

**THE CRIME THREAT ANALYSIS PROCESS – AN ASSESSMENT**

by

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I declare that “The Crime Threat Analysis process – an assessment” is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references. This study has not been submitted before for any degree or examination at any other University.

.....  
MR. A KRAUSE

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**Title: The Crime Threat Analysis process: an assessment**

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**SUMMARY**

The study investigated the application of the crime threat analysis process at station level within the Nelson Mandela Metro City area with the objective of determining inhibiting factors (constraints) and best practices.

Qualitative research methodology was applied and interviews were conducted with crime analysts and specialised investigators/intelligence analysts. The research design can be best described as descriptive –and explorative in nature.

The crime threat analysis process embroils the application of various crime analysis techniques and the outcomes thereof intends to have a dual purpose of generating operational crime management information in assisting crime prevention initiatives and crime detection efforts, mainly focussing on the criminal activities of group offenders (organised crime related), repeat offenders and serial offenders.

During the study it became evident that crime analysts understand and thus apply the crime threat analysis process indifferently, which impeded on the relevancy and the utilisation thereof as an effective crime management tool.

**KEY TERMS:**

Crime threat analysis process; crime analysis; crime series, viz. crime threat; crime statistical analysis; crime trend analysis; crime threshold analysis; ratio per 100 000 of the population analysis; crime pattern analysis; crime mapping (geographic crime analysis); case docket analysis; linkage crime analysis; fieldwork; profiling; crime management information; and threats associated with group offenders (organised crime related), repeat offenders and serial offenders.

## **ABBREVIATIONS AND ACRONYMS**

BI:	Business Intelligence System
BMC:	Border Movement Control System
CAS:	Crime Administration System
CIAC:	Crime Information Analysis Centre
CIR:	Vehicle Enquiry System
CRI:	Criminal Record Enquiry System
CTA:	Crime Threat Analysis
DNA:	Deoxyribonucleic Acid
EUROPOL:	European Police Office
FAR:	Firearm Register System
FBI:	Federal Bureau of Investigation
GIS:	Geographic Information System
GOVNET:	Government Network System
IACA:	International Association of Crime Analysts
IALEIA:	International Association of Law Enforcement Intelligence Analysts
ICTY:	International Criminal Tribunal for the Former Yugoslavia
INTERPOL:	International Criminal Police Organisation
ISIS:	Individuals & Structures Information System
MACA:	Massachusetts Association of Crime Analysts

NCCF:	National Crime Combating Forum
NIA:	National Intelligence Agency
PERSAL/PERSAP:	Personnel Salary System/Personnel SAPS System
SADC:	Southern African Development Community
SANDF:	South African National Defence Force
SAPS:	South African Police Service
SARS:	South African Revenue Service
SASS:	South African Secret Service
SSA:	Statistics South Africa
TSA:	Technikon Southern Africa

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## **CHAPTER 1**

### **GENERAL ORIENTATION**

#### **1.1. Introduction**

The levels and nature of crime in South Africa, as cited in South African Police Service (SAPS) (2002c:2), especially relating to organised crime, pose a serious threat to stability and good governance. Furthermore, the intensity and magnitude of crime in general extend beyond the parameters of law enforcement alone, whereby civil society also has a major role to fulfil in the prevention of crime. The magnitude and sophistication of organised crime are complicated by South Africa's unique political and socioeconomic history, whereby the former law enforcement intelligence and/or security entities' primary focus was more directed towards securing and maintaining the political status quo of the former apartheid state, than focusing on organised crime.

The increase and/or change in the character of organised crime during a period of transition is not a phenomenon unique to South Africa – it is a well known global phenomenon. As international organised crime activities have increased in sophistication and means during the past decade, so have organised crime activities increased in South Africa (SAPS, 2002c:2). Organised crime syndicates operate covertly (and also overtly) and their dynamics correspond to those of well-fledged organisations. In order to combat this phenomenon, it is necessary to know the way in which it operates, its structures, the methods in committing crime and the illegal activities it is involved in. This is not possible without an endeavour such as the Crime Threat Analysis (CTA) process (SAPS, 2002c:2). This view is supported by Ratzel (2006:4), who also emphasises the need for a future-orientated assessment of organised crime to support law enforcement efforts in the European Union. Furthermore, the threat analysis (assessment) will help decision-makers to identify strategic priority areas in the fight against serious and organised crime and to initiate an intelligence process to define operational targets (Ratzel, 2006:4).

It is the notion of the researcher that the nature and extent of criminal activities associated with organised crime groupings are currently more prevalent than in the pre-1994 era. The reason for this is that South Africa was, to a great extent, in the previous dispensation (pre-1994 era), protected against the onslaught of organised crime, mainly due to its political policies, the political climate, global isolation, closed and controlled borders, and more powers entrusted to the security forces, etc.

Furthermore, it is the notion of the researcher that repeat offenders and serial offenders (killers/rapists) pose a serious threat to society, based on the seriousness and repetitiveness of their criminal activities which generate large crime volumes. This view is supported in Schoeman (2002:13) who states that repeat offending is one of the factors that play a contributing role towards increasing crime rates in South Africa; also, recidivism is not being addressed through risk assessments (threat analyses) for the prevention or management of crime. Venter (1952:11), as cited in Schoeman (2002:44), also states that the recidivist poses a greater threat or danger to society than the normal criminal, because criminal sentences hold no deterrent value to these types of offenders.

The researcher is of the opinion that it is important to adopt and implement an effective and viable CTA process, whereby the criminal activities of organised crime groupings, repeat offenders and serial offenders can be uncovered through a process of threat (risk) assessments (analyses). This view is supported in Schoeman (2002:13), specifically pertaining to repeat offenders. Based on the researcher's knowledge and experience, no similar process is currently in place to address group offenders (organised crime related), repeat offenders and serial offenders effectively and efficiently within the SAPS.

## **1.2. Historic development of the Crime Threat Analysis process in the SAPS**

The CTA process was designed, introduced and implemented in the SAPS in 1998 (SAPS, 2000:2). During this time, crime analysts in the SAPS at station level were tasked to apply the CTA process by following certain crime analytical techniques and activities in order to arrive at specific outcomes. Hence, it was a new endeavour (process), and as time progressed it became evident that certain shortcomings exist in the



practical application of the CTA process that impedes on its relevancy and utility as an effective crime management tool. The manner in which some of these shortages have been addressed in the past by managers has been rather rudimentary, and alterations have often been implemented in over-hasty ways that clearly did not suggest a thoroughly thought-through process. The latter could, in the opinion of the researcher, be attributed to a lack of knowledge, insight, intervention and/or co-ordination. This resulted in a situation where the essence of the problem(s) in the application of the CTA process could not be addressed, as it was never really comprehensively investigated and identified. According to De Kock (2004:1), the intended CTA process became too much of a ritualistic paper exercise, aimed at impressing the next higher level of police management.

The CTA process was, accordingly, a national instruction, issued by the National Crime Combating Forum (NCCF) (Instruction number 29/2002), subsequently suspended at national, provincial and area police levels (excluding police station level), mainly due to the inability of crime analysts to apply the CTA process as originally intended (SAPS, 2002a:1).

The CTA process, in short, is merely an integration of various crime analysis findings (crime statistical analysis<sup>1</sup>, crime pattern analysis<sup>2</sup>, geographic crime analysis<sup>3</sup>, linkage analysis<sup>4</sup>, case docket analysis<sup>5</sup> and profiling<sup>6</sup>) and activities (fieldwork<sup>7</sup>) which are primarily aimed at addressing the what, why, where, who and how aspects of crime (De Kock, 2004:4). This type of crime information is ideally suited to the SAPS in its

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<sup>1</sup> Crime statistical analysis provides a picture of the nature and extent of crime, as well as trend increases, stabilisations and decreases over time (De Kock, 2004:5).

<sup>2</sup> Crime pattern analysis indicates the frequency of crime occurrences in terms of time and space dimensions (TSA, 2002:56).

<sup>3</sup> Geographic crime analysis or crime mapping refers to the analysis of the spatial distribution of crime within a given geographical area (SAPS, 2000:8).

<sup>4</sup> Linkage analysis refers to a technique whereby different cases can be linked based on similarities or commonalities in relation to modus operandi, target information, offender/victim description or detail, and time and space dimensions (De Kock, 2004:4).

<sup>5</sup> Case docket analysis is described as the analysis of information contained in police case dockets/dossiers (SAPS, 2000:6).

<sup>6</sup> Profiling refers to the positive identification of offenders (Van Heerden, 1994:191).

<sup>7</sup> Fieldwork includes the activities of interviewing witnesses and the visiting of crime scenes for the purpose of information gathering (De Kock, 2004:4).

endeavour to address crime more effectively and efficiently, proactively and reactively. Thus, the core foci of the CTA process are, firstly, to generate crime management information suitable for crime prevention purposes, and, secondly, to uncover criminal activities related to group offenders (organised crime related), repeat offenders and serial offenders, through a process of crime analysis.

### **1.3. Problem statement**

The problem studied was the identification and addressing of shortcomings and/or impediments pertaining to the understanding and application of the CTA process, which impede its relevancy and utility in the SAPS. The general high levels of crime in South Africa, as cited in De Kock (2004:1), urged the SAPS management to adopt a more focus-orientated approach in crime management, to be more effective and efficient in relation to proactive (crime prevention) and reactive (crime detection) policing via the CTA process.

The understanding and application of the CTA process are problematic, in the sense that different interpretations are attached thereto by crime analysts in the SAPS, which inhibits or hampers the effective and efficient application thereof. Furthermore, based on the experience and knowledge of the researcher as a practising crime analyst, crime analysts from different police stations within the Nelson Mandela Metro city area view and apply the CTA process differently, thereby effecting possible ineffective outcomes.

### **1.4. Aims of the study**

The aims of the research were to:

- assess the application of the CTA process at station level within the Nelson Mandela Metro city area;
- identify any shortcomings and/or impediments in the CTA process (practice and/or theory); and
- formulate possible solutions that could be used to standardise the CTA process at all stations in the Nelson Mandela Metro city area,

in order to enhance the understanding and practical application of the CTA process in the SAPS.

### **1.5. Value of the research**

The research provided new information that can be used to:

- enhance the understanding of the CTA process and improve the skills of crime analysts at station level;
- enhance the application of the CTA process, ultimately improving on police effectiveness and efficiency;
- be of academic value as a source of reference to other learners and academics; and
- standardise the application of the CTA process within the SAPS.

### **1.6. Research methodology**

A qualitative research design was opted for and the methodological approach used in this study can best be described as both descriptive and explorative in nature. Smith (1988:180) states that qualitative research excludes numerical measures in favour of narrative data, meaning that qualitative data appear in text rather than in numbers. The qualitative analysis in this study involves critical analysis and synthesis of narrative information to derive verbal rather than statistical conclusions (Smith, 1988:180).

The aim in using descriptive research in this study is to assess and describe the application of the CTA process within the Nelson Mandela Metro city area. On the basis of the findings, the researcher identified the shortcomings and/or impediments which may place constraints on the application of the CTA process. In the last chapter of the study the researcher proposes solutions to these identified shortcomings and/or impediments.

The aim of the explorative approach used in this research was to identify and uncover important facts pertaining to the identification, nature and analysis of organised crime, repeat offenders and serial offenders. These important facts were derived from interviews with experienced and specialised police officials in the fields of criminal

investigations and/or intelligence analysis/research. The researcher thus attempted to explore new facts or information, thereby adding value to the study.

The purpose of exploratory research in this study, as described in Welman and Kruger (1999:19), was to determine whether or not a phenomenon exists, namely, criminal activities associated with group offenders (organised crime related), repeat offenders and/or serial offenders within the Nelson Mandela Metro City area, and, furthermore, to gain insight into this phenomenon and not to compare it with other phenomena.

### **1.7. Research design**

The design of the research is presented in the form of a literature study, which contains literature on the topics of crime analysis, organised crime, repeat offenders and serial offenders, including a presentation of the empirical research findings.

### **1.8. Data collection and analysis**

The researcher conducted a thorough literature study and semi-structured interviews with Station Information Managers (crime analysts) and experienced and specialised criminal investigators and/or intelligence analysts/researchers. Interview schedules (as per Appendix A and B) were designed and applied during the interviewing process, as a method of data collection.

From the collected data, the researcher conceptualised variables and refined concepts as part of the process of measuring variables that is associated with data collection and analysis.

The following outlined data collection methods, relevant to the qualitative approach, were used during the study.

#### **1.8.1. Interviews**

According to De Vos, Strydom, Fouché, Poggenpoel and Schurink (1998:90), the use of interviews for obtaining data is inherent in the behavioural sciences. One-on-one semi-

structured interviews were conducted with, firstly, Station Information Managers (crime analysts), and, secondly, with experienced police officers, practising and specialising in the fields of criminal investigation and/or intelligence analysis/research. The motivation behind the use of two separate respondent groups was that

- Station Information Managers or crime analysts are responsible for generating information (intelligence) pertaining to group offenders (possible organised crime related), repeat offenders and serial offenders through a process of crime analysis, i.e. the application of the CTA process; while
- Experienced and specialised criminal investigators and/or intelligence analysts/researchers are responsible for operationalising or utilising the findings of the CTA process in the investigation of the crime process and/or in the crime intelligence gathering process.

Thus, the Station Information Managers (crime analysts) generate findings which must be operationalised by criminal and specialised investigators/intelligence analysts. Two separate sets of questions were designed in the interview schedules, catering for both spectrums of the CTA process, i.e. the analysis and the investigation/intelligence entities.

### **1.8.2. Literature**

De Vos et al. (1998:90) mention that the analysis and interpretation of written material offer distinctive challenges which enable the qualitative researcher to collect data which could not otherwise have become available. A variety of sources, namely, official documents/records/manuals/directives of the SAPS, academic and law enforcement journals/books/articles, and information published on the Internet, were employed during the study.

### **1.9. Target population and sampling**

Two separate target population groups were utilised during the research, i.e. Station Information Managers (crime analysts); and experienced and specialised criminal

investigators and/or intelligence analysts/researchers.

The first target population group included all Station Information Managers (crime analysts) who were stationed within the Nelson Mandela Metro City area. It included the following sixteen police stations: Algoa Park, Bethelsdorp, Despatch, Gelvandale, Humewood, Kabega Park, Kamesh, Kwadwesi, Kwanobuhle, Kwazakele, Motherwell, Mount Road, New Brighton, Swartkops, Uitenhage and Walmer. There is one Station Information Manager (crime analyst) stationed at each of these police stations.

According to Neuman (1997:222), for small populations (less than 1000) a researcher needs a large sampling ratio (about 30 per cent). Hence, a probability sample (simple random) technique was applied and a sample size of fifty per cent (eight respondents) was drawn from the population group Station Information Managers (crime analysts) in the Nelson Mandela Metro city area. These respondents are referred to as respondents A-H in the rest of this document.

The following method was employed during the sampling technique:

- The sixteen stations' (population group) names were typed on an A4 sheet.
- The A4 sheet was cut into sixteen pieces, each depicting a station's name.
- The sixteen pieces of paper were folded twice and stapled, placed in a box and shuffled by an independent colleague.
- A third colleague was requested to draw eight pieces of paper from the box.
- The researcher then unfolded and opened the eight pieces of paper, which revealed the fifty per cent to be included in the study.

None of the respondents A-H, drawn in a simple random selection, possess advanced knowledge, skills and/or experience in specialised criminal investigative techniques. In layman's terms, respondents A-H are crime analysts and not criminal or specialised criminal investigators.

The second target population can best be described as experienced and specialised criminal investigators and/or intelligence analysts/researchers. A total of eight

individuals from this second target population were selected (non-probability) by the researcher, to be interviewed and included in the study. The reason for opting or utilising a method of selective selection, in comparison with simple random sampling, was based purely on the fact that no large pool of experienced and specialised investigators exists within the Nelson Mandela Metro City area, in order to determine a reasonable population group of experienced and specialised investigators. Thus, the absence of the latter placed a constraint on or inhibited the researcher from applying simple random sampling techniques in relation to experienced and specialised investigators. As an alternative, the researcher opted to select the above-mentioned eight individuals. They were specifically selected on the basis of their unique experience, knowledge and skills in relation to specialised crime investigation and/or intelligence analysis/research. The researcher, as a practising crime and internationally certified criminal analyst<sup>8</sup>, has been acquainted with these individuals for the past ten years - even longer. The researcher interacts and liaises with these individuals as part of his daily official function, and all serve on the same secretariat committee, dealing with organised crime which warrants specialised investigative techniques to address. The researcher is of the opinion that it was essential to include these selected individuals, as they were basically the only ones in a position to contribute valuable information to the study. Three of these respondents - all from the crime intelligence analysis/research environment - are also former specialised and experienced criminal investigators. The other five respondents were, however, never before stationed within the crime intelligence environment, and thus not deemed to be specialised and experienced intelligence analysts/researchers.

The above-mentioned eight individuals are all stationed within the Nelson Mandela Metro city area and placed in (senior) managerial positions within specialised investigative units or intelligence units. Their periods of service and experience vary from twenty-five to thirty-five years. Four of the respondents hold the rank of Senior Superintendent, three hold the rank of Superintendent and one holds the rank of Captain. All the respondents are in possession of relevant tertiary educational qualifications, i.e. National Diploma: Police Administration and/or Bachelor's Degree: Policing. All these

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<sup>8</sup> The researcher is an internationally certified criminal analyst from the Society of Certified Criminal Analysts, Lawrenceville, United States of America – certification number 098 (2002-09-30).

respondents underwent various specialised investigative and/or intelligence analysis related courses. Based on the above, they can with relative certainty be labelled as experts within their respective fields, each possessing expert subject knowledge and experience. These respondents are referred to as respondents I-P in the rest of this document.

#### **1.10. Methods ensuring validity and reliability**

The researcher applied the following methods to ensure validity and reliability, as described by Welman and Kruger (1999:138) and De Vos et al. (1998:85):

- The application of semi-structured interviews with respondents A-H by posing the same questions to each of them;
- The application of semi-structured interviews with respondents I-P by posing the same type of question, but limited to their specific fields of expertise. For example, a question specifically related to specialised criminal investigations was posed to those with relevant and expert knowledge of criminal investigations. It is the notion of the researcher that it would be pointless to pose questions relating to crime analysis techniques, for example, to an individual with expert knowledge of only criminal investigations, and vice versa. The questions were thus so designed that it focused on the specific individuals' expert knowledge, i.e. either criminal investigations and/or intelligence related.
- The application of a probability sample (simple random sampling technique) in relation to respondents A to H ensured reliability and validity as far as this group of respondents was concerned.
- The study was reliable, because it is on par with the qualitative research design.
- Although the findings of the research were only valid within the Nelson Mandela Metro city area, a high probability exists that the findings would also be relevant with respect to all other police stations in South Africa, due to the following reasons: all police stations were instructed to consult the SAPS' NCCF (Instruction number 29/2002 dated 2002-08-26) to apply the CTA process; all police stations are similarly structured (i.e. the composition of human and other



resources); all police stations are affected by crime although the nature and extent thereof vary; at least one crime analyst (Station Information Manager) is stationed per police station in South Africa; all crime analysts resort in one single police agency, i.e. the SAPS; all crime analysts are compelled to execute the same policing analysis function; and, one national type of crime analysis training course is designed for all crime analysts.

- The measuring instruments used (questionnaires – Appendix A and B) were designed and formulated so as to ensure that the responses received during the interviews measured what they were supposed to measure. Only relevant and specific questions, directly related to the CTA process, group offenders (organised crime related), repeat offenders and serial offenders, were included.
- The questions posed to the two respondent groups were formulated so as to be clearly understandable, thereby ensuring that all respondents understood the exact meaning of the questions. As questions were posed, no respondent articulated any hesitation in responding to the latter - a clear indication of unambiguousness.
- All respondents expressed and demonstrated their willingness to partake in the study, thereby ensuring a more reliable outcome.

### **1.11. Ethical considerations**

All the respondents were orally informed of the intended research project, and they all indicated their willingness to participate and co-operate during interviews and discussions. The researcher adhered to the prescribed University of South Africa code of ethics during the research process. The anonymity of all the respondents were guaranteed and respected throughout the report. All authors of literature sources utilised in the report were acknowledged, and no unauthorised copying from sources is depicted in the report. Official permission was obtained from the SAPS prior to conducting the research (see Appendix C).

### **1.12. Problems experienced in the study**

Access to literature information was not always readily available, and the researcher was at times compelled to rely on secondary sources (i.e. the Internet) due to the non-availability of relevant literature sources. The researcher attempted to restrict Internet searches to reliable and accredited websites such as the International Association of Crime Analysts (IACA), the International Association of Law Enforcement Intelligence Analysts (IALEIA), International Criminal Police Organization (INTERPOL), other law enforcement police agencies, and academic institutions. Page numbers of the sources were mostly omitted/not available at the browsed websites and the researcher was thus compelled to quote only the year pertaining to source quotations.

No problems were encountered during the interviews with respondents A-H and I-P. No large pool of experienced and specialised investigators exists within the Nelson Mandela Metro City area in order to determine a reasonable population group of experienced and specialised investigators. Thus, the absence of the latter placed a constraint on (or inhibited) the researcher to apply simple random sampling techniques in relation to the selection of experienced and specialised investigators. As an alternative, the researcher opted to select the eight individuals (respondents I-P), as described in section 1.9.

### **1.13. Delimitation of the study**

The study is demarcated as follows:

- Only threats associated with group offenders (organised crime related), repeat offenders and serial offenders were included in the study, because the CTA process is designed to cover and address only threats related to the aforementioned.
- Methods (overt and/or covert) of investigating group offenders (organised crime related) and repeat/serial offender(s) were excluded from the study, due to the sensitive and secretive nature of covert investigative methods.
- The geographic area was demarcated to include only the Nelson Mandela Metro city area which consists of the former municipal areas of Port Elizabeth, Despatch

and Uitenhage.

- Only the following crime analysis techniques were included in the study: crime statistical analysis (crime threshold analysis, crime trend analysis and ratio per 100 000 of the population analysis), crime pattern analysis, geographic analysis or crime mapping, linkage crime analysis, case docket analysis and profiling (criminal investigative analysis). The reason for this is that the CTA process is designed to include only certain types of crime analysis techniques in which the findings address the what, when, where, why and how aspects of crime.
- The research commenced in August 2002 and was concluded in November 2007.

