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THESIS

THE CALIFORNIA LAW ENFORCEMENT COMMUNITY'S INTELLIGENCE-LED POLICING CAPACITY

by

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December 2010

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THE CALIFORNIA LAW ENFORCEMENT COMMUNITY'S INTELLIGENCE-LED POLICING CAPACITY

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ABSTRACT

Hindsight gives the nation much clarity regarding the cause of the failure to prevent the tragic events of 9/11. Calls for reform challenge the intelligence community, and law enforcement in general, to create the collaborative capacity to connect the dots, dare to imagine, and become accustomed to expecting the unexpected. Throughout the various reformation efforts over the last nine years, one central theme endures: the ability to share intelligence across interagency and intergovernmental barriers is imperative. The inextricable link between foreign and domestic intelligence demands that changes be made to smooth the continuum of efforts from public safety, to homeland security, to national security. If the quality of intelligence in this continuum is directly related to the depth and breadth of information available, then the participating agencies must be fully networked. Such a network is one way to transform the unknowingly relevant into potentially actionable intelligence. How else can domestic events be understood in an international context (or vice versa)?

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LIST OF ACRONYMS AND ABBREVIATIONS

ACIC	Arizona Crime Information Center
ARIES	Automated Regional Information Exchange System
ARJIS	Automated Regional Justice Information System
BJA	Bureau of Justice Assistance
CA	California
CAD	Computer Aided Dispatch
CalEMA	California Emergency Management Agency
CIA	Central Intelligence Agency
CJIS	Criminal Justice Information Services
COMPSTAT	Computerized Statistics
COP	Community-Oriented Policing
CSO	Community Services Officer
DHS	Department of Homeland Security
DoD	Department of Defense
DOJ	Department of Justice
ELVIS	Tucson, AZ mug shot system
FBI	Federal Bureau of Investigations
FI	Field Interview
GISI	Gateway Information Sharing Initiative
GIWG	Global Intelligence Working Group
GJXDM	Global Justice XML Data Model
Global	Global Justice Information Sharing Initiative
HIDTA	High Intensity Drug Trafficking Areas
HMIC	Her Majesty's Inspectorate Constabulary
HSGP	Homeland Security Grant Program
IACP	International Association of Chiefs of Police
IC	Intelligence Community
ILP	Intelligence-Led Policing
ISE	Information Sharing Environment
JPA	Joint Powers Agreement

JRIES	Joint Regional Information Exchange System
JTTF	Joint Terrorism Task Force
KCC	Knowledge Computing Corporation
LEISP	Law Enforcement Information Sharing Program
LEO	Law Enforcement Online
LInX	Law Enforcement Information Exchange
LEMA	Law Enforcement Management and Administration Statistics
MOA	Memorandum of Agreement
NCISP	National Criminal Intelligence Sharing Plan
N-DEx	National Data Exchange
NIEM	National Information Exchange Model
NIJ	National Institute of Justice
NIM	National Intelligence Model
OES	Office of Emergency Services
RIMS	Regional Information Management System
RJIS	Regional Justice Information System
RMS	Records Management System
PERF	Police Executive Research Forum
POP	Problem-Oriented Policing
SAR	Suspicious Activity Report
SARA	Scanning, Analyzing, Responding, and Assessing
TLO	Terrorism Liaison Officer
TPD	Tucson Police Department
UAAIL	University of Arizona Artificial Intelligence Lab
UK	United Kingdom
US	United States
VINE	Victim Information and Notification Everyday
XML	Extensible Markup Language

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I. INTRODUCTION

A. PROBLEM STATEMENT

In 2007, the Homeland Security Council defined "homeland security" in its document "National Strategy for Homeland Security" as "a concerted national effort to prevent terrorist attacks within the United States, reduce America's vulnerability to terrorism, and minimize the damage and recover from attacks that do occur" (Homeland Security Council, 2007, p. 3). The "National Strategy for Homeland Security" also calls upon law enforcement agencies to increase their situational awareness within the communities they serve with the implementation of intelligence-led policing (ILP) (Homeland Security Council, 2007, pp. 19–20).

However, according to David Carter and Jeremy Carter, there is no universally accepted definition of ILP (2009, p. 315). ILP is defined as a process resulting in an intelligence product for decision makers (United States Department of Justice, Bureau of Justice Assistance [USDOJ, BJA], 2005, pp. 3–4), as an approach built upon the tactics of various policing model, such as community-oriented policing (COP) (Carter, 2004, pp. 41–44; Loyka et. al., 2005, p. 8; Peterson, Morehouse & Wright, 2002, pp. 13–16), and as a collaborative philosophy (Fuentes, 2006, p. 3). Despite its different meanings, ILP serves a purpose in policing: an effective ILP program provides law enforcement managers and executives with an actionable intelligence product used for sound decision making, strategic targeting, and more efficient resource allocation, whereas lack of clarity and the inefficient allocation of resources hinder an agency's ability to detect and prevent acts of crime and terrorism and to save lives.

As a business model, ILP involves six steps, referred to as the "Intelligence Cycle": planning and direction, collection, processing and collation, analysis, dissemination, and reevaluation (Peterson, 2005, pp. 6–7, Peterson, et. al., 2002, pp. 79–118, USDOJ, BJA, 2005, p. 3; Joint Chiefs of Staff, p. x). Each step in the process may use different technology, have varying training and legal requirements, and involve different divisions, units, or bureaus. For the purposes of this thesis, the components of

the intelligence cycle used to evaluate the California law enforcement community's ILP capacity involve planning and direction, collection, and the dissemination—including the sharing—of crime- and terrorism-related information.

The planning and direction components require law enforcement executives to recognize the dual imperative of collecting crime- and terrorism-related information in a more collaborative, cohesive, and integrative fashion in order to enhance the California law enforcement community's ability to reduce crime and improve the hometown living environment wherein their constituents live, work, and play. However, a push for a strong collection effort may cause officers to collect hundreds of thousands—if not millions—of pieces of information annually. In order to avoid the random collection of information, it is important for law enforcement decision makers to identify and clearly articulate the information they want gathered and to continue to provide training to their troops so that they understand the federal and state guidelines within which they must operate to avoid the violation of civil rights.

Focusing on the operational aspect of collection, many law enforcement officers receive training on the recognition of preincident indicators, otherwise known as "suspicious activity," that may have a nexus to terrorism. In many cases, the "suspicious activity" is documented on a generalized report like an "incident report," however, this reporting mechanism is not a standardized reporting format used by all law enforcement agencies. The need for law enforcement agencies to standardize their reports and use common collection codes to assist in the identification of crime trends, including terrorism-related activities, is detailed in a 2008 multiagency report entitled, "Findings and Recommendations of the Suspicious Activity Report (SAR) Support and Implementation Project" (USDOJ, BJA, 2008, p. 3). In addition, an effective information gathering effort requires a cohesive and collaborative police/community partnership, because a strong law enforcement/community partnership provides the mechanism that ILP needs for the dual imperative of collecting crime- and terrorism-related information.

Clearly, a need exists to share the information that law enforcement agencies have gathered and identified as "dots" or suspicious activity that could lead to a criminal act, including terrorism. It is also critical to understand that every law enforcement agency in

the country has data including “dots” that have not yet been identified as “dots.” As an example, a SAR report might be generated in one jurisdiction where suspicious activity causes interest but is not enough to act upon—a potential “dot.” A ticket totally unrelated to any crime other than a traffic offense might reside in the database of a distant jurisdiction without raising a suspicion of terrorist activity, but when combined with a “dot” from another jurisdiction, an analysis of those “dots” leads to the development of significant intelligence (e.g., connecting the dots).

As members of the law enforcement community begin to collect traditional crime- and terrorism-related information in a more organized fashion, how do these agencies most effectively share this information with other homeland security professionals such as neighboring law enforcement agencies, the FBI, and the Department of Homeland Security? The two major data-mining systems currently used by California law enforcement agencies supporting an agency’s information-sharing efforts are COPLINK and the Law Enforcement Information Exchange (LInX). However, no formal standard operating procedures exist that regulate the sharing of information: this is significant because a lack of standards and policies is one of the top five impediments in the flow of intelligence information among law enforcement agencies (USDOJ, BJA, 2005, p. 3). The lack of integrated data-sharing systems hinders the ability of California law enforcement agencies and the entire homeland security community to detect the threat and reduce the impact of crime and terrorism in the United States. Therefore, California law enforcement agencies would benefit from the identification of a data-mining system, or more than one system if the systems can effectively interface and share information, instead of independently selecting one of the many disparate systems available.

B. RESEARCH QUESTIONS

The California law enforcement community must be collaborative, proactive, and coordinated in its information gathering and sharing efforts to more effectively direct its limited resources, prevent crime, and possibly save lives. The research questions

addressed in this thesis are, "What is the ILP capacity among the California law enforcement community, and how can California agencies strengthen their homeland security efforts using ILP?"

C. SPECIFIC RESEARCH OBJECTIVE

The research anticipated an outcome demonstrating that policing in America is transitioning from the community policing model of the 1980s to an intelligence-led policing business model where the focus is now on the intelligence processes used to influence police procedures. This thesis demonstrates that strengthening the collection and dissemination components of ILP throughout the California law enforcement community will assist those agencies in being more effective in combating crime and terrorism because enhanced community/police partnerships will result in more actionable intelligence products.

The research reveals that, although much progress is being made in the institutionalization of the policies and procedures inherent to ILP, no framework for connectivity exists to standardize and forcibly implement mechanisms necessary to fully network the law enforcement community. A fully networked and integrated law enforcement community overcomes the inherent gap and vulnerabilities in its homeland security efforts resulting from the use of disparate data-mining systems.

D. SIGNIFICANCE OF RESEARCH

This thesis demonstrates that a transition in the current policing model is underway, that police practitioners and scholars recognize the crime-prevention value of ILP, and that the California law enforcement community's current ILP capacity creates gaps in its information collection and sharing efforts, thereby hindering its ability to detect and prevent acts of crime and terrorism and save lives.

Future research efforts should include the development of a national model of intelligence-led policing, the development of national, state, and local policies in order to

facilitate the sharing of information, the official identification of integrated data-mining systems, and a value assessment of centralizing the California law enforcement community.

The immediate consumers of this thesis are law enforcement community members, homeland security practitioners, and national leaders.

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II. REVIEW OF RELEVANT LITERATURE

Research reveals that the criminals that law enforcement officers face today are more sophisticated and operationally agile due to the vast and instantaneous information found on the Internet and the ease and availability of various mass-transit systems. As a result, the traditional jurisdictional boundaries for criminals have been erased. This paradigm shift causes law enforcement agencies to develop ways with which to combat crime in a more structured and modernized business process manner, resulting in the need for a comprehensive reformation in state and local law enforcement intelligence operations (Peterson, 2005, p. vii). A transformational change in police programs and philosophies is needed to address the new threat environment. The focus of this literature review centers on the evolution of policing from the political era to the hometown security era with the implementation of intelligence-led policing (ILP), the history and application of intelligence as it relates to ILP, and the information collection and dissemination components of the ILP policing process.

Scholarly journals, police trade magazines, governmental reports, and police practitioners, foundations, associations, and organizations all discuss the evolution and efficacy of policing models and practices. A review of relevant literature regarding the evolution of policing programs and practices since the mid to late 1800s reveals a knowledge gap relating to police effectiveness studies until the late 1970s. During the 1970s and after, several police scholars and practitioners set out to discover which policing models impact crime rates and citizen satisfaction levels. In a review of the literature, one finds that for every position taken by scholars, practitioners, or professional organizations regarding what does and does not work in policing, one will find a counter or opposing position. However, what these police scholars and practitioners have in common is their desire to uncover which policing business models, practices, programs, and philosophies have the greatest impact on the prevention, deterrence, and disruption of criminal acts. One identified practice found to be effective in combating crime is the incorporation of the intelligence cycle into policing practices.

Decision making based on the gathering and analysis of information, the cornerstone of the intelligence cycle, dates back hundreds of years for the military and was formalized at the federal level with the establishment of the intelligence community (IC) in 1947. Mark Lowenthal opined in his 2009 book entitled *Intelligence from Secrets to Policy* that excluding subversion, espionage, and terrorism, internal domestic security activities (i.e., the gathering of information that is later synthesized with other intelligence and developed into an actionable intelligence product) are considered to be state and local law enforcement issues (p. 6). On the other hand, Lowenthal writes that intelligence is defined in the 2004 *Intelligence Reform and Terrorist Prevention Act* as "national intelligence" (2009, pp. 4–5), which is a federal law enforcement activity. According to the literature reviewed and the author's knowledge and training on the subject, the time period for which intelligence gathering became a part of state and local policing efforts in the United States began in the early 1900s (personal communication, Brian Gray, March 10, 2010, Peterson, Morehouse, & Wright, 2002, p. 3). More recently, the gathering of information has been directed toward obtaining terrorism-related intelligence (International Association of Chiefs of Police [IACP] National Law Enforcement Policy Center, 2003b, p. 1). Although progress is being made, much debate still continues with regard to the access of federally collected crime- and terrorism-related information by state and local law enforcements professionals.

The literature review related to ILP reveals that it is a relatively new concept in the United States. The ILP sources evaluated range from governmental documents at the federal, state, and local level to academia and individual experts. The assessed literature generally discusses ILP as a process, very similar to the intelligence cycle, that is broken down into six categories: 1) planning & direction; 2) collection; 3) processing and collation; 4) analysis; 5) dissemination; and 6) reevaluation (Peterson, 2005, pp. 6–7, Peterson, Morehouse, & Wright, 2002, pp. 79–118, USDOJ, BJA, 2005, p. 3). Some of the literature reviewed focuses on one or more aspects of the ILP process (e.g., collection and/or dissemination) rather than the ILP process as a whole.

What is ILP? There are a few events and published documents that appear to have been the catalyst for the push to implement ILP in the United States. In 2002, at a Criminal Intelligence Sharing Summit hosted by the International Association of Chiefs of Police (IACP), summit participants defined ILP as "the collection and analysis of information to produce an intelligence end product designed to inform law enforcement decision making at both the tactical and strategic levels" (USDOJ, BJA, 2005, pp. 3–4). However, according to David Carter and Jeremy Carter, there is no "universally accepted definition" of ILP (2009, p. 315). To illustrate this point, the research reveals that other police practitioners and scholars define ILP as an approach built upon the tactics of various policing models like community-oriented policing (COP) (Carter, 2004, p. 41–44; Loyka, Faggiani, & Karchmer, 2005, p. 8; Peterson, Morehouse, & Wright, 2002, p. 13–16) and as a collaborative philosophy (Fuentes, 2006, p. 3). According to a Bureau of Justice Assistance (2005) report, the difference between COP, problem-oriented policing (POP), and ILP, is that ILP provides a "strategic intelligence analysis" whereas COP and POP operate on more of a tactical/operational level by providing a statistical analysis of a specific incident (Peterson, 2005, p. 11).

