used for both criminal and civil court cases. When an incident enters the court system, the data from PNC or the MP are reentered into the OJ’s Web-based management database. The OJ staff reported that there is an 80% dismissal rate for cases filed with their office. Court-related measures are released to the public every 6 months or on an ad hoc basis when specific requests are made.

- **Wednesday, May 11: National Civilian Police (Policía Nacional Civil)**

The PNC collects information on crime reported to the police, although data at the level of specific incidents currently are not collected systematically across the country. However, the PNC assigns a geocode for data on emergency calls for service (011) for all of the country. While these data do not represent all confirmed crimes, they do represent a useful aggregate measure for crime, safety, and quality-of-life issues reported by the public. The data can be analyzed and aggregated at the address level as well as for neighborhoods or municipalities. The PNC has several computer workstations with current GIS installed, and its staff actively geocode or manually locate data on crime incidents by hand. Several staff members have been trained in the use of the GIS and these staff appear capable of generating geographically based crime statistics and map outputs. The 011 (calls-for-service) system is highly automated and is national in scope. Although calls-for-service contain many non-crime records, this system may be a useful source to track some types of overall trends.

The PNC also has a real-time system that allows the tracking of over 100 patrol cars in Guatemala City. It could be made to interact with the crime data that the PNC collects to assist in analyzing crime as related to patrol areas and police presence.

- **Thursday, May 12: Municipal Urban Health Observatory (Observatorio de Salud de la Municipalidad de Guatemala)**

RTI staff met with the Urban Health Observatory for Guatemala City and discussed the Crime Observatory's role in promoting health policy, prevention, and wellness for the greater community. Initiated in 2004, the Urban Health Observatory has developed an infrastructure and processes for collaborating with other organizations and for collecting and using data from other agencies (including agreements in place with Forensic Medicine, MP, and the PNC). As a tool for analyzing the data, the Urban Health Observatory created a matrix composed of 66 indicators, which is available from its website. One of the central goals of the Urban Health Observatory is to produce information that facilitates, supports, and informs decision-making and that meets the interests and needs of collaborating groups. Another goal is to create homogeneous data that can be compared across municipalities and countries. An inter-institutional council (which includes 30 nongovernmental organizations [NGOs]) helps oversee the Urban Health Observatory's activities and a technical analysis group (comprising seven institutions) directs the analysis functions. They have one dedicated data entry person, as some data are reported manually and other data in raw electronic form. They also maintain a public website where aggregated data and general information can be accessed. The GIS data include layers for transportation, water, social and demographic information, and certain violence indicators. Considering their staffing levels (only one person), they have presented a good level of detail and planning and a genuine desire to share information, both internally and externally. The Urban Health Observatory recognizes that one of its limitations is the unavailability of data at the submunicipal level (i.e., neighborhood or street-level data).

- **Thursday, May 12: Ministry of Government (Ministerio de Gobernación, MG)**

RTI met with the Director of the Citizen Security Observatory (Observatorio de Seguridad Ciudadana) at the annex office of the MG. This observatory was created in 2008, with support from the United Nations Development Programme (UNDP). It has a multidisciplinary team to gather and analyze crime-related data for a set of eight indicators. Its focus is on violent crimes, gender-based violence, robbery, and extortion. In addition, the Citizen Security Observatory regularly performs victimization surveys to find out how the populace views the government's efforts to fight crime, and the impact of crime as a fear factor. These surveys are internal and have not been made public yet.

The Citizen Security Observatory publishes a semiannual bulletin for the Ministry and the network of institutions that work with it. This network currently comprises the Urban Health Observatory, INE, GIS, National Institute of Forensic Sciences of Guatemala (Instituto Nacional de Ciencias Forenses de Guatemala, INACIF), Ministry of Public Health and Social Assistance (Ministerio de Salud Pública y Asistencia Social), and PNC.

This network sends monthly reports to the Urban Health Observatory, which geo-references the data and produces statistical reports.