#### **1.14. Layout of the dissertation**

Chapter 1: General orientation

Chapter 2: A theoretical overview – and application of the crime analysis techniques in policing

Chapter 3: Threats associated with group offenders (organised crime related), repeat offenders and serial offenders

Chapter 4: Data comparison: theory and practice

Chapter 5: Research findings and recommendations

#### **1.15. Summary**

Chapter 1 describes the general orientation of the study, which includes an introduction, historic development of the CTA process, problem statement, research aims, the value of the research, research methodology, research approach and design, methods of data collection, interviews, literature, demarcation of the study, the target population and sampling, data collection and analysis, methods used to ensure validity and reliability, ethical considerations, problems experienced in the study, and the dissertation layout.

Chapter 2 provides a theoretical overview of crime analysis in policing, based on an international and South African perspective. The following concepts are discussed: crime analysis, purpose and standards of crime analysis, crime analysis process, source of information, types of crime analysis in policing, defining the concept of a crime threat, application of the CTA process, outcomes of the CTA process, and the core functions of the SAPS in comparison to the objectives of the CTA process.

## CHAPTER 2

### A THEORETICAL OVERVIEW – AND APPLICATION OF CRIME ANALYSIS TECHNIQUES IN POLICING

#### 2.1. Introduction

Crime analysis, according to the International Criminal Police Organization (2004), also referred to as INTERPOL, has been internationally recognised by law enforcement agencies as a meaningful crime-combating supportive tool for the past twenty-five years. Within the last ten years the role and position of crime analysis in the global law enforcement community has fundamentally changed. Previously, only a few countries acted as forerunners and promoters of the practice, but more and more countries have now implemented analytical techniques within their police agencies. Even international organisations, such as INTERPOL, European Police Office (EUROPOL) and the International Criminal Tribunal for the former Yugoslavia (ICTY) employ analysts to fulfill vital functions (INTERPOL, 2004). Crime analysis as a discipline is an evolving profession that has changed from basic statistic gathering to an analytical position where data is analysed and projections are made as to expected criminal activity (INTERPOL, 2004).

Gottlieb, Arenberg and Singh (1998:xix) state that the process of analysing crime and the integration of crime analysis units into the mainstream of policing is a relatively new phenomenon within law enforcement, in comparison with policing practices in general. The statement of Gottlieb et al. (1998:xix) is supported, whereby, according to the researcher, the SAPS also adopted and integrated crime analysis units into the mainstream of policing during 1994. With the limited and even decreasing resources available for policing increasing crime incidents, police management in general is currently relying more on crime analysis findings to guide the decision-making process within crime management. The latter approach applied by the SAPS is in line with the statement of Gottlieb et al. (1998:33-34), who state that crime analysis provides commanders and police managers with a scientific basis for a decision or action to

improve operations or deployment of resources.

This chapter describes and outlines the concept of crime analysis, the purpose and standards set for crime analysts, the prerequisite requirements and the key performance areas set for crime analysts, the crime analysis process, sources of crime information, the different types of crime analysis in policing, interpretation of data in crime analysis, the application and outcomes of the CTA process, and a comparison between the core functions of the SAPS and the objectives of the CTA process.

## **2.2. Crime analysis**

McDowell (1998:110) describes (crime) analysis as the integration and interpretation of data or information. The SAPS (2000:5), in support of this view, further defines crime analysis as a detailed examination of the elements or structure of a subject, the relationship between these, and a statement of the results.

Peterson, Morehouse and Wright (2000:8) concur with the SAPS' view by describing crime analysis as the compilation, summarising, comparing and organising of information into meaningful relationships. Gottlieb et al. (1998:13) further define crime analysis as a set of systematic, analytical processes directed at providing timely and pertinent information relative to crime patterns and trend correlations, to assist operational personnel in planning the deployment of resources for the prevention and suppression of criminal activities and aiding in the investigative process. This view is supported by Peterson (1998:210), who defines crime analysis as the compilation, reviewing and articulation of conclusions drawn from crime incident data for the purpose of optimal police deployment to prevent crime, and criminal detection.

The SAPS (1999:2-3) further defines crime analysis as the identification of - and the provision of insight into - the relationship between crime data and other potentially relevant data. This definition is supported by Heuer (1999:61), namely, that small pieces of information are collected, which, when pieced together like a mosaic or jigsaw puzzle, eventually enable crime analysts to perceive a clear picture of reality. The Oakland Police Department (2000:1) summarises the latter and former views by defining crime

analysis as a set of systematic, analytical processes directed at identifying current and emerging crime patterns and trend correlations.

### **2.3. The purpose and standards of crime analysis**

According to INTERPOL (2004), the primary task of crime analysts is to assist law enforcers, policy- and decision-makers in dealing more effectively with threats or potential threats, to provide timely warning of threats, and to support operational activity by analysing crime. Peterson (1998:210) states that crime analysis has the dual purpose of supporting crime prevention and crime detection efforts; for example, investigative crime analysis supports the solving of crime in apprehending offenders, while operational crime analysis supports the deterring of crime through crime prevention actions.

In any discipline or practice, according to Peterson et al. (2000:109), certain standards are set to enhance and ensure formality, effectiveness, efficiency and professionalism. The same principle applies within the crime analysis environment, in respect of deliverable analytical products, namely (Peterson et al., 2000:109):

- Standard 1: Analysed data should be used to direct policing operations and investigations.
- Standard 2: Crime analysis should be an integral part of every major investigation the police are engaged in.
- Standard 3: Analytical products should contain, at minimum, a written report. Visuals may also be presented, but they are only acceptable in addition to, rather than in place of, a written report.
- Standard 4: Analytical products should contain conclusions and recommendations. These are presented to management for their consideration.
- Standard 5: The development of an analytical product requires the application of thought to data. Data compilations that do not reflect comparisons or other considerations are not analyses.

Standard 6: Analytical products must be accurate. Policy- and decision-makers must be able to rely on the data provided to them by analysts.

Standard 7: Analyses must be produced in a timely manner.

Standard 8: Analytical products should reflect all relevant data available through whatever sources and means available to the analyst.

Standard 9: Analyses should incorporate the best and most current computerisation, compilation, visualisation and analytical techniques available in the analyst's environment.

Standard 10: Analyses should both reflect and be evaluated on the qualitative and quantitative contribution to the mission and priorities of the agency or organisation for which they are being produced.

The researcher could not find any other supportive theoretical views for the above-mentioned set of standards. However, in practice - as experienced by the researcher as a crime analyst - the above-mentioned set of standards is being applied by crime analysts within the SAPS, although no formal directive and/or order regulates the latter.

Integral to the standards and purpose of crime analysis, it is necessary to reflect on the prerequisite requirements set for crime analysts and their key performance areas. The reason for the inclusion is merely to demonstrate that it is mandatory for crime analysts to apply the CTA process, whilst the majority of them view and apply the CTA process differently, thereby effecting possible ineffective outcomes, as described in section 1.3.

#### **2.4. Prerequisite requirements and key performance areas of crime analysts**

The SAPS (2005c:6) cites a set of prerequisite requirements for crime analysts within the SAPS, which includes the following: (1) Qualifications: Grade 12 or higher with two years' police experience; (2) Training: Crime Information Management & Analysis course; (3) Other requirements: Possession of a valid motor vehicle driver's licence and security clearance.



According to SAPS (2005c:4-5), the key performance areas of crime analysts at station level include the following: (1) Compilation of the CTA document; (2) Explanation of crime patterns and trends within the station area; (3) Rendering of assistance to other components (in the SAPS) pertaining to crime information; and (4) Assistance in ensuring that all crime information is captured on the corporate systems (of the SAPS).

For clarity purposes in respect of the latter requirement, i.e. requirement number 4, it is not, according to the experience of the researcher, expected from crime analysts to physically capture crime data on the corporate systems of the SAPS, but it is expected from them to verify captured crime data and rectify any incorrectly registered charges (cases) on the Crime Information System (CAS), if any, as a measure to ensure, enhance and maintain acceptable levels of data integrity.

The following section outlines and describes the crime analysis process - also referred to as the crime intelligence process. Although the latter and former are viewed differently by some police agencies, both processes are similar in terms of the intent and/or outcome.

## **2.5. The crime analysis (intelligence) process**

Within the crime analysis and crime intelligence environment, processes exist, differing in name only, which refer to the crime analysis process and the crime intelligence process, but by analysing the two processes, it will be noted that they are actually the same or similar, in terms of the collection, collation, analysis, dissemination and evaluation of crime information.

The Waltham Police Department (2001) describes the crime analysis process as consisting of data collection, data scanning, (patterns or trend) analysis, dissemination of information and evaluation, while Gottlieb et al. (1998:13) describe the crime intelligence analysis process as one of collection, collation, analysis, dissemination of crime information and evaluation. The latter view is supported by Peterson (1998:210), who describes the function of crime intelligence analysts as one of collection, collation, analysis, dissemination and evaluation/feedback. Urias (2002) supports both these views and describes that the basic operation of a crime analyst is the same as the functions

performed by the crime intelligence analyst.

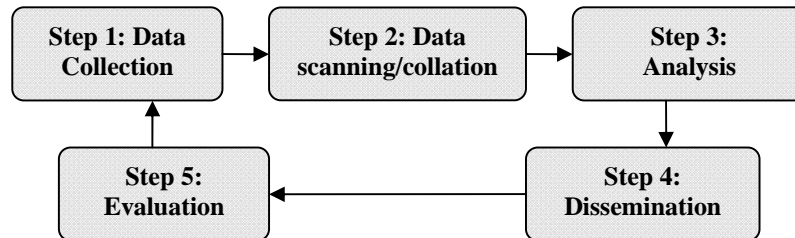
The only reason, according to the researcher, why a distinction is drawn between the crime analysis process and the crime intelligence analysis process, is to indicate the commonalities and similarities amongst the two concepts (processes) that are performed in two separate police components in the SAPS. For example, a police agency such as the SAPS employs both crime analysts and crime intelligence analysts within the division Crime Intelligence, in two separate, but related sub-components, i.e. Crime Information Analysis Centres (crime analysts) and the Crime Information Management Centres (crime intelligence analysts). The only distinction between crime analysts and crime intelligence analysts relates to their functions and clientele, described as follows:

- Crime analysts stationed at area, provincial and national levels are more strategy-orientated, and their clients include the policy- and decision-makers within the SAPS, while crime analysts at station (precinct) levels are mainly operation-orientated, and their clients include the local station management, crime prevention units and the Detective Service.
- Crime intelligence analysts, stationed at area, provincial and national levels, are operation- and strategy-orientated, focusing mainly on organised crime activities and crimes aimed against the State, and their clients include specialised investigative and intelligence units (e.g. Organised Crime Units and Crime Intelligence Gathering Units) and the policy- and decision-makers. There are no crime intelligence analysts stationed at station (precinct) levels.

In conclusion, no apparent differences exist between the crime analysis process and the crime intelligence analysis process. Both consist of collection, analysis, dissemination and evaluation, while collation and scanning are closely-related activities.

In summary of the definitions, the flow chart (Chart 1), designed by the researcher, conceptualises and describes the crime analysis process.

**Chart 1: The crime analysis process**



Step 1: Data collection refers to the gathering methods of source information (as described in section 2.6.) for the purpose of analysis;

Step 2: Data scanning or collation refers to the procedures which are followed to differentiate and separate relevant and irrelevant information;

Step 3: Analysis refers to the methods applied (as described in section 2.7.) in analysing information, the reaching of findings, the drawing of conclusions and the suggesting of solutions in addressing the problem;

Step 4: Dissemination refers to the way that information, derived from step 3, is provided to the relevant stake holders, e.g. SAPS management and/or the relevant operational unit; and

Step 5: Evaluation basically refers to the feedback the crime analyst receives from e.g. SAPS management or the relevant operational unit indicating either contentment, shortcomings or further tasking in this regard. If any shortcomings or taskings exist, the cycle or process then resumes, starting with step 1, and continues until contentment is reached.

The next section outlines sources of information as an essential part of crime analysis, with reference to which types of information sources are available and accessible to crime analysts.

## **2.6. Sources of information**

The SAPS (1999:49) states that sources of information form the foundation of any information network, and, according to the researcher, information or data forms the core foundation of crime analysis. The latter view is supported by Gottlieb et al. (1998:101), who describe data as the livelihood of the crime analysis operation. According to the SAPS (1999:49-50), sources of information, in the context of crime analysis, include the following:

- **Internal information sources:** These types of source cannot be accessed by the general public, and their use is restricted to the SAPS. They include internal statutory databases such as the Vehicle Enquiry System (CIR), CAS, Individuals/Structures Information System (ISIS), Criminal Record Enquiry System (CRI), Firearm Register System (VWR), Business Intelligence System (BI) and the Personnel Salary/Personnel SAPS System (PERSAL/PERSAP). Other types of internal police sources refer to human sources (informers/agents/contacts/police officials) and electronic sources (electronic intercepted/monitored information, via telephone and cellular phone interceptions, e-mail interceptions and data/information contained in/stored on hard drives of computers, etc.).
- **External information sources:** Access to these types of source is denied to the general public, but available and accessible to the SAPS. They are being managed, controlled and maintained by other institutions/organisations within the public and/or private sector. These are official South African databases such as the Population Register, Border Movement Control System (BMC), National Traffic Information System (NATIS), Home Affairs System and Government Network System (GOVNET). Other types of external semi-closed sources include information held by other government departments and/or institutes/organisations/non-governmental organisations (NGO), i.e. National Intelligence Agency (NIA), South African Secret Service (SASS), South African National Defence Force (SANDF), South African Revenue Service (SARS), Department of Trade and Industry, Department of Education/Academics/Tertiary

Institutions, Customs and Excise, Nature Conservation, municipalities, Civil Aviation, banks, Registrar of Companies, hospitals, airports, ports of entry, security companies, the media, taxi forums, credit bureaux, insurance companies, Chamber of Business, Chamber of Commerce, the cellular network providers (e.g. Vodacom, MTN, Cell C) and Interpol. Information can be obtained from them by means of liaison with organisations and government/semi-government departments, or by applying Section 205 of the Criminal Procedure Act 51 of 1977<sup>9</sup> in relation to private and other entities (e.g. banks, insurance companies, network providers, the media, credit bureaux, etc.).

- Open sources: This type of source refers to sources which are available and accessible to the general public and also to the police, and which include printed and electronic media, literature sources, the Internet, etc.

According to Gottlieb et al. (1998:118-124), the following internal and external information sources are available to crime analysts in the United States of America (USA):

- Internal sources: Crime reports; suspect reports; field interview reports; sex/narcotic registration forms; traffic citations; booking reports (arrest reports); criminal history information; calls-for-service/dispatch reports; investigation reports; evidence reports; property reports; victim/witness interview reports and offender interview/ interrogation information reports.
- External sources: Other law enforcement agencies; parole/probation departments; Department of Motor Vehicles; Federal Bureau of Investigation (FBI); other federal agencies; National Institute of Justice, other state-automated data systems and the transnational databases between the USA, Canada and South America.

Gottlieb et al. (1998:101-103) further state that crime analysts in the USA utilise mainly crime reports, suspect/arrest reports and field interview reports in their analysis operations. These documents contain the data that are used most frequently to establish

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<sup>9</sup> Section 205 of the Criminal Procedure Act (Act No. 51 of 1977) is used to obtain information pertaining to any alleged offence where the State has reason to believe that a certain individual has such information at his/her disposal, but is unwilling to disclose such information to the State (Hiemstra, 1987:438).

the existence or emerging of crime patterns, compile modus operandi and suspect files, as well as to determine the identity of criminal offenders. The following type of information is contained in these reports:

- Crime reports: (1) Geographic factors; (2) Time factors; (3) Victim/target descriptors; (4) Property loss descriptors; (5) Physical evidence descriptors; (6) Solvability factors; (7) Specific modus operandi factors; and (8) Preliminary investigation information.
- Suspect/Arrest reports: (1) Geographic factors; (2) Time factors; (3) Victim/target descriptors; (4) Recovered property descriptors; (5) Physical evidence descriptors; (6) Specific modus operandi descriptors; (7) Suspect descriptors; and (8) Suspect vehicle descriptors.
- Field interview reports: (1) Geographic factors; (2) Time factors; (3) Subject descriptors; (4) Subject vehicle descriptors; (5) Names of associates of subject (offender); and (6) Reasons for the interview.

The researcher noted that Gottlieb does not make any reference to open sources, but it can most probably be assumed that crime analysts in the USA also make use of open sources during the course of their analysis activities.

In comparison, crime analysts in both the SAPS and the USA have access to the same or similar type of information or data for analytical purposes. The format or type of information sources may differ, but the contents thereof are basically the same.

The following section outlines the types of crime analysis within the police environment, i.e. operational, tactical and strategic crime analyses.

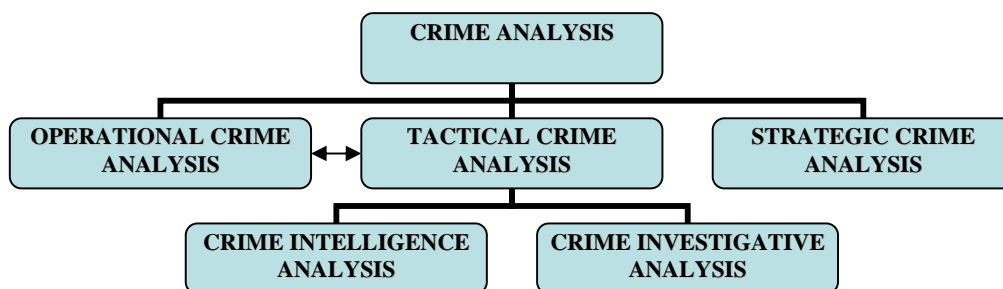
## **2.7. Types of crime analysis in policing**

According to the SAPS (1999:2-3), crime analysis involves the use of uniform techniques focusing on the development of hypotheses, reconstructing the course of criminal incidents, identifying a series of related crimes, understanding criminal networks and analysing the scope of - and patterns in - criminal activity. Crime analysis, in Gottlieb et

al. (1998:11), allows the analyst to determine who's doing what to whom by its focus on crimes against persons and property. Peterson (1998:2) states that crime analysis has been a patrol-orientated form of analysis, the conclusions of which are frequently utilised to support decision-making on the deployment of personnel in crime-affected geographic areas of concern. In Gottlieb et al. (1998:12), crime analysis consists of tactical crime analysis, operational crime analysis and strategic crime analysis. This view is partly supported by the SAPS (2000:5-8) and Interpol (2004), who state that crime analysis consists of strategic and operational crime analysis. The SAPS in their definition do not, however, mention tactical intelligence as a separate entity, as described by Gottlieb. According to the researcher, the SAPS also does not differentiate between tactical and operational analysis in practice, and views both as an integrated concept. For the purpose of the study, and in order to maintain continuity and perspective, the researcher considers it important to acknowledge tactical crime analysis as a crime analysis type, and it will be discussed in concurrence with operational analysis.

The following chart (Chart 2), designed by the researcher, conceptualises the different types of crime analysis applied in practice within the SAPS environment.

**Chart 2: Different types of crime analysis**



The following section outlines the different types of crime analysis - operational crime analysis, followed by tactical crime analysis (crime intelligence analysis and crime investigative analysis) and strategic crime analysis.

### **2.7.1. Operational crime analysis**

The Tempe Police Department (1999) comments that operational crime analysis provides crime information which can be utilised to assist operational personnel in identifying specific and immediate crime trends, patterns, series, sprees and focus areas, and also in providing investigative leads. The latter view is supported in the study material of Technikon Southern Africa (TSA) (2002:50), which states that operational analysis involves an evaluation of information and factors directly relevant to crime combating, and this analysis is further aimed at the identified and immediate crime threats/problems in time and space. Furthermore, in Tempe Police Department (1999) operational crime analysis includes associating criminal activity by method of the crime, time of occurrences, dates of occurrences, prominent geographic locations, suspect particulars or description, vehicle, and other types of information.

The Redding Police Department (2002) supports the latter views, and comments that the crime analyst will focus on the criminal's mode of operation (*modus operandi*), the crime's day/time/location patterns and clusters, and past similar crimes, to perform predictive analyses for mitigation efforts such as using a decoy, stakeouts, extra patrols, and saturating the area with additional marked units or crime prevention methods. Urias (2002) supports these views and adds that forecasting crime potentials or trends through a combination of casual and statistical analyses will determine when and where the next incidents in a crime pattern will or ought to appear, for crime prevention purposes.

Operational analysis, in INTERPOL (2004), aims to achieve a specific law enforcement outcome. The latter might be arrests, seizure or forfeiture of assets or money gained from criminal activities, or the disruption of a criminal group.

Examples of operational crime analysis techniques relevant to the CTA process, according to the researcher, include geographic crime analysis or crime mapping, crime pattern analysis, case docket analysis and linkage analysis.



### **2.7.2. Tactical crime analysis**

Gottlieb et al. (1998:13) cite that tactical analysis provides crime information to assist operational personnel, such as detectives and intelligence personnel, in the identification of specific and immediate crime problems and the arrest of specific criminal offenders. Analysed data is used to promote a quick response to field situations. According to the researcher, tactical analysis involves an evaluation of information and factors directly relevant to police actions aimed at crime detection and the prevention of crime. Furthermore, this analysis is aimed at the identification of specific and immediate crime tendencies in time and space. It serves to identify prominent features, such as individuals/groups of criminals, relevant premises, contact points and methods of communication. The identification may result from a structured approach to information and intelligence gathering as a result of a criminal incident or the identification of emerging trends. Urias (2002) supports this view and comments that analysts can link a suspect to a crime by examining career criminal files, suspect vehicle files, parole/probation reports, modus operandi files and field interrogation (interviewing) files.

Furthermore, tactical analysis, in Peterson (1998:30) and supported by Gottlieb et al. (1998:11), consists of crime intelligence analysis and crime investigative analysis, described as follows:

#### **2.7.2.1. Crime intelligence analysis**

Crime intelligence analysis, according to Gottlieb et al. (1998:11-12), aids in the determination of who's doing what with whom by its focus on the relationship between persons and organisations involved in illegal and usually conspiratorial activities, such as organised criminal groupings/syndicates. This view is supported by the Massachusetts Association of Crime Analysts (MACA) (2001a), which describes crime intelligence analysis as the study of criminal organisations and enterprises, how they are linked and who the key stakeholders are. Furthermore, this type of analysis assists in the investigation and prosecution process. Gottlieb et al. (1998:27) also define crime intelligence analysis as the systematic collection, evaluation, analysis, integration and

dissemination of information on criminals, especially relating to their associations and their identification with criminal activity of an organised nature. As such, crime intelligence analysis focuses more on organised crime, as cited in Gottlieb et al. (1998:27).