Regardless of the definition used, the creators of the National Strategy for Homeland Security believe that ILP enhances situational awareness within communities. The strategy therefore calls upon members of the law enforcement community to implement ILP practices within their respective agencies (Homeland Security Council, 2007, pp. 19–20). Additionally, ILP advocates like Jerry Ratcliffe and David Carter believe that ILP is not another buzzword with "business operating as usual," nor is it to be relegated to a simple information clearinghouse within an organization (Ratcliffe, 2002, p. 61; Carter, 2004, p. 41). Although ILP has a different meaning depending upon the end user, the literature reviewed suggests that ILP serves a purpose in this new era of policing (USDOJ, n.d., p. 1) and that purpose is to proactively set out to prevent the loss of lives and property.

There are other events and publications that also appear to be catalysts for the recent shift to ILP and the formalization of its processes. During a 2002 IACP Criminal Intelligence Sharing Summit, law enforcement and intelligence experts came to the

realization that improvements must be made in their information-gathering, intelligence production, and information-sharing efforts (USDOJ, BJA, 2005, p. iii). In December 2003, the Police Executive Research Forum (PERF) hosted an intelligence and information-sharing session attended by law enforcement executives from all levels of government. According to Loyka, Faggiani, and Karchmer, the attendees recognized that reliable intelligence is the most effective weapon in the fight against terrorism. However, the authors also noted a problem in that the executive session attendees did not clearly understand the differences between "information" and "intelligence" because they used the two terms interchangeably during the PERF session (2005, p. 10).

The available information related to the collection and dissemination or sharing of information throughout the various law enforcement entities is limited and relatively new. All sources evaluated stem from federal, state, and local governmental entities. The material reviewed in this subcategory is found to support the use of a suspicious activity report (SAR) and the development of an information-sharing environment (ISE) among all law enforcement agencies and other homeland security professionals in order to facilitate the sharing of information. The research also reveals the existence of multiple information-sharing platforms currently in use by various law enforcement agencies. At least two of these platforms lack the interface capabilities to share information (personal communication, Robert Fund, October 2, 2009).

III. TRANSITION TO INTELLIGENCE-LED POLICING

The California law enforcement community, in recognizing their role in homeland security, must continue to evolve from the reaction/prevention policing models of previous eras (i.e., professional and community-oriented policing (COP)) to newer and more robust models that focus on prevention and prediction (i.e., COP & ILP) in order to support a more cooperative, collaborative, and cohesive approach to policing.

Terrorism is not just a federal issue, it is also a local issue. The nexus between crime—a local issue—and acts of terrorism—a federal issue—is the fact that most terrorists are criminals. In many instances terrorists commit criminal acts in support of their mission (i.e., identity theft, selling stolen property), and local officers are in the best position to detect and disrupt that mission. Additionally, terrorists at some point become part of a local community, even if for a short time, in order to prepare for and carry out their mission. Although their activities may not raise any suspicion, they may still come to the attention of law enforcement, and a document may be created (i.e., incident report, traffic citation, field interview card) that links to an investigation elsewhere. Moreover, state and local law enforcement executives throughout the United States have urged federal authorities to recognize and fundamentally alter their view of state and local government by recognizing the significant role of their officers in the fight against terrorism (Major Cities Chiefs Association, Homeland Security Committee, 2008, p. 1). Furthermore, recent research reveals that police tactics such as the crime prevention and disruption efforts used by local officers on a daily basis are effective in combating terrorists organizations—especially those organizations refusing to recognize nonviolent tactics (Jones & Libicki, 2008, pp. xiii–11). For instance, beat officers and agency intelligence officers are very familiar with their operational environment. They know who and what belongs in the area and those people and things—such as cars—that are out of place. Local intelligence officers and detectives can use various means in order to penetrate a criminal organization and gain valuable information in the process. It would take years for someone from outside the area to develop this capability.

A. SCOPE

It is beyond the scope of this thesis to explore all the distinctions and similarities of the various policing models and programs used throughout the years. However, it is beneficial to have some understanding of the past in order to evaluate the status of policing today—and where it will be in the future. This chapter discusses the evolution of policing strategies from the political era to what I call the era of hometown security.

B. EVOLUTION OF POLICING STRATEGIES—PAST TO PRESENT

The law enforcement community within the United States has adopted many programs and policing strategies throughout the last several decades that are meant to help prevent and reduce the occurrence of crime. According to Samuel Walker, the temperance movement in the early 1930s frustrated governmental officials due to law enforcement's inability to stop criminal acts related to violations of the Eighteenth Amendment (Prohibition of Intoxicating Liquors). As a result, in May 1929, President Hoover tasked Attorney General George Wickersham with conducting the first comprehensive national assessment of law and order in the United States. The resulting documents released from 1931 to 1932 failed to identify the weakness of a compartmentalized criminal justice framework, and by the end of 1933 the Eighteenth Amendment was repealed (Walker, 1978, pp. 1–11). The predominant policing strategies used from the 1840s until the early 1930s—a time referred to by some scholars as the "political era"—include legitimacy obtained through the local political establishment; intimate relationships between police and citizens, and police and politicians; crime control and prevention efforts using foot patrol and tortured confessions; political information gathering; broadly defined areas of responsibility to include social services; and operating within a centralized organization with decentralized decision-making powers (Kelling & Moore, 1988, pp. 2–4). What these policing strategies lacked were interdisciplinary cooperation and a coordinated enforcement effort, along with effective internal and external accountability measures. An outcome from this era is the move

toward police professionalism by setting more stringent hiring standards, the development of criminal justice undergraduate degree programs, and the creation of the FBI National Training Academy.

In another major study of the criminal justice system conducted in the mid to late 1960s—another outcropping from the people's frustration with the criminal justice system—the President's Commission on Law Enforcement and Administration of Justice set out to determine the reasons why the system was unable to thwart certain forms of corruption and criminal behavior in areas involving big businesses, the mob, and political figures. Unlike the Wickersham report, President Johnson's commissioned report identifies the intricacies and impacts the actions of police, courts, and corrections on one another (Kelling & Wycoff, 2001, p. 4 (section 2)). According to West's Encyclopedia of American Law (2005), the National Commission on Law Observance and Enforcement, more widely known as the Wickersham Commission, published reports in 1931 and 1932 in which a host of issues were identified that eventually led to a series of court decisions intended to rein in police abuse and misconduct (i.e., *Mapp v. Ohio* (1961), *Escobedo v. Illinois* (1964), *Miranda v. Arizona* (1966)).

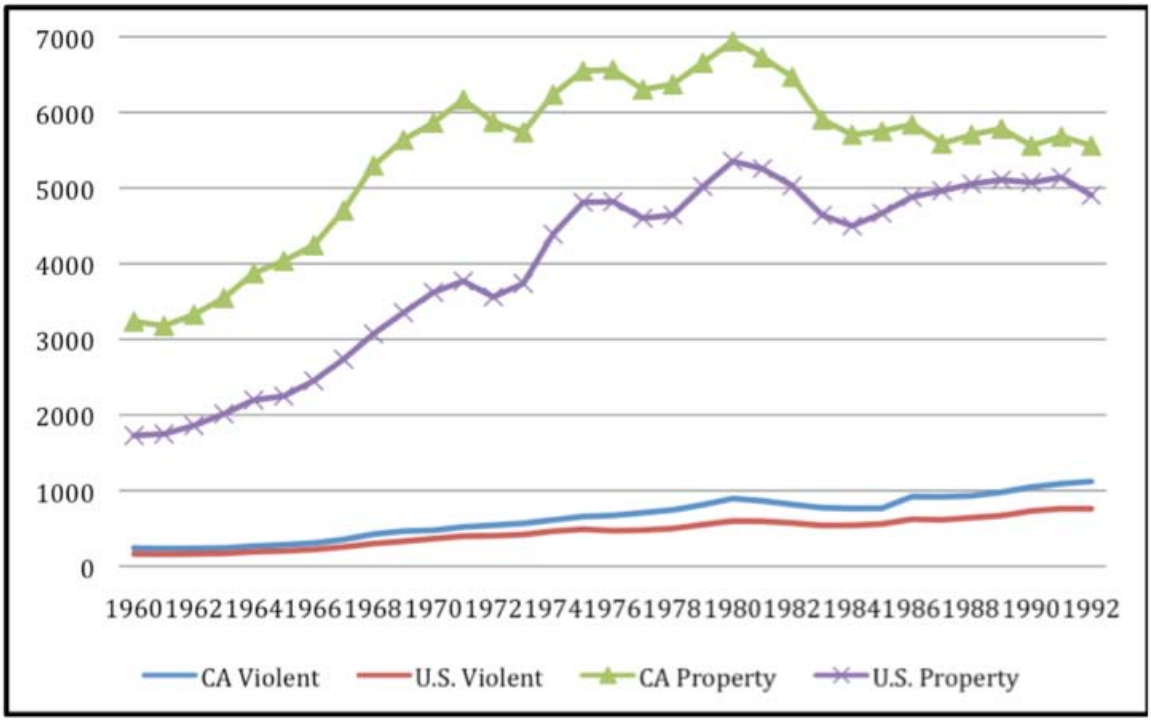
The degradation of police-community relationships resulting from riots and racial tension also occurred in the 60s (Walker, 1978, pp. 3–5), as did the practice of social distancing between police officers and the community (Kelling & Moore, 1988, pp. 5–8). In stark contrast to the strategies of the 1840s to early 1930s, the predominant policing strategies used in the 1930s to 1970s—a time scholars that refer to as the reform or professional era—included legitimacy obtained through enforcement of criminal laws; detached relationships between officers and citizens; attempts to insulate officers from politicians; crime control and prevention through the use of directed patrol and rapid response to calls; centrally dispatched calls for service; narrowing of the police function to address serious crime problems with the elimination of social services–related work; and police operation within a centralized organization with little decision-making powers (Kelling & Moore, 1988, pp. 5–9)—although there is some debate among police experts and scholars regarding the latter. The problems of the 1840s to 1930s are not solely related to the familiarity between police officers and citizens, but a notable shift in

police/community relations occurred during the 1960s. What the policing strategies during the reform period lacked were a coordinated and collaborative enforcement effort between police agencies, the integration of intelligence into their operations, and meaningful external accountability measures.

The revitalization of previous policing strategies reemerged in the late 1970s, resulting in the implementation of policing programs designed to reestablish police/community relations (Walker, 1978, p. 5). According to Edward Flynn, a "quiet revolution" began in the 1980s, in which emerging ideologies like the "broken windows theory" of James Wilson and George Kelling caught the attention of the law enforcement community (2004, pp. 26–27). By 1993, Herman Goldstein had gained ground with his philosophy that law enforcement efforts alone cannot solve the crime problem, as evidenced by the increasing violent crime rate (Flynn, 2004, pp. 28–29). One predominate policing strategy to emerge as a result of the work done by Wilson, Kelling, Goldstein, and many others is community-oriented policing, otherwise known as COP. In some respects, policing had come full circle. According to George Kelling and Mark Moore, the predominate policing strategies occurring during this time they refer to as the "community problem solving era" include broadening of roles and responsibilities to include social and educational programs; greater focus on prevention rather than simply quick response times; close relationships with neighborhood community groups and business leaders; emphasis on information sharing and gathering within the agency; and decentralized decision making with increased support and participation from management and agency executives. Police legitimacy is now an amalgamation of the political and reform eras, coupled with the establishment of checks and balances derived from civil service protections, unionization, and the overall professionalization of police organizations (Kelling & Moore, 1988, pp. 10–14).

How have these various models affected the crime rate in the United States and California up to this point? Table 1 provides a snapshot of the violent crime and property crime rates in the United States and California from 1960 to 1990.

Table 1. Comparison of California and U.S. Violent Crime and Property Crime, 1960–1992



Source: Office of Justice Programs, 2009

One can infer from the information listed in Table 1 above that the various policing strategies practiced between 1960 and 1990 had little to no effect on the disruption, suppression, or prevention of violent crime. In addition, both violent crime and property crime in California exceeded the overall crime rate in the United States as a whole. The crime comparison between California and that of the United States is important because two of the police reform leaders, August Vollmer and Orlando W. Wilson, have ties to California: thus it is difficult for California police executives to say they were unaware of these new police practices and therefore did not try them or did not implement them. However, studies conducted between 1972 and 1997 of police effectiveness and the impact of police practices on the crime rate/level yielded mixed results. Some police scholars believe that police activities have had no impact on the crime rate (Bayley, 1996, p. 40), whereas others believe they have (Kelling, 1996, p. 31, Bratton, 1997, p. 29). According to Robert Heaton, some studies do suggest that the use

of intelligence tactics (i.e., physical and technology-driven surveillance and development and use of informants) positively affects the crime rate (2000, pp. 337–54). The impact of intelligence tactics is discussed later in the chapter.

A major shift in police practices occurred as a result of the Violent Crime Control and Law Enforcement Act of 1994 that provided the money and legislative push for the law enforcement community to continue and further strengthen its migration from the reform policing era into an era I will call community-oriented policing. According to an article of the National Institute of Justice, the COP program had four specific goals: 1) to hire more officers; 2) to focus on problem-solving and interact with the community more; 3) to be innovative; and 4) to develop new technologies to assist in reducing crime and its consequences (Roth & Ryan, 2000, p. 1).

The COP philosophy relies heavily on the positive relationships that officers develop within their community-oriented police enforcement area, otherwise known as their "beat area." Through the program, which is built upon a relationship of trust and respect, officers can elicit help, as well as information, from the people and business owners within their beat area by asking them to become stakeholders in area crime prevention and problem-solving efforts. This is important because studies have shown that most crime is solved, not by police efforts, but because the victim named the perpetrator or an informant provided the suspect's name (Heaton, 2000, pp. 340–43).