- **Thursday, May 12: U.S. Department of State Narcotics Affairs Section (NAS)**

Members of the NAS presented details on the Police Intelligence System (Sistema de Inteligencia Policial, SIPOL) that is in place at the PNC. NAS also provided insights into some of the organizational issues inherent in implementing a computerized database like SIPOL throughout the PNC (lack of basic computing infrastructure, aversion to change in areas outside Guatemala City), and insight into strategic plans of the PNC (such as development of new leadership training schools to improve professionalism of the police). Although the system is in place at the central level, the precincts/districts either are not using SIPOL or are using an isolated version that does not readily connect to the main database.

- **Friday, May 13: Presentation of Initial Findings and Recommendations**

RTI staff met with representatives of the Myrna Mack Foundation, CABI, and the National Justice Commission to present preliminary findings and recommendations generated from the site visit activities. The meeting also included a discussion and clarification of the recommendations presented, including how they pertain to the plans for the Guatemala Crime Observatory moving forward. These findings and recommendations are discussed in more detail in the section below.

General Findings

During the site visit the team noted the following findings:

1. **Widespread support among partner institutions.** Overall, the national and municipal stakeholder agencies appeared to be willing to support the Crime Observatory activities. Agencies also expressed a willingness to share data as requested. Based on the interviews conducted, no potential agency partners were reluctant to share data or to participate in Crime Observatory activities.
2. **Skills and capabilities of partnering institutions.** The potential collaborating agencies possess a range of skills and capabilities with regard to tracking and maintaining data in information systems. Many of the collaborating agencies maintain information in databases and can retrieve summary or case-level information from these systems. These capabilities represent a good starting point that should help to overcome one of the principal challenges: access to data.
3. **Collection of victimization data.** The interviewees generally recognized the importance of collecting victimization data. This is a positive sign as typically it is useful to compare measures in victimization surveys to administrative crime statistics produced using police or prosecutor data. Multiple agencies—including the INE and the Urban Health Observatory in Guatemala City— either were conducting or are planning to conduct national or municipal-level victimization surveys.
4. **Data on gender-based violence.** There are also several data sources that capture information on violence against women and domestic violence. This includes a program

administered by INE that compiled police reports on these incidents. These sources could be used to support awareness and prevention planning for violence against women.

5. **Availability of GIS data.** GIS base data (streets, census boundaries, schools, and many cultural/economic facilities such as bars, hospitals, churches, etc.) are available in the PNC GIS. No deficiencies in base data were found.
6. **Lack of police crime-incident data.** The PNC has a plan in place to develop a national database for crime incident information. However, currently these capabilities are not yet in place nationwide. Incident data that are compiled at the PNC (staff at the PNC indicated that approximately 30,000 incidents are currently in the system) represent a subset of all incidents and only cover the Guatemala City area at present. An unknown proportion of incidents is reported directly to the MP and the relationship between these incidents and those reported to the PNC is not well understood. The data to support an overall analysis of criminal incidents in Guatemala do not currently seem to exist.
7. **National census data.** INE census data and household survey data are important sources for understanding the social context of crime. INE census data attached to detailed census geographic boundaries provides the denominator needed to calculate crime rates based on locations of incidents. Thus, if incident data also were more readily available, the census data could be combined with the GIS base data layers to produce critical geographically referenced demographic data. These data could be used to calculate crime rates.
8. **Challenges related to utilizing different data sources.** A number of potentially useful data sources are available at both national levels (e.g., MP, PNC, OJ, and INE) and municipal levels (e.g., Urban Health Observatory for Guatemala City). However, these data sources differ in terms of their content, coding schemes, and definitions used. As an example, while representatives from the National Justice Commission generally believe that the MP data set is the most complete source of crime data in the country, it remains unknown specifically how the MP compares to other available data sources, including data from the PNC.
9. **Limitations in crime data provided to the public.** One of the key themes across many of the agencies and institutions involved in the interview process was that data are made available to the public, but often only by request. Several agencies do make summary data available on a regular basis. Creating a more systematic and transparent process for providing access to crime data and information generated from these data would be a major strength. This could include consumers not only from the public but also from participating agencies.
10. **Challenges associated with collecting national data.** Some agencies indicated additional challenges associated with collecting data from areas outside of the larger municipalities and urban areas of the country. For example, the more rural areas have technical and physical limitations (e.g., lack of electronic systems; lack of Internet connectivity) but they also find it difficult to participate due to limited staffing and adherence to data collection policies in these areas. For example, NAS reported that for

SIPOL, the combination of the lack of computing infrastructure and the aversion to participation in more rural areas was a major limitation for collecting comprehensive data for that reporting system.