### **2.7.2.2. Crime investigative analysis**

In Gottlieb et al. (1998:12), investigative analysis is an exceedingly specialised type of analysis that is frequently utilised in the investigation of unusual or serial-related cases such as murder and rape. This type of analysis uses crime scene evidence and information pertaining to the history or backgrounds of victims to develop physical, behavioural and psychological profiles of the offender(s) involved in the crime(s). Investigative analysis does not answer the question of who is doing what to whom, but it does provide an insight into the why aspect of crime. This view is supported by Urias (2002) who describes investigative analysis as the analysis of crime patterns, in order to identify the personality and behavioural characteristics of criminal offenders. Through this analysis of crime scene characteristics, the profiling includes developing a description of the most likely type of offender, which can be used by investigators to narrow the list of suspects and focus on investigations, as described in Urias (2002).

According to the SAPS (2000:7), investigative analysis is defined as the analysis of crime scene evidence and information associated with victims and circumstances, to develop profiles of suspects responsible for the crimes under consideration. This view is supported by Peterson (1998:42), who defines investigative analysis as the use of components of a crime and/or the physical and psychological attributes of a criminal to ascertain the identity of the criminal. Peterson's view is supported in the study material of TSA (2002:55), which states that investigative analysis focuses on crime scene evidence and is concerned with information leading to the profiling of offenders. In layman's terms, investigative crime analysis encompasses criminal profiling.

### **2.7.3. Strategic crime analysis**

Strategic crime analysis, according to Gottlieb et al. (1998:14-15), is concerned with long-range problems and projections of long-term increases or decreases (crime trends) pertaining to crime. This view is supported by Peterson (1998:41), who states that strategic crime analysis is a statistical analysis of crime to forecast future crime. These views are supported by the California Employment Development Department (1999), which adds that strategic crime analysis is future-orientated and is being used to make informed resource decisions to determine where police presence needs to be increased or decreased in future operations.

In Peterson (1998:53), the key to all forms of strategic analysis is that it is generally predictive and medium-to-long-term in nature, and that it forms some assessment of a situation along with recommendations on how to address the latter. The approach in strategic analysis is to look at what has occurred in the past, what is occurring presently and then to predict what may probably occur in the future. This requires the assimilation of data from a variety of sources - inter alia, police records, public records, demographic data, economic data and other relevant documents. Many of the techniques used in strategic analysis are adopted from military, international or business intelligence formats (Peterson, 1998:53).

A collection plan is used to initiate a strategic analysis, and an assessment is usually the end product of a strategic analysis. Furthermore, the latter should be utilised to form the basis for policy-making and strategy development (Peterson, 1998:53).

The views of Peterson and Gottlieb et al. are supported in SAPS (2000:5-7) and in the study material of TSA (2002:50), which regard strategic crime analysis as the monitoring of crime trends in terms of time and space dimensions. This is done to explain variations in crime figures over time and among different geographic areas, by endeavouring to correlate policing or socioeconomic and demographic factors with the occurrence of crime.

In INTERPOL (2004), strategic analysis is intended to generate management information, based on long-term predictions. It is usually aimed at managers and policy-makers rather than individual investigators. The intention is to provide early warning of threats and to support decision-makers in developing priorities to prepare their organisations to be able to deal with emerging criminal issues.

According to the researcher, an example of strategic crime analysis relevant to the CTA process is crime statistical analysis.

Integral to the aforementioned types of crime analyses is the importance of reflecting on the techniques applied in arriving at the meaning of analysed data, as outlined in the following section.

## **2.8. The interpretation of data**

Harris (1976:30) comments that in executing the general functions of analysis, it may at times be expected from the analyst to apply some specialised techniques to the crime problem, for more effective insight.

Peterson et al. (2000:105) state that the data comparison technique applied in crime analysis is the critical step in the analysis endeavour, mainly because through this activity meaning is derived. The data which the analyst has organised and summarised are compared to the set of expectations derived from an initial hypothesis. In addition to imposing a general structure on the analysis, the hypothesis is the source of criteria that determines the significance of observed data. Similarities or regularities in geographic distribution might also be observed.

Harris (1976:31) supports this view and remarks that in the comparison step, the analyst must ask what the significance is. The analyst should determine whether the data exhibit significant relationships, the meaning of the relationships or lack of them in terms of the purpose of the analysis, the larger meaning of these findings, and the requirements for additional information or further analysis.

According to the researcher, through the application of different crime analysis techniques in the CTA process, and coupled with source information (where necessary), meaning can or ought to be derived.

The following section outlines the CTA process (the core of the study), the different crime analysis techniques to be applied, and what findings it intends to arrive at as an outcome.

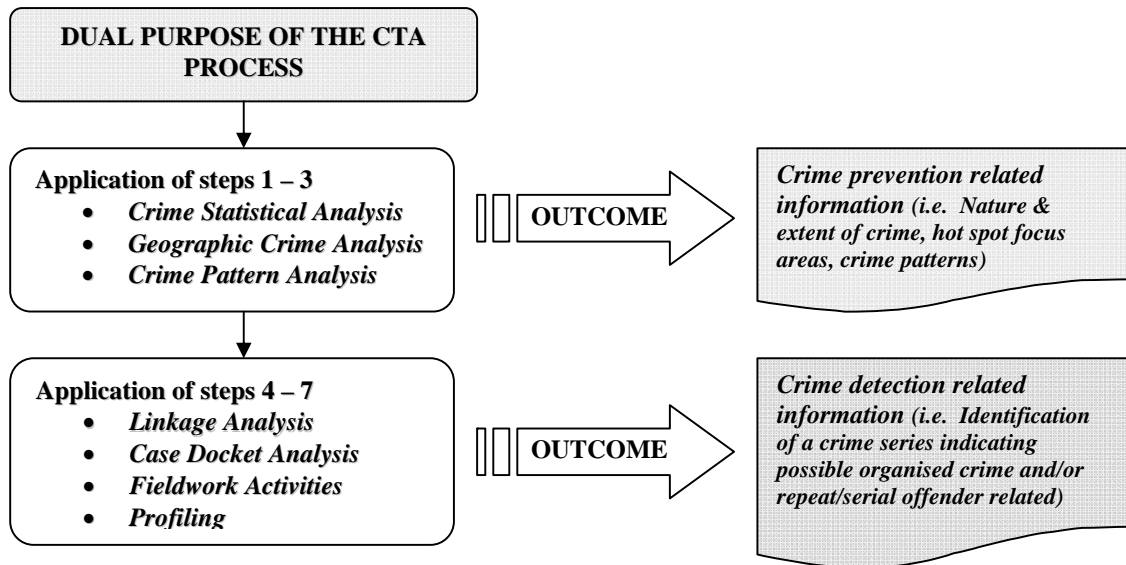
## **2.9. The Crime Threat Analysis process**

According to SAPS (2000:8), the CTA presents a holistic view of crime in a given geographical area at a specific point in time, which is measured by specific criteria. This view is supported in the study material of TSA (2002:57) which adds that the analysis (findings) is meant to present a holistic view of threats associated with crime, in a manageable format.

The CTA process, as described in SAPS (2000:9), encompasses or integrates the findings of different crime analysis techniques. The crime analysis techniques referred to in the CTA process include crime statistical analysis, geographic crime analysis or crime mapping, crime pattern analysis, linkage analysis, case docket analysis, fieldwork and profiling. Furthermore, the crime analysts at station level are required to effect linkages and record/report all incidences of possible repeat and serial offenders and/or possible organised crime-related activities, based on crime analysis findings.

Similar to crime analysis, as quoted in Peterson (1998:210), the CTA process has a dual purpose and outcome; i.e. the findings can be applied to generate crime management information intended for crime prevention and crime detection purposes. For illustration, see Chart 3, designed by the researcher.

**Chart 3: Dual purpose and outcomes of the Crime Threat Analysis process**



Integral to the above is the importance to reflect on defining the concept of a crime threat within the context of the CTA process.

### 2.9.1. Defining the concept of a crime threat

In De Kock (2004:5), a verifiable crime series constitutes a threat in the sense that a high probability exists that it was committed by either a group of offenders (possible organised crime related) or a repeat offender(s) or a serial offender(s). The latter view is supported by Oakland Police Department (2000:2) which states that a crime series is committed by the same suspect or suspects. The word threat, according to the Collins South African School Thesaurus (2003:594), is “something that seems likely to harm you”.

Based on the notion as cited in De Kock (2004:5) and the explanation of the word ‘threat’ as cited in Collins South African School Thesaurus (2003:594), it can most probably be argued that crime, directly or indirectly, can harm or impair one financially and/or physically, thereby posing a threat to human society - financially, in the sense that one can lose property or cash during a crime incident or fraudulent event, and physically, in the sense that one can be physically harmed (e.g. killed and/or raped), in both incidences, by either a single offender or a group of offenders.

The primary reason, according to the researcher, why criminal activities associated with group offenders (organised crime related), repeat and serial offenders are singled out to be viewed as a threat, is based on their repetitiveness - and thus the cumulative harm done or caused. Organised criminal groupings, repeat and serial offenders are, by the very nature of their description/classification, incessantly and repeatedly involved in crime, thereby continuously generating large volumes of crime. Other crime incidents, unrelated to the latter, also generate large volumes of crime, but they are largely socially-related and are normally once-off criminal events (rarely repeated events). Thus, the emphasis is placed on the repetitiveness or the continuation of criminal activities by organised criminal groupings (mainly financially motivated), repeat and serial offenders (financially and psychologically motivated or driven), as well as the cumulative harm and/or damage which are caused by both the former and the latter.

According to the researcher, it must thus be emphasised that in the study a clear distinction is drawn which envisages only a crime series to be viewed as a crime threat, as described in De Kock (2004:5). One can with reasoning argue that crime per se also constitutes a threat to society, irrespective of crime volumes, the levels of violence, crime frequencies and/or crime types. Furthermore, the researcher acknowledges that all relevant factors or variables need consideration in defining a threat, i.e. financial impact, socioeconomic factors, public opinion and perceptions, perceived fear of crime, political implications, social acceptance levels and other relevant and valid factors, but the latter factors are not included within the parameters of this study.

The study rather attempts to explain how crime statistical calculations - and analytical methods, specifically - can be used to uncover a crime series, irrespective of other factors. Furthermore, the study attempts to narrow or restrict its focus on specific and clearly defined threats which are exclusively associated with organised crime related groupings/syndicates, repeated offenders and serial offenders.

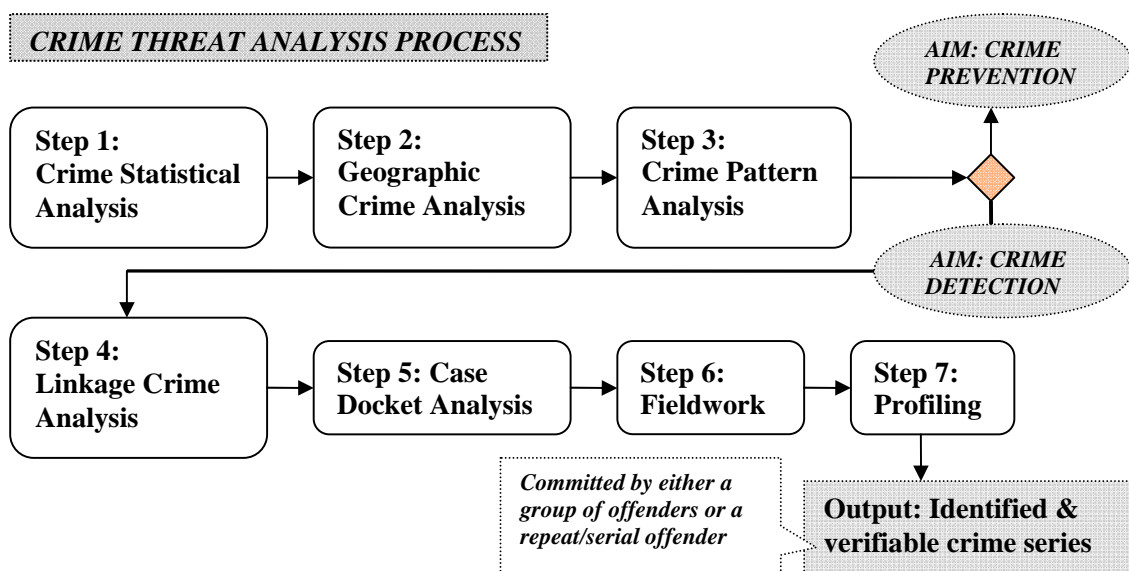
The following section outlines the application of the CTA process within the SAPS, which is the essence of the study.

### 2.9.2. The application of the Crime Threat Analysis process

Central to the above is the necessity to reflect on the various crime analysis techniques applicable to the CTA process, i.e. crime statistical analysis, geographic crime analysis or crime mapping, crime pattern analysis, linkage analysis based on the matrix, case docket analysis, profiling and fieldwork, as cited in section 2.9. in the SAPS (2000:2).

The following flow chart (Chart 4), designed by the researcher, conceptualises the CTA process and is displayed at the beginning of each of the seven crime analysis steps throughout the chapter, for contextual purposes.

**Chart 4: The Crime Threat Analysis process**



The CTA process, as conceptualised in Chart 4, describes seven separate, yet integrated, steps which the crime analyst must follow in order to reach and/or secure certain findings. The process is designed to generate operational and crime management information for:

- Crime prevention purposes, by applying steps 1 to 3. The findings of crime statistical analysis, combined with the findings of geographic crime analysis and crime pattern analysis will reflect and indicate the nature and extent of crime over a given period in time, identify geographic crime hot spot or focus areas and will

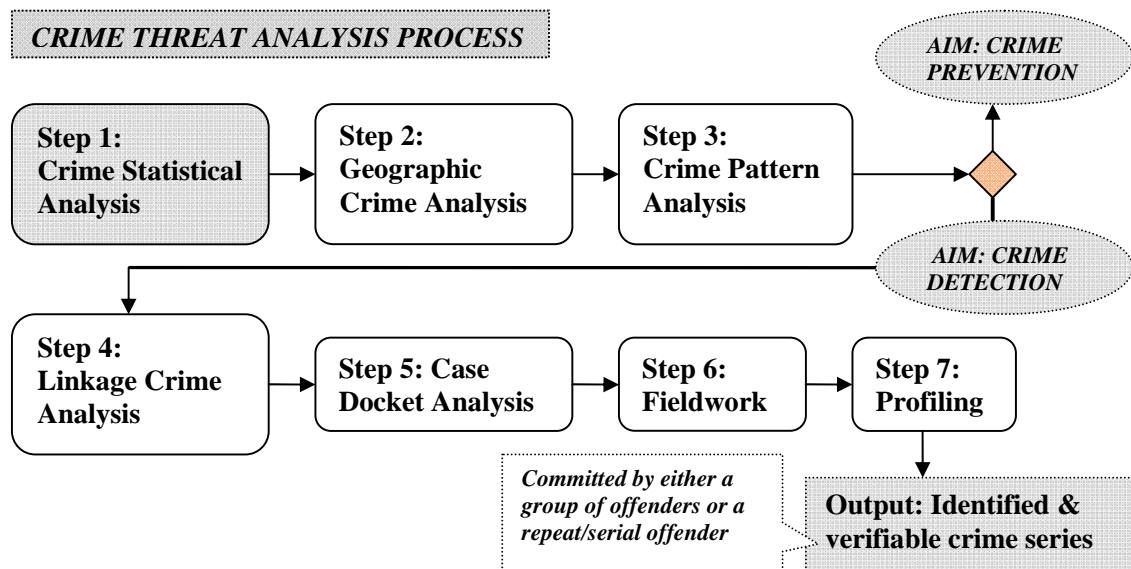


provide crime pattern information. This information is essential for police management in the planning phase of crime prevention operations, for knowing when (day of the week and time intervals) and geographically where to deploy resources more effectively.

- Crime detection purposes, by applying all the steps, i.e. Steps 1 to 7. The findings of the seven steps will provide the analyst and/or investigator with operational information related to the what, where, when, who and how aspects of crime, specifically focused on group offenders (organised crime related), repeat and serial offenders.

The following chart outlines the seven steps which are prescribed in the CTA process, as described in the SAPS (2000:9) in section 2.9. Thus, the first step for the crime analyst will be to apply crime statistical analysis techniques, as described and conceptualised in Chart 5:

**Chart 5: Step 1 - Crime statistical analysis**



**2.9.2.1. Crime statistical analysis – Step 1**

The crime statistics of a police station provide a picture of the nature and extent of crime, as well as trend increases, stabilisations and decreases over time (De Kock, 2004:5). In

the understanding and utilisation of crime statistics within the police environment, it can be defined as quantitative facts (crime figures) which are collected, processed, analysed and interpreted. Furthermore, the latter provide information and serve as a foundation for the formulation of policy, and development and administration of programmes (Seimela, 2003:3). This latter view is supported in the study material of TSA (2002:73) which further describes that statistics are numbers which are processed and analysed to provide intelligence and serve as a foundation for policy formulation.

It is, according to the researcher, important to accentuate that crime statistics, which will always be a highly criticised and controversial issue, are only a reflection of criminal cases reported to the SAPS, and are not per se a true reflection of the total crime spectrum, due mainly to the under-reported rate of crime, whether by the public at large and/or by the SAPS themselves (e.g. crime registration administrative errors). This view is supported by Louw (2001:1) who states that the most important feature of police crime statistics is that they tell us about crimes that the public report and the police record. Furthermore, according to Louw (2001:1), police crime statistics often say more about reporting patterns and police procedure than about actual crime levels. The views of the researcher and Louw are supported by Leggett (2002:7) who states that crime rates or the number of crimes recorded by the police are unreliable as a reflection of the real crime situation and as an indicator of police performance.

On the other hand, according to Schönreich (2002:1), South Africa's official crime statistics are widely regarded as comprehensive and certainly as the most detailed and reliable of all countries on the African continent. This view is supported by Louw (2001:3), who states that the accuracy of statistics should be assessed in terms of validity and reliability. In relation to validity, Louw (2001:3) mentions that, based on available information, reporting patterns in South Africa are similar to those in other countries - an indication of validity. In relation to reliability, Louw (2001:3) mentions that a ministerial committee of inquiry into the collection, processing and publication of crime statistics found that the routine and widespread public scepticism about police data in South Africa was unfounded. According to Louw (2001:3) and supported by Schönreich (2002:1), the SAPS' statistics are probably reliable at national, provincial and area level.

Furthermore, Schönteich (2002:1) supports the views of the researcher, Louw and Leggett, in relation to the undercount of crime. According to Statistics South Africa's (SSA) 1997 National Victims of Crime Survey, as cited by Schönteich (2002:1), crimes involving valuable and insured property are mostly reported. In conclusion, Louw (2001:4) quotes:

The South African Police Service's Crime Information Analysis Centre has in fact done particularly well to produce comprehensive, consistent and geographically detailed information about the 28 serious crime types.

Based on (1) the findings of Louw and Schönteich (both senior researchers at the time attached to the Institute for Security Studies in Pretoria) regarding the validity and reliability status of the SAPS official crime statistics, (2) the findings of Louw and Schönteich regarding the undercount or under-reporting rate of crime in South Africa, and (3) the findings of the ministerial committee of inquiry, one can probably generalise and conclude that:

- The official crime statistics of the SAPS are reasonably valid and probably reliable;
- An undercount or under-reporting rate of crime exists, but the phenomenon is similar to or consistent with those in other countries; and
- The widespread public scepticism about police crime statistics in South Africa is unfounded.

Notwithstanding any scepticism pertaining to crime statistics in general, it must (according to the researcher) be accepted that the crime statistics collected, processed, analysed and published by the SAPS are the only official and recognised record of reported crime incidences in South Africa. For the purpose of the CTA process, the latter set of crime data (crime statistics) must therefore, despite general scepticism, form the foundation in crime statistical analysis endeavours.

Crime analysts and researchers must, according to the experience of the researcher, as a precautionary measure always ensure that collected crime data are valid and reliable

before attempting to analyse and interpret the latter. Thus, findings based on unreliable crime data will distort and/or invalidate any findings.

The following three types of crime statistical analysis techniques will be discussed, as to which is relevant to the CTA process: crime threshold analysis, crime trend analysis and ratio per 100 000 of the population analysis.

#### **2.9.2.1.1. Crime threshold analysis**

In Gottlieb et al. (1998:375), all police agencies need to know how many crimes of each type are considered normal for any given period of time. That is, the police need to know the upper and lower limits (known as thresholds) of each crime, in order to determine if the crimes are within, above or below the thresholds of crime.

This view is supported in the study material of TSA (2002:75), which states that the upper and lower limits of crime are calculated to determine whether crime thresholds are within acceptable limits.

In Gottlieb et al. (1998:376), the reason why crime thresholds are established is to provide an objective basis for determining when crime is getting out of control. The statistical tool that enables the crime analyst to calculate these limits (the spread) is the standard deviation.

The standard deviation, in Gottlieb et al. (1998:376-377), is known as a measure of dispersion, and it measures the distance of data points from the mean average. Crime analysts use standard deviation to establish what the normal limits for crime should be. The following statistical method in Gottlieb et al. (1998:378), and supported in the study material of TSA (2002:75-76), determines the upper and lower limits of crime:

- Calculate the mean average of the data set;
- Subtract the mean average from each data point;
- Square each of the differences obtained in the above step;
- Sum the squares from the above step;

- Divide the total of the squares by the number of numbers in the original data set - the number that results from this deviation is known as the variance;
- Find the square root of the variance to obtain the standard deviation.

In order to calculate the upper limit, add the standard deviation to the mean and in order to calculate the lower limit, subtract the standard deviation from the mean. Table 1, designed by the researcher, is an example of how crime threshold analysis findings can be expressed, interpreted and presented for crime management and operational purposes. The statistics reflected in the table are fictional and used solely for explanatory purposes.