Problem-oriented policing takes COP to the next level, requiring officers to conduct a more in-depth analysis of community problems and then develop a corrective solution based upon that analysis. The analysis process, called "SARA" (Scanning, Analyzing, Responding, and Assessing) is used to assist officers in their identification of the root cause of a community problem. Prior to September 11, 2001, the COP philosophy was thought to be an effective public safety strategy because it required officers to take a more proactive, instead of reactive, approach in their crime prevention efforts (Kerlikowske, 2004, pp. 6–8). However, since September 11, some law enforcement executives throughout the United States have begun to recognize the need to

transition from a community policing model to that of a "domestic security model" (IACP, 2005, p. ii). The status of COP in California, and in the United States in general, is discussed in greater detail in Chapter IV.

Roughly the same time that the COP program began to take shape in the United States, New York City Police Commissioner William Bratton was in the process of implementing another model of policing known as "Compstat." Police Commissioner Bratton wrote an article published by the Institute of Economic Affairs entitled "Crime Is Down in New York City: Blame the Police," in which he attributed the sharp decline in crime in the early 1990s to this new policing model (Bratton, 1997, p. 29). Although what the "Compstat" acronym actually stands for is up for debate, the tenets of this policing model include data collection, analysis of crime trends, maps and statistics, and stringent accountability measures for command staff. The collected data is analyzed and an analysis product is produced for use by police commanders, managers, and supervisors to assist them in targeting crime problems within their areas of control in an expeditious manner (Willis, Mastrofski, & Weisburd, 2003, pp. v–2). Compstat differs from the problem-oriented policing program in that in the latter program officers work with community members to determine the root cause of the problem, and they work collaboratively with community members in addressing the problem. With Compstat, on the other hand, the supervisors are the ones held responsible for crime trends in their areas; some supervisors have responded to the added pressure on them by curtailing an officer's discretion to address problems (Willis, Mastrofski, & Weisburd, 2003, p. vi), and some developed crime resolutions are made solely by the police (Scott, 2000, p. 104), thereby running the risk of weakening community partnerships.

The strategic change that began to take shape in the United States after September 11—a time I refer to as the hometown security era—is still in its infancy stages. The transnational effect of crime, globalization, the free exchange and proliferation of information worldwide, and the relative ease of transportation affects all police jurisdictions in a similar manner, leaving any area vulnerable to attack. Therefore it is no longer appropriate for police executives to think that "it won't happen here," that traditional law enforcement practices are sufficient, or that the actions of their agency

have no impact on the crime-fighting efforts of other law enforcement agencies or homeland security professionals. As a result of the actions taken on September 11, 2001, some police executives now recognize the need to conform their current policing strategy more closely to that of a hometown security model, where they look outside their narrow span of control to determine the best methods to predict, prevent, respond to, and recover from crime, acts of terrorism, and natural disasters.

During the 1990s, while COP, problem-oriented policing, and Compstat strategies were taking shape in the United States, ILP was being formally developed in Great Britain. The origins of ILP in Great Britain stem from the Kent Policing Model (Peterson, 2005, p. 9) and the implementation of the National Intelligence Model in 2000 (Brown, 2007, p. 336). By April 2003, the minimum standards of the National Intelligence Model (NIM) had been codified and applied to all police forces in England and Wales. The resulting collective effort in applying NIM assists police professions in the United Kingdom to combat crime and acts of terrorism with the development of an intelligence product they use to effectively "direct police activity" (CENTREX, n.d., pp. 2–3). However, unlike the uniform effort in the U.K., no legislative doctrine regarding the universal implementation and application of ILP exists in the United States.

According to police scholars and practitioners, ILP in the United States is thought to be an approach built upon the tactics and practices of COP, problem-oriented policing, Compstat, and crime analysis (Carter, 2004, p. 44; Loyka, Faggiani, & Karchmer, 2005, p. 8;Peterson, Morehouse, & Wright, 2002, pp. 13–16). A Bureau of Justice Assistance report (2005), details the difference between COP, problem-oriented policing, and intelligence-led policing, where ILP is described as providing an intelligence product for decision-making to strategically address large-scale crime issues, in contrast to COP and problem-oriented policing, which are more tactically and operationally oriented to the statistical analysis of a single specific incident. The report goes on to recommend that law enforcement agencies integrate their problem-oriented policing and SARA functions into their ILP program (Peterson, 2005, pp. 11–12), and that they maintain a robust COP program because COP provides the mechanism that ILP needs for the collection of crime- and terrorism-related information. According to Graeme Newman and Ronald

Clarke, the tenets of ILP assist agencies in capitalizing on current police activities (i.e., patrol, enforcement of laws, and the collection, analysis, and synthesis of criminal information) in order to prevent crime rather than simply solving a crime after it has occurred (2008, p. Brief 23).

C. EMPOWERING DOCUMENTS FOR ILP

Homeland security professionals are known to misuse or use interchangeably the terms "information" and "intelligence" (Loyka, Faggiani, & Karchmer, 2005, p. 10; Peterson, 2005, p. 3). Therefore, before delving into the development of the use of intelligence and ILP in the United States, the definitions of various intelligence functions and components of the ILP processes pertinent to this thesis topic are discussed below.

The definitions provided by the IACP National Law Enforcement Policy Center include:

- Information: "Raw data";
- Intelligence: "Reasoned conclusions, suppositions, and informed judgments based on a collection and analysis of reasonably reliable information";
- Criminal Intelligence: "Information compiled, analyzed and/or disseminated in an effort to anticipate, prevent, or monitor criminal activity";
- Strategic Intelligence: "Information used to develop trends, indicators, forecasts and projections about criminal activity from various perspectives"; and
- Tactical Intelligence: "Information regarding a specific criminal event that can be used immediately by operational units to further a criminal investigation, plan tactical operations and provide for officer safety." (2003b, pp. 3–4)

During a 2002 Criminal Intelligence Sharing Summit hosted by the IACP, summit participants defined ILP as "the collection and analysis of information to produce an intelligence end product designed to inform law enforcement decision making at both the tactical and strategic levels" (USDOJ, BJA, 2005, pp. 3–4).

It is difficult to enhance the ILP process without first understanding what the process involves. Similar to the crime analysis process, the ILP process has six steps: planning and direction, collection, processing/collation, analysis, dissemination, and reevaluation (Peterson, 2005, pp. 6–7; Peterson, Morehouse, & Wright, 2002, pp. 79–118; Gottlieb, Arenberg, & Singh, 1994, pp. 101–84; USDOJ, BJA, 2005, p. 3). Each step in the process may use different technology, have varying training and legal requirements, and involve different divisions, units, or bureaus. Marilyn Peterson (2005) provides a diagram and description of the intelligence process, a basic overview of which is given below:

- **Planning and Direction:** Agency-defined outcomes that direct the scope of collection; collection is planned, focused, coordinated; guidelines prohibit illegal methods of information collection.
- **Collection**: Raw data or information collected through the use of reports, citations, field interview (FI) cards, Internet searches, online database searches, surveillances, searches, citizen informants, confidential informants.
- **Processing/Collation**: Sifting through raw data or information, usually through text-mining databases to eliminate irrelevant information.
- **Analysis**: Converting, reviewing, indexing, and validating raw data or information into an intelligence product.
- **Dissemination**: Presentation of a finished intelligence product to agency decision makers. This can be accomplished through the use of intelligence reports, intelligence bulletins, and so forth. The intelligence product may also be distributed to outside agencies and state and national law enforcement networks for those who have the need and the right to know.

- **Reevaluation**: Requesting feedback from the receiver of the intelligence product to determine its usefulness. This may also involve an audit tool used to track who received the report, when they received it, their reason for needing the report, and who released the report to them. (2005, pp. 6–7)

One of the primary uses of intelligence products, whether labeled military intelligence, national security intelligence, or criminal intelligence for police agencies, is to provide executive decision-makers with the necessary information to protect the lives and property of U.S. citizens. For more than a hundred years, the military has used intelligence products to make strategic and tactical resource and deployment decisions. According to Mark Lowenthal, national security–level intelligence capabilities began around the 1940s with the establishment of the Coordinator of Information followed by the Office of Strategic Services, and they became more solidified with the passage of the National Security Act in 1947, which provides the legal basis for what is known as the "Intelligence Community" (IC) (2009, pp. 1–19). Until the events of September 11, 16 agencies were identified as members of the IC. After September 11, with the passage of the Intelligence Reform and Terrorism Prevention Act in 2004, the IC was expanded to include the newly established Department of Homeland Security. According to Lowenthal, one of the applications of intelligence at the national level is to counteract strategic acts of crime and terrorism (2009, pp. 2–3). The gathering of information for similar purposes by police agencies began when the New York police department sent officers from their Italian crime squad to Italy in the 1920s to collect intelligence on mob families (personal communication, Brian Gray, March 10, 2010). During Prohibition, police information-gathering efforts focused on the sale, transportation, and consumption of alcohol. Later, the gathering of information focused on Communist sympathizers, suspected Communist organizations, and organized crime operations. Most recently, the gathering of information by police agencies has been directed toward obtaining terrorism-related intelligence (IACP National Law Enforcement Policy Center, 2003b, p. 1).

Although law enforcement agencies have practiced the gathering of information for future criminal intelligence purposes for many years, in the aftermath of September

11, law enforcement executives recognized a need to comprehensively reform their intelligence operations because they now recognized the dual imperative of gathering information related to all crimes, which includes suspicious activity that has a possible nexus to terrorism, rather than being narrowly focused on traditional crimes (Peterson, 2005, p. vii) . For instance, at a 2002 IACP Criminal Intelligence Sharing Summit, law enforcement and intelligence experts concluded that improvements had to be made in their information gathering, intelligence production, and information-sharing efforts (USDOJ, BJA, 2005, p. iii). An IACP report also indicates that police and intelligence experts alike support the tenets of ILP and that they recognize the need for non-federal law enforcement agencies to be partners in and the driving force behind the criminal intelligence process (2002, pp. i–1). The 2002 IACP summit participants also acknowledged the lack of a coordinated effort or national doctrine related to the criminal intelligence process (2002, p. 5) and therefore recommended the creation of legislation in support of a "national intelligence plan" (2002, p. 19).

In response to requests made by the 2002 IACP summit participants, a Global Justice Information Sharing Initiative (Global) Intelligence Working Group (GIWG) was formed. The newly formed working group developed a National Criminal Intelligence Sharing Plan (NCISP) to guide the intelligence efforts of homeland security professionals, regardless of the size of their agencies, and assist those professionals in their public-safety efforts. The GIWG participants envisioned that the NCISP would provide agencies with:

- A model intelligence-sharing plan;
- A mechanism to promote intelligence-led policing;
- A blueprint for law enforcement administrators to follow when enhancing or building an intelligence system;
- A model for intelligence process principles and policies;
- A plan that respects and protects individuals' privacy and civil rights;
- A technology architecture to provide secure, seamless sharing of information among systems;

- A national model for intelligence training;
- An outreach plan to promote timely and credible intelligence sharing;
- A plan that leverages existing systems and networks, yet allows flexibility for technology and process enhancements. (USDOJ, BJA, 2005, pp. iii–iv)

In December 2003, the Police Executive Research Forum (PERF) hosted an intelligence and information-sharing session attended by law enforcement executives from all levels of government. According to Loyka, Faggiani, & Karchmer, attendees at the forum determined reliable intelligence products to be the most effective weapon in the fight against terrorism (2005, p. 1). As noted in another report prepared by the IACP, in 2004, law enforcement executives realized that "for the first time since World War II, policing is being conducted, domestically, in a time of war; [and] the United States faces a foreign threat within its own borders" (2005, p. 9). Therefore, in 2004, a project intended to assist the law enforcement community in adapting to and managing its changing police environment was begun. The project group included executive members of various law enforcement associations, a national police organization, and the Police Foundation. These agency executives participated in surveys and roundtable discussions to address how the law enforcement community could effectively navigate the new policing environment that included an element of terrorism. As the 2002 summit participants and members of the GIWG had two years previously, the 2004 IACP executive working group also identified the development of state and local agency intelligence units and ILP as promising practices (IACP, 2005, p. 5). In fact, 86 percent of the executives responding to the survey reported a change in their operations due to the threat of terrorism within the United States (2005, p. 17), and 41 percent identified a policy or program change with regard to their information and intelligence-sharing efforts. However, only one of the 164 responding agencies specifically mentioned ILP (2005, p. 29). The fact that only one agency mentioned ILP is significant since the research of this thesis reveals that ILP had been identified as a promising crime-fighting initiative in Canada in the early 1990s (Smith, 1997, pp. 17–20), in the U.K. by 1993 (Robertson, 1997, pp. 21–23, Anderson, 1997, pp. 5–7), and in the United States by 1997 (Peterson, 2005, p. 23). It should be noted, however, that at least one police professional

believes that agencies employing Compstat principles and members of the High Intensity Drug Trafficking Areas (HIDTAs) are using processes consistent with the ILP policing models (Porter, 1997, pp. 28–29).

In 2007, President Bush officially supported the efforts of those law enforcement executives who began transforming their intelligence operations with his 2007 National Strategy for Homeland Security, in which he called upon law enforcement agencies to increase their situational awareness of the communities they serve using ILP (Homeland Security Council, 2007, pp. 19–20). Although President Obama's 2010 National Security Strategy does not specifically refer to ILP, the strategy does identify the gathering, analysis, and exchange of information/intelligence as our best defense against crime and terrorism (President of the United States [POTUS], 2010, pp. 19–20).

Although there is no universally accepted definition of ILP (Carter & Carter, 2009, p. 315), one definition describes ILP as an approach built upon the tactics of various policing models like COP (Carter, 2004, pp. 41–44; Loyka, Faggiani, & Karchmer, 2005, p. 8; Peterson, Morehouse, & Wright, 2002, pp. 13–16). Even though ILP has many meanings, it serves a purpose in this new era of policing (USDOJ, n.d., p. 1), because, when implemented correctly, ILP transitions police services to a more preventive, rather than reactive, model of policing, by providing law enforcement executives with actionable intelligence products for sound decision making, strategic targeting, and efficient resource allocation in order to prevent crime and acts of terrorism (Home Office, 2005, p. 7).

The next two chapters of this thesis focus on aspects of the collection (Chapter IV) and analysis (Chapter V) steps of ILP, both of which are critically important since without the gathering of and access to all potential crime- and terrorism-related information, law enforcement agencies cannot hope to save lives or protect people and property by detecting and preventing crime and acts of terrorism. The next chapter compares the COP efforts of American law enforcement agencies with those within the United Kingdom since research reveals that the tenets of COP are key elements of an officer's ability to solicit, collect, and share suspicious activity and crime-related information.