Follow-Up Recommendations

The recommendations we present here conclude with a diagram (*Figure 1*) illustrating the sequence in which the steps would take place.

1. Develop and implement the Crime Observatory functions in phases. A Crime Observatory could have some long-term and large milestones, including reductions in crime and violence. Yet these are often very challenging goals to reach, especially in light of the security and safety problems present in some communities. As such, the observatory should establish a series of short- and long-term goals and plan for a series of smaller, very reachable pilot projects that can help produce initial successes and visible output within the first year. These activities can then be expanded to other areas, such as conducting analyses that can inform crime policy-related activities, or developing the capacity to make data accessible to the academic community for longer-term research.

2. Establish geographic and topical focus and scale that meets the needs of the community-based crime prevention strategies. The available data are geographically precise enough to help identify and describe local crime problems as well as to show how they are changing over time, at the *neighborhood* level. However, an even more detailed geographical analysis would require street-level data. When possible, the observatory should incorporate data on individual addresses and intersections, for example, into the overall goals for collection and analysis.

3. Identify the end users of the data and how they will use the compiled and analyzed data. The observatory planners will need a process to help specify the data sources, the interests and needs of these end users, and any arrangements or agreements that must be established before the observatory can collect or use data.

4. Develop written memoranda of understandings (MOU) with key agencies. One of the key challenges is to create incentives for agencies to share data with the observatory. Establishing an MOU between stakeholder organizations and the observatory can help establish concrete roles and expectations. It can also lay the groundwork for data-sharing agreements, including specifying what data are to be accessed by other agencies (or the observatory); and determine a common interchange format. We would recommend for participating agencies to have a mutual agreement allowing direct access to their data (without modification of said data) rather than depending on periodic reports. This would provide real-time information to the participating agencies, and reduce the burden in generating these reports. At a minimum, the information should be accessible to the observatory.

The data-sharing agreement should detail the conditions under which the data are shared, and spell out how the data will be kept anonymous. The direct availability of data from multiple sources for the observatory is a key component in an effective analysis process.

5. Develop a systematic process for collecting, integrating, and analyzing data. To limit the burden placed on the participating agencies, the observatory should be in a position to work with data stored in multiple formats among the agencies. To facilitate this, each participating agency should put one person in charge of data sharing to support the observatory and other agencies. This means that the observatory implementers will need to develop specific points of contact at the agencies and improve capacity within them. Another critical goal should be to develop efficient processes for observatory staff to process and clean incoming data. The less time spent cleaning data, the more can be dedicated to analyzing crime, interpreting the results, and presenting and discussing the results among the observatory team. The PNC is in the process of tagging crime incidents with a location (via geocoding and manual mapping), but the scope of incidents being input currently is limited geographically. For the observatory to function properly, the planners must solve the issue of having all crime incidents throughout the country entered into a computerized database and having each incident uniquely identified and located geographically.

6. Collect the necessary data to effectively evaluate local crime prevention initiatives.

Measuring the effectiveness of crime prevention programs and initiatives is a key to sustaining local efforts, maintaining community participation, and improving the overall effectiveness of programs. For example, the team noted that Guatemala City has many social programs in place but little systematic evaluation of their impact. A goal should be to focus prevention activities in high-risk communities that have the greatest need. We recommend that the Crime Observatory include evaluation as a core component and measure the impact of intervention strategies. The most basic evaluation design would be to compare crime indicators before and after program implementation to document the impact of the intervention on intended outcomes, namely criminal incidents.

7. Design the observatory functions and operations to meet the needs of the stakeholders.

One of the central objectives of the observatory should be to provide data that can help the partner organizations improve their decision making. As such, the planners should design the observatory functions to address the information or policy needs of these agencies as well as the needs of users of the data. As part of this process, the observatory should develop a well-defined communication strategy that can keep stakeholder agencies and data/information users informed on observatory activities and outputs.