**Table 1: Crime threshold analysis**

<b>CRIME TYPE</b>	<b>LOWER LIMIT</b>	<b>UPPER LIMIT</b>	<b>STATISTICS SEPT 2007</b>	<b>% CHANGE</b>	<b>INDICATOR</b>
Theft of motor vehicles	12.37	17.88	31	42.32%	Above the threshold
Burglary (residences)	18.30	31.95	26	18.62%	Within the threshold
Robbery (common)	72.05	108.70	52	27.83%	Below the threshold

In the table (Table 1), incidences of motor vehicle theft (31 cases) depict 42.32% above the expected crime levels, while incidences of residential burglaries (26 cases) depict 18.62% within the expected crime levels, and incidences of robbery (52 cases) depict 27.83% below the expected crime levels.

Based on the above interpretation, it can be concluded that incidences of motor vehicle theft warrant more attention and intervention in comparison to burglaries and robberies.

However, a national directive of the SAPS of 26/1/1 (Assistant Commissioner Dr CP De Kock) dated 21 February 2005 states the following (SAPS, 2005b:2):

This office [National Crime Information Analysis Centre, Pretoria] will over at least the next three years calculate the extent to which the Government targets have been achieved purely on the basis of a percentage reduction based on raw figures. In other words, during the current financial year of 2004/2005 the Government's target is to achieve at least a 7% reduction in the serious crime statistics compared to figures for the previous financial year of 2003/2004. As these are new targets determined by government, no upper and lower limits (standard deviations) will have to be calculated [crime threshold analysis] during the next three years and it is strongly recommended that all provincial offices dispense with the calculation of limits and use the usual increase/decrease calculations.

The researcher is not convinced that the meaning of the directive, as cited in SAPS (2005b:2), was intended to prohibit the use of crime threshold analysis techniques among crime analysts. It is the notion of the researcher that the intent of this directive was directed at provincial offices of the CIAC's (not station crime analysts), to dispense with this technique as a crime measuring tool and recommend the use of crime trend analysis findings to measure the extent to which the South African government's targets have been achieved, i.e. 7% reduction in serious crimes. Based on the experience of the researcher, crime analysts ought still to apply crime threshold analysis in conjunction with crime trend analysis and ratio per 100 000 of the population analysis, because crime analysts must provide all the various interpretations of crime statistics to their clients, in order for them to arrive at a well-informed decision, as described by Gotlieb et al. (1998:355).

In conjunction with the findings of crime threshold analysis, the crime analyst will also apply crime trend analysis techniques in order to determine or calculate the percentage increases/decreases/stabilisations in crime occurrences.

#### **2.9.2.1.2. Crime trend analysis**

According to Seimela (2003:11), one of the main duties of a crime analyst is to provide

information regarding the direction of crime. The direction of crime can best be illustrated in the percentage with which it has increased, stabilised or decreased, as described in Seimela (2003:11), where it states that crime does only three things: it increases, decreases or stabilises. Percentage change calculation always involves two numbers, i.e. the current (e.g. September 2007) crime figure (e.g. 30) and the corresponding past (e.g. September 2006) crime figure (e.g. 20). The statistical formula to calculate percentage change is as follows:

$$\% \text{ Change} = \frac{n_{30} - n_{20}}{n_{20}} \times 100$$

Where:  $n_{30}$  = the number of crimes during September 2007, and

$n_{20}$  = the number of crimes during September 2006.

The view and formula, as described by Seimela, above, are supported in the study material of TSA (2002:74) which further states that crime trend analysis is used to calculate the crime rate over a specified period by comparing two corresponding figures, as depicted above.

Table 2, designed by the researcher, is an example of how crime trend analysis findings (operational) can be expressed, interpreted and presented for crime management and operational purposes. The statistics reflected in the table are fictional and used solely for explanatory purposes.

**Table 2: Crime trend analysis (operational)**

<b>CRIME TYPE</b>	<b>STATISTICS SEPT 2006</b>	<b>STATISTICS SEPT 2007</b>	<b>% CHANGE</b>	<b>INDICATOR</b>
Theft of m/vehicles	20	31	55.00%	Increased trend
Burglary residence	33	26	21.21%	Decreased
Robbery	52	52	0.00%	Stabilised

In Table 2, incidences of theft of motor vehicles (31 cases) depict an 55.00% increasing

trend, while incidences of residential burglaries (26 cases) depict a 21.21% decreasing trend, and while incidences of robbery (52 cases) depict a 0.00% stabilised trend. Based on the interpretation it can be concluded that incidences of motor vehicle theft warrant more attention and intervention in comparison to that of burglaries and robberies.

For strategic purposes, according to the researcher, it is also important to determine the percentage change of the different crime types over a longer period of time than indicated in Table 2. The covering period, for strategic purposes, will vary from station to station, based on crime volumes. The general or unwritten rule to apply, in the researcher's experience, is "the higher the crime volume, the shorter the time-covering period" and vice versa. For example, if a station depicts 100 cases per month, it will be advisable to utilise, for example, a three month covering period, while if a station depicts 10 cases per month, it will, for example, be advisable to use a much longer period, e.g. a twelve month period. Calculating or monitoring crime volumes over long periods of time will allow the crime analyst to determine trends, i.e. crime frequency abnormalities (sudden slumps in crime volumes and/or sudden increases in crimes) and/or gradual increasing or decreasing crime trends. This type of information will provide the decision-makers and managers with strategy-orientated crime management information.

Table 3, designed by the researcher, is an example of how crime trend analysis findings (strategic) can be expressed, interpreted and presented for crime management and strategy purposes. The statistics reflected in the table are fictional and solely used for explanation purposes.

**Table 3: Crime trend analysis (strategic)**

<b>CRIME TYPE</b>	<b>STATISTICS JAN - SEPT 2006</b>	<b>STATISTICS JAN - SEPT 2007</b>	<b>% CHANGE</b>	<b>INDICATOR</b>
Theft of m/vehicles	120	80	33.33%	Decreased
Burglary residence	145	164	13.10%	Increased
Robbery	125	140	12.00%	Increased



Based on both crime trend analysis (operational and strategic) findings, one can now conclude that:

- Although incidences of motor vehicle theft depict a 55% increase (see Table 2) during September 2007 in comparison with the corresponding period of September 2006, incidences overall depict a decreasing trend of 33.33% (see Table 3) during the period January 2007 to September 2007 in comparison with the corresponding period, January 2006 to September 2006.
- Although incidences of burglary (residences) depict a decrease of 21.21% (see Table 2) during September 2007 in comparison with the corresponding period of September 2006, incidences overall depict an increasing trend of 13.10% (see Table 3) during the period January 2007 to September 2007 in comparison with the corresponding period January 2006 to September 2006.
- Although incidences of robbery depict a stabilised trend (0.00%) (see Table 2) during September 2007 in comparison with the corresponding period of September 2006, incidences overall depict an increasing trend of 12.00% (see Table 3) during the period January 2007 to September 2007 in comparison with the corresponding period January 2006 to September 2006.

Based on the above interpretation, one can conclude that incidences of motor vehicle theft warrant more attention and intervention currently, due to a sudden, unexpected hike in incidences during September 2007. Furthermore, the sudden or unexpected slump in the burglary and robbery statistics during September 2007, indicating decreases/stabilisations, is not an assertion that the current favourable trends will be sustained in future, based on the overall increasing trend, as depicted in Table 3 (January 2007 to September 2007). Only time will collaborate the latter statement, e.g. the forthcoming months.

In conjunction with the findings of crime threshold analysis and crime trend analysis, the crime analyst will thus also apply the ratio per 100 000 of the population analysis, described below, in order to determine whether the crime occurrences are higher, lower or equals the general norm.

### 2.9.2.1.3. Ratio per 100 000 of the population analysis

This method, in Gottlieb et al. (1998:353), is particularly useful for comparing changing rates involving crimes against persons, including property crimes. Ratios, according to Seimela (2003:9-10), are used to standardise the values that are to be compared, and the way to standardise data is according to population sizes. In layman's terms, crime volumes are divided into population figures, and the answer thereto is expressed as a fraction per 100 000 of the population, also referred to as ratio per 100 000 of the population.

Crimes are measured and expressed in ratios per 100 000 of the population in both the USA (Gottlieb et al., 1998:353) and South Africa (Seimela, 2003:10). The statistical formula, according to Seimela (2003:10), and supported by Gottlieb et al. (1998:354) and the study material of TSA (2002:76), to calculate the ratio frequency per 100 000 of the population is as follows:

$$\text{Ratio} = \frac{n_{30}}{p_{2000}} \times 100\,000$$

Where:  $n_{30}$  = the number of crimes, and  $p_{2000}$  = the population size

Table 4, designed by the researcher, illustrates an example of how ratios per 100 000 of the population analysis findings can be interpreted and expressed. The statistics reflected in the table are fictional and used solely for explanatory purposes.

In the example (Table 4), the incidences of motor vehicle theft cases at a specific station (station X) and that station's population figure, are calculated and expressed in ratio per 100 000 of the population. The same principle applies to the national statistics of theft of motor vehicles cases and the national population figure. The national crime figure and ratio per 100 000 of the population are used as a comparable measurement.

One can even use the crime statistics and ratio per 100 000 of the population of the applicable province, as an additional and comparable measurement.

This will indicate whether the specific station's crime occurrences are higher, equals or lower than the national and/or provincial ratio per 100 000 of the population seen as the norm.

**Table 4: Ratio per 100 000 of the population analysis**

<b>THEFT OF MOTOR VEHICLES</b>	<b>STATISTICS 2007</b>	<b>POPULATION SIZE</b>	<b>RATIO PER 100 000 OF POPULATION</b>	<b>INDICATOR</b>
Station X	1534	872 866	175.74	Higher than the national ratio
South Africa	52 860	43 685 699	121.00	

From the table (Table 4) it is evident that incidences of motor vehicle theft at station X, based on the ratio frequency per 100 000 of the population, are considerably higher (175.74) than the national norm (121.0). In layman's terms, if station X depicted 1056 cases or 478 cases less, the station's ratio would have equalled the national ratio of 121.0 per 100 000 of the population. Thus, it can be concluded that incidences of motor vehicle theft at station X warrant more attention and intervention than on a national level.

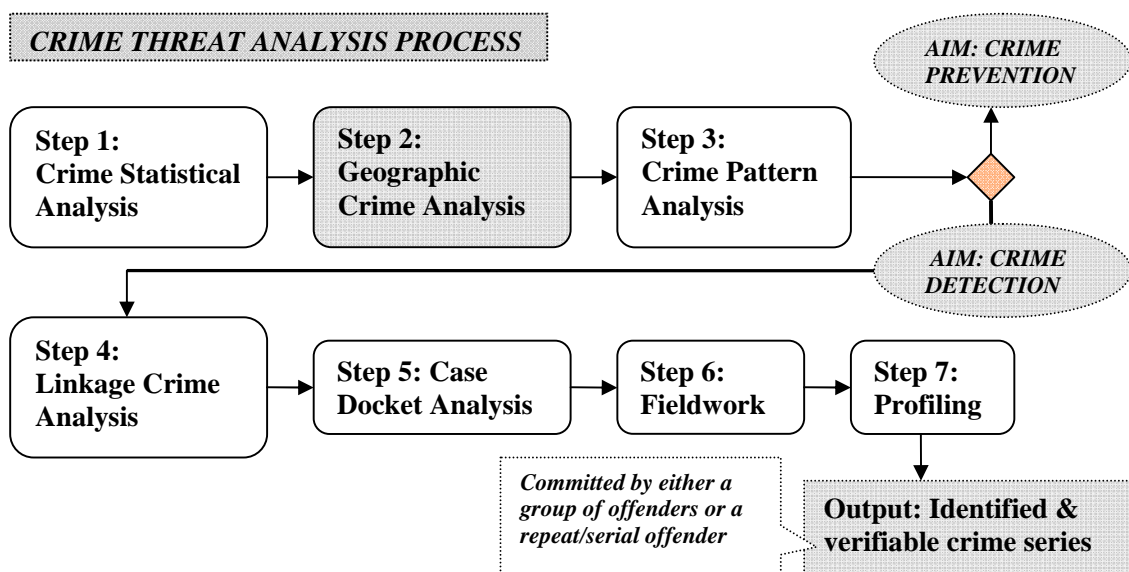
In summary, crime threshold analysis determines whether a specific crime type depicts levels above the upper limit, within the limits or below the lower limits, crime trend analysis (operational and strategic orientated) determines the percentage increases or decreases (or stabilisation) in relation to a specific crime type(s), and ratio per 100 000 of the population determines whether the ratio frequency of a specific crime type is higher, equals or lower than the set standards or norm (e.g. national/provincial ratio). According to the researcher, the findings of threshold analysis, trend analysis and ratio per 100 000 of the population analysis cannot be viewed or interpreted in isolation.

In order to enhance and secure objectivity, it is vitally important for the crime analyst to provide decision-makers and managers with the findings of all three crime statistical analyses so that they, the decision-makers and managers, can interpret and understand the crime situation better. This view is supported by Gottlieb et al. (1998:355) who state that

the crime analyst must provide all the various interpretations of crime statistics for their clients in order for them to arrive at a well informed decision.

Integral to the above-mentioned crime statistical analysis techniques, the crime analyst's next step (Step 2) is to apply geographic crime analysis, as described and conceptualised in Chart 6.

**Chart 6: Step 2 – Geographic crime analysis**



### 2.9.2.2. Geographic crime analysis or crime mapping – Step 2

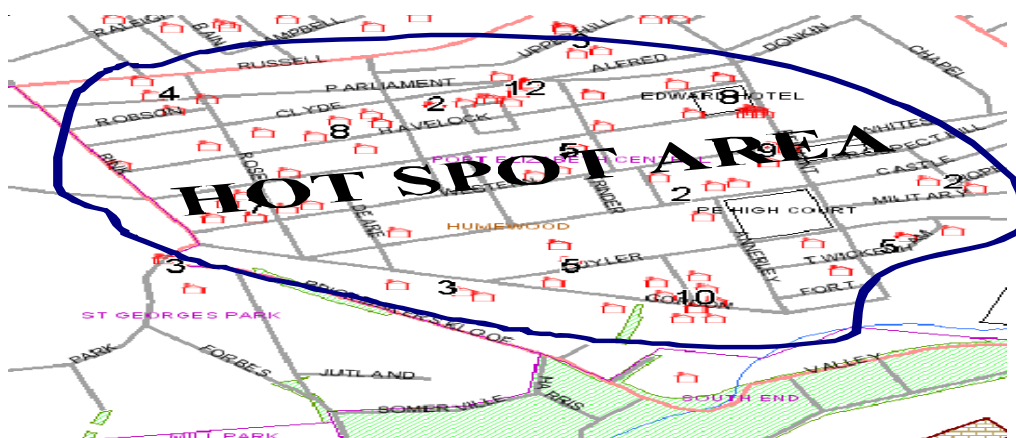
Geographic crime analysis, as described in SAPS (2000:8), also referred to as crime mapping, is the analysis of the spatial distribution of crime within a given geographical area. The latter view is supported in the study material of TSA (2002:55) which also states that geographic analysis indicates where crimes are committed within a specific geographical area. Crime mapping, according to Harries (1999:1), has long been an integral part of the process known as tactical crime analysis. Crime maps can provide a rich variety of information (Harries, 1999:18). Furthermore, crime maps are often thought of solely as display tools, whereas, in fact, maps play a wide-ranging role in the process of research, analysis and presentation (Harries, 1999:18). Mapping is most

effective when those broad capabilities are recognised and used to their fullest extent. The crime map is the end product of a process that starts with the first-responding officer's report on a crime incident that is processed by data entry personnel, entered into a database and transformed into a symbol on paper. In this narrow interpretation, a crime map is merely a picture or part of a database (Harries, 1999:18).

In Peterson et al. (2000:107), geographic distribution analysis of crime incidents looks at the occurrence of the latter over a particular geographic area to determine what can be concluded about the criminal activity or area. In crime analysis, crime hot spot area(s) are identified by means of the application of geographic distribution analysis. The application of geographic crime analysis, according to the experience of the researcher, allows the crime analyst to determine the when, where and what aspects of crime and the visualisation of crime incidents on a geographic map.

Map 1, which was retrieved from the SAPS' Geographic Information System (GIS), serves as an example to illustrate mapped crime incidents and the subsequent identification of a crime hot spot area which basically refers to a geographic area where the highest concentrate of crimes have occurred, as indicated on the map. The crime type burglary and time period were used solely for illustration and explanatory purposes.

**Map 1: Burglary (residence) hot spot geographic area**

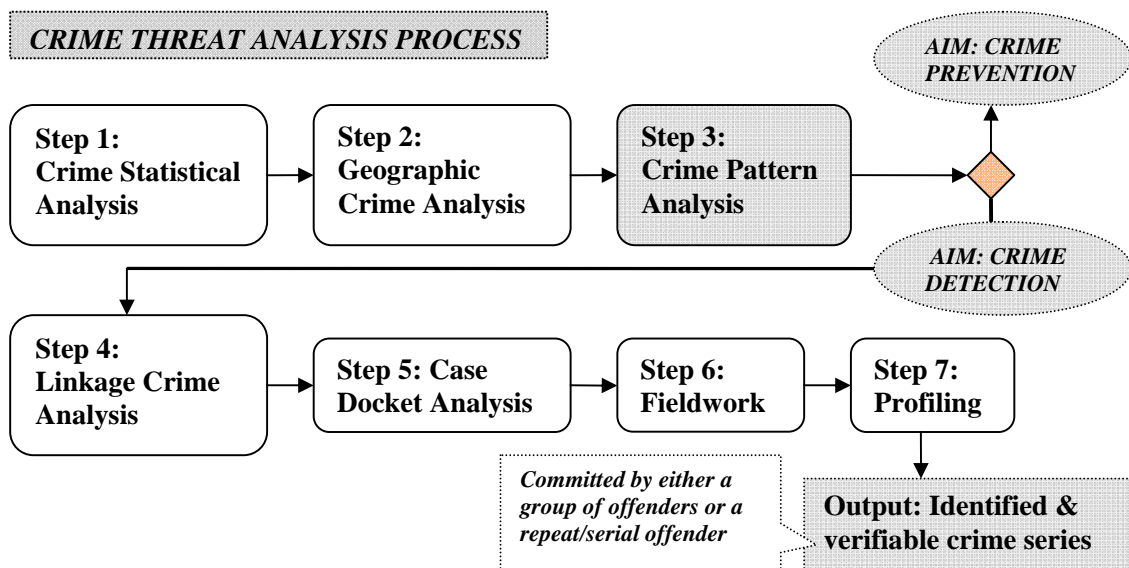


(Source: SAPS Geographic Information System, 30 May 2005)

In the analysis of the information, as depicted on the map (Map 1), it can be detected that during January 2005, from the 145 cases of burglary (residence) which were reported to the Humewood police, a total of 52 cases or 35.86% thereof occurred within a relatively small (1.34 square km) geographic area in the central suburb (part of Humewood police area). The latter geographic area can be regarded as a crime hot spot area, based on the high density of burglary incidents. This crime hot spot area, as depicted in Map 1, can be described as the geographic area inside or within the borders of Parliament Street, Belmont Street, Rink Street and Gordon Street, in relation to residential burglaries, thereby explaining and visually reflecting the where aspect of crime. The remaining 93 burglary cases or 64.14% thereof appeared scattered or evenly spread within a relatively large (19.67 square kilometre) geographic area in the rest of the police area of Humewood.

Integral to geographic crime analysis, the crime analyst's next step (Step 3) is to apply crime pattern analysis, as described and conceptualised in Chart 7.

**Chart 7: Step 3 – Crime pattern analysis**



### 2.9.2.3. Crime pattern analysis – Step 3

Crime pattern analysis, in the study material of TSA (2002:56), indicates the frequency of

crime occurrences in terms of time and space dimensions. The latter view is supported by SAPS (1999:3), which states that crime pattern analysis examines the nature, extent and development of crime or certain types of crime in a geographical area and in a certain period of time. Crime pattern analysis will include the creation of graphs, the marking and updating of geographic maps, the keeping of statistics and the creation of structured reports, in order to identify patterns within the crime(s). Crime pattern analysis is looking at the similarities and differences among crime incidents to determine if they have been committed by the same individual or a group of offenders, and when further similar incidents might probably occur, based on pattern information (SAPS, 1999:3).

The latter view is supported by MACA (2001a) who defines a crime pattern as a group of the same crimes committed over a shorter period than a trend that has a common proximate cause, including (possibly) the same perpetrator. Similar to the latter and in support thereof, the SAPS (2000:8) defines crime pattern analysis as the analysis of the incidence of crime in terms of time and space dimensions, as well as the explanation of crime based on analyses of modus operandi, target, and victim and suspect particulars, in order to identify distinct patterns pertaining to the above. This allows the crime analyst to determine the ‘why, when, where, what and how’ aspects of crime, including the detection of a crime series [threat]. This view is supported by Peterson et al. (2000:106-107) who state that crime pattern analysis is looking at the components of crimes to discern similarities among them. The patterns involved can be based on time, geography, perpetrators, victims, modus operandi or other relevant factors. The Oakland Police Department (2000:2) also defines a crime pattern as “a set of occurrences of similar offences in a defined geographic area”.

Although the crime analysis process begins with the collecting and managing of data, the actual analysis of a crime pattern begins with its initial identification (MACA, 2001a). Crime pattern identification can be an overlooked and underestimated art. Effective crime analysis requires that the analyst strives to identify all identifiable crime patterns as soon as possible, thereby not allowing a pattern to continue long past its point of identifiability. The point of identifiability describes the moment, after  $N$  incidents occurred, when the analyst can confidently assert that a pattern exists (MACA, 2001a).

The actual number of incidents can vary greatly, depending on the types of crimes and the strengths of their commonalities. Some patterns will be identifiable after the second incident, while others will require more than the latter. The analyst, according to MACA (2001b), may determine the possibility of a pattern based on one of three factors:

- Modus operandi commonalities - which are found through a careful review of incident reports and their narratives<sup>10</sup> (account of events/chronicle); or
- Exceptional crime volumes - which are found through some brand of threshold analysis, either deliberate or unconscious; or
- Geographic proximity - which is found through crime mapping techniques.

The following methods, according to MACA (2001c), can be applied by crime analysts, in order to detect or uncover patterns in crime:

[1] Reviewing of crime incident reports: The review of crimes reported should be a daily process. This process is the least scientific of all the means to identify patterns, but it is probably the most effective. Many patterns exhibit neither high volume nor geographic clustering, making other methods often ineffective.