IV. A COMPARISON OF COP IN THE UNITED STATES AND THE UNITED KINGDOM

Law enforcement officials now recognize the value of the intelligence cycle and the resulting product—reliable intelligence (e.g., the detailed analysis, evaluation and interpretation of information)—as the most effective weapon in our fight against terrorism (Loyka, Faggiani, & Karchmer, 2005, pp. 1–7). Additionally, former Department of Homeland Security Secretary Michael Chertoff called upon citizens to become engaged in homeland security efforts by becoming active crime-fighting partners with the police (United States Department of Homeland Security [USDHS], 2005, pp. 1–4). Furthermore, the National Security Strategy recognizes the dual imperative of empowering and engaging communities and the intelligence cycle as our best defense against crime and terrorism (POTUS, 2010, pp. 19–20). ILP is the framework to address the intelligence need; however, it requires a cohesive and collaborative police/community partnership—the basis of the COP philosophy—to be truly effective in preventing crime and saving lives. Therefore, it stands to reason that a strong COP program—with its benefits of community engagement and joint ownership of crime problems and solutions—provides the mechanism that ILP needs for the collection of crime- and terrorism-related information, which, when combined with other information, may provide actionable intelligence leading to the prevention of crime and acts of terrorism.

A. SCOPE

This chapter compares the state and local government structure within California, focusing on the county and local law enforcement community. The data set is particularly accessible given the author's role and familiarity with California law enforcement and its structural similarity to police services in England and Wales. This chapter addresses the level of community-oriented program implementation in the California and English and Welsh law enforcement communities and the level of accountability imposed upon law enforcement agencies with regard to their COP efforts.

Table 2 provides the reader with a quick logistical and demographical comparison between California and England and Wales.

Table 2. Demographic Comparison of California and England/Wales

Demographic Comparison	California	England/Wales
Population	38.3 mil (1)	54.4 mil (8)
Land Area	155,959 sq mi (2)	80,523 sq mi (9)
Counties w/ Sheriff's Departments	58 (3)	
Cities	478 (4)	
Cities w/ Local Police Departments	338 (5)	43 forces (10)
Total Sworn	64,032(6)	142,209
Total Community Service Officers (CSOs)	Unknown	16,507
Total Reserve Officers/Special Constables	6,200(7)	14,516(11)
LE officer per 100,000 population	167	261
Reserves per 100,000 population	16	27
CSO per 100,000 population	---	30
Total per 100,000 population	183	318

Sources: (1) League of California Cities, 2010; (2) Ibid.; (3) Reaves, 2007, p. 11; (4) League of California Cities, 2010; (5) Reaves, 2007, p. 10; (6) Ibid., pp. 10–11; (7) California Commission on Peace Officer Standards & Training, 2009; (8) Office for National Statistics, 2009; (9) Wikipedia, 2010; (10) Sigurdsson & Mulchandani, 2010, p. 1; (11) Ibid., pp. 1–4.

B. U.S. IMPLEMENTATION

Elements of the Violent Crime Control and Law Enforcement Act of 1994 provided the incentive for the law enforcement community to migrate from the professional policing era into what some call the era of community-oriented policing. According to an article of the National Institute of Justice, the COP program had four specific goals; however, the federal government gave individual agencies the latitude to implement their own policies, programs, and procedures in order to reach those goals (Roth & Ryan, 2000, pp. 1–3). As a result, 47 different tactics are identified as being a part of the COP philosophy prior to 2002 (Roth & Ryan, 2000, p. 16). By 2002, there were at least 56 different COP tactics employed (Cordner, 2004, p. 61). Although there are variations in how COP is practiced amongst the various policing entities, these variations share a fundamental commonality: the development of strong police and community partnerships/relationships.

Regardless of the efforts of COP proponents and the Violent Crime Control and Law Enforcement Act of 1994, the COP philosophy is not fully embraced by all police executives in the United States. In 1992, only 20 percent of the agencies polled had implemented COP, and a mere 58 percent had implemented it by 1997 (Fridell, 2004b, p. 41). However, due to self-reporting concerns surrounding the survey methods used in 1992, 1997, and later in 2002, the extent to which one can accurately assess the level of COP philosophy implementation among U.S. law enforcement agencies is limited.

Although police executives find rising crime rates or the public perception of rising crime rates to be problematic, there are no real incentives for them to migrate to a more community-focused policing style because the rising crime alone does not "threaten their survival," as does abuse under the color of authority committed by their officers (Kelling, Wasserman, & Williams, 1988, p. 1). For instance, some police executives in the United States express concern that the COP philosophy, once implemented, could lead to police corruption and abuse. A counterargument expressed in "Police Accountability and Community Policing," indicates that the tenets of community policing afford police managers "additional opportunities for … maintenance and accountability" of their officers (Kelling, Wasserman, & Williams, 1988, p. 7). Additionally, the report states that a militaristic, top-down command and control approach to managing law enforcement agencies and their people tends to make officers feel that they are being treated as wayward, minimally skilled employees, rather than as professional, creative, and productive problem solvers committed to the communities they serve (Kelling, Wasserman, & Williams, 1988, p. 2). As a result, this managerial style may cause officers to align themselves with other officers—even corrupt and abusive ones—rather than fully supporting the organization and communities they serve.

Kelling, Wasserman, and Williams suggest three viable alternates for police executives who use the COP philosophy to manage their people: 1) values-based leadership derived from laws, the Constitution, and highest professional norms; 2) community accountability though the use of community relations units and civilian review boards; and 3) the use of administrative controls (i.e., supervision, training, audits, surveys, discipline, rewards, and peer control) (1988, pp. 3–7). In essence, clearly

communicated organizational values, along with written policies and procedures to guide and inform both officers and community members, linked to administrative control mechanisms like those listed above, allow officers to apply their own ideas and solutions to problems instead of merely following the rules (Kelling, Wasserman, & Williams, 1988, pp. 3–4). This decisional empowerment of frontline law enforcement officers affords them the opportunity to collaborate with business and community members in order to solve problems, which in turn enhances police/community trust, respect, and confidence. This police/community partnership may also lead to a feeling of "mutual accountability" and citizen resiliency where community members recognize that they too are responsible for their own safety. As the intellectual founder of COP, Sir Robert Peel, once said, "The police are the public and the public are the police" (Fridell, 2004b, p. 4).

In addition to the lack of incentive, and the fact that there is no definitive concept of COP in the United States, Jeffrey Roth and Joseph Ryan surmise that the COP program will either succeed by achieving its objective, the objective will be altered to fit the organization's culture, or it will "fizzle out" (2000, p. 19).

Where is the COP program now in California? According to Brian Reaves and Matthew Hickman, 91 California sheriff's and police departments responded to a nationwide Law Enforcement Management and Administrative Statistics (LEMAS) survey conducted in 2000. The response of 91 agencies represented a 23% participation rate by California law enforcement agencies. Only 89 agencies answered a series of questions regarding community policing plans, training, and programs questions, representing only 22% of all law enforcement agencies in California. Although a limited sampling, the results demonstrate that only 61 agencies (69%) have a formal COP plan; however, 5 of those 61 respondents (8%) also indicated that their officers do not receive community policing training. Fifty-seven agencies (64%) indicated that they have full-time personnel assigned to a special COP unit, 19 agencies (21%) have designated COP personnel when needed, and 8 agencies (9%) have COP policies, but no personnel designated to perform this task (Reaves & Hickman, 2004, pp. 109–110). In the next series of COP-related questions, all but one agency provided responses, leaving a response pool of 90 agencies. An analysis of these response results reveals that only 64%

of responding agencies in California participate in problem-solving partnerships, only 48% conduct citizen surveys, 99% participate in community group meetings, and 78% actively encourage officer problem-solving projects. Of the 70 agencies that actively encourage officer problem-solving projects, 25 (36%) do not document this information in an annual performance appraisal (Reaves & Hickman, 2004, pp. 121–22). Failure to document this type of activity in an annual performance appraisal does two things: First, it demonstrates that the department does not think the activity is an important employee performance measurement tool. Second, it allows for the indiscriminant implementation of officer-initiated problem-solving projects involving citizen input, which is an important community partnership/ownership building activity.

How do these results from the year 2000 compare to other agencies in the United States? Lorie Fridell (2004), on behalf of the Police Executive Research Forum, analyzed three national COP surveys involving U.S. police agencies in general. According to Fridell, the 2002 survey results indicate that 80% of responding agencies work with citizens to identify and address problems, approximately 70% employ citizen surveys to determine area needs and priorities, and less than 80% use citizen surveys to evaluate their police services (Fridell, 2004b, pp. 49–54). Gary Cordner's analysis of the three national surveys reveals that community involvement in community policing actually declined in 2002 when compared to the 1997 survey results (Fridell, 2004b, p. 64). However, as with the California component of the 2000 LEMAS survey, one must be careful in placing too much emphasis on these survey results because of the limitations of the survey data and the fact that the survey data relied on agencies to accurately self-report.

In an attempt to further assess the commitment to community partnerships within local California law enforcement agencies, this author conducted a random sampling of California police and sheriff's websites. Of the 43 websites assessed, only 77% mention their commitment to community partnerships. Essentially, a brief notation is made within the agency's mission, vision, or value statements, indicating that they work

"in partnership with the community." Additionally, only one website notes that the agency has have a "community/law enforcement partnership program," and the agency website actually identifies the members of the program and how to contact them.

How one measures the success of COP as a crime prevention and reduction strategy for a measurement tool seems as nebulous as the concept itself. According to Roth and Ryan, during the fourth year of COP implementation, the net effect of COP tactics on reducing crime were found to be immeasurable (2000, p. 20). In reviewing another comprehensive COP performance study sponsored by the Police Executive Research Forum, entitled "Community Policing: The Past, Present and Future," COP supporters skirt the issue of whether or not COP tactics actually reduce crime. In addition to Ryan and Roth's observations in 2000, Darrell Stephens (2004) wrote, "There remains a wide gap that precludes linking crime-fighting strategies and tactics to the outcome of reduction in crime" (2004, p. 203).

How does one measure the performance and effectiveness of California law enforcement agencies? California law enforcement agencies and their individual members are held accountable by a court of law or the attorney general—and to some extent by either city councils, grand juries, police commissions, boards of supervisors, various unions, and civilian review boards. However these entities focus on real or perceived abuses, instead of substantive issues like service delivery, public confidence, crime reduction, and addressing neighborhood concerns. According to Robert Heaton, some researchers even question whether or not police and their activities positively impact crime (2000, pp. 342–351).

C. UNITED KINGDOM IMPLEMENTATION

According to the Home Office Crime Reduction webpage, the Crime and Disorder Act 1998 provides the legal impetus for the police to tackle area crime through police/community partnerships (Home Office, 2003). Since 1998, all of the 43 police forces throughout England and Wales have made neighborhood policing practices central to how they address crime and community concerns (Home Office, 2005, p. 2). Part 1, chapter 1, sections 5 & 6 of the Crime and Disorder Act 1998 direct the police to elicit

the views of and input from the public as they formulate and implement strategies to address crime and disorder (Office of Public Section Information [OPSI], 1998). In addition, since implementation of the Crime and Disorder Act, several other legislative and policy documents have been written and implemented, each with a citizen-focused approach to policing. These items include "Involving Your Community: Working to Reduce Crime," by Andy Boys and Frank Warburton (n.d.), "Police Reform Act 2002: The Policing Plan (Amendment) Regulations 2010," and from the Home Office, "Neighbourhood Policing: Your Police; Your Community; Our Commitment" (2005), "From the Neighbourhood to the National: Policing Our Communities Together" (2008b), "Cutting Crime A New Partnership 2008–11" (2007a), "National Community Safety Plan 2008–11" (2007b), "Saving Lives. Reducing Harm. Protecting the Public. An Action Plan for Tackling Violence 2008–11" (2008c), "Saving Lives. Reducing Harm. Protecting the Public, An Action Plan for Tackling Violence 2008–11 One Year On" (2009a), and "Protecting the Public: Supporting the Police to Succeed" (2009b).

As one may surmise, the police forces in the United Kingdom have made fundamental and strategic changes in their approach to and implementation of COP. The paradigm shift to COP in the United Kingdom, termed "neighbourhood policing," is apparent throughout all 43 police forces within England and Wales (Home Office, 2005, p. 5). Community members living and working in the England/Wales police service areas enjoy responsive "neighbourhood policing teams." These policing teams are made up of police officers, special constables, community support officers, and other volunteers (Home Office, 2005, p. 2). As the information in Table 2 demonstrates, there are an estimated 57% fewer law enforcement officers (full-time and reserve) to combat crime and address community concerns per 1,000 population in California compared to the number of neighborhood police team members available in England and Wales. This difference may be more significant when including community service officers (CSOs) in the equation; however, that particular information for California is not readily available.

Clearly, the law enforcement community in the United Kingdom has been transformed over the last several years as a result of new legislation (i.e., Crime and Disorder Act 1998 and Police Reform Act 2002). Moreover, the nationwide strategic

effort with the development of “neighbourhood policing,” the adherence to the “policing pledge” (Home Office, 2008b, pp. 20–34), and the development of a three-year “national community safety plan” each year, as well as the “police report cards,” have begun to solidify the United Kingdom’s citizen-focused policing model. The principal guiding document that outlines the nationwide governmental approach to policing is found in the green paper entitled, “From the Neighbourhood to the National: Policing Our Communities Together.”

In addition, the U.K. police forces take their neighborhood policing efforts one step further in that they believe it “must be intelligence led” (Home Office, 2005, p. 7). To the same degree that the “neighbourhood policing” program was implemented, the “national intelligence model” (NIM) has also been implemented throughout the United Kingdom. The NIM provides the framework for use by police forces with regard to their information and intelligence operations, as well as the key to developing a proactive crime-fighting neighborhood policing program (Home Office, 2005, p. 7). The statutory basis of NIM is outlined in a Home Office National Centre for Policing Excellence report entitled, “Code of Practice National Intelligence Model.” According to this report, the Home Secretary has the authority to issue codes of practice that must be adhered to by all police forces in England and Wales, the police authorities, and other crime and intelligence services and authorities as identified in the Police Act 1996, Police Act 1997, and the Police Reform Act 2002 (CENTREX, n.d., p. 2). CENTREX also published a report to assist agencies in their intelligence process efforts. The CENTREX report indicates that ILP “underpins all aspects of policing” and that NIM is a business model to be followed by the police services (2007, p. 3 & 6).