8. Develop effective partnerships with other observatories, including the Urban Health Observatory for Guatemala City. We believe the Urban Health Observatory in Guatemala City, and maybe some of the other existing observatories, could be effective partners for a crime-focused observatory, particularly with respect to initiatives focused in Guatemala City. For example, the Urban Health Observatory has a number of relevant data collection activities in place, such as a youth prevention program that focuses on reducing drug use and violence among the municipality's youth; and a study on the organization and operation of gangs in Guatemala and El Salvador. Other relevant data the Urban Health Observatory collects include psychosocial profiles of youth (collected annually from the municipality's high schools); homicides in Guatemala City, provided by the Human Rights Commission (which could be compared to homicide data from other sources such as PNC and MP); and a new victimization survey for the

municipality, which is planned to be administered annually. Some of these data could be very beneficial for the newly developed Guatemalan Crime Observatory.

9. Establish directed and specific types of analyses. Analyses such as these could lead directly to the improved targeting of crime prevention programs and interventions as well as to better understanding of the strengths and weaknesses of the existing data sources. For example, analyzing the MP versus PNC data by crime type over time (and across municipalities) would be very beneficial and might indicate that each data source has particular strengths for certain types of research questions. Other recommendations include identifying and prioritizing key crime indicators and identifying crime “hot spots,” or high rates of violence in particular areas (perhaps for certain types of crime, such as domestic violence). The goal should be to use the available data to better understand the dynamics of crime in particular areas, including the influences and changing patterns associated with particular forms of crime. For example, the observatory could prepare and present results on variations in time and space of street robberies within a particular municipality.

10. Develop standardized crime analysis techniques and output. Analyzing crime data can allow municipalities to learn things they did not already know or reinforce theories concerning crime in communities. We recommend that the observatory implementers prepare a basic template for analysis, for standardization both within sites over time and across sites. Items consistently analyzed could include

- the prevalence of gun versus non-gun crimes by type of crime (robbery, homicide),
- monthly trends in crime,
- victim characteristics (e.g., high prevalence rates for particular age groups or for women and men), and
- high-rate neighborhoods and specific locations. Some neighborhoods may have the highest rates for violence overall, while other areas may have high rates of violence only at night or for certain types of crime such as domestic violence.

These types of analyses can directly lead to improved targeting of crime prevention programs and police intervention. Another critical recommendation is to use population-based rates (for example, number of homicides committed per 100,000 residents) in some analyses to produce results that can be compared across municipalities and even neighborhoods. In some instances, certain areas may experience high rates of violence relative to the number of residents.

Establishing a core set of indicators would represent a useful first step toward developing a reporting system that allows for better surveillance and monitoring, comparing data within and across municipal boundaries (for example, homicide, robbery, assault, theft, suicides). We recommend that the observatory focus initially on analyzing and tracking a subset of the most critical indicators. In addition, we recommend that crime patterns be examined to identify the locations with the highest rates (crime hot spots) for certain types of crimes. Victim profiles (including age and sex) should also be developed to describe the types of persons who are most commonly victimized for certain types of offenses. In addition, obtaining and analyzing data on offenders (e.g., offender age, gender, residence, and ethnicity) could be an asset to the functions of the Crime Observatory. As an example, this type of data would allow for questions to be

addressed if robbery incidents were increasing and were believed to be associated with offenders from an outside location who were targeting residents from a particular area.

11. Establish a regular and periodic reporting process. The observatory should establish a reporting protocol for publishing a set of publicly available data and statistics at regular intervals. Even the most basic data and analyses results, if reported regularly and consistently, will have an influence on building trust in criminal justice institutions.

12. Integrate detailed, area-specific census population counts from the national census organization. The INE should share its census geographic boundaries and the associated demographic data summarized for each geographic boundary with the PNC and with the observatory. Having these GIS and demographic data available would promote the calculation of crime rates, which are one of the most fundamental crime statistics.