[2] Threshold analysis: Threshold analysis describes the process by which the analyst identifies potential patterns through exceptional volume. The theory behind threshold analysis is that when crime in a particular geographic area reaches a level that is significantly higher than usual, some type of crime pattern is probably present. The analyst can use a statistical method to determine when crime has reached a level that is significantly higher than usual - in other words, when crime crosses the threshold from average volume to exceptional volume. The benefit of threshold analysis is that it may detect patterns overlooked in the details of day-to-day crime report reviews. Analysts with many crimes or a large area to review may want to employ a more scientific methodology, which employs the statistical technique known as standard deviation. Studying totals on

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<sup>10</sup> The narratives in police incident reports include information pertaining to the specific method which the offender or offenders employed during the commissioning of a crime or crime series (researcher).



a monthly basis may distort results for some crimes, since some years will have more weekend days or other high volume days than others.

[3] Crime mapping: The crime mapping method of pattern identification involves creating pin (crime) maps or thematic maps of various crimes and seeking geographic hot spots or clusters. This method is valid for crime patterns which exhibit geographic clustering (MACA, 2001c). Many crime patterns involve crimes which are not geographically clustered. Like threshold analysis, the crime mapping method should not be the only means by which an analyst seeks patterns. However, like threshold analysis, mapping crime may help detect patterns which were lost in the detail of the daily crime report reviews.

[4] Intelligence-based pattern identification: Analysts must accept that no method or combination of methods will ever allow them to identify all of the crime patterns. Upon the arrest of an offender and the collection of evidence, the analyst may engage in a kind of reverse pattern identification, thereby linking other similar unsolved crimes to the arrested offender. This type of intelligence-based pattern identification allows the crime analyst to identify a pattern which was previously not possible to detect. For example, the arrest of a potential serial killer and their subsequent interrogation might provide vital and/or additional information (not previously known) which can lead the analyst to other unsolved murder cases. By reviewing the latter cases, the crime analyst might be able to link some of the unsolved murder cases to the arrestee, based on newly-uncovered patterns which were previously not so clear and/or undetectable.

[5] Hot spots and *criminogens*: Hot spots (locations with multiple incidents) and *criminogens* (individuals connected to many crimes reports) are easier to identify than other types of crime phenomena. Though the analyst may identify both of them through the regular crime review process, it also behoves analysts to periodically run a database query that simply counts the number of incidents attached to a particular person or location in any given time period. A hot spot is a condition indicating some form of clustering in a spatial distribution (Harries,

1999:112). Not all clusters are hot spots, however, because the environments that help generate crime (the places where people are) also tend to be clusters; therefore, any definition of hot spots has to be qualified.

It can be concluded that no single method will ensure that the analyst identifies all identifiable patterns. Experienced crime analysts will use a combination of these methods on a regular basis: report review (daily), crime mapping (weekly), threshold and hot spot analysis (monthly) and intelligence-based methods (after arrest), in their endeavour to identify verifiable crime patterns. According to MACA (2001c), once the analyst believes a crime pattern has been detected, the next step is to analyse the pattern and the individual incidents that compose it, with the ultimate goal of providing information to suppress or eradicate the crime and/or the offender's activity. The analyst provides this information by describing the commonalities that form a particular pattern. A pattern with common offenders is a crime series, while a pattern with a common location is a hot spot, as cited in MACA (2001c).

The commonalities in a pattern, according to MACA (2001c), are the keys to its causes and the causes are the keys to its solution. Due to the numerous potential factors at work in any given crime pattern, the analyst benefits from a checklist of factors to consider when performing analysis. However, not all factors depicted in the checklist will apply to all patterns. The following checklist (Checklist 1), according to MACA (2001b), can be used to guide crime analysts in their endeavour to detect or uncover crime patterns.

#### **Checklist 1: Factors to consider when analysing a crime pattern**

'What' factors: (1) Incident nature/type; and (2) Number of incidents.

'Who' factors: (1) Number of offenders; (2) Offender characteristics (gender, age, race, nationality, height, weight, build, tattoo or marks, clothing, property carried); (3) Social/economic/political regarding the offender (occupation, education, lifestyle and income level); (4) Vehicle detail (make, model, year, body style, colour and stolen/not stolen status); (5) Activity (pre- and post-crime activity,

and the psychological intent and motive); (6) Number of victims (victim characteristics, i.e. gender, race, age, nationality, height, build, clothing and property carried); (7) Social/economic/political regarding the victim(s) (occupation, education, lifestyle and income level); and (8) Business/property characteristics (name, industry, logo/sign, physical appearance, number of units, location of portals, political affiliation, social/political activity).

‘Where’ factors: (1) Geographic location (address and location type); (2) Environment (lighting, degree of seclusion, geographic proximity to other locations/events and topology); (3) Route/migration; (4) Direction of travel/flight; and (5) Geographic progression of patterns.

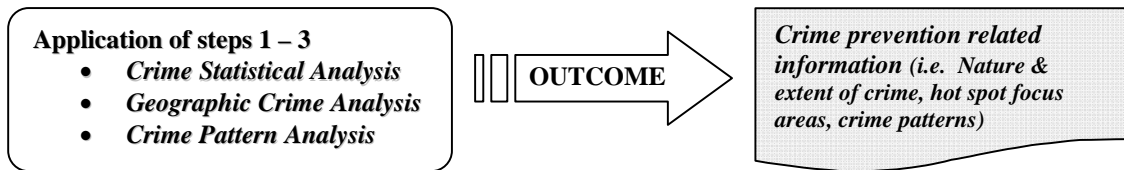
‘When’ factors: (1) Time of the day; (2) Day of the week; (3) Type of day (e.g. weekend), week of the month; (4) Month of the year; (5) Temporal proximity to other events; and (6) Days/times between hits.

‘How’ factors: (1) Actions essential or incidental to crime (location of entry, method of entry, weapon used, property stolen, words spoken, injury inflicted, property damaged and miscellaneous actions); and (2) Actions not essential to crime commission.

The crime analyst, according to MACA (2001b), needs to consider most of the factors only briefly, and will probably dismiss most as not being a commonality in the current pattern, after scanning the relevant crime information.

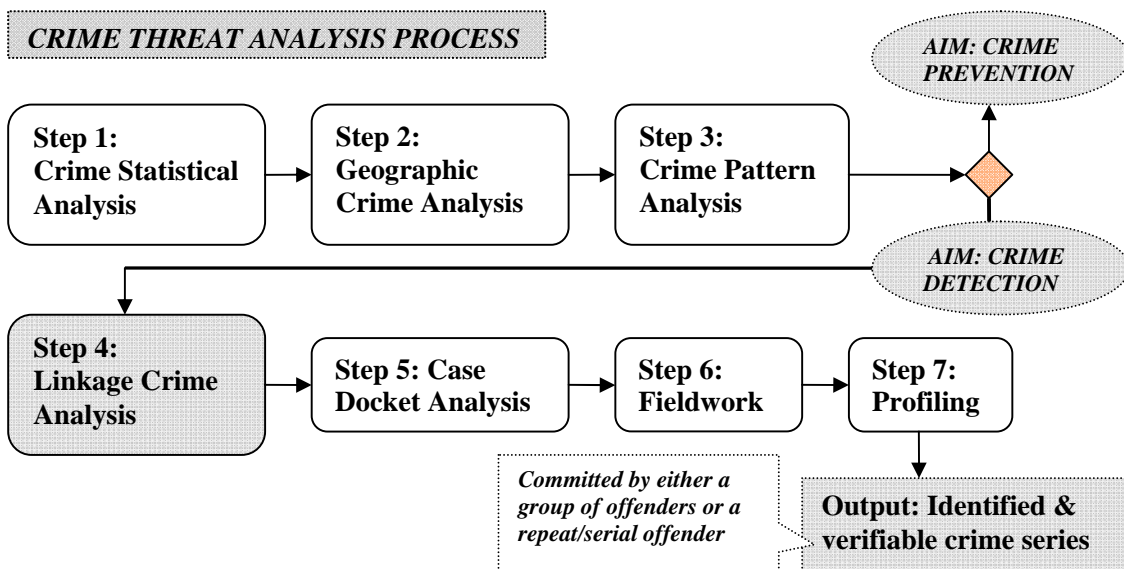
The information interpreted and analysed through the application of the first three steps in the CTA process, i.e. crime statistical analysis, geographic crime analysis and crime pattern analysis, can provide the SAPS with operational crime management information focused on the prevention of crime activities, as conceptualised in Chart 8.

**Chart 8: Outcome of steps 1 to 3**



On the other hand, for the purpose of crime series identification (crime detection purposes) and integral to the previous three steps of the CTA process, the next step (Step 4) for the crime analyst is to apply linkage crime analysis, as described and conceptualised in Chart 9.

**Chart 9: Step 4 – Linkage analysis based on the matrix**

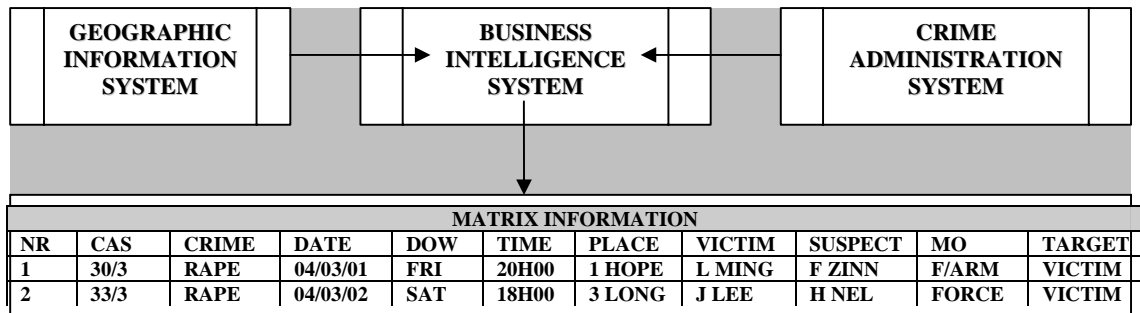


**2.9.2.4. Linkage analysis based on the matrix – Step 4**

The captured crime information contained in a matrix<sup>11</sup> (electronically entered) is retrieved from the SAPS Business Intelligence System (BI), which is electronically linked with the SAPS Crime Administration System (CAS) and the SAPS Geographic Information System (GIS), as conceptualised in Graph 1.

<sup>11</sup> Matrix refers to a spreadsheet, created in Microsoft Excel, which contains crime data per incident and derived from the SAPS Business Intelligence System (researcher).

**Graph 1: Integrated GIS/BI/CAS systems of the SAPS**



The type of information contained in a matrix includes a numerical serial number, case number, crime type, date of the crime, day of the week information, time of crime occurrence information, crime address/location, victim particulars, offender(s) particulars or description, modus operandi and target information. This type of information, as described in De Kock (2004:4), allows or enables the crime analyst to link different cases based on similarities or commonalities in relation to modus operandi, and/or target information, and/or offender and/or victim particulars, thereby uncovering or identifying a possible crime series. This technique is referred to as matrix (linkage) analysis and it allows the crime analyst to determine the ‘who’ aspect of crime.

In De Kock (2004:4) it is further stated that each crime entered on the matrix should be checked against the particulars of the previous ones in the same crime category, to see whether there are any commonalities in terms of victims, perpetrators, modus operandi and/or targets.

In De Kock (2004:4) it also states that in the case of murders (including attempts) and rapes (including attempts), an incident should be checked against all other cases of these crimes recorded for at least the preceding six months (or longer). The reason, according to De Kock (2004:4), and supported by Pistorius (2002:6), is to widen the search for possible serial murderers and/or rapists.

In the definition of a serial offender, as cited in Pistorius (2002:6), serial offenders normally maintain a cooling-off period in between incidents of murders (rapes), resulting in a lower frequency of events - hence the reason why such cases must be checked for

over an extended period of time.

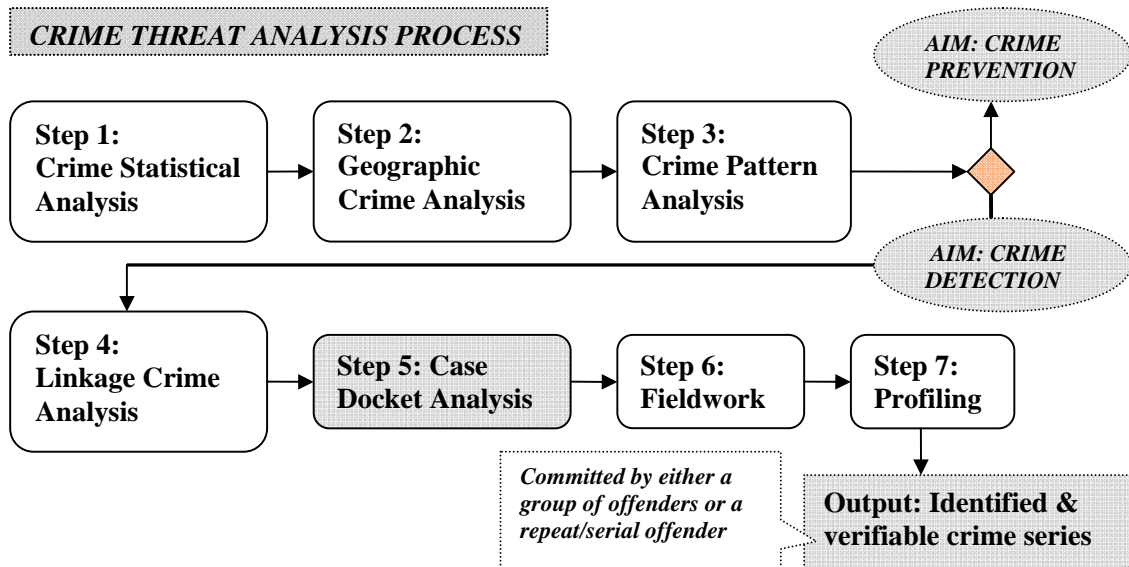
Furthermore, according to De Kock (2004:4), in the case of all robberies and property related crimes, an incident should be checked against all corresponding cases of such crimes reported during the preceding three months. The reason is that offenders of robberies and property related crimes are normally individuals committing single or multiple crimes (repeat offenders), while groups of offenders (organised crime related) tend to commit crimes more frequently than repeat and serial offenders. If commonalities are identified, these should be grouped together as a crime series (De Kock, 2004:4).

Linkage analysis, based on the matrix, will furthermore provide an indication of different crimes committed by the same individual or group of individuals (De Kock, 2004:5). If the same modus operandi and the same suspects repeatedly appear, the probability of repeat offenders being involved is high. Such crimes can be committed by an individual repeat offender(s), or a serial offender, or a group of offenders (organised crime related).

Although, according to the researcher, the matrix provides crime or case information which can be linked based on commonalities and similarities, it must be borne in mind that such links are based on probabilities. The possibility of coincidences cannot be ruled out, and such discovered links, based on commonalities and similarities, must still be verified or confirmed through methods such as case docket analysis, interviewing of victims and witnesses, source information and crime investigation.

Integral to the application of linkage analysis, the next step for the crime analyst will be to apply case docket analysis as a further measure of verifying a crime series which was detected through linkage analysis, as conceptualised in Chart 10.

**Chart 10: Step 5 – Case docket analysis**



#### 2.9.2.5. Case docket analysis – Step 5

In the SAPS (2000:6), case docket analysis is described as the analysis of information contained in police case dockets (dossiers). Case docket analysis allows the crime analyst to determine the why, when, where, what and how aspects of crime. Case docket analysis, according to Lock (2002:2-3), also provides an avenue to obtain detailed information in order to explain (understand) crime and crime trends. As case dockets contain a complete record of investigations conducted into a specific crime, important information can be obtained in the Investigation Diary (SAPS5) pertaining to the sequence and status of the investigation and additional leads, such as offender description and other critical notes which are not necessarily contained in statements filed in the case dockets. The SAPS (1995:2) prescribes that the following information must be contained in statements:

- In the preamble of the statement: The full names and surname, identity number, race, sex, age, occupation, residential address, home and business telephone numbers, and business address of the deponent (victim and/or witness).
- The content of the statement: Detailed information must be incorporated in the statement, which includes place, day of the month, time of the incident, evidence

of the occurrence, evidence of own perceptions, description of wounds and/or stolen property, description of suspect, (offender) identification and the elements of the crime.

Detailed statement content, as cited in SAPS (1995:2), allows crime analysts, according to the experience of the researcher, to analyse case dockets and to affect linkages based on offender identity or physical description, crime patterns, target and modus operandi information.

The primary aim of case docket analysis, according to Lock (2002:3), is to increase knowledge about crime. The results of a case docket analysis, according to Lock (2002:3), can serve a number of purposes in this regard, such as:

- Management information: The findings of case docket analysis on spatial aspects of the crime can, for example, serve as a guideline when and where resources must be deployed.
- Providing explanations for the causes of crime or giving an indication of factors associated with certain crimes, such as substance abuse.
- Providing information with a view to focusing on crime prevention strategies, e.g. the identification of crime hot spot areas.
- The identification of a common modus operandi, which could be indicative of the presence of repeat offenders or serial offenders or a group of offenders (crime series).
- The channelling of information to the community about risk factors, such as the existence of danger periods, places where certain crimes are more likely to occur and factors that make a member of the public vulnerable to crime.

This view of Lock (2002:3) is supported by SAPS (1999:3) which also states that case docket analysis attempts to reconstruct the course of a particular criminal incident in order to identify the sequence of events and patterns in an activity, to obtain indications as to further lines of inquiry and to identify anomalies in information from different information sources, by using the following aids to achieve the latter: commodity flow

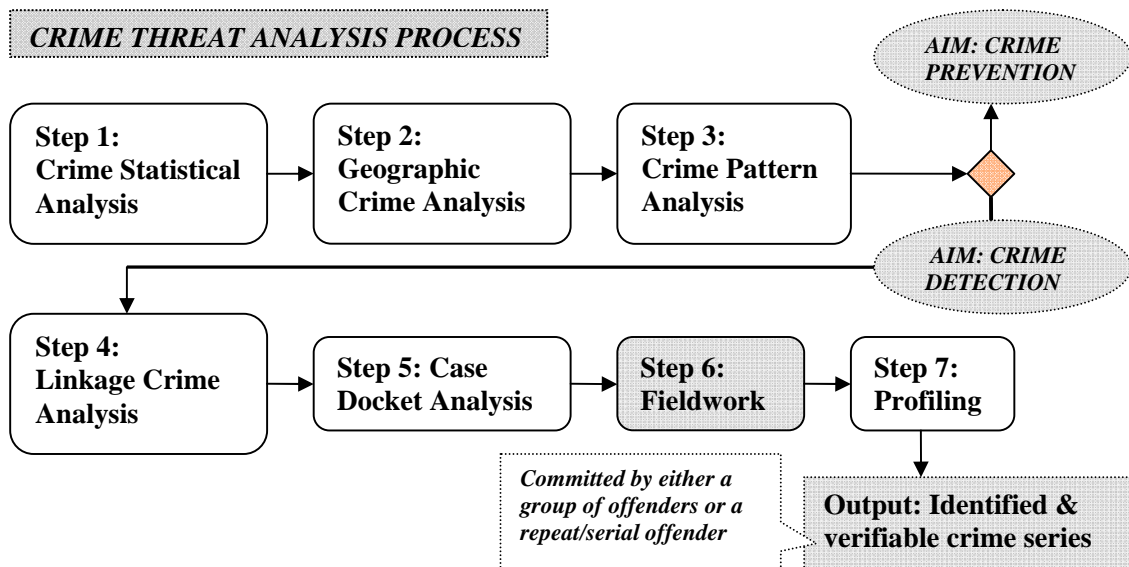


charts, event charts (time line analysis), activity charts, case analysis charts and structured reports.

Furthermore, comparative case docket analysis compares the information on similar criminal incidents, with a view to discovering whether some of them may have been committed and/or organised by the same (group of) offender(s) (SAPS, 1999:3). According to the researcher, it is thus of vital importance, during the taking of victim/witness statements, to include a full physical description of the offender(s) where the identity of the offender(s) is unknown to the deponent. This practice will assist in the profiling and the subsequent linking of the offender to other possible as yet unsolved crime cases, thereby verifying the existence of a crime series (threat).

Integral to the application of case docket analysis techniques, the crime analyst's next step (Step 6) will be to apply fieldwork, as described and conceptualised in Chart 11.

**Chart 11: Step 6 – Fieldwork activities**



#### 2.9.2.6. Fieldwork activities –Step 6

Fieldwork, as cited in De Kock (2004:4), is one of the most important activities or functions which must be executed by crime analysts at station level. Fieldwork activities

by crime analysts should include the following:

- Interviewing of complainants, witnesses, members of visible policing and detectives in order to gather information related to possible motives, description of suspects, the nature of the crime and modus operandi. The interviewing of police officers and victims who had been victimised at the same crime flashpoint and/or during the same crime series.
- Visiting of the crime scenes or crime hot spots in order to gather information related to the environmental design. The visiting of crime flashpoints at (or during) the same times that the incidents occurred, and observation to attempt to determine the reason why such flashpoints exist at specific localities at specific times.

The application of fieldwork, according to the experience of the researcher, will allow crime analysts to understand the crime phenomena, thereby addressing the why and who aspects of crime.

Furthermore, offender description related information, derived from interviews, will or can assist the analyst to link the offender(s) to other possible as yet unsolved cases, thereby verifying the existence of a crime series (threat).