In contrast to the U.S. survey results, the British model of policing focuses on the needs and expectations of its citizens. In “The Review of Policing Final Report,” Sir Ronnie Flanagan wrote:

> Policing is far too important to be left to the police alone. It is a public service and one that can only be effectively carried out with the support and consent of the public. Using and developing this engagement with the public is one of the most important challenges in modern policing and it is a challenge that must be met at all levels (2008, p. 5)

Clearly, Flanagan's statement demonstrates the importance that the British place on police/community partnerships. Another Home Office website concurs with Sir Flanagan's statement, going so far as to state that community needs and expectations should "always [be] reflected in police decision-making and service" (Home Office Police, n.d.).

In stark contrast to the lackluster websites assessed in California, of the 25 England/Wales police force websites assessed, one hundred percent demonstrated a solid commit to the community partnership and accountability philosophy. Each website has a "Safer Neighbourhood" or " My Neighbourhood" link where the "Neighbourhood Policing Teams" are identified by photograph and their contact information listed. Moreover, it is readily apparent after reviewing a majority of the England/Wales police force and police authority websites that they are committed to community accountability through the use of audits and various survey tools. More importantly, however, all of the websites indicate the level of public confidence that each police force has within the community it serves.

Authorities in the United Kingdom place more emphasis on the level of community confidence brought about by the COP philosophy rather than the actual reduction in crime. However, one Home Office website did indicate that "partnerships between the police, local authorities, probation service, health authorities, the voluntary sector, and local residences and businesses" are effective in reducing crime and disorder (Home Office, 2008). The formation of these new partnerships is the result of a new program called the Crime & Disorder Reduction Partnerships (CDRPs) program, which began as a result of the Crime and Disorder Act 1998.

In addition, this author's review of a website operated by Her Majesty's Inspectorate Constabulary (HMIC)—Inspecting Policing in the Public Interest—indicates

that police forces must "account for what they do, and how well they are doing it" (O'Connor, n.d.). The website also contains a report, entitled "Assessing Police Performance: Giving the Public a Voice—Proposals for Consultation on Rounded Assessment," in which a detailed account provides information on 36 police performance indicators within four major domains areas (Her Majesty's Inspectorate of Constabulary [HMIC], 2009, pp. 4–20). On March 11, 2010, HMIC's department—Inspecting Policing in the Public Interest—published the most recent "police report card" for all 43 police forces in England and Wales. (HMIC, n.d.). This author's review of the police report card reveals that the performance of all 43 police forces was rated in 15 subcategories covering three of the four major domains (i.e., local crime and policing, protection from serious harm, and confidence and satisfaction). The forth domain (value for money) contains four subcategories and lists a rating of low, low/medium, medium/high, or high for each subcategory. The ratings for each category are listed as either poor, fair, good, excellent, meeting standard, or exceeding standard. The "Local Crime & Policing" domain rates 42 of the agencies as having met the "neighbourhood policing" standard and one agency exceeded the standard. The "Confidence & Satisfaction" domain rates 35 of the agencies as "fair" and eight as "good" in meeting the "policing pledge." In addition, 33 of the agencies were rated "fair," five were rated "poor," and five were rated "good/excellent" with regard to the confidence of the public in their police force (HMIC, 2010, pp. 1–5).

Another system used to hold police forces accountable—known as the "tripartite partners,"—distributes police oversight responsibilities among the Home Office, Police Authorities, and the chief constable. In turn, the Home Office, Police Authorities, and the chief constable are held accountable to Parliament by the Home Secretary. The Home Secretary is able to establish goals and objectives, known as a "code of practice," which is then detailed in the National Police Plan (Mawby & Wright, 2005, p. 4).

One possible reason that California law enforcement agencies have not fully embraced COP to the extent that the U.K. police forces have is because the government in the United Kingdom is more regional and centralized. The Home Office/Home Secretary provides the guidance for 43 police forces, whereas the 58 counties and 338 local police agencies in California are decentralized and operate autonomously. If California law enforcement agencies intend to implement ILP, as suggested in the 2007 National Strategy for Homeland Security, then they will need a more robust COP program. Like the U.K. policing model in England and Wales, California law enforcement agencies should assess the pros and cons of operating in a more regionalized fashion. Recently, a Los Angeles police executive acknowledged that a decentralized government poses both opportunities and challenges (Downing, 2009). One drawback of a decentralized form of government, as demonstrated in this chapter, is the inability to uniformly implement and sustain COP or ILP practices in California. California Constitution, article 11, sections 1(b) and 4(c) state that the legislature and county charters shall provide an elected sheriff (California State Senate, n/d). Since California sheriffs are "constitutional officers" elected by the people of each county, it is possible for the 338 municipal police departments to be absorbed within the authority of the 58 county sheriffs. This regionalized approach will save money with the sharing of resources, increase the "unity of effort," and increase the sharing of information and intelligence by reducing the number of organizational and informational stovepipes.

In addition, California law enforcement agencies receive direction and guidance from several state and federal agencies such as the governor's office, California Peace Officers Standard and Training; California Department of Justice; California attorney general's office; U.S. Department of Justice Office of Community Oriented Policing Service; Department of Homeland Security; and the U.S. attorney general's office, to name a few. Although California law enforcement agencies receive guidance and direction from these agencies, there is little to no measure of accountability with regard to sustaining the implementation of COP or ILP. Furthermore, although the attorney general's office has the legal authority to audit and hold law enforcement agencies accountable, historically the attorney's general's office exerts this power when some

form of corruption, abuse, or negligence has been alleged, not because a certain service delivery method was not used. It is recommended that the attorney general's office conduct routine annual audits of the various law enforcement agencies. This task would be significantly more manageable with a regionalized policing model—58 agencies versus 396—similar in scope to the accountability audits conducted by the HMIC in the United Kingdom.

In summary, to be more coordinated and cohesive in their efforts to protect and serve Californians, the viability and potential for a more centralized law enforcement community similar to the policing model found in England and Wales must be explored further. Furthermore, California must fully embrace and implement the tenets of COP.

V. INFORMATION-SHARING SYSTEMS

A 1999 Library of Congress research document titled "The Sociology and Psychology of Terrorism: Who Becomes a Terrorist and Why?" states that researchers believed then that al Qaeda would attack the United States by either bombing a federal building, using a nuclear suitcase bomb on various targets in Washington, D.C., or by crashing a plane into the one of the critical infrastructures in our nation's capital (Hudson, 1999, p. 6). In the year 2000, 40 federal entities were awarded $10 billion to assist in their terrorism-related activities (United States General Accounting Office [GAO], 2000, p. 3). Although the government had warning, and billions allocated to combat terrorism, the United States was still attacked. The failure to synthesize and share information in a timely manner are contributing factors to our inability to prevent or disrupt such attacks.

Therefore, it is crucial that the California law enforcement community learn from not only its own events, but also from lessons learned by other agencies in order to avoid repeating the same mistakes. For instance, the 9/11 Commission report identifies operational deficiencies within governmental agencies that may have contributed to the government's failure to thwart the attacks of September 11, such as substandard information systems technology, the lack of effective intelligence collection processes, and the failure to share information (Kean, et al., 2004, pp. 76–79). One of the many recommendations identified by the 9/11 Commission to more effectively protect the homeland was the need for "unity of effort in sharing information" (Kean, et al, 2004, p. 416). This chapter discusses the benefits of data-mining and the issue of sharing information, examines emerging computer systems that support the goal of information sharing among California law enforcement agencies, and considers how the California law enforcement community can better leverage its information-sharing efforts in order to enhance its ability to detect and prevent crime and terrorism.

A. DATA MINING AND INFORMATION SHARING

Advancements in technology have facilitated the evolution of information from general data to crime and terrorism information that, when analyzed with other data and value-added information, can be developed into an actionable intelligence product used by law enforcement managers and executives in their strategic decision-making process of selecting an appropriate response (Willis, Mastrofski, & Weisburd, 2003, p. 1).

Table 3 illustrates how data mining has evolved in the business industry, and one may infer that similar capabilities have evolved, and are continuing to evolve, within the law enforcement community as well.

Table 3. The Evolution of Data Mining

Evolutionary Step	Business Question	Enabling Technologies	Product Providers	Characteristics
Data Collection (1960s)	"What was my total revenue in the last five years?"	Computers, tapes, disks	IBM, CDC	Retrospective, static data delivery
Data Access (1980s)	"What were unit sales in New England last March?"	Relational databases, Structured Query Language, ODBC	Oracle, Sybase, Informix, IBM, Microsoft	Retrospective, dynamic data delivery at record level
Data Warehousing & Decision Support (1990s)	"What were unit sales in New England last March? Drill down to Boston."	On-line analytic processing, multidimensional databases, data warehouses	Pilot, Comshare, Arbor, Cognos, Microstrategy	Retrospective, dynamic data delivery at multiple levels
Data Mining (Emerging Today)	"What's likely to happen to Boston unit sales next month? Why?"	Advanced algorithms, multiprocessor computers, massive databases	Pilot, Lockheed, IBM, SGI, numerous startups (nascent industry)	Prospective, proactive information delivery

Source: Kurt Thearling website http://www.thearling.com/text/dmwhite/dmwhite.htm

Data mining as described by Kurt Thearling involves “the automated extraction of hidden predictive information from large databases” (Thearling, n.d.). In other words, analysts use various programs and systems as they sift through a plethora of stored data in order to identify current and future crime trends and patterns. The extracted information is then used by the analyst to develop an intelligence product for the police chief or management to direct their resources most effectively. For example, if the police chief wants to disrupt a series of burglaries in the downtown area, the analyst either builds a model or uses a previous model depicting a known and similar event. Some of the steps that analysts take in developing the model include researching dates, times, and locations of similar burglaries and noting similar characteristics from those past burglaries (i.e., types of items taken, methods and tools used for entry, entry and exit strategies, routes used, security measures in place). The model is developed using all the similar characteristics and is applied to the unknown string of burglaries in the downtown area. From this process, the analyst hopes to provide the police chief with an actionable intelligence product in which the analyst provides his recommendation about when, where, how, and possibly by whom, the next crime will occur. Using this intelligence product the police chief directs his limited resources with the intention of preventing another crime and possibly apprehending the individual committing the crimes. Although the above scenario is quite possible as described, the author acknowledges that many times a criminal footprint cannot be determined by data mining and analysis alone. One may still need to use other forms of information and intelligence gathering, such as confidential informants and signals intelligence (court ordered wire taps), in order to add value to the modeled information.

Due to the transnational and globalized nature of crime and criminals, as well as terrorism and terrorists, in order to be most effective in combating crime and terrorism, the local law enforcement community must share its data not only throughout its own county, but throughout the state and with other states and federal agencies as well.

B. GLOBAL JUSTICE INFORMATION SHARING INITIATIVE

As previously noted in Chapter I, a Global Justice Information Sharing Initiative (Global) Intelligence Working Group (GIWG) was formed at the request of the 2002 IACP Criminal Intelligence Sharing Summit participants. The newly formed GIWG developed a national criminal intelligence sharing plan, which was meant to be used by local, state, tribal, and federal law enforcement agencies, regardless of their size, to assist them in their public safety and information-sharing efforts (USDOJ, BJA, 2005, p. iii). According to the Bureau of Justice Assistance report, one outcome envisioned by the GIWG participants for the national criminal intelligence sharing plan was the "secure [and] seamless sharing of information among systems" (2005, p. iv).

There are many governmental initiatives aimed at enhancing and improving information sharing. One such initiative is the Intelligence Reform and Terrorism Prevention Act (2004), Public Law 108-458, which mandates the sharing of information among governmental agencies (Office of Homeland Security, 2002, p. 49). In response to the Intelligence Reform and Terrorism Prevention Act, the Department of Justice sought to transform its information-sharing efforts with federal, state, county, municipal, and tribal law enforcement entities with the development of the Law Enforcement Information Sharing Program (LEISP) strategy. LEISP is a policy framework—not an information system—that provides the guiding principles toward the movement of a "need to share" culture within the various governmental levels of law enforcement (USDOJ, 2005a, p. iii). A 2004 report by Jeffrey W. Seifert recognizes that technologies and processes available today, such as those explored in this chapter, are intended to enhance data sharing among the various governmental agencies in an effort to better "connect the dots" (pp. CRS-2). In addition, the National Strategy for Information Sharing (2007) recognizes the need to strength the intelligence community's capabilities throughout the intelligence cycle and encourages both horizontal and vertical sharing of information, as well as intelligence, with other homeland security providers and responders. Of importance in this strategy is the stated goal of information "access" by state, local, and tribal governments and the acknowledgment that these entities are "full and trusted partners" (White House, 2007, p. 3). However, the intelligence community's

Information Sharing Strategy regarding the "access" to information by state, local, and tribal entities is narrowly defined in that the intelligence community will "provide" mission-based intelligence to those entities (United States Intelligence Community, 2008, pp. 9–10). The knowledge gap created by this strategy is of concern. Each state, local, and tribal law enforcement agency operates in a somewhat unique environment, an environment with which it is intimately familiar and which it has the ultimate duty to protect and serve. How do state, local, and tribal law enforcement officers request "mission"-specific information when they do not know what information is available? Furthermore, how do members of the intelligence community "provide" or "share" information to these entities when they are not intimately familiar with the operational environment? The answers to these questions are outside the scope of this thesis; however, the conflict between the "access" to information versus being "provided" with information still exists. Although federal agencies have made great strides in attempting to address this knowledge gap issue, a more viable solution still needs to be developed.

C. NIEM

In an effort to address the information gap, DOJ and the Department of Homeland Security (DHS) embarked on a joint effort to develop a data-sharing framework that would allow for the seamless electronic sharing of intergovernmental information. The DHS/DOJ partnership resulted in the creation of a data-sharing initiative termed the National Information Exchange Model (NIEM), which was released in October 2005 (Kurlander, 2006, p. 1; Cover Pages, 2005, p. 1). According to information contained on the NIEM website, NIEM is essentially viewed as "a data model providing the reference vocabulary for consistent and repeatable interagency and inter-domain exchanges of information" (USDOJ, 2010, p. 1).

