

Incident-Based Crime Analysis

Incident-based crime analysis can improve a police department's efficiency and enhance its ability to apprehend criminals.¹ Specifically, crime analysis systems identify crime patterns and series, forecast future occurrences of crime, identify likely victims of crime, provide investigative leads, solve open cases, and provide supporting data for community policing programs and departmental planning efforts.² The four types of analysis most often used by law enforcement, as well as the information required to perform each type of analysis, are explained below.

Crime Analysis

Departments utilize crime analysis to prevent and suppress crime, apprehend offenders, and recover stolen property.³ Crime analysis is usually conducted on offenses with discernable patterns and trends that can be prevented or reduced through the implementation of directed action plans.⁴ A review of existing police crime analysis operations reveals that **burglary, robbery, auto theft, larceny, fraud, sex crimes, aggravated assaults, and murder** are the crimes most appropriate for crime analysis.⁵

There are three types of crime analysis:

[1] Tactical Analysis⁶

- Detects crime patterns and series by studying and linking common elements of crimes.⁷
- Predicts when and where future events will occur.
- Provides information to officers regarding specific crime problems and is intended to result in the arrest of a suspect.⁸

[2] Strategic Analysis

- Concentrates on long-term crime trends and is used to project where police presence should be increased or decreased.

[3] Administrative analysis⁹

- Interprets crime statistics categorized by economic, geographic, or social conditions.
- Provides information for grant applications, feasibility studies, and city council reports.¹⁰

Investigative

Criminal investigative analysis is used to investigate: **[a]** homicides or attempts that involve an abduction, are apparently random, motiveless, or sexually oriented, or are suspected of being part of a series; **[b]** missing persons cases where the circumstances indicate a strong possibility of foul play; and **[c]** unidentified dead bodies where the manner of death is suspected of being homicide.¹¹

Criminal investigative analysis (essentially criminal profiling) is an investigative process that **identifies the major personality and behavioral characteristics of an offender** based upon the crimes he has committed.¹²

- Seldom provides police with the identity of the perpetrator.¹³
- Few investigators have the formal behavioral sciences training necessary to render an accurate profile.¹⁴

Intelligence

Intelligence analysis is a time consuming and labor-intensive process that focuses on organized crime such as **narcotics smuggling, money laundering, gangs, terrorism, and auto theft rings**.¹⁵

Intelligence analysis is the study of criminal relationships and **establishes links between known or suspected criminals and other suspected criminals or organizations**.¹⁶

- Links suspects to criminal organizations or events to determine who is doing what with whom.

Operations

Operations analysis, similar to administrative analysis, is a **police management tool used to improve department operations**.

Operations analysis focuses on factors that help determine **how many officers the department needs and how they should be distributed** throughout the jurisdiction.

- Analyzes police service delivery problems.
- Provides police managers with a scientific basis for decisions intended to improve department operations and resource deployment.¹⁷

Categories of data considered most useful

Crime analysis	Intelligence analysis
<p>Purpose To determine who is doing what to whom. Focuses on crimes against persons and property.</p> <p>Information needs Categories of data considered most useful for crime analysis are those relating to:¹⁸</p> <ul style="list-style-type: none"> <input type="checkbox"/> Geographic factors¹⁹ <input type="checkbox"/> Time factors <input type="checkbox"/> Victim descriptors <input type="checkbox"/> Property loss descriptors <input type="checkbox"/> Physical evidence descriptors <input type="checkbox"/> Specific MO factors <input type="checkbox"/> Suspect descriptors <input type="checkbox"/> Suspect vehicle descriptors 	<p>Purpose To determine who is doing what with whom. Focuses on the relationships between persons and organizations.</p> <p>Information needs²⁰ Information about the suspects and those associated with him including:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Informant information <input type="checkbox"/> Phone records <input type="checkbox"/> Financial records (including purchases) <input type="checkbox"/> Surveillance information (including field observations and travel data) <input type="checkbox"/> Criminal history record information <input type="checkbox"/> Public records (including assets records, business license applications, court filings, etc.) <input type="checkbox"/> International police information <input type="checkbox"/> Newspaper articles
Investigative analysis	Operations analysis
<p>Purpose To develop behavioral and psychological profile of homicide suspects. Focuses on crime scene and victim characteristics.</p> <p>Information needs Examination of the crime scene and the victim often provides analysts with the information they need to gain insights into the personality of a perpetrator.²¹ The following information about the victim is used by trained profilers:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Age <input type="checkbox"/> Physical description including dress <input type="checkbox"/> Marital status, including children and close family members <input type="checkbox"/> Education level <input type="checkbox"/> Medical history (both physical and mental health) <input type="checkbox"/> Fears <input type="checkbox"/> Personal habits <input type="checkbox"/> Social habits <input type="checkbox"/> Use of alcohol and drugs <input type="checkbox"/> Hobbies <input type="checkbox"/> Friends and enemies <input type="checkbox"/> Recent changes in life style <input type="checkbox"/> Recent court action <input type="checkbox"/> Former and present occupation <input type="checkbox"/> Former and present residence <input type="checkbox"/> Reputation at work and in the neighborhood <input type="checkbox"/> Past and present financial status <input type="checkbox"/> Background information of victim's parents (including victim's relationship with them) 	<p>Purpose To assist the agency in managing its resources. Focuses on deployment and workload distribution patterns.</p> <p>Information needs Operations analysis involves the study of several external and internal factors that impact the agency's ability to provide services.²²</p> <p><u>External factors include:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Number and types of calls-for-service <input type="checkbox"/> Average length of calls <input type="checkbox"/> Crime rates <input type="checkbox"/> Police response times <input type="checkbox"/> Topography and ease of travel within the jurisdiction (hills, unimproved roads, lakes) <p><u>Internal factors include:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Size, geography, and population of the jurisdiction <input type="checkbox"/> Size of the police force and officer availability <input type="checkbox"/> Field deployment policies <input type="checkbox"/> Workload distribution patterns <input type="checkbox"/> Budget limitations <input type="checkbox"/> Shift and tour lengths <input type="checkbox"/> Number of officers per patrol vehicle <input type="checkbox"/> Number of hours devoted to non-patrol tasks (prisoner transport, court, etc.) <input type="checkbox"/> Desired percentage of uncommitted time per unit per shift

¹ Steven Gottlieb, *et al.*, *Crime Analysis: From First Report to Final Arrest* 15 (1994).