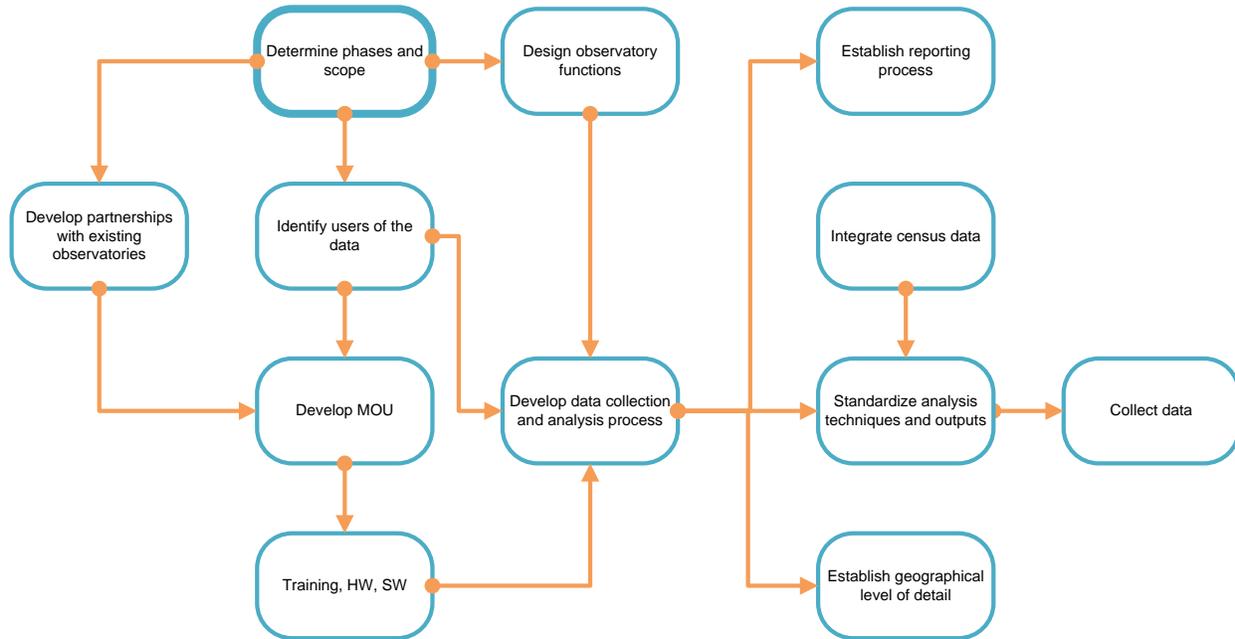
13. Hardware and software. Although the PNC geographical information systems are not integrated with PNC precincts throughout the country or with other criminal justice systems, the hardware and software components currently in use at the PNC headquarters could serve as a model for the observatory. Several computer workstations, high-quality GIS software, and color plotters and printers are essential to the basic functioning of a crime observatory. In general, there should be one GIS desktop computer for each GIS analyst in the observatory. To run recent releases of commercial GIS software, we recommend computers with quad-core processors of speeds greater than 3.1GHz, 4GB of RAM, and 500GB of disk space storage. Computer monitors for GIS workstations should be at least 21 inches. Peripherals should include a 42-inch color plotter and a desktop color printer. Other observatory staff, supervisors, crime analysts, and other non-GIS staff can get any standard, professional desktop or laptop computer capable of running standard office applications such as word processing, spreadsheets, presentation software, and databases. If budgets permit, we recommend ArcGIS technology from ESRI for desktop and server-based GIS applications. Further discussion of data sizes, applications requirements, and work flows would be necessary before we could recommend server hardware or software.

That said, the emphasis needs to be on the process for collecting and accessing information rather than on the procurement of computer equipment.

14. Crime analysis and GIS training. Training should teach the fundamental skills essential to the crime observatory: basic crime analysis techniques using spatial and nonspatial software. Online and instructor-led classes can be used for this purpose and many are readily available. But one of the keys to a successful observatory is that the staff who are trained in these techniques are able to use them regularly so that they continue to develop their skills over time and do not lose them to disuse. Therefore, it is important to hold trainings for observatory staff only when all the components (hardware, software, and data) are in place for them to start working, perform refresher trainings after a few months of operation, and encourage the formation of a users' group. The users' group should be composed of staff participating in the data collection and analysis at the different organizations, as a way to provide mutual support, share experiences, and reinforce the dialogue among organizations. This effort can be buttressed through a series of

initial workshops to provide the underlying organization until this group can perform autonomously.

Figure 1. Recommended steps for establishing observatory operations



Attachment: Terms of Reference [Redacted]