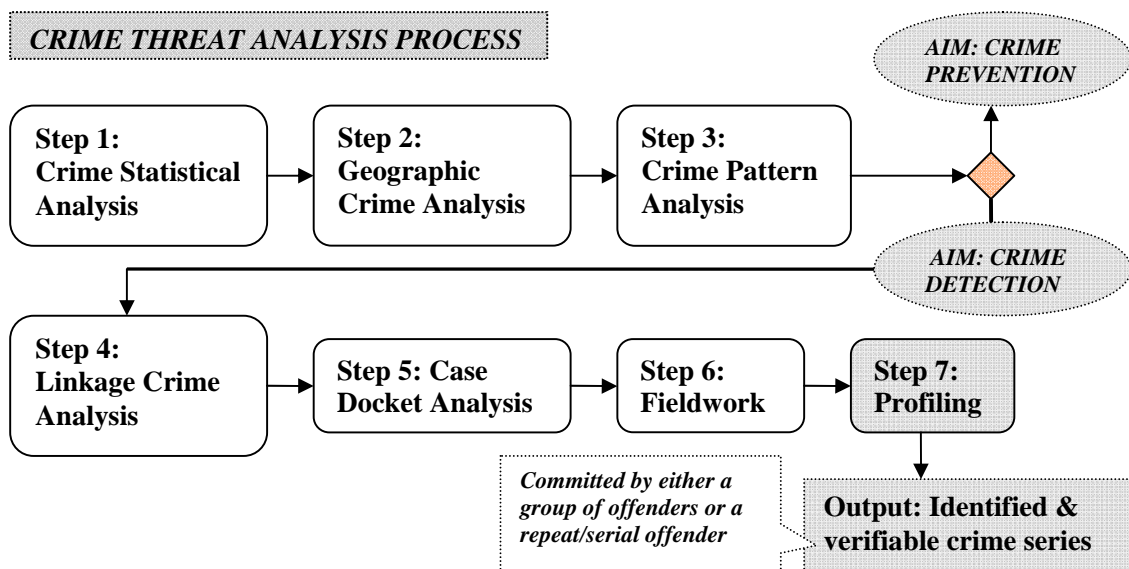
Based on the experience of the researcher, crime analysts must realise and understand that by utilising system-based information exclusively will not necessarily - or always - provide the analyst with all the necessary information in the determination of a crime series (crime threat).

Crime analysts must therefore, in addition to system-based information, also gather or collect other relevant information from sources and/or observations in order to detect or uncover a verifiable crime series. At most, system-based analysed and interpreted crime information will only allow the crime analyst to uncover or detect a possible crime series, which is based on probabilities, while system-based analysed and interpreted crime information, which is supported by source information, will allow the crime analyst to verify an uncovered crime series (threat).

In De Kock (2004:11-12) it is suggested that the sub-component Crime Intelligence Gathering (SAPS) be tasked to gather relevant or additional information from sources, in order to verify a crime series related to incidences of organised crime activities.

Integral to the application of fieldwork, the last step (Step 12) for the crime analyst is to apply profiling, as described and conceptualised in Chart 12.

**Chart 12: Step 7 – Profiling**



### 2.9.2.7. Profiling or criminal investigative analysis –Step 7

Van Heerden (1994:191) maintains that offender identification is concerned with the positive identification of the offender as a person rather than with the identification of their unlawful conduct. Techniques applied to identify the offender include personal description, sketches, photo identification, identification parades, voice identification and modus operandi. From the latter information an offender profile can be compiled. Furthermore, identity is based on the theory that everything in the universe is unique because it has distinctive individual and class characteristics; thus, identity equals uniqueness (Van Heerden, 1994:187). This view is supported in the study material of TSA (2002:72), which states that profiling is a useful method of gathering information pertaining to offenders.

Furthermore, according to Gottlieb et al. (1998:58), criminal investigative analysis or profiling also focuses on determining the personality and behavioural characteristics of an offender. Table 5 illustrates the components of an offender profile from a Federal Bureau of Investigation (FBI) perspective (Gottlieb et al., 1998:59).

**Table 5: Components of an offender profile (FBI perspective)**

<ul style="list-style-type: none"> <li>• Age, gender, race</li> <li>• Marital status</li> <li>• Level of intelligence</li> <li>• Sexual adjustment and perversions</li> <li>• Social adjustments</li> <li>• Appearance and grooming</li> <li>• Employment history</li> <li>• Emotional adjustments</li> <li>• Work habits</li> </ul>	<ul style="list-style-type: none"> <li>• Location or residence in relation to crime scene</li> <li>• Personality / characteristics</li> <li>• Evaluation and analysis of the criminal act</li> <li>• Motive for the offence</li> <li>• Lifestyle</li> <li>• Prior criminal arrest history</li> <li>• Sequence of events during the offence</li> <li>• Mood of the offender before, during and after the offence</li> </ul>
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Criminal investigative analysis or offender profiling has also proven effective in building profiles of rapists (Gottlieb et al., 1998:60). Through careful interviewing of the rape victim about the offender's behaviour, investigators (including crime analysts) may be able to build a profile of the offender. The sexual, physical and verbal behaviour of an offender (rapist) reflects the offender's overall personality and underlying motive (Gottlieb et al., 1998:60). By examining this behaviour, according to Gottlieb et al. (1998:60), the investigator and/or crime analyst may be able to determine what type of person is responsible for the offence, and once a suspect has been apprehended, offender profiles are of inestimable value in the subsequent interrogation process. Interviewing investigators, who are in possession of information about an offender's background, can use it to recognise and exploit certain personality characteristics and associated emotional deficiencies (Gottlieb et al., 1998:60).

Offender profiles, according to Gottlieb et al. (1998:62), can help identify the type of person responsible for the crime, confirm or deny a suspect's possible involvement in a criminal event and facilitate the interview of an offender after their arrest.

The SAPS (2002b:1) describes an offender profile as the gathering, adaptation and coupling of cases in which a person is involved, and a résumé of information where a suspect could possibly be involved in crime, with the purpose of compiling a complete profile of an offender, to serve as an aid to investigators in locating the suspect.

In the SAPS (2002b:2), the following two types of profiles are being used: a psychological profile and a crime intelligence profile.

#### **2.9.2.7.1. Psychological profile**

The psychological profile is the profile that the layman most commonly confuses with the normal crime intelligence profile. The psychological profile is compiled by a researcher who is regarded as skilful in the science of psychology.

These profiles are normally compiled where an as yet unidentified serial offender (killer/rapist) is involved. Psychological profiling tends to rely heavily on varied offender topology, as cited in the SAPS (2002b:2). Thus, this type of profile is mainly based on a deduction drawn from information gathered at a crime scene, with the focus on the psychological condition of an as yet unknown offender and/or the type of offender which may be involved.

#### **2.9.2.7.2. Crime intelligence profile**

The standard crime intelligence profile compiled by the SAPS (2002b:2), is compiled with the purpose of furnishing the client with urgently needed information that is immediately required regarding a suspect, as described in Table 6 hereafter. This type of profile is compiled where the perpetrator is not involved in an organised crime group.

The advanced crime intelligence profile is the profiling of individuals involved in organised crime. The advanced profile is a more detailed profile than the standard profile, and includes movement control information and retail-related information.

Table 6 illustrates the different components of a standard and advanced offender profile, as utilised in the SAPS (SAPS, 2002b:7-8):

**Table 6: Components of a standard and advanced<sup>12</sup> offender profile (SAPS perspective)**

<ul style="list-style-type: none"> <li>• Personal information</li> <li>• Address information</li> <li>• Vehicle information</li> <li>• Firearm information</li> </ul>	<ul style="list-style-type: none"> <li>• Criminal record information</li> <li>• * Movement control information (Advanced)</li> <li>• Modus operandi information</li> <li>• * Retail information (Advanced)</li> </ul>
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These components, as depicted in Table 6, are supported in the study material of TSA (2002:72). The components of an offender profile as portrayed in Table 6 (SAPS perspective) in comparison with Table 5 (FBI perspective) depict similarities in respect of personal information, address information, criminal record information and modus operandi information, but the FBI perspective exclude components such as vehicle information, firearm information, movement control information and retail information.

According to the researcher, crime analysts in the SAPS apply profiling techniques pertaining to:

- Unidentified offenders (prior to the arrest phase), in order to aid or assist in the identification process of individuals, by mainly applying psychological profiling.
- Identified offenders (after the arrest phase), in order to aid or assist investigators during the interviewing phase, by mainly applying crime intelligence profiling.

As stated in Gottlieb et al. (1998:60), once an offender has been apprehended, offender

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<sup>12</sup> The asterisks in Table 8 indicate the additional information which is contained in the advanced crime intelligence profiles.

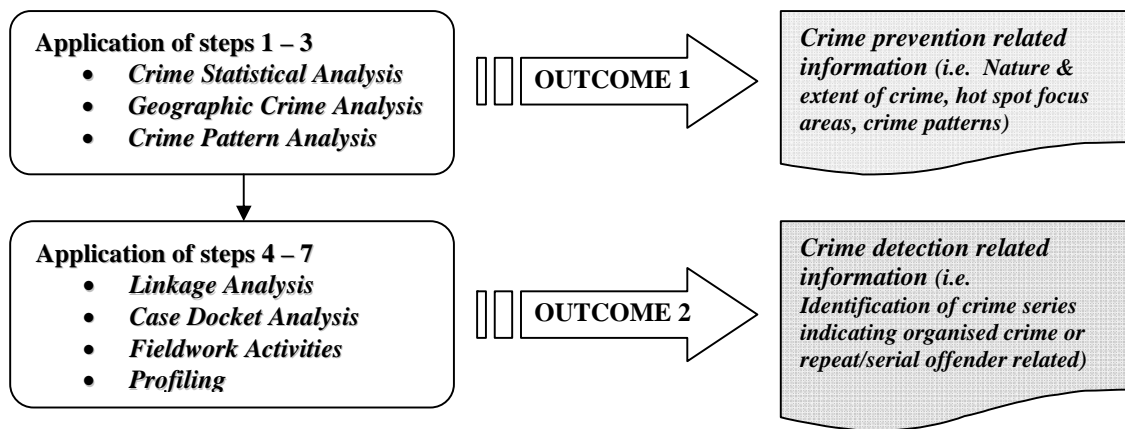
profiles are of inestimable value in the subsequent interrogation process. Investigators who are in possession of information about an offender can use it to recognise and exploit certain personality characteristics and associated emotional deficiencies - for example, to choose an appropriate interviewing technique that would most likely be effective in obtaining information from this type of offender. The crime analyst can, by applying “reverse” crime pattern analysis techniques, as stated in MACA (2001c) above, effect case linkages based on commonalities and/or similarities detected in the modus operandi of an arrested offender. The offender can thus be linked to other possible as yet unsolved crime cases, thereby uncovering and/or verifying the existence of a crime series or threat.

Effective profiling, according to Gottlieb et al. (1998:60), is based on profiles of offenders compiled by carefully interviewing victims about the offenders’ behaviour, overall personalities, underlying motives and physical descriptions. By examining offender behaviour, as cited in Gottlieb et al. (1998:60), the crime analyst may be able to determine what behavioural type of offender is responsible for the crime.

### **2.9.3. The outcomes of the crime threat analysis process**

The application of all the crime analysis techniques in the CTA process, as described above, will allow or enable the crime analyst to determine the “what, where, when, why and how” aspects of crime, for the dual purpose of generating operational crime management information for crime prevention and crime detection purposes, as conceptualised in Chart 13.

**Chart 13: The outcomes of the Crime Threat Analysis process**



The following section outlines a comparison between the CTA process and the core functions of the SAPS. This is merely to demonstrate that the intent or the design of the CTA process complements or coincides with the core functions of the SAPS pertaining to the prevention and detection of crime.

#### **2.9.4. The Crime Threat Analysis process and the core functions of the South African Police Service**

Section 205(3) of the Constitution of the Republic of South Africa Act 108 of 1996 prescribes the core functions of the SAPS as follows:

[the] objects of the police service are to prevent, combat and investigate crime, to maintain public order, to protect and secure the inhabitants of the Republic and their property, and to uphold and enforce the law.

Thus, one can conclude that the design, intent and outcomes of the CTA process complement or coincide with the core functions of the SAPS pertaining to the prevention and detection of crime.

#### **2.10. Summary**

The findings derived from steps 1 to 3 (described in sections 2.9.2.1. to 2.9.2.3) of the CTA process, will provide operational crime management information essential for crime



prevention purposes, while the findings derived from steps 1 to 7 (described in sections 2.9.2.1. to 2.9.2.7) of the CTA process will provide operational crime management information essential for crime detection purposes, i.e. the identification of a crime series, with the primary goal to uncover group offenders (organised crime related), repeat offenders and/or serial offenders.

Integral to the application of the CTA process (steps 1 to 7), as described in Chapter 2, the following chapter (Chapter 3) outlines an overview of threats associated with group offenders (organised crime related), repeat offenders and serial offenders.

## **CHAPTER 3**

### **THREATS ASSOCIATED WITH GROUP OFFENDERS (ORGANISED CRIME RELATED), REPEAT OFFENDERS AND SERIAL OFFENDERS**

#### **3.1. Introduction**

The relevance of the following discussion in the study is based on the view expressed in De Kock (2004:5) that a verifiable crime series constitutes a threat, in the sense that a high probability exists that it was committed by either a group of offenders (organised crime related), a repeat offender or a serial offender. Furthermore, from a crime analyst's perspective, specific knowledge of the nature, extent and dynamics of group offenders (organised crime related), repeat offenders and serial offenders is essential for the purpose of focused analysis attempts and/or endeavours in uncovering or detecting the latter through the application of crime analysis techniques, as described in the previous chapter (Chapter 2).

#### **3.2. Threats associated with organised crime**

According to Gastrow (2001), it is a well-known fact that organised crime has become a global phenomenon which can no longer be countered effectively by relying only on national initiatives. This viewpoint is supported by Dobovsek (2005) who states that organised crime is a major problem in most countries of the world. Sub-regional, regional and global responses, according to Gastrow (2001), have to be put in place to counter organised crime effectively. Gastrow further states that at regional and sub-regional levels there are ongoing attempts in various parts of the world to improve co-operation between states and to co-ordinate strategies against organised crime. The United Nations Convention against Transnational Organised Crime, signed by more than 120 states in December 2000, constitutes, for example, the most far-reaching global response.

The Southern African region, in Gastrow (2001), which consists of the fourteen member states of the Southern African Development Community (SADC), includes both

developing and least developed countries. Map 2 illustrates the geographic location of the SADC countries, which include South Africa, Lesotho, Swaziland, Botswana, Namibia, Zimbabwe, Mozambique, Zambia, Angola, Tanzania, Malawi, Democratic Republic of the Congo, Seychelles and Mauritius (Gastrow, 2001).

**Map 2: Southern African Development Community (SADC) countries**



The five organised criminal activities, according to Gastrow (2001), that constitute the most serious threat to the SADC countries, in the order of their seriousness, are:

- theft of motor vehicles;
- carjacking (robbery of motor vehicles);
- other robbery;
- drug-related offences;
- illicit dealing in gold, diamonds and emeralds; and
- illicit dealing in firearms and ammunition.

This view is supported by Msutu (2001:13) who adds to the list stock theft and human trafficking. Except for carjacking and the illicit dealing in firearms and ammunition, the similar organised criminal activities, as stated in Gastrow (2001), are also prevalent in the Eastern Cape, including other variants of organised criminal activities such as abalone<sup>13</sup> smuggling and human trafficking (SAPS, 2005d:48-49).

In the SAPS Annual Report 2004/2005 of the Eastern Cape, as described in SAPS (2005d: 48-49), a total of thirty organised crime groups are known to be active and operating in the Eastern Cape. Furthermore, it states that most of these groups specialise in drug trafficking, theft of motor vehicles, money laundering, illicit dealing in abalone, fraud, corruption, human trafficking, and trafficking in non-ferrous metals, precious metals and stones. Analysis conducted by the Crime Information Analysis Centre (Eastern Cape), of organised crime threats over the past decade, identified drug threats as accounting for the largest proportion of known organised crime threats in the Eastern Cape (SAPS, 2005d:49). Furthermore, drug smuggling, as organised crime, usually ties in with other dimensions of organised crime, such as diamonds, gold, abalone, motor vehicle theft and carjacking (robbery of motor vehicles).

In De Kock (2004:5) it is stated that crime analysts, by applying certain crime analysis techniques, such as linkage crime analysis, can identify possible incidences of organised crime where a verifiable crime series has been identified. The latter must still, however, be verified by source information, namely, police informers and/or police agents.

The following section outlines an overview of organised crime concepts, since no internationally accepted definition for organised crime exists thus far.

### **3.2.1. The concept ‘organised crime’**

Msutu (2001:13) describes the term ‘organised crime’ as being derived from criminal abilities to organise themselves in a well-structured and organised entity. The term organised crime, according to Gastrow (2001), has been loosely and generically used

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<sup>13</sup> Abalone (Perlemoen: Afrikaans) – are a group of shellfish (molluscs) in the family Haliotidae and the *Haliotis midae* genus (Wood, 1993:3).

internationally to describe the criminal activities of organised criminal groups consisting of three or more persons who commit serious crimes over a period of time for profit.

Most countries have struggled to develop a satisfactory definition for organised crime, mainly because the nature of organised crime tends to differ from country to country. The fact that the well-known Mafia groups in the USA have clear hierarchical structures, has led to some American definitions emphasising 'structure' when elucidating the concept of organised crime. In Southern Africa, however, indications are that organised criminal groups are not as structured as the Mafia in the USA. They tend to function in loose and shifting associations and alliances with others, or in networks without clear hierarchical structures. As a result, in Gastrow (2001), different definitions have been used by police agencies in different parts of the world.

The following organised crime working definitions, as cited by Von Lampe (2005) in his collection of organised crime definitions, including the SAPS version or view, demonstrates the variety of definitions being used by various countries and international policing and law enforcement agencies.

*Council of Europe:* Organised crime means the illegal activities carried out by structured groups of three or more persons existing for a prolonged period of time and having the aim of committing serious crimes through concerted action by using intimidation, violence, corruption or other means in order to obtain, directly or indirectly, a financial or other material benefit (Council of Europe in Von Lampe, 2005).

*INTERPOL:* Any group having a corporate structure whose primary objective is to obtain money through illegal activities, often surviving on fear and corruption (Bresler in Von Lampe, 2005).

*United Nations:* Organised crime is understood to be the large-scale and complex criminal activity carried on by groups of persons, however loosely or tightly organised, for the enrichment of those participating and at the expense of the community and its members. It is frequently accomplished through ruthless disregard of any law, including

offences against the person, and frequently in connection with political corruption (United Nations in Von Lampe, 2005).

*United States of America: Attorney General:* A crime syndicate is defined as a group having most of the following characteristics, although not necessarily all of them: a substantial number of members; a large gross volume of operations; interstate operations involving at least a substantial geographical part of the nation; operations on several vertical levels, such as supplier, manufacturer, wholesaler and retailer; members separated by two or more levels of operation frequently not knowing the identity of each other; major beneficial interest and management divorced from operation, with top leadership engaging primarily in crimes of conspiracy or of aiding and abetting; membership usually engaging in more than one kind of criminal activity; membership habitually engaging in similar criminal conduct and relying on it as a primary source of income (Johnson in Von Lampe, 2005).

*Great Britain: Home Office:* Organised crime constitutes any enterprise, or group of persons, engaged in continuing illegal activities which has as its primary purpose the generation of profits, irrespective of national boundaries (Huber in Von Lampe, 2005).

*Republic of South Africa:* In the SAPS (2000: 8-9), supported by Gastrow (2001), the working definition of organised crime, which was adopted by the SAPS, can be defined as “the systematic commissioning of crimes [by a criminal group] motivated by a craving for profit or power”.

Furthermore, within the parameter of this definition, a criminal group involved in organised crime must conform to the following criteria (SAPS, 2000: 8-9), as indicated in Checklist 1, as follows:

<b>CHECKLIST 1: CRITERIA: ORGANISED CRIME</b>	
1	The criminal group has to involve the collaboration of more than two people
2	It has to be suspected of involvement in serious criminal offences
3	It has to have been involved in such serious criminal activity for a prolonged or indefinite period
4	It has to be motivated by the pursuit of profit and/or power
5	It should resemble and/or employ commercial or businesslike structures
6	Group members should have their own appointed tasks by way of a division of labour
7	It should employ some form of discipline and control (disciplinary sanctions)
8	It should be engaged in money laundering
9	It should use violence and/or other means suitable for the purpose of intimidation
10	It should attempt to exert influence on politics, the media, public administration, judicial authorities and/or the economy (corruption)
11	The abuse of state/provincial, national and international borders

(Source: SAPS, 2000:8-9)

Before a criminal group can be classified as an organised criminal organisation, at least six of the above mentioned criteria need to be fulfilled, including the first four on the list.

Accordingly, at the many meetings of the United Nations Ad Hoc Committee, held during 1999 and 2000 in Vienna to negotiate the Convention against Transnational Organised Crime, an internationally agreed definition for organised crime proved to be one of the most difficult aspects on which to reach consensus (Gastrow, 2001). The compromise eventually agreed upon at the Palermo Convention (2000) did not actually define organised crime per se; instead, it provided a definition of an organised criminal group as follows (Gastrow, 2001):

[o]rganized criminal group shall mean a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in

accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit.

Dobovsek (2005) states that incidences of organised crime are a major problem in most countries of the world. In spite of the latter, Dobovsek stated that there is no generally accepted or unified definition of organised crime, mainly due to the following factors:

- the quick development and the changing of the forms in which organised crime appears;
- the differences in defining organised crime throughout the world;
- the differences in judicial systems;
- the differences in the police registration methods of organised crime; and
- the differences in registration of criminal offences and of police activities.

However, in the quest to address organised crime effectively, it is essential to collect and analyse information in relation to organised crime, systematically (Dobovsek, 2005). In order to do so, the international policing and law enforcement agencies need to determine an appropriate policy to address organised crime, and they need to formulate an internationally recognised or unified definition of organised crime. Since no such definition exists, international organised crime-related data is hardly comparable, which hampers the effective and efficient analysis and understanding thereof. However, what is common is an understanding of the features which characterise the way in which organised criminal groups operate. Thus, the ideal to strive for would be to compare the organised crime characteristics in different countries, to work out a basis for an internationally accepted and unified definition of organised crime (Dobovsek, 2005).

Neilson (2000) states that the problem in any study of organised crime and in formulating a universally accepted definition, is the lack of research in this field, largely because of the necessity of organised crime to remain clandestine in its operations and therefore not enough data being available for research purposes. This, according to Neilson (2000), has hampered criminologists' attempts at formulating an operational definition of organised crime in order to reach a de facto understanding of the complexities of



organised crime. Much of the evidence on organised crime is based on empirical studies only, and as a consequence this has led to simplistic definitions that have given rise to the idea of organised crime as a homogenous entity and without variation. Based on the experience of the researcher, it is clear that variants exist within the broader understanding of organised crime and that it is not just a homogenous entity, as is sometimes accepted. Variants of organised crime include, for example, crime syndicates and criminal gangs (see discussion in section 3.2.2.).