As a result of varying data and format standards among agencies, NIEM set out to capitalize on the data standards developed by Global to facilitate the exchange of data among various agencies like the Department of Transportation, Department of Health and Human Services, and domains such as Intelligence, as well as other departments and domains (USDOJ, 2007, pp. 1–3; Kurlander, 2006, p. 1).

One component of NIEM is the use of Extensible Markup Language (XML), a computer programming language for encoding documents in order to exchange meaningful information regardless of the computer system used. This was selected by the DOJ as the open standard for the exchange of information between various governmental entities. XML simple language rules provide the framework for interpreting the meaning of data in order to allow for the exchange of information among disparate systems (USDOJ, 2010, p. 1). According to an XML Journal article written by Neil Kurlander in 2006, Global was tasked with developing and implementing a "Justice-specific" XML, later identified as "The Global Justice XML Data Model (GJXDM) (p. 1). Detailed in DOJ's Global Justice Information Sharing Initiative report is the design of GJXDM and how the framework of NIEM allows real-time information to be shared not only between the broad law enforcement community, but also throughout the public safety, emergency, and disaster management agencies as well (2009, p. 13).

The exchange of terrorism-related information, as envisioned with the development of NIEM, is enhanced with deployment of the Information Sharing Environment (ISE), Functional Standard (FS), and Suspicious Activity Reporting (SAR). The systems used to store and share information documented in a report like SAR include the National Data Exchange (N-DEx), e-Guardian, COPLINK, and the Law Enforcement Information Exchange (LInX). Although NIEM is designed to help law enforcement agencies disseminate and share information using consistent exchange standards and processes, the fact remains that there are multiple systems available, each with varying data sets, capabilities, and costs. Therefore, the question is, "Which of the knowledge management systems should California law enforcement agencies use to enhance their situational awareness and information-sharing capabilities?"

D. N-DEX

In March 2008, the Federal Bureau of Investigations (FBI), Criminal Justice Information Services (CJIS) division deployed its version of an information-sharing system called the National Data Exchange (N-DEx) (Federal Bureau of Investigation

[FBI], 2008, p. 1) (FBI, , n.d.2, p. 1). The N-DEx was developed as part of the LEISP strategy and involved the input of members from various U.S. executive law enforcement associations, DOJ, and DHS (Federal Bureau of Investigation, n.d.1, p. 1).

The stated vision and mission of the N-DEx is that the system will provide nationwide interconnectivity for the various levels of governmental entities in order to facilitate the sharing of critical crime- and terrorism-related information. Initially the system stored incident/case reports and allowed 50,000 users to search and retrieve those reports. The second phase of the system, which became operational in July 2009, added the following data sets: arrests, bookings, and incarceration information. In addition, another 50,000 users are now supported by the system. Slated for implementation by the summer of 2010, the third phase adds probation and parole data and increases the supported user group to 200,000 participants (Federal Bureau of Investigation, n.d.2, p. 1). Although this is a major step in the right direction, there are many available data sources missing (i.e., parking, traffic, field interview, and crime report data).

According to FBI, CJIS representative Rita Willis, N-DEx is a web-based system that can be accessed by law enforcement agencies from the Law Enforcement Online (LEO) website, and it supports NIEM, the LEISP, and XML standards. According to Willis, the purpose of the national information-sharing system is for law enforcement agencies to connect to regional nodes like ARIES in Contra Costa County (northern California) or RJIS in San Diego County (southern California), which will then be connected to N-DEx. Law enforcement agencies can be either a “participating agency” by sharing information from their records management systems (RMS) within a regional node or simply participate as a “user only” agency. The initial cost for a “participating agency” is estimated to be in the thousands to tens of thousands of dollars in order to data map the agency’s information; however, there are no recurring costs, nor are there any costs to participate as a “user only” (personal communication, Rita Willis, October 2, 2009).

E. E-GUARDIAN

E-Guardian is a system similar in design to the FBI's classified Guardian system; it is different from the N-DEx system in that N-DEx collects information other than just terrorism-related information. E-Guardian, launched in January 2009 by the FBI, in their effort to facilitate close to real-time sharing of suspicious activity information—with a possible nexus to terrorism—with other law enforcement entities. Using a secure Internet portal, FBI-approved law enforcement officers and other homeland security professionals can access information contained in the e-Guardian system. Currently e-Guardian only provides an officer with the ability to search the system. In the future, e-Guardian may provide other capabilities such as chat rooms, link analysis, and geo-spatial mapping (National Terror Alert, 2009). The disadvantage of e-Guardian is that it is primarily for SARs and not readily accessible by most law enforcement officers.

F. COPLINK

In 1996, the Tucson, Arizona Police Department (TPD) recognized the need to be more efficient and effective in their knowledge management process (Monroe, 2000, p. 1). Funded by the DOJ Office of Justice Programs, National Institute of Justice (NIJ), the development of an information-sharing system for TPD was awarded to the University of Arizona, Artificial Intelligence Lab (UAAIL) (University of Arizona, n.d., p. 1; Sochan & Chen, n.d., p. 1). The short- and long-term goals of the new information-sharing system involved the integration of TPD's databases (i.e., RMS, Computer Aided Dispatching (CAD), and ELVIS) as well as the Arizona Crime Information Center (ACIC) and the National Crime Information Center (NCIC) databases (Sochan & Chen, n.d., p. 1).

According to John Monroe, University of Arizona professor Hsinchun Chen had previously addressed knowledge management problems at the CIA and Department of Defense. Monroe attributes the following statement to Professor Chen: "Knowledge management generally refers to methods used to track and analyze all the information stored in an organization's various data sources. The key is to extract the information from those sources, consolidate it and then index it so it is fully searchable" (2000, p. 1).

COPLINK is the product developed by UAAIL to solve TPD's knowledge management concerns. Using a simple Web browser interface one can access COPLINK from a secure Internet link. Due to the successful implementation and ease of use of COPLINK, the Phoenix Police Department joined COPLINK, and the two cities (Tucson and Phoenix) envisioned other departments joining COPLINK as well, thereby expanding the available information and user network (Monroe, 2000, p. 1).

Although initially developed by the UAAIL, Professor Chen founded the Knowledge Computing Corporation (KCC) in order to sell, maintain, and update COPLINK for use by other law enforcement agencies and the private sector (Monroe, 2000, p. 1; University of Arizona, n.d., p. 1). Currently, more than 35 law enforcement agencies throughout the United States belong to the COPLINK network (Knowledge Computing Corporation, n.d., p. 1). In 2009, KCC merged with i2. Like KCC, i2 provides electronic intelligence and investigative management solutions to law enforcement agencies, as well as other homeland security agencies and the private sector (i2, 2010).

According to Emily Robinson, California Emergency Management Agency (Cal-EMA) COPLINK coordinator, in 2008 Cal-EMA Secretary Bettenhausen approved the expenditure of $3.8 million for the statewide purchase of COPLINK licenses for all California law enforcement officers. Robinson was hired in December 2009 to facilitate a statewide records management system (RMS) integration project that will allow California law enforcement agencies to electronically share information. She is in the process of establishing a statewide working group to assist her in addressing challenges and developing integration solutions. COPLINK is one solution under consideration to rectify the knowledge gap that exists in California today. Robinson's research has led to the identification of 14 COPLINK nodes, either in production (7 nodes) or in the process of implementation (7 nodes), throughout California. However, many of these nodes are currently stand-alone systems (personal communication, Emily Robinson, July 20–21, 2010).

On July 21, 2010, Robinson provided attendees at the statewide RMS Integration Node Project Managers meeting a draft copy of "Coplink in California." A review of this draft document reveals that 23 county and 159 city law enforcement agencies either are or will be participating in COPLINK in California (Robinson, 2010, pp. 5–14).

In order for an agency to participate in COPLINK, there are fees over and above the license fees paid for by Secretary Bettenhausen. According to COPLINK representative Robert Fund, costs associated with joining the COPLINK system also include the cost to integrate the data from the agency's various databases and annual maintenance fees. In some instances, agencies also pay hardware infrastructure costs associated with developing a COPLINK node (data warehouse). For example, the estimated cost for Santa Barbara County Sheriff's Department's recent COPLINK system purchase is $500,000, with an initial $75,000 annual maintenance cost. After the first year, the annual maintenance cost is expected to be reduced to an estimated $50,000. According to Fund, COPLINK supports XML, complies with NIEM, and currently interfaces with N-DEx, DHS (ICEPIC), and OneDOJ. However, the interface from COPLINX to N-DEx will cost an agency another $40,000, plus a 15% annual maintenance fee (personal communication, Robert Fund, October 2, 2009).

G. LAW ENFORCEMENT INFORMATION EXCHANGE (LINX)

According to former FBI agent Dan Estrem, the actual development of the Law Enforcement Information Exchange (LInX) began prior to 2000; however, at the time it was known as the Gateway Information Sharing Initiative (GISI). Three agencies (FBI, Illinois State Police, and St. Louis Metropolitan Police) agreed to test the concept of sharing criminal investigative records from a single integrated database. A DOJ COPS grant helped to fund the GISI project, which was further supported by the FBI. At the time, the GISI was a unique proposition—the sharing of information among three agencies in a data warehouse environment. The GISI project, developed by Veridian Company, also provided data mapping and analytical capabilities to the users (personal communication, Dan Estrem, October 15, 2009).

After the events of September 11, 2001, the FBI pushed to use the GISI in all of the joint terrorism task forces (JTTF). A key feature of LInX is the ability to produce link analysis diagrams within minutes, in comparison to the months it previously took analysts and investigators to complete the same task (Gateway Information Sharing Initiative, 2002, p. 5).

According to information received from LInX representative Dennis Usrey, LInX meets NIJ and DoD technical and security standards, and it complies with GJXDM and NIEM. Unlike COPLINK, which is now maintained by i2, LInX is run by a governance board made up of representatives from the participating agencies (i.e., agency chief, sheriff, or SAC). The governance board determines who is allowed to participate, and the board establishes all the operational policies, rules, and oversight (personal communication, Dennis Usrey, September 16 and 21, 2009). According to Ventura County Sheriff's Department's LInX board member, Deputy Chief Gary Pentis, the Southern California LInX node requires agencies to submit their records management system information in order to participate (personal communication, Gary Pentis, September 2, 2009). This includes all of the traffic and field interview records missing from the N-DEx data bases.

LInX representative Dennis Usrey provided a list of law enforcement agencies either currently or in the process of participating in LInX; five sheriff's departments and 65 police departments are or will be LInX participants (personal communication, Dennis Usrey, July 27, 2010). The minutes of the "Southern California Board of Governance" meeting of July 10, 2010 revealed that LInX-to-LInX node integration is now a reality and that current "LInX users … now have access to nearly 500 million records including 30 million mug shots contributed by nearly 600 agencies" (personal communication, Dennis Usrey, July 27, 2010). Unlike COPLINK, several federal agencies also participate and share information in LInX.

The evaluation criteria used to assess each of the law enforcement information-sharing platforms includes associated costs, national standards-based formats, functionality, capability, and access. Table 4 provides a visual display of some of the key differences between the platforms evaluated.

Table 4. Comparison of Data-Sharing Information Systems

	COPLINK	LInX	N-DEx	e-Guardian
Data Feeds				
CFS	X	X		
Incident Rpt	X	X	X	
Arrest Rpt	X	X		
Booking	X	X	X	
Crime Rpt	X	X	X	
Probation	X		X	
Parole			X	
FIs	X	X		
Citations	X	X		
Pawn Shop	X	X		
Warrants	X	X		
Registrants	X	X		
SARs	X			X
Features				
Link Analysis	X	X	X	goal
DHS/ICE/CBP		X		
ONEDOJ	X		X	
Access	Internet	Internet	Internet	Internet
NIEM/XML STDS	X	X	X	X
Cost	Annual	1 time	1 time	
Proprietary	Private	Government	Government	Government

Research has shown that terrorists and more sophisticated criminals present new realities for law enforcement agencies that require increased collaboration in information gathering and intelligence sharing (Peterson, 2005, p. vii). Both COPLINK and LInX satisfy this needed collaboration and information-sharing requirement; however, unlike the high annual fees of COPLINK, LInX currently provides similar functionality and capabilities with minimal associated one-time costs for data migration efforts. This feature—no annual costs—is especially important for law enforcement agencies in California, given the current difficult economic times. In addition, LInX participants include both local and federal homeland security agencies, whereas many local COPLINK users are resistant to sharing information with federal entities through the use

of the COPLINK system due to the inability of the federal agencies to sign a mutual indemnification clause contained within the COPLINK Memorandum of Understanding. A letter dated May 5, 2010, from IACP President Michael Carroll to the Honorable Loretta Sanchez, outlined the IACP's understanding of the "Anti-Deficiency Act" and the "Adequacy of Appropriations Act", which, in essence, prohibits a federal governmental agency from entering into an agreement that leads to financial repercussions (Carroll, 2010, p. 1). The letter states, "The IACP requests that Congress review this issue and take all steps necessary to remove this obstacle to critically needed information sharing between federal, state, local and tribal law enforcement agencies" (Carroll, 2010, p. 2).

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VI. SURVEY

The data presented in this chapter are based on a survey tool distributed in April and May 2010 to 58 sheriffs' departments and 340 police departments throughout California. In a review of the survey responses, 163 "consent to survey" entries are recorded. Of those 163 survey responses, six are from the same agency, and 49 failed to answer any additional questions, leaving 108 remaining responses, a 27% response rate.

The survey tool itself describes—among other things—the current level of automation and information sharing, the information-sharing systems in use, employed policing programs, the status of intelligence-led policing, and the intelligence capabilities among California municipal agencies and county sheriffs' departments. However, there are limitations to this survey because it was sent electronically to agency individuals and relies on full and accurate completion by the individual, barring a few exceptions. Those exceptions are the result of the author's operational knowledge of a particular respondent agency or personal communication with an agency representative—not necessarily the original respondent—for clarification purposes.

Furthermore, the to state with much confidence that the results of the aggregate survey are indicative throughout all California law enforcement agencies is hindered by the 27% survey return rate. However, one is able to extrapolate the data further by separating sheriffs' department responses (28) from those of municipal police agencies (80). An analysis of the survey responses at this level allows one to infer, with some degree of confidence, trends throughout sheriffs' departments, due to the 48% survey return rate.

A. AGENCY DEMOGRAPHICS

As Table 5 demonstrates, approximately 84% of the survey respondents who answered the question, "What is your position within the organization?" hold management to executive-level positions within their agency. This response rate provides insight into how managers and executives have interpreted and implemented various policing programs, technologies, and systems within their agency.