² *Id.* at 16.

³ *Id.* at 14.

⁴ *Id.*

⁵ *Id.* at 133. In 2004 there were 75,944 burglaries, 22,561 robberies, 40,780 motor vehicle thefts, 294,750 thefts (including larceny and fraud), 5,813 criminal sexual assaults, 41,806 aggravated assaults, and 776 murders. *Crime in Illinois 2004* (ILL. STATE POLICE 2005).

⁶ This type of analysis is the first priority of police departments. Gottlieb, *supra* note 1 at 15.

⁷ A crime pattern is merely a set of similar offences happening in a specific geographical area while a crime series is a crime pattern that appears to be done by either the same person or group of persons. Shawn A. Hutton & Mark Myrent, *Incident-Based Crime Analysis Manual* 34 (ILL. CRIM. J. INFO. AUTH. 1999).

⁸ *Id.* at 7.

⁹ Administrative Analysis is also used to:

- Keep officers informed of crime statistics and patterns.
- Justify the number of officers within the agency or requesting more officers.
- Write a request for a federal grant to increase the agency’s budget.
- Give speeches on crime prevention to organizations such as Neighborhood Watch Programs.

¹⁰ Gottlieb, *supra* note 1 at 15 (administrative analysis essentially includes the “nice to know stuff.”).

¹¹ *Id.* at 40.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.* at 56.

¹⁵ *Id.* at 27, 33.

¹⁶ *Id.* at 27.

¹⁷ *Id.* at 33-34.

¹⁸ *Id.* at 128. Specifically, experienced analysts have found that the factors listed below (numbers in parentheses suggest the order in which the data should be searched) often help determine if a pattern exists. *Id.* at 318-320.

Residential Burglaries	Commercial Burglaries	Thefts From Vehicles
<input type="checkbox"/> Geographic factors (1) <input type="checkbox"/> Time factors (2) <input type="checkbox"/> Property loss descriptors (2) <input type="checkbox"/> Victim descriptors (2) <input type="checkbox"/> Physical evidence descriptors (2) <input type="checkbox"/> Specific <i>modus operandi</i> factors (2) <input type="checkbox"/> Suspect vehicle descriptors (3) <input type="checkbox"/> Suspect descriptors (3)	<input type="checkbox"/> Geographic factors (1) <input type="checkbox"/> Victim descriptors (1) <input type="checkbox"/> Specific <i>modus operandi</i> factors (1) <input type="checkbox"/> Property loss descriptors (2) <input type="checkbox"/> Physical evidence descriptors (2) <input type="checkbox"/> Time factors (3) <input type="checkbox"/> Suspect vehicle descriptors (3) <input type="checkbox"/> Suspect descriptors (3)	<input type="checkbox"/> Geographic factors (1) <input type="checkbox"/> Property loss descriptors (1) <input type="checkbox"/> Suspect vehicle descriptors (1) <input type="checkbox"/> Time factors (2) <input type="checkbox"/> Victim descriptors (2) <input type="checkbox"/> Physical evidence descriptors (2) <input type="checkbox"/> Specific <i>modus operandi</i> factors (2) <input type="checkbox"/> Suspect descriptors (3)
Strong-Arm Robberies	Armed Robberies	Sexual Offenses
<input type="checkbox"/> Geographic factors (1) <input type="checkbox"/> Time factors (1) <input type="checkbox"/> Victim descriptors (1) <input type="checkbox"/> Property loss descriptors (2) <input type="checkbox"/> Physical evidence descriptors (2) <input type="checkbox"/> Specific <i>modus operandi</i> factors (2) <input type="checkbox"/> Suspect descriptors (2) <input type="checkbox"/> Suspect vehicle descriptors (3)	<input type="checkbox"/> Geographic factors (1) <input type="checkbox"/> Time factors (1) <input type="checkbox"/> Suspect descriptors (1) <input type="checkbox"/> Victim descriptors (2) <input type="checkbox"/> Specific <i>modus operandi</i> factors (2) <input type="checkbox"/> Suspect vehicle descriptors (2) <input type="checkbox"/> Property loss descriptors (3) <input type="checkbox"/> Physical evidence descriptors (3)	<input type="checkbox"/> Time factors (1) <input type="checkbox"/> Victim descriptors (1) <input type="checkbox"/> Suspect descriptors (1) <input type="checkbox"/> Victim-suspect relationship (1) <input type="checkbox"/> Geographic factors (2) <input type="checkbox"/> Physical evidence descriptors (2) <input type="checkbox"/> Specific <i>modus operandi</i> factors (2) <input type="checkbox"/> Suspect vehicle descriptors (2)

¹⁹ Spot maps can be of great assistance to the analyst, however, they will only depict crime patterns. Additional information is necessary to determine if a crime pattern is also a crime series.

²⁰ Gottlieb, *supra* note 1 at 28-31.

²¹ *Id.* at 44.

²² *Id.* at 34-38.