Goredema (2001:35), on the other hand, defines organised crime as the systematic serious criminal activity committed by a structured group of persons in order to obtain, secure or retain, directly or indirectly, a financial or other benefit. This author views this definition as broad enough to embrace participation in organised crime groups, serious economic related crime, violent crime, corruption, money laundering, drug-related crime, human trafficking and poaching (e.g. abalone). At the core of organised crime there is usually an economic imperative (Goredema, 2001:35).

It can be concluded that the majority of the above-mentioned organised crime “working” definitions include common denominator characteristics of organised crime, such as: structured groupings; involvement in illegal activities; motivated by profit and power; utilisation of violence or intimidation; and exertion of influence on politics, the media, public administration, judicial authorities and/or the economy.

The following section outlines and differentiates between crime syndicates and criminal gangs, as variants of organised crime.

### **3.2.2. Differences between crime syndicates and criminal gangs**

It is the notion of the researcher to differentiate between a crime syndicate and a criminal gang in this study. The two variants may tend to be viewed as similar, yet they are not. Gastrow (1998:9) defines a crime syndicate as follows:

A crime syndicate is a criminal organisation, engaged in the commission of serious criminal offences, which is based on a

structured association of more than two persons acting in concert over a prolonged period of time in pursuit of both their criminal objectives and profits.

A criminal gang can be defined as (Gastrow, 1998:10):

A criminal gang consists of an organised group of members which has a sense of cohesion, is generally territorially bound, which creates an atmosphere of fear and intimidation in the community and whose members engage in gang-focused criminal activity either individually or collectively.

Based on the above-mentioned definitions, it can most probably be concluded that gangs tend to be less formally structured (loosely-knit) than syndicates, are mostly territorial-based, their criminal activities involve less sophistication than those of syndicates, and gang members tend to be youths with identifiable gang colours and names. The criminal activities of gangs, however, under certain circumstances, conform to organised crime (Gastrow, 1998:10).

The following section outlines threats associated with repeat and serial offenders, as an integral part of the outcome.

### **3.3. Threats associated with repeat and serial offenders**

Repeat offenders and serial offenders, based on the experience of the researcher, pose a greater threat or danger to society than do normal criminals, due to the repetitiveness and nature of their criminal activities. The repeat offender's motive tends to be mainly for financial and/or economical gain or greed, while the serial offender's motive tends to be mainly violent in nature (murders and rapes).

The following sections outline threats associated with repeat and serial related offenders, the definitions of repeat and serial offenders, the crime types normally associated with

repeat and serial offenders and the manner in uncovering repeat and serial related criminal activities.

### **3.3.1. The concepts of repeat and serial offenders**

Integral to the above, the following outlines the concepts of repeat offenders and serial offenders.

#### **3.3.1.1. Repeat offenders**

Repeat offending or recidivism can be defined as an individual's tendency to engage repeatedly in criminal activities, as cited in Prinsloo (1995:8) and supported by Plug, Meyer, Louw and Gouws (1988:307), who state that recidivism refers to a person or group of persons who commits crime on a continuous basis. A recidivist, according to Plug et al. (1988:307), is a person who committed a series of offences for which they have already being convicted. The American Heritage Dictionary (2002), in support of the latter views, states that recidivism refers to a tendency to lapse into a previous pattern of behaviour, especially a pattern of criminal habits. According to Word Net (2003), in supporting the latter and former views, defines a recidivist as someone who is repeatedly arrested for criminal behaviour (especially for the same criminal behaviour) and/or someone who lapses into previous undesirable patterns of behaviour.

All these views are partially supported by Schoeman (2002:31-32) who defines recidivism as a behaviour pattern whereby an offender who previously served a prison/community corrections sentence, commits a further unspecified offence and is found guilty of such an offence and serves a further correctional sentence for it. Recidivism is derived from the Latin word *recidere*, meaning to fall back, as cited by Maltz (2001:54) in Schoeman (2002:38). Maltz (2001:54) in Schoeman (2002:40), postulates that a recidivist is a person who is not rehabilitated, but falls back into former criminal behaviour patterns by habitually committing more crime.

Prinsloo (1995:41), from a social point of view, views a recidivist as a person who is convicted of the recurrence of criminal behaviour which is of a serious nature.

Recidivism, according to Prinsloo (1995:41), can therefore be viewed as an aggravated or more serious form of criminal behaviour or conduct.

Venter (1952:11), as cited in Schoeman (2002:44), also states that the recidivist poses a greater threat or danger to society than the normal criminal due to the fact that previous criminal sentences hold no deterrent value. The latter view on the deterrent value is supported by Muntingh (2001:11) who also states that in relation to re-offenders, the deterrence approach of incarceration does not hold much promise as a crime reduction strategy, based on the fact that the majority of inmates are recidivists who have been in detention before.

A further variant of a repeat offender type exists, known as a chronic offender, which is synonymous with a recidivist in so far that both can be associated with re-offending criminal behaviour patterns as well as pro-criminal lifestyles (Schoeman, 2002:56).

The only apparent difference between a chronic offender and a recidivist is that a person can be classified as a chronic offender if such a person makes themselves guilty of at least five officially recorded criminal offences, while a person can be classified as a recidivist if the latter commits a further crime and is sentenced accordingly (Longmire (1979:1) in Schoeman (2002:56), as conceptualised in Table 7.

**Table 7: Classification of a chronic offender and the recidivist**

<b>Difference or classification</b>	<b>Number of convictions</b>	<b>Frequency of repeat offending</b>
Chronic offender	Five or more convictions	Considerably higher than a recidivist
Recidivist	Two or more convictions	Occasionally – lower frequency than a chronic offender

Bartollas and Miller (1998:102), as cited in Schoeman (2002:57), state that chronic offenders are mostly labelled as “serious delinquent, repeat offender, violent offender, dangerous offender, hard-core delinquent and career delinquent”. Furthermore, though

there are slight differences, it seems as if, essentially, recidivism and chronic offending refer to the same phenomenon, namely, repeated and consistent engaging in criminal activities. In both cases, according to Bartollas and Miller (1998:102) in Schoeman (2002:57), it is assumed that the bulk of offenders who could be classified as either a recidivist or chronic offender, are responsible for the majority of crimes.

In comparison, it seems that the classification of both recidivism and chronic offenders are used as labels to identify repeat offenders. It can be concluded that chronic offending, as in the case of recidivism, refers to a path whereby repeat offending becomes a behavioural pattern, subsequently leading to a criminal career.

Repeat offenders, within the context of the CTA process, according to the experience of the researcher, refers not only to the defined or classified recidivists or chronic offenders, but includes any person who repeatedly commits a series of crimes, irrespective of the type of crime or whether such person or persons have been previously arrested and/or convicted and/or acquitted.

Thus, a high probability exists that there are countless repeat offenders committing crimes on a repeated basis without ever have being arrested before; therefore, the focus cannot only be on the officially recorded classical recidivists or chronic offenders, as defined above, but must include all repeat offenders.

### **3.3.1.2. Serial offenders**

The following outlines, basically, the two types of serial offenders: serial killers and serial rapists. The reason why the researcher opted to differentiate between the two types of serial offenders is merely to demonstrate or argue the fact that not all serial killers are also serial rapists, although the majority of serial killers tend also to rape their murder victims, thus, inter alia, one must bear in mind that a certain variant of serial killers do not also rape their victims.

### **3.3.1.2.1. Serial killers**

Cameron and Frazer (1987:17) classify serial killers as a variation of sex murderers. They define serial killers as men (with a few exceptions) who murder their sexual objects, whether they are women, children or other men. The murders are characterised by sexual assault, rape, torture and intimidation.

Hollin (1989:74) considers a serial killer to be a type of mass murderer who commits murder over a period of time, torturing or sexually assaulting his/her victims before killing them. Hollin's definition aligns with that of Cameron and Frazer by focusing on the sexual aspects of serial murders.

Levin and Fox (1991:14), on the other hand, regard serial killers and simultaneous killers as two types of mass murderers. According to them, serial killers are defined as mass murderers who murder victims at different times, while simultaneous murderers are mass murderers who kill their victims in one event.

Holmes and De Burger (1988:18) differentiate between a mass murderer as a person who kills many people at one time, and a spree (serial) killer as a person (or persons) who kill(s) several people over a shorter period, whether it be hours, days or weeks. Holmes and De Burger (1988:18) list the following traits of a serial killer:

- The central element is repetitive murders;
- They are usually one-on-one murders;
- The victim is usually a stranger to the killer;
- The motive is murder and not passion, nor is it precipitated by any action of the victim; and
- The motivation is intrinsic.

Pistorius (2002:4) supports the above-mentioned traits in serial killers as described by Holmes and De Burger, but is of the opinion that Holmes and De Burger omitted to include the feature of a cooling-off period (lapsed time/period between murders) and the element of fantasy, both of which are characteristics of a serial killer's modus operandi

and motive. According to Pistorius (2002:6), Ressler and Shachtman's definition of serial killers, mass murderers and spree killers, as cited in Pistorius (2002:6), are the most comprehensive to date. In Pistorius (2002:6), the definitions of Ressler and Shachtman are as follows:

- A serial killer can be defined as a person or persons who kill(s) more than three victims, during more than three events, at three or more geographic locations, with a cooling-off period in between. Premeditated planning and fantasy are also present;
- A mass murderer can be defined as a person who kills four or more victims during one event at one location. There is no cooling-off period and the victims may be family members; and,
- A spree killer can be defined as one or more persons who kill two or more victims during one event which could have a long or short duration, at two or more locations, with no cooling-off period.

Pistorius (2002:6), a forensic psychologist and criminal profiler who was involved in evaluating more than thirty serial killer related cases in South Africa, formulates the following definition of a serial killer:

A serial killer is a person (or persons) who murder several victims, usually strangers, at different times and not necessarily at the same location, with a cooling-off period in between. The motive is intrinsic - an irresistible compulsion, fuelled by fantasy, which may lead to torture and/or sexual abuse, mutilation and necrophilia.

#### **3.3.1.2.2. Serial rapists**

According to studies by Welman and Humphreys (2000:11-13), as cited by Mkhabela (2005), on differentiating types of rapists in South Africa using developmental and social patterns of offence behaviour as the typological criteria, four broad groups of rapists in South Africa were identified. Development factors, social features and behavioural patterns were found to differentiate between the groups, suggesting that the

characteristics of the offence and offender may serve to differentiate between different types of rapists.

The four general types of offenders identified by Welman and Humphreys (2000:11-13) are as follows:

- Gang rapists (rapists who operate in a group);
- Serial rapists (rapists who operate alone and have been convicted of more than one rape);
- Single rapists (rapists who operate alone and have a single rape conviction); and
- Felony rapists (where the rape was committed during the course of another crime).

The following section outlines the methods of how to detect or uncover criminal activities associated with repeat offenders and serial offenders, through crime analysis techniques.

### **3.3.2. Detection of repeat and serial offenders**

Integral to the concepts and definitions of repeat and serial offenders, is the importance of reflecting on the methods to detect or uncover offenders' (repeat and serial offenders) criminal activities by means of the application of crime analysis techniques.

Criminal investigative analysis or profiling, according to Gottlieb et al. (1998:60), has also proved effective in building profiles of rapists. Through careful interviewing of the rape victim about the offender's behaviour, investigators may be able to build a profile of the offender. The sexual, physical and verbal behaviour of an offender (rapist) reflects the offender's overall personality and underlying motive (Gottlieb et al., 1998:60). Furthermore, Gottlieb states that by examining this behaviour, the analyst may be able to determine what type of person is responsible for the offence. Once a suspect in repeat or serial offences has been apprehended, offender profiles are of inestimable value in the subsequent interrogation process. Investigators who are in possession of information about a repeat or serial offender can use it to recognise and exploit certain personality characteristics and associated emotional deficiencies (Gottlieb et al., 1998:60).



According to the researcher, by analysing the definition and/or the general characteristics of a serial killer, as described by Pistorius (2002:6), from a crime analyst's perspective, it is evident that the presence of a serial killer/rapist will be difficult to detect by merely applying normal crime analysis techniques. The reason is that serial killers (and rapists), according to the definition of Pistorius (2002: 6), normally maintain a cooling-off period in between incidents (murders and rapes).

Additional methods must therefore be applied in an attempt to detect serial killers/rapists. According to the researcher, by keeping proper record in an automated matrix format of all unsolved and solved murder and rape cases, the crime analyst will be in a far better position in attempting to detect the presence of a possible serial killer and/or rapist through crime analysis techniques, as cited in De Kock (2004:4) (section 2.9.2.4.). These crime analysis techniques refer to crime pattern analysis, matrix (linkage) analysis, case docket analysis and profiling, as discussed respectively in sections 2.9.2.3. to 2.9.2.5. and 2.9.2.7. The reason for including solved murder/rape cases, according to the researcher, is that a probability may exist that a suspected or convicted killer/rapist may be linked to other unsolved murder/rape cases. This suspect or convicted killer/rapist may eventually turn out to be a serial killer/rapist in custody or under investigation.

The definition of a serial killer, as described by Pistorius (2002:6) can thus be used as a guideline for crime analysts in their endeavour to determine the presence of a possible serial killer/rapist, based on the elements contained in the definition, i.e. several victims; usually strangers; different times; not necessarily at the same location; with a cooling-off period in between incidents; and, with a motive which may lead to torture and/or sexual abuse, mutilation and necrophilia.

### **3.4. Summary**

Based on the above, one can conclude that a crime analyst must, in relation to murder and rape cases, apply crime pattern analysis, geographic crime analysis (mapping), matrix (linkage) analysis, case docket analysis, profiling (especially in relation to rape cases), and keep an automated record of all unsolved and solved murder and rape cases, on the

one hand, and use the definition of a serial killer(rapist), as cited by Pistorius (2002:6), as a guide, on the other hand, in an endeavour to attempt uncovering the presence of a possible serial killer/rapist. It must, according to the researcher, be emphasized, however, that the crime analyst's attempt to detect or uncover repeat and serial offenders is based purely on probabilities. The verification thereof can only be established through intensive investigations, forensic-related evidence, the interviewing of offenders/witnesses and source information (informers and police agents), which are mainly the functions of the criminal investigator.

Chapter 4 outlines the findings of the data comparison, i.e. practice and theory, derived from questions posed to the two respondent groups, i.e. respondents A-H and I-P respectively.

## **CHAPTER 4**

### **DATA COMPARISON: PRACTICE AND THEORY**

#### **4.1. Introduction**

In this chapter (Chapter 4), the responses received from the two respondent groups, i.e. respondents A-H and I-P, are discussed separately. As discussed in Chapter 1, the first group of respondents (A-H) are all Station Information Managers (crime analysts), while the second group of respondents (I-P) are experienced and specialised criminal investigators and/or intelligence analysts/researchers. The purpose of this chapter is to reflect on whether the practice and theory are in concurrence, and, if not, to give possible reasons and/or explanations for this.

#### **4.2. Respondent group A-H**

The biographical profile of all respondents (A-H) in the study concurs and/or meets the prerequisite requirements for crime analysts in the SAPS in terms of qualifications, police experience, training, valid motor vehicle licence and security clearance, as described in the SAPS (2005c:6) in section 2.4. The following table (Table 8) illustrates the biographical profile of respondents A to H.

**Table 8: Biographical profile of respondents A-H**

Gender	Male	Female		
	5	3		
Age group	26-30 years	31-35 years	36-40 years	41-45 years
	2	4	1	1
Rank level	Civilian (SAC) <sup>14</sup>	Sergeant	Inspector	Captain
	1	0	5	2
Total years of police service	10-13 years	14-17 years	18-21 years	22-25 years
	3	3	1	1
Total years of crime analysis experience	4-5 years		6-7 years	8-9 years
	6		1	1
Highest education level	Grade 10	National Certificate: Policing	National Higher Certificate: Policing	National Diploma: Policing
	2	0	2	4
Crime Information Management & Analysis <sup>15</sup> course attended	Valid motor vehicle drivers' licences		Security clearances	
8	8		8	

**The objective of crime analysis:** Four respondents stated that the objective of crime analysis in policing is to generate crime management information, i.e. the what, where, when, why and how aspects of crime by means of crime analysis techniques for crime prevention and detection purposes. Another respondent, in support of this view, adds that the objective of crime analysis is to determine crime patterns and trends for the deployment of operational members in identified focus areas (crime hot spots) on specific days and times, based on the findings of crime pattern analysis. Both these views are shared by the remaining three respondents.

<sup>14</sup> Civilian (SAC) – Senior Administrative Clerk appointed in terms of the Public Service Act and employed by the SAPS.

<sup>15</sup> Crime Information Management & Analysis course is a three week course (120 hours credit) designed for crime analysts and presented by the SAPS (Crime Intelligence training).

The views of all the respondents concur, in general, with the theory, namely, that the objective of crime analysis has the dual purpose of supporting crime prevention and crime detection efforts, as described respectively in Peterson (1998:210) in section 2.3, and in Gottlieb et al. (1998:13) in section 2.2.

***The outcomes of the CTA process:*** Seven respondents claimed that the outcomes of the CTA process are basically a reflection of the crime statistics of a station (indicating the extent and crime trends or tendencies and the geographic crime hot spot areas) and a reflection of threats associated with organised crime. One respondent stated that the outcome of the CTA process is somehow similar to the objective of crime analysis in policing, but it is actually more designed to uncover threats associated with organised crime threats.

The views of all respondents concur thus partially with the theory, namely, that the outcomes of the CTA process are intended to generate crime management information for crime prevention and crime detection purposes, as described in SAPS (2000:9) in section 2.9., and also as conceptualised in Chart 13 in section 2.9.3. The respondents, however, in their responses, omitted to view threats associated with repeat and serial offenders also as an outcome of the said process. The consequence of the latter is that a high probability exists that repeat and serial offenders' criminal activities will not be detected effectively.

***The types of crime analysis techniques and activities applied:*** All respondents were requested to indicate what types of crime analysis technique(s) and activity are being applied by them (1) as an integral part of the CTA process, or (2) on an ad hoc basis when specifically tasked to apply or otherwise. Table 9 illustrates the responses accordingly:

**Table 9: Types of crime analysis techniques - and activities applied**

Types of crime analysis techniques– and activity	Apply as integral part of the CTA process	Apply on an ad hoc basis when tasked to apply or otherwise	Do not apply
Crime threshold analysis	Respondent: D, E, F	-	Respondent: A, B, C, G, H
Crime trend analysis	Respondent: A – H	-	-
Ratio per 100 000 of the population analysis	-	-	Respondent: A – H
Crime pattern analysis	Respondent: A – H	-	-
Geographic crime analysis	Respondent: A – H	-	-
Linkage crime analysis	-	-	Respondent: A – H
Case docket analysis	Respondent: C	Respondent: A, B, D, E, F, G, H	-
Interviewing (activity)	Respondent: C	Respondent: A, B, D, E, F, H	Respondent: G
Crime scene visits (activity)	Respondent: C	Respondent: A, B, D, E, F, H	Respondent: G
Profiling	-	Respondent: A – H	-

Based on the contents displayed in Table 9, it is evident that the majority of the respondents generally do not strictly apply all the different crime analysis techniques and activities in the CTA process, namely, that crime analysts must apply the following crime analysis techniques as integral part of the CTA process: crime statistical analysis, geographic crime analysis, crime pattern analysis, crime linkage analysis, case docket

analysis, profiling and fieldwork (interviewing and crime scene visits), as described (and conceptualised in Chart 3) in section 2.9. in the SAPS (2000:9); and also, as conceptualised in Chart 4 (Crime Threat Analysis process) in section 2.9.2.

Based on the specific types of crime analysis techniques (see Table 9), which the respondents apply, i.e. steps 1 to 3 of the CTA process, it suggests that the respondents' primary focus is more directed to aiding crime prevention than aiding in the detection of crime (i.e. threats associated with organised crime, repeat and serial offenders), as conceptualised in Chart 3 in section 2.9.

***Applying crime threshold analysis:*** Five of the respondents indicated that they used to apply crime threshold analysis techniques in the past, but ceased the practice or use thereof, based on a national instruction of the SAPS which ceased the utilisation of crime threshold analysis techniques, as described in the SAPS (2005b:2) in section 2.9.2.1.1.

Notwithstanding the national instruction, as described in the SAPS (2005b:2) in section 2.9.2.1.1., three respondents indicated that they still apply crime threshold analysis. They further claim that crime threshold analysis is a valuable and objective crime measuring tool which enables them to monitor crime trends in terms of the upper limit, within the limits and below the lower limits. Two of the latter respondents further stated that by applying only crime trend analysis is not sufficient, because it only indicates whether crime increased, stabilised or decreased. What they, as crime analysts, also need to know is whether a specific crime is above, within or below the expected levels (thresholds) of crime. One respondent explained that by applying crime trend analysis, a specific crime type may depict a decrease (favourable), but by applying crime threshold analysis it may even depict levels above the expected crime levels or threshold (unfavourable). Three respondents stated that they incorporate the findings of crime threshold analysis with other findings such as crime trend analysis, thereby reflecting a more objective crime picture.

The responses received thus from five respondents do not concur with the theory, as described respectively in Gottlieb et al. (1998:375) and in the study material of TSA

(2002:75) in section 2.9.2.1.1. However, the responses received from the other three respondents, notwithstanding the national directive as described in the SAPS (2005b:2) in section 2.9.2.1.1., do concur with the theory, namely, that applying crime threshold analysis enables the police to know the upper and lower limits of each crime in order to determine whether the crimes are either within, above or below the thresholds of crime, as described in Gottlieb et al. (1998:375) in section 2.9.2.1.1.

It can be concluded that it is essential for crime analysts to apply crime threshold analysis, in order to determine whether crimes are within, above or below the thresholds of crime. A best practice, as cited by three respondents (D, E and F) - to incorporate the findings of crime threshold analysis with the findings of crime trend analysis - will reflect a more objective crime picture.

***Applying crime trend analysis:*** All respondents apply crime trend analysis, thus concurring with the theory, namely, that by applying crime trend analysis one can determine whether crime increased, decreased or stabilised during a specific time period, as described respectively in Seimela (2003:11) and in the study material of TSA (2002:74) in section 2.9.2.1.2. Furthermore, all the respondents retrieve and interpret crime statistics (crime trend analysis), covering a one month period for operational purposes, and also retrieve and interpret crime statistics, covering quarterly and annual time periods, for strategic purposes, as described (and conceptualised respectively in Table 2 and Table 3) by the researcher in section 2.9.2.1.2.