Table 5. Survey Respondent's Position within Organization

What is your position within the organization?				
Answer Options	**Municipal Percent**	**Municipal Count**	**County Percent**	**County Count**
Executive staff	50.0%	40	33.3%	9
Command staff	26.3%	21	14.8%	4
Management staff	8.8%	7	33.3%	9
Supervisory staff	10.0%	8	11.1%	3
Line level staff	2.5%	2	3.7%	1
Analyst/detective	1.3%	2	3.7%	1
Answered question	100%	80	100%	27
Skipped question		0		1

Table 6 presents the size of all but one of the respondent agencies. The range options are listed in the table below. As one can see from the information provided, the greatest number of responses came from agencies with 101 to 200 employees, and the outliers include one agency with as many as 7,500 employees and one with 20,000 employees.

Table 6. Number of People Employed by Respondent's Agency

Total agency personnel (sworn and non-sworn)		
Answer Options	**Municipal Count**	**County Count**
0 to 25	5	1
26 to 50	14	1
51 to 75	3	3
76 to 100	12	0
101 to 200	18	6
201 to 300	8	2
301 to 400	7	3
401 to 500	5	2
501 to 1,000	3	3
1,001 to 3,000	5	2
3,001 to 5,000	0	2
5,001 to 7,500	0	1
7,501 to 10,000	0	0
10,001 to 15,000	0	0
15,001 to 20,000	0	1
20,001+	0	0
Answered question	80	27
Skipped question	0	1

B. AUTOMATION

According to survey responses, all but one county representative answered the question, "Does your agency have an electronic Records Management System (RMS)?" An analysis of the answers demonstrates that 98% of municipal and 100% of county agencies have an electronic RMS. The survey also asked respondents, "Which electronic Records Management System does your agency use?" The responses show that more than 40 different RMSs are in use in California, with Tiburon listed as the most common system.

Next, the survey respondents were asked to indicate the type of computer-aided dispatch (CAD) system used by their agency. All police respondents, and all but one

county respondent, answered the question, resulting in 95% of municipal agencies (76) and 93% of county respondents (25) currently using a computer-aided dispatch system (CAD).

Further analysis of the 107 responses reveals that 12% of the agencies did not have a CAD system and that there were at least 35 different types of CAD systems in use, with Tiburon listed as the most common system.

Although the actual number of disparate RMS and CAD systems is likely to be much higher than indicated, due to varying versions and/or a slight customization to off-the-shelf systems by each agency, the opportunity and capability to share information with outside agencies is more likely due to the automated systems. However, there are associated programming costs for each of these disparate systems in order to normalize and consolidate the information into a useable and shareable format, which for many agencies during these difficult economic times may prove to be cost prohibitive.

C. INFORMATION SHARING

Of the 107 survey responses, only 65% of municipal (51) and 63% of county (17) law enforcement agencies actually share their RMS information with other "local agencies." Survey respondents were also asked whether they shared their agency information with their state and federal partners: the results demonstrated that 6% of municipal (5) and 11% of county (3) agencies shared with federal agencies and 10% of police (8) and 19% of sheriffs' (5) agencies shared with other state agencies.

Respondents were also encouraged to list information-sharing systems used by their agency—in addition to the response options provided (refer to Table 7 below)—in order to share information. Some of the other systems identified by the respondents included P2P Data Sharing by OSSI, Citizen RIMS, RIMS Collaborate, Offender Watch, VINE, Automatic License Plate Reader (via BOSS), TracNet, Cal Gang, Cal JRIES, ARIES, and shared local agency integrated networks such as the Ventura County Integrated Justice Information System (VCIJIS).

As previously reported, only 65% of municipal and 63% of county agencies share their RMS information with other local agencies, however, two sheriffs' department respondents and six police department respondents reported that their agency participates in COPLINK. Three police department respondents indicated that their agency participates in LInX, but these 11 respondents also indicated that their RMS information is not shared. It is possible that these agencies are able to access COPLINK, and possibly LInX, without sharing their information, but if one were to assume that the 11 respondents are mistaken with regard to the sharing of their RMS data, that change elevates the local information-sharing effort by county agencies to 70% and by city agencies to 75%. This capability is significant because it helps to facilitate the integration of an agency's RMS data with other information-sharing systems like LInX, COPLINK, and ARIES.

Table 7 represents other systems that agencies use to share information and illustrates the response to the question, "Does your agency participate in information sharing/intelligence sharing by inputting your agency's information into one of these shared systems?"

Table 7. Data-Sharing Systems Used

Does your agency participate in information sharing/intelligence sharing by inputting your agency's information into one of these shared systems? (Check all that apply)		
Answer Options	County Response Percentage	City Response Percentage
Law Enforcement Information Exchange (LInX)	14%	11%
Regional Information Sharing System (RISS)	29%	14%
Western States Information Network (WSIN)	50%	43%
Law Enforcement Online (LEO)	25%	22%
COPLINK	18%	39%
N-DEx	11%	5%
Cody Cobra	0%	0%
Answered question	28	79
Skipped question	0	1

It should be noted that ten municipalities and three county agencies are in the process of becoming a COPLINK user. Once those agencies have access to COPLINK, the percentage of municipal agencies sharing information through COPLINK will increase from 39% to 52%, and county agency participation will increase from 18% to 29%, should they chose to share their information. Additionally, one city agency is in the process of connecting to LInX; therefore, city LInX participants will increase from 11% to 13% once that process is complete. When COPLINK and LInX results are combined, it is apparent that 65% of cities and 43% of counties recognize the importance of sharing information and are committed to sharing information through their participation in these data-sharing systems.

Table 8 provides the reader with a broad overview regarding the percentage of California county and city law enforcement agencies with automated RMS and CAD systems, the levels of sharing RMS information, and the current and near future data-sharing capabilities using LInX, COPLINK, ARIES, and/or ARJIS–type data-sharing systems.

Table 8. Level of Information Automation and Sharing

Overview of municipal and county law enforcement agency automation and information-sharing status		
Capabilities	County Response Percentage	City Response Percentage
Computer Aided Dispatch System (CAD)	93%	95%
Automated Records Management System (RMS)	100%	98%
Sharing with local agencies	63%	65%
Sharing with state agencies	19%	10%
Sharing with federal agencies	11%	6%
Answered question	80	27
Skipped question	0	1
Current/future information sharing through LInX, COPLINK, ARIES, and/or ARJIS	77%	79%
Answered question	79	28
Skipped question	1	0

D. POLICING PROGRAMS

Survey respondents were asked, "Which policing program(s) does your agency participate in? (Check all that apply)." Table 9 represents the results of this question, broken down by police and sheriffs' departments.

Table 9. Policing Philosophy Employed

Policing Philosophy Employed		
Answer Options	Police Response Percentage	Sheriff Response Percentage
Community Oriented Policing (COP)	86%	89%
Problem Oriented Policing (POP)	66%	41%
Intelligence-Led Policing (ILP)	23%	15%
COMPSTAT	34%	7%
Traditional Policing	58%	70%
Answered question	80	27
Skipped question	0	1

Respondents were also given an opportunity to describe alternative policing models employed by their agency. One respondent wrote, "We are moving toward a geographic based policing model that incorporates components of most of the above programs with a focus on both quantitative and qualitative out-come measures." Other policing models mentioned include:

- STAT TRAC ("a variation of COMPSTAT").
- Geo-policing/area command;
- Values-based policing;
- Geographic-based policing,

E. ILP IMPLEMENTATION

To assess the level of ILP implementation, survey participants were specifically asked, "Does your agency incorporate the 'Intelligence-Led Policing' (ILP) philosophy into its operations?" All 27 of 28 sheriffs' departments and 79 of 80 city respondents answered the question. Their response shows that 33% of county (9) and 43% of city (34) agencies incorporate ILP into their operations. An affirmative response to the above

question sent the 43 respondents to another series of questions intended to elicit more information about their ILP policing model and level of implementation, discussed later in this chapter.

It is interesting to note that 5 of the 9, or 56%, of the sheriffs and 18 of the 34, or 47%, of the police respondents who answered affirmatively to the ILP philosophy question did not also identify it as a policing model employed by their agency; had they done so, Table 9 would have reflected 33% of sheriffs and 45% of police employing ILP.

The 45 city and 18 county survey respondents who indicated that they did not incorporate the ILP philosophy were directed to another section of the survey; however, two city and two sheriff respondents failed to complete any questions within this section, leaving a response pool of 43 city and 16 county. The remaining 59 respondents were given the following additional information about ILP:

> Jerry H. Ratcliffe (2008) defines ILP as "a business model and managerial philosophy where data analysis and crime intelligence are pivotal to an objective, decision-making framework that facilitates crime and problem reduction, disruption and prevention through both strategic management and effective enforcement strategies that target prolific and serious offenders.

The respondents were then asked, “Do you believe your organization would be interested in adopting this approach to preventing crime?” Analysis of those responding to the question show that 44% of sheriffs (7) and 58% of police (25) respondents believe that they would be interested in adopting ILP. An additional 19% of sheriffs (3) and 30% of police (13) respondents might be interested in ILP for their agency.

The next question provided the 59 respondents with the following information:

> According to a Sept. 2005 report from the U.S. Department of Justice—Office of Justice Programs—Bureau of Justice Assistance, ILP implementation may require several changes within your organization such as: 1) an evaluation of policies and procedures to ensure intelligence is incorporated into the planning process as agencies address issues within their communities; 2) information sharing is a policy matter, not an informal practice; and 3) the development of quality analytical staff, techniques and systems to assist in the intelligence process.

The question immediately following the provided information was, “Do the potential changes to your agency in order to implement ILP seem prohibitive?” Table 10 presents a breakdown of the 43 remaining city and 16 remaining county respondents.

Table 10. ILP Implementation Commitment by Non-ILP Agencies

U.S. Department of Justice—Office of Justice Programs—Bureau of Justice Assistance ILP information.		
Answer Options	**City Response Percentage**	**County Response Percentage**
Yes	33%	38%
No	37%	44%
Maybe	30%	19%
Answered question	43	16
Skipped question	0	0

As previously mentioned, an additional series of ILP-related questions were posed to 34 police and 9 sheriffs’ department respondents whose agencies integrate the ILP philosophy into their business operation. However, three police respondents failed to answer any questions within this section and were therefore removed from the calculations. These remaining nine county and 31 city survey respondents were asked, “Does your agency have a formalized ILP program (i.e., written policies and procedures)?” An analysis of the responses demonstrates that 89% of sheriffs and 90% of police respondents incorporate the ILP philosophy within their agency on an informal basis.

Thirty-one police and nine sheriffs’ department respondents were asked, “Which answer best describes your agency’s understanding of ILP?” Table 11 demonstrates the responses selected by the 40 potential respondents.

Table 11. Respondent's Definition of ILP

Choice to best describe ILP understanding		
Answer Options	Police Response Percentage	Sheriff Response Percentage
Intelligence product for decision-makers which drives your operations	26%	22%
Approach similar to COP	23%	11%
Collaborative philosophy	13%	11%
None of the above	6%	0%
All the above	26%	33%
Other	3%	22%
Answered question	31	9
Skipped question	0	0

The survey tool shows that 100% of police and 100% of sheriffs advocate using intelligence to some extent in directing their agency's operations. Table 12 illustrates the respondents' answers to following question, "How often are your agency resources directed as a result of an intelligence product?"

Table 12. Use of Intelligence Products

Intelligence product driven operations		
Answer Options	Police Response Percentage	Sheriff Response Percentage
Not at all	0%	0%
Rarely	13%	11%
Sometimes	45%	44%
Frequently	39%	44%
Don't know	0%	0%
Other	0%	0%
Answered question	31	9
Skipped question	0	0

The 31 city and nine county survey respondents were asked, "If your agency is using the ILP policing model, how long have you been involved in this practice?" Twenty-two percent of sheriffs and 29% of the existing police respondents did not answer the question. The remaining responses demonstrate that 86% of sheriffs and 82% of police have been using ILP for more than a year. Table 13 provides a detailed breakdown of the responses.

Table 13. Length of Time That ILP Has Been Practiced

How long agency has practiced ILP		
Answer Options	Police Response %	Sheriff Response %
Less than 1 year	36%	14%
1 year	9%	0%
More than 1 year	36%	71%
More than 3 years	9%	0%
More than 5 years	9%	14%
More than 10 years	0%	0%
Answered question	22	7
Skipped question	9	2

F. INTELLIGENCE CAPABILITY

The next series of questions, intended to access an agency's current intelligence capability, had the potential for 80 city and 28 county agencies to respond. However, four city and three sheriffs' respondents did not answer, and one sheriffs' respondent did not understand and therefore failed to answer the question, "What is your agency's intelligence capabilities?" Respondents were encouraged to check all applicable answers. The answer garnering the highest survey results reveals that 54% of police agencies have someone assigned to perform their intelligence function on a collateral or part-time basis, and 38% of sheriffs' departments have more than one person assigned to perform their intelligence function on a full-time basis. Table 14 provides a detailed breakdown of the responses.

Table 14. Level of Intelligence Capabilities

Intelligence capabilities		
Answer Options	Police Response Percentage	Sheriff Response Percentage
One (1) person assigned full-time	22%	17%
More than one (1) person assigned full-time	20%	38%
Collateral or part-time assignment	54%	29%
Personnel assigned to a JTTF	21%	21%
Personnel assigned to a Fusion Center	8%	21%
Access to and use of a regional officer(s) through a MOA or JPA	9%	8%
Other	3%	4%
None	4%	8%
Answered question	76	24
Skipped question	4	4

Next, 80 city and 28 county respondents were asked whether their agency employs crime analysts and/or intelligence analysts; all but one of the city and one of the county respondents answered the question. Analysis of those responses show that 56% of sheriffs and 62% of police agencies have one or more crime analysts, and 19% of sheriffs and 20% of police agencies have one or more intelligence analysts.

G. HOMELAND SECURITY MINDSET

In the next series of questions, of the initial 80 city and 28 county, only 74 city and 25 county survey participants responded to questions related to the following scenario:

> A citizen reports seeing the same vehicle parked at the rail station on at least three occasions. Each time the subject has remained in the vehicle and has been seen taking photographs of the area. Police respond and talk to the subject. The subject is not an employee of the rail station, is not a rider and is not picking anyone up at the station. The officer clears the call as "subject contacted, unable to establish a crime."

In order to determine whether or not their agency recognizes the importance of documenting the suspicious activity described in the scenario above, the respondents were asked, "Given the scenario above, what would your agency do with the information, if anything? (Check all that apply)." An analysis of the responses demonstrates that 98% of the respondents recognized the importance of documenting the suspicious activity in some fashion. Table 15 provides a detailed breakdown of responses.

Table 15. Suspicious Activity Scenario

Given the scenario above, what would your agency do with the information? (Check all that apply)		
Answer Options	Police Response Percentage	Sheriff Response Percentage
Document information on Suspicious Activity Report	39%	28%
Document on incident or similar type report	41%	52%
Submit field interview/contact card/form	68%	48%
Use a specific Computer-Aided Dispatch clearance code	23%	24%
No documentation	0%	0%
Answered question	74	25
Skipped question	0	0

Equally important to determining whether or not the agency documents the event is to learn what the agency does with the information, once collected. Therefore, the respondents were asked, "If your agency documented the event described above, what does your agency do with the information? (Check all that apply)." One city respondent failed to answer the question.

Table 16. Documentation Outcome for Suspicious Activity

If your agency documented the event, what does your agency do with the information? (Check all that apply)		
Answer Options	Police Response Percentage	Sheriff Response Percentage
Give information to detective unit	58%	40%
Give information to intelligence unit	42%	24%
Turn information over to FBI	36%	12%
Turn information over to the fusion center	33%	32%
Enter information into an intelligence database	22%	20%
Don't know	0%	4%
Other (please specify)	25%	36%
Answered question	73	25
Skipped question	1	0

Eight of the nine sheriffs' department respondents clarified their "other" response with a written comment. The following indicates the number of responses for the given action taken: 3 "RIMS"; 1 "OES"; 2 "TLO"; 1 "Patrol"; 1 "CMA"; and 1 entry into an automatic database. The sheriffs' responses demonstrate that all but one knew that the captured information should be given to someone or entered into a computer database for future recall and potential analysis.

Similarly, all eighteen of the police respondents clarified their "other" response with the following notations: 2 "Nothing"; 7 "TLO"; 3 "RMS"; 1 "RIMS"; 1 "RTIIS"; 1 "TRAK FLYER Critical Reach"; 2 "Patrol"; and 1 "contact local agencies for similarities." Although the number of respondents who indicated that they would do nothing with the information is low, it is still a concern since 100% of police agencies need to recognize the importance of collecting, documenting, and sharing information if we are to be effective in preventing crime and the next terrorist attack.

Finally, 74 police and 25 sheriffs' department survey respondents were asked, "If the information generated from the scenario above is given to your agency detective and/or intelligence unit, what would members of those units do with that information? (Indicate the highest probability of action)." Two police and three sheriffs' department respondents failed to answer the question. In addition, based on their responses, four respondents (3 police and 1 sheriff) did not understand the question and therefore were removed from the equation. In some instances, respondents identified more than one answer as equally probable and therefore the overall computation exceeds 100%. An analysis of the responses indicates that 99% of police and 133% of sheriffs' department respondents thought the information would be reviewed and/or investigated further. Ten percent of police and 33% of sheriffs' department respondents thought there would be no further follow up or action.

VII. ANALYSIS AND CONCLUSION

Although federal law gives the primary responsibility for the investigation of terrorist acts to the FBI, the role of state and local law enforcement in identifying, preventing, and responding to these events is extremely important to the overall effort. Many believe that local law enforcement officers are more likely to intersect with terrorist players than any other entity inside the country. Intelligence-led policing and integrated data networks are our best tools for fulfilling the role of local law enforcement in homeland security.

Furthermore, the criminals that law enforcement officers face today are more sophisticated and operationally agile due to the vast and instantaneous information found on the Internet and the ease and availability of various mass transit systems. This paradigm shift causes law enforcement agencies to combat crime in a more structured and modernized business process manner. Rather than simply relying on previous policing models, law enforcement executives—to coin a phrase from Mark W. Johnson—need to "seize the white space" by identifying ways to better serve the community (2010, p. 7). Using Johnson's framework for strategic change, visionary police leaders can bring new community value to policing by assessing their current policing model and defining their constituents' "job-to-be-done"; identifying gaps in their crime detection and prevention efforts; developing a new or reengineering their current policing model; and implementing the new value-added policing model (i.e., ILP) to support their customers' "job-to-be-done" (pp. 25–28). I assert that the law enforcement customer's idea of the "job-to-be-done" is to keep themselves, their loved ones, and their personal effects safe, and to feel safe and secure in their home, work, and play environments. Therefore, the integration and use of the intelligence cycle as a standardized policing practice is necessary to improve efforts to prevent hometown crime and terrorism. Today's complex policing environment requires police agencies to develop more human intelligence capabilities (i.e., gathering information from citizens, informants, physical surveillance)

and to augment other information collection (i.e., open source, electronic surveillance) and data sharing efforts (i.e., integrated data-sharing systems) in order to be effective. ILP provides the proper framework for working within this context.

Much of the available literature suggests that a unified community-oriented policing strategy implemented under the guiding philosophy and framework of intelligence-led policing will focus law enforcement efforts in a more proactive and preventive fashion, as well as better equip agencies to partner with communities, private businesses, non-profit organizations, other departments, agencies, and jurisdictions in the pursuit of providing a safe and secure environment for people to live, work, and vacation.

However, the research and my survey tool reveal that the COP philosophy is not wholly accepted or uniformly applied throughout the California law enforcement community, even though many government-sponsored studies and reports recognizing the value of COP exist. As a result of this weak response to the COP philosophy, California law enforcement agencies hinder their crime and terrorism prevention efforts because a robust and fully functional ILP program needs assistance from the public and members of the business community to increase its effectiveness.

More alarming are the results of my survey related to ILP. There are two separate questions regarding the use of ILP among California law enforcement agencies. First, respondents were asked to identify all of the policing philosophies employed by their agencies. According to the survey responses, only 15% of sheriffs and 23% of police departments employ ILP. Second, respondents were specifically asked whether their agency incorporates the ILP philosophy into their operations; however, this time 33% of sheriffs and 43% of police respondents checked “yes.” The discrepancy between these two answers calls into question the validity of responses to the second question, leaving a dismal application of ILP in sheriffs’ departments (15%) and police agencies (23%). Assuming 33% of sheriffs and 43% of police agencies do employ ILP, only 11% of sheriffs and 10% of those “ILP” agencies have formalized ILP programs. To enhance the ILP capabilities among those agencies, it is recommended that police executives and managers use the LEIU Audit Checklist (2004) to ensure their agency’s criminal intelligence practices are in accordance with applicable laws. Next, these agencies should

formalize their criminal intelligence practices by adapting and incorporating the Criminal Intelligence Model Policy (2003) developed by staff at the IACP National Law Enforcement Police Center.

Those agencies who indicated that they do not incorporate ILP into their operations were directed to another series of ILP-related questions. The remaining respondents were provided Jerry Ratcliffe's (2008) definition of ILP and information from a Bureau of Justice Assistance report (2005) regarding potential organizational changes to implement ILP. An analysis of this pool of responses indicates that 44% of sheriffs and 58% of police agencies are interested in adopting ILP as defined by Ratcliffe. However, 38% of sheriffs and 33% of police respondents thought the organizational changes needed to implement ILP were prohibitive. Over the last 20 years, the various components of ILP have proven to be an effective crime management tool. Moreover, research demonstrates that reliable information, expeditiously scrutinized and evaluated, can result in the development of an actionable intelligence product outlining efficient and productive strategies for preventing and combating both traditional and terrorism-related crimes. A statewide collaborative ILP capacity will positively impact the crime rate; therefore, all California law enforcement agencies need to adopt the ILP philosophy in order to be part of a cohesive, coordinated, and effectively networked community. A necessary first step for police executives and managers within agencies not currently employing ILP is to read the Interagency Threat Assessment and Coordination Group's "Intelligence Guide For First Responders" (n.d.) and the U.S. Department of Justice's report, "Intelligence-Led Policing: The New Intelligence Architecture" (2005). David L. Carter also provides a comprehensive guide for law enforcement agencies looking to incorporate the collection and use of intelligence into their operations in his "Law Enforcement Intelligence: A Guide for State, Local, and Tribal Law Enforcement Agencies" (2004).

There are two possible solutions to enhance the coordination and cohesiveness of the California law enforcement community's crime and terrorism prevention and disruption efforts. The first solution is to centralize the California law enforcement community, similar to the policing model found in the United Kingdom or the

centralization of the military after the Goldwater-Nichols Reorganization Act. Centralization permits the integration of collective capabilities and reduces the effects of operational redundancies, jurisdictional turf wars, technology incompatibility, and the likelihood of autonomous communication/information-sharing systems. Although a similar recommendation was made in the 1960s by the President's Commission on Law Enforcement and Administration of Justice (Skoler, 1977, pp. 1–3), the recommendation was limited in scope. My recommendation is for municipal police agencies to be subsumed into one of the 58 county sheriffs' agencies. However, the validity and viability of a reorganization of this magnitude within law enforcement bears careful consideration and needs further exploration.

A second solution involves the development of a national ILP doctrine that encourages acceptance and implementation of ILP at the state and local levels. This is a necessary first step to providing a more coordinated and collective approach to saving lives and property. Similar to the impetus behind the implementation of COP, ILP needs state legislation to facilitate a unified execution and application of ILP throughout California. Research shows that ILP provides an effective use of resources, provides clarity in evaluating the operational environment, and focuses on the prevention of, rather than simply responding to, acts of crime and terrorism.

Once ILP is fully implemented, one way to assess compliance and the continued effectiveness of the ILP business model is through the use of routine audits, surveys, and report cards. Although one idea is discussed below, it is important to mention that developing one overarching and simplistic measurement tool may not be possible due to the complexity and diversity of police work. However, that is not to say that a stringent effort to develop such a measurement tool is likely to be in vain. Unlike the limitations that academic scholars and law enforcement practitioners faced in previous eras, the information and technology available and readily accessible today may yield different results for success in our ability to measure and assess the quality and efficacy of police services, methods, and practices.

For instance, an agency "report card," similar to the U.K. model discussed in Chapter IV, and issued to all California law enforcement agencies would serve a dual purpose. First, it would hold agency executives accountable for the vitality and effectiveness of their COP and ILP programs. Secondly, it would provide an effective measure of public trust and confidence—both of which are critical components of an effective community partnership/relationship from which crime information can be gleaned. The basis of the "report card" could be developed from the Department of Justice's Uniform Crime Reporting information, citizen surveys, and through physical audits. To facilitate and enhance government transparency, the "report card" would be posted on all law enforcement websites and the attorney general's website. Suggested areas of assessment include, but are not limited to the following:

- Citizen confidence in their law enforcement officers;
- Citizen satisfaction with their law enforcement services;
- Service delivery rates (i.e., response times, dispatch times);
- Workload activities (i.e., number of arrests, citations, public assists, quelled public disturbances, community meetings attended, and contacts made);
- Crime reduction information related to crimes of persons and property;
- Crime solving/clearance rate;
- Assessment of the agency's COP program;
- Assessment of the agency's ILP program;
- Number of deputies per one thousand population;
- Cost of law enforcement services to the area.

My survey tool, in combination with information from Cal-EMA COPLINK Coordinator Emily Robinson, identifies the knowledge gap that still exists among California law enforcement agencies. According to survey respondents, 100% of sheriffs and 98% of city agencies employ automated RMS, yet only 63% of county and 65% of city agencies indicate that they share their RMS information with other local agencies. When asked whether their agency participates in sharing information through a system

like LInX or COPLINK, the percentage of information sharing increases to 77% for county and 79% for city responding agencies. In an effort to further solidify the survey findings, I conducted an assessment of the information provided by Emily Robinson and Dennis Ursey (personal communications, July 21 and July 27, 2010). An analysis of Robinson's draft proposal, "Coplink in California," combined with a list of agencies received from Dennis Ursey reveals that 183 or more cities (38%) and 41% (24) of counties participate in a data-sharing system (i.e., COPLINK, LInX, or ARJIS) in California. In comparison, my survey demonstrates that 65% of cities and 43% of counties either currently participate in or are in the process of participating in COPLINK and LInX. Although this represents a vast improvement in comparison to a time before systems like LInX or COPLINK became available, the crucial goal is 100%. Fortunately, Cal-EMA Secretary Bettenhausen, his staff, and many police executives throughout the state recognize the importance of information sharing and are committed to supporting this vital goal by establishing a statewide RMS Node Integration Project working group to facilitate the full integration of these systems throughout the state.

Many California law enforcement agencies benefit from Homeland Security Grant Program (HSGP) funds, COPS grants, and other state and federal funding mechanisms. The funding plan—intended to complement and support national, state, and local homeland security strategies—has little oversight and accountability once the funds are received. One suggestion to assist law enforcement agencies in becoming more unified and coordinated in their policing efforts is that the programs funded by these grants become more narrowly focused in order to more strategically direct and guide the efforts of local law enforcement agencies, as the Home Office does in the United Kingdom. For example, in California, there are several data mining/data warehouse solutions to further the sharing of information among law enforcement agencies. Currently there is no ability for the COPLINK and LInX systems to exchange information; therefore, the California law enforcement community must begin to apply political pressure on COPLINK and LInX executives in order to develop an interface between the two systems, thereby allowing access to the sharing of information between both systems. In addition, instead of allowing agencies to use HSGP monies to fund any

one of a number of systems, only those proven systems that can functionally interface and share information should be allowed. Furthermore, the grantees should holding California law enforcement agencies fully accountable for the funds they are awarded by conducting on-site audits to verify claimed equipment purchases and programs that were promised by the agencies to be implemented.

Finally, the ability to identify, locate, and arrest dangerous criminals—including terrorists—are core competencies of California law enforcement officers. The strategic approach to locate and apprehend criminals and to disrupt their criminal actions is through a robust intelligence-led policing program. The ILP framework recommended in this thesis requires California law enforcement to 1) enhance and expand upon its ILP capacities by becoming familiar with and fully embracing the ILP philosophy (planning and direction); 2) to strengthen its use of the COP philosophy throughout its organizations and solidify statewide coordinated crime detection and disruption efforts using coordinated information and intelligence-gathering practices (collection); 3) participate in statewide electronic data-sharing systems and fully integrate and share its crime- and terrorism-related information both vertically (federally) and horizontally (other state and local law enforcement agencies) (dissemination).

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