***Applying ratio per 100 000 of the population analysis:*** None of the respondents apply ratio per 100 000 of the population analysis technique, thus not concurring with the theory, namely, that applying this method enables the police to compare and determine whether crime levels at a specific police station are higher, equals or lower than the national or provincial crime norms, as described respectively in Gottlieb et al. (1998:353) and Seimela (2003:10), in section 2.9.2.1.3. All the respondents claimed that no population figures are available to enable them to apply ratio per 100 000 of the population analysis at station level. Two of these respondents added that the only official



population figures available are the 2001 population census statistics from SSA<sup>16</sup>, but that the latter set of population figures cannot be used, because the geographic census boundaries differ from the geographic police boundaries of a station. Furthermore, even the geographic municipal boundaries and the geographic magisterial boundaries differ from geographic police boundaries. One respondent stated, furthermore, that only crime analysts stationed at a provincial - and higher - level of policing will be able to apply ratio per 100 000 of the population analysis, because the geographic census boundaries of, for example, the Eastern Cape Province, are the same as the geographic policing boundaries of the said province – thus, the population figures are available for this purpose.

It is the notion of the researcher that population figures are therefore not available at station level due to census and policing geographic boundary differences; one can thus not expect station crime analysts to apply ratio per 100 000 of the population analysis technique. After all, population figures are essential in order to determine the ratio per 100 000 of the population.

In concluding crime statistical analysis techniques (Step 1 of the CTA process), the theory prescribes that (1) crime threshold analysis, (2) crime trend analysis and (3) ratio per 100 000 of the population analysis form an integrated part of crime statistical analysis, and cannot be interpreted individually because it may distort reality or the true crime picture, as described respectively in SAPS (2000:12) in section 2.9. and in Gottlieb et al. (1998:353) in section 2.9.2.1.2. Thus, the findings of all three crime statistical analysis findings need to be considered in order to interpret crime figures more accurately and objectively. In practice, however, the majority of respondents only apply crime trend analysis techniques, and it is the notion of the researcher that there is no apparent reason why crime analysts cannot also apply at least crime threshold analysis, notwithstanding the national directive, as described in SAPS (2005b:2). The non-appliance in relation to ratio per 100 000 of the population analysis technique, is understandable due to the non-availability of population figures per police station, as discussed by the researcher, above.

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<sup>16</sup> SSA (abbreviation) –Statistics South Africa is a government entity which gathers, interprets and publishes statistical related reports such as population figures and census findings (researcher).

***Applying geographic crime analysis:*** All respondents apply geographic crime analysis, thus concurring with the theory, namely, that the latter enables the police to determine geographically where and when crimes occurred and also to determine any crime hot spot area(s) for intervention purposes, as described respectively in the SAPS (2000:8), Peterson et al. (2000:107), the study material of TSA (2002:55) and Harries (1999:1) in section 2.9.2.2.

***Applying crime pattern analysis:*** All respondents apply crime pattern analysis, thus concurring with the theory, namely, that the latter enables the police to determine the frequency of crime occurrences in terms of time and space dimensions, as well as an explanation of crime based on the analyses of modus operandi, target, and victim and offender particulars, in order to identify distinct patterns, based on similarities or commonalities, as described respectively in the study material of TSA (2002:56), the SAPS (2000:8), Peterson et al. (2000:106-107) and the MACA (2001a) in section 2.9.2.3. All crime analysts supply crime pattern information to their respective commanders and operational units for the purpose of crime prevention planning and activities (deployment of personnel in identified focus areas).

***Applying linkage crime analysis:*** None of the respondents apply linkage crime analysis based on the matrix, thus not concurring with the theory, namely that linkage analysis findings will provide an indication of different crimes committed by the same individual or group of individuals, thereby enabling crime analysts to link an offender or offenders to a series of crimes, as described respectively in SAPS (2000:9) and in De Kock (2004:5) in section 2.9.2.4.

The consequences of not applying linkage analysis within the context of the CTA process will, according to the researcher, diminish the chance of identifying a crime series (crime threat) and subsequently the inability to identify a group of offenders, repeat offenders or serial offenders.

All the respondents indicated that they do not possess the knowledge or experience to manipulate data in a database (spreadsheet) or automated matrix, in order to effect

linkages. Therefore, a serious training need was observed amongst respondents in relation to automated linkage analysis techniques in spreadsheet applications. However, the respondents indicated that they do effect linkages by using methods other than automated techniques, i.e. by applying the technique manually.

Four of the respondents stated that they normally rely on daily reported crime inputs at the Station Crime Combating Forum (SCCF) meetings, as well as human memory, in order to effect possible linkages. These respondents indicated some successes achieved in this regard, but acknowledged the fact that possible linkages could have been missed in their endeavour to effect linkages.

Five of the respondents claimed that (manual) linkages are more effective after the arrest and interviewing of an offender. Two of these respondents further added that linkages can also be effected by means of forensic evidence such as fingerprints. The researcher partially supports the latter view, but emphasises that the application of specialised interviewing methods and techniques will probably enable the investigator to link a suspect to a series of crimes, while forensic-related evidence is factual and regarded as undisputed evidence if presented in a court of law.

Three respondents further claimed that another method in linkages can be effected by utilising Morpho Touch equipment. Morpho Touch is an electrically- or battery-operated live scanning device, through which a person's index finger's pattern and ridge tracing are used in an electronic search of the police's centralised fingerprint database, in order to determine whether that person is listed as 'wanted' for any other crime(s). The search will be performed against a 'wanted' database on the Morpho Touch, and on completion of the electronic search one of the following results will be displayed: possibly wanted, previously convicted, or no record.

***Applying case docket analysis:*** Seven of the respondents do not apply case docket analysis as an integral part of the CTA process, thus not concurring with the theory, namely, that the latter enables the crime analyst to determine the what, why, when, where and how aspects of crime; and, also, the outcome of case docket analysis may possibly

identify a common modus operandi which could be indicative of the presence of a repeat offender, a serial offender, or group offenders (in a crime series), as described respectively in the SAPS (2006:6) and in Lock (2002:3) in section 2.9.2.5.

However, these seven respondents claim that they do apply the technique of case docket analysis only on an *ad hoc* basis or when they are specifically tasked to do the latter. They all view case docket analysis as part of strategic research/analysis and not as an integral part of the CTA process. Case docket analysis in this sense, according to these seven respondents, basically refers to a process of problem identification (crime type), the application of sampling techniques, the gathering/collection of sample case dockets, the design of a questionnaire (measuring tool), the perusal of sample case dockets, the completion of questionnaires, the analysis of results, findings/recommendations, and report writing. According to these seven respondents, this type of case docket analysis endeavour is normally initiated by the crime analysts (respondents) themselves and/or when they are specifically tasked to do the latter by management.

According to the experience of the researcher, this approach (case docket analysis) has strategic value, as it focuses mainly on the explanation of crime. The findings of the latter are normally used to strategise crime prevention programmes or initiatives.

Case docket analysis, done on a regular basis within the context of the CTA process, on the other hand, is solely focused on the activities of a specific group of offenders, repeat offenders and/or serial offenders, in relation to an identified crime series (crime threat) and not to generalise case docket analysis in respect of all or selected crimes. The focus is on generating operational information or intelligence in order to determine the “what, where, when, why and how” aspects of a crime series for operational deployments and/or interventions (prevention and detection).

The consequences of not applying case docket analysis within the context of the CTA process will, according to the researcher, diminish the chance of identifying possible offenders involved in a crime series (threat) which relates to either organised crime (group of offenders), repeat offenders or serial offenders. Thus, only one respondent

applies case docket analysis as integral part of the CTA process, as described in the theory in section 2.9.

***Executing fieldwork:*** Six of the respondents apply fieldwork on an ad hoc basis only, for the sole purpose of information gathering on the more serious and/or sensational crime scenes, while one respondent does not apply fieldwork at all. This respondent claimed that due to a resource shortage (vehicles) no fieldwork activities can be executed, and therefore the respondent relies mainly on internal systems and crime reports for the gathering and analysis of crime information. Thus, only one respondent applies fieldwork as an integral part of the CTA process, as described in the theory in section 2.9. The non-application practice is in contrast with the theory, as described in De Kock (2004:4) in section 2.9.2.6., who states that fieldwork is one of the most important functions of the crime analyst. The latter activity, which includes interviewing and crime scene visits, will assist the crime analyst in the understanding of the crime phenomenon and can probably assist in the identification of the offender(s), based on offender description supplied by witnesses during interviews. According to the majority of the respondents, not all crime scenes can be visited, nor can all witnesses be interviewed, due to the high extent of serious crime volumes. In supporting the latter views on the high extent of serious crime volumes, the respondents quoted annual crime statistics (only serious crimes or commonly referred to as A-crimes) which varied from 3687 to 10938 cases per police station.

The objective, according to the researcher, in applying fieldwork within the context of the CTA process, is primarily to focus on the identified/uncovered crime series (crime threat) and not to generalise fieldwork activities in respect of all reported crimes, as viewed by these respondents. Furthermore, based on the quoted annual crime statistics which vary from 3687 to 10938 (averaging between 10.23 and 30.38 serious crimes per station per day), one cannot expect the limited number of crime analysts (respondents) to cover the total spectrum of crime incidences. That is why crime analysts ought to focus only on those crime incidences depicting a crime series (derived from Step 4 of the CTA process).

The consequences of not applying “focused” fieldwork activities within the context of the

CTA process will, according to the researcher, diminish the chance of identifying possible offenders relating to organised crime (group of offenders), repeat offenders or serial offenders.

***Applying profiling:*** None of the respondents apply profiling as an integrated part (or within the context) of the CTA process, thus not concurring with the theory, namely, that profiling allows the crime analyst to determine the “who” aspect of crime, that profiling is a useful method of gathering information pertaining to offenders, and that offender profiles can also assist in the identification of the type of offender involved in crime, as described respectively in Van Heerden (1994:191), the study material of TSA (2002:72), Gottlieb et al. (1998:62) and the SAPS (2002b:2), in section 2.9.2.7.

The only variant of profiling which is done by all the respondents includes the compilation of standard profiles on all persons arrested and detained at the various SAPS detention centres or lock-up cells. The contents of these profiles (all in automated format) include a digital photo of the arrestee, personal information (identity number, citizenship status, age, gender, race, physical description, distinct marks and/or tattoo marks), address information (physical residential and business address, including the crime scene address), vehicle information (if any), firearm information (if any), criminal record information, particulars of the crime(s) committed - with reference to the station precinct name, CAS reference number and crime type, modus operandi information and criminal association information. The contents of these standard profiles concur with the theory, as described and conceptualised in the SAPS (2002b:7-8) and Table 6 in section 2.9.2.7.2.

The consequences of not applying profiling techniques prior to the arrest phase of offenders will, according to the researcher, diminish the identification of an offender involved in a crime series. Furthermore, the physical description or artist’s sketch of an offender, derived from witness accounts, and the behavioural patterns of an offender based on modus operandi information and target information, will assist in the identification of and/or narrowing down the search for offenders involved in a crime series.

Thus, it can be concluded that, in layman's terms, the respondents apply only post-arrest profiling aimed at aiding the interrogation process, and neglect the primary focus of pre-arrest profiling aimed at the identification of offender(s), which is an integral part of the CTA process.

***Detecting a crime series through applying crime analysis techniques:*** Four respondents (A, B, D and H) indicated that they are able to detect or uncover a crime series by applying a crime analysis technique(s) and/or any other method, i.e. by applying case docket analysis. This view was supported by the remaining four respondents who added that analysing the daily serious crime reports can also uncover a crime series. One of these respondents further added that one can probably also rely on human memory, based on events that took place in the past, in order to identify a crime series.

The views of four respondents (A, B, D and H) regarding case docket analysis as a technique to uncover a crime series, are partially supported by the researcher, but the researcher emphasises that automated linkage analysis (database/spreadsheet operations) will be a more effective and efficient analytical technique to apply than case docket analysis (manual method). This is because case docket analysis is a time-consuming exercise, and case dockets are not always readily available. Case dockets are either with investigators or with the Public Prosecutor (Department of Justice), or available at various police stations, or even sometimes missing/stolen/lost or misfiled. According to the researcher, automated crime information contained in a database/spreadsheet is more readily available and accessible than the content of information contained in the actual case dockets.

The views of four respondents, with regard to the analysis of daily serious crime reports and/or relying on human memory, cannot be supported by the researcher, due to the unreliable practice thereof. Daily crime reports, according to the researcher, are only compiled on specific and sensational crime events and do not cover all crimes reported to the SAPS.

Some of the views of the respondents thus partially concur with the theory, namely, that

the outcome of case docket analysis can possibly identify a common modus operandi, which could be indicative of the presence of repeat offenders, serial offenders or group offenders involved in a crime series, as described by Lock (2002:3) in section 2.9.2.5. The researcher, however, is of the opinion that linkage analysis techniques, as described in De Kock (2004:5) in section 2.9.2.4, will be a more effective and efficient method to apply than case docket analysis, as argued above.

***Detecting group offenders, repeat offenders and serial offenders through analysis:***

None of the respondents were able to detect or uncover the criminal activities of group offenders (associated with organised crime), repeat offenders or serial offenders by applying a crime analysis technique(s) and/or any other method, thus not concurring with the theory, namely, that linkage analysis techniques will enable the crime analyst to link an offender(s) to different crime incidents (crime series) which, per se, is an indication of the involvement of either group offenders, repeat offenders or serial offenders, as described in De Kock (2004:5) in section 2.9.2.4. The reason for non-compliance, according to the researcher, can most probably be attributed to the inability of respondents to effectively apply linkage crime analysis techniques, as described in De Kock (2004:5) in section 2.9.2.4.

One respondent furthermore claims that the set criteria on organised crime, as described in the SAPS (2000:8-9) and Checklist 2 in section 3.2.1, places a constraint on crime analysts in the identification of organised criminal groupings, in the sense that crime analysts are normally only able to verify three criteria, while at least six of the eleven criteria need to be fulfilled, including the first four on the list, in order to classify a criminal group as an organised criminal organisation. The three criteria which can be verified by crime analysts include criterion 2<sup>17</sup>, criterion 3<sup>18</sup> and criterion 4<sup>19</sup>. The rest of the criteria, i.e. criterion 1, and criteria 5 to 11, can only be verified through source information (informers/police agents). The view of this respondent is supported by the researcher and is in accordance with the job description of crime analysts, as cited in

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<sup>17</sup> Criterion 2 - It has to be suspected of involvement in serious criminal offences

<sup>18</sup> Criterion 3 - It has to have involved in such serious criminal activity for a prolonged or indefinite period

<sup>19</sup> Criterion 4 - It has to be motivated by the pursuit of profit and/or power



SAPS (2005b:6); the handling of sources (informers and police agents) does not form part of the job function of crime analysts. Informer handling and intelligence gathering are the primary function of Crime Intelligence Gathering (CIG), a sub-component within the division Crime Intelligence in the SAPS.

Based on the above, it can be concluded that the respondents (crime analysts), taking their job description and functions into account, are not in the position to uncover 'verifiable' incidences of organised crime strictly according to the set criteria on organised crime. The latter can mainly be achieved through the utilisation of source information.

As a consequence, according to the researcher, not being able to apply automated linkage analysis techniques and the subsequent identification of a crime series (threat), will counter attempts to detect group offenders (organised crime related), repeat offenders or serial offenders - the essence of the CTA process.

In summary, all the respondents in general (partially, but sufficiently) apply the first three steps in the CTA process, thereby generating operational crime information in assisting crime prevention initiatives, but none of the respondents apply all seven steps in the CTA process, thereby being unable to effectively uncover a crime series, namely, crime threats associated with either organised crime, repeat and/or serial offender activities. The general loose or ad hoc application of some steps (4 to 7) in the CTA process, will thus diminish the effective prospect of uncovering a crime threat, as described above.

***Utilising source information:*** Six respondents stated that they have access to and utilise the following internal information sources in their crime analysis endeavours: CAS, ISIS and the BI systems. Two other respondents, both also having access to these systems, also utilise and have access to the CIR system. They all claimed that access to information contained in other internal and external information sources (systems) is limited to users stationed at higher levels of policing, i.e. area, provincial and national levels. One respondent furthermore claims that before one can be registered on any system as an end-user, one must first attend a training session. The view of this

respondent is supported by all the other respondents, including the researcher.

According to the researcher, who possesses first-hand knowledge regarding the training and registration of end-users, before one can be registered as an end-user to gain access to any system in the SAPS, one must first attend training sessions in each and every internal system type. Furthermore, the training sessions are not regularly presented, due to budgetary constraints/restrictions. Current practice to overcome the latter constraint is to train and register specific individuals who are strategically placed at higher levels of policing (i.e. area, provincial and national levels), for the purpose of access to and dissemination of information to operational police officials. For example, crime analysts and detectives are required to submit a written request to the strategically placed end-users at area and provincial police levels, in order to obtain system-based information from internal and external information sources (systems). This practice, however, places a constraint on information collection.

None of the respondents has access to the Internet via the official police network. Furthermore, five of the respondents claimed that they utilise the Internet, but at their own cost at their private residences after normal working hours, in order to obtain information relevant to their job function as crime analysts. Four of the respondents stated that in addition to system-based information (and/or Internet-based information) they also make use of the printed media (i.e. newspaper reports on crime and other relevant issues), and two of these respondents also claimed that they make occasional use of human source information (unregistered informers).

Based on the above, it can be argued that the respondents (crime analysts) have access to - and utilise - only those internal information sources accessible to them. These practices partially concur with the theory as far as accessibility to certain internal information sources is concerned. However, the theory describes a long list of internal and external information sources in the SAPS (1999:49-50) in section 2.6, above, of which the majority are not accessible or readily available to the respondents, thereby constraining access to information, the livelihood of crime analysis operation, as described in Gottlieb et al. (1998:101).

### 4.3. Respondent group I-P

Table 10 illustrates the biographical profile of respondents' I-P.

**Table 10: Biographical profile of respondents I-P**

Gender	Male	Female		
	7	1		
Age group	36-40 years	41-45 years	46-50 years	51-55 years
	1	2	2	3
Rank level	Captain	Superintendent	Senior Superintendent	
	1	3	4	
Total years of police service	25–30 years		31-35 years plus	
	3		5	
Specialised investigative courses attended (five respondents)	Specialised intelligence analysis courses attended (three respondents)		Both specialised investigative and intelligence analysis courses attended (three respondents)	
5	3		3	
Highest level of education	M+3 National Diploma		M+4 Bachelors degree (Hons.)	
	5		3	

**Crime types normally associated with organised crime:** One respondent stated that the following crime types are normally associated with organised crime within the Nelson Mandela Metro City area: drug trafficking, fraud-related crimes (including corruption and money laundering), theft of motor vehicles, carjacking (robbery of motor vehicles) and other robberies such as bank robbery and robbery of cash-in-transit. The latter view is supported by another respondent who also added stock theft to the list, as it is a major crime problem within the farming community where the respondent is stationed. Two other respondents, in support of the latter and former views, added illicit dealing in firearms, gold, diamonds and emeralds, and also abalone trafficking, to the list.

According to another respondent, incidences of robbery of cash-in-transit and the age-old problem of abalone smuggling along the coastal area of Port Elizabeth, are linked to

organised crime activities. Abalone is being poached from the sea and illegally exported to the Far East via Oliver Tambo International Airport in Johannesburg (Gauteng) and Durban harbour in KwaZulu-Natal.

The former and latter views are all supported by the remaining respondents. The general views of the respondents are mainly consistent with the theory, namely, that theft of motor vehicles, robbery of motor vehicles, other robberies, drug related crimes, illicit dealing in gold/diamonds/emeralds and illicit dealing in firearms and ammunition are crime types normally associated with organised crime within the SADC countries, including South Africa, as described in Gastrow (2001) in section 3.2. Furthermore, the respondents also quoted stock theft and abalone trafficking, which are also consistent with the theory, as described respectively in Msutu (2001:13) and in the SAPS Annual Report 2004/2005 of the Eastern Cape, in section 3.2.

***The primary method of detecting organised crime:*** Five respondents stated that, from an investigative perspective, the primary method of detecting or uncovering verifiable incidences of organised crime is through source information, mainly informers and police agents. Furthermore, three respondents stated that, from an intelligence analysis/research perspective, by applying certain crime analysis techniques, such as linkage analysis, one can also identify possible incidences of organised crime where a crime series has been identified. The latter must still, however, be verified, namely, by informers or police agents. These views are shared by the researcher, based on his experience.

The views of the five respondents, from an investigative perspective, and the views of the other three respondents, from an intelligence analysis/research perspective, concur with the theory, namely, that by applying certain crime analysis techniques, such as crime linkage analysis techniques, the crime analyst can identify possible incidences of organised crime involvement. However, the latter must still be verified by means of source information, namely, police informers and/or agents, as described in De Kock (2004:5), in section 3.2.

***Crime types normally associated with repeat and serial offenders:***

One respondent claimed that the following crime types are normally being associated with or committed by **repeat offenders**: burglaries (residential and business), theft out of or from motor vehicles, theft of motor vehicles, common and armed robberies (handbag snatching, ordinary street robberies and business robberies), fraud-related crimes and petty thefts. This view is shared by six respondents of whom one also added stock theft to the list, because the so-called “potslag”<sup>20</sup> stock theft incidences are prevalent on smallholdings and farms.

The remaining respondent, in support of the latter views, also adds indecent exposure, domestic-related violence and paedophilia to the list. The researcher, in support of all these views, differs, however, with regard to *paedophilia* as a phenomenon associated with **repeat** offenders. According to the researcher’s experience, paedophilia is associated with **serial** offenders, due to their characteristics, motive and psychological makeup which is synonymous with serial offenders like serial rapists. Their (paedophiles’) motive may deviate from that of a serial killer/rapist in the sense that they normally exhibit a sexual attraction towards adolescents/children.

The researcher, however, could not find any supportive views from the literature pertaining to the specific type of crimes normally associated with repeat offenders, but, as a practicing crime and criminal analyst, concurs with the views expressed by all the respondents.

In relation to **serial offenders**, one respondent stated that serial offenders are normally involved in murders and/or rapes, but emphasised that not all murders and all reported rapes are being committed by serial offenders per se. This view is supported by all the other respondents, including the researcher.

The latter views of all the respondents with regard to serial offenders concur with the theory, namely, that serial offenders involve themselves in murders and rapes, as

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<sup>20</sup> Potslag (Afrikaans word) – meaning incidences of stock theft where the stock thief (or more) will slaughter stock (normally only one sheep/goat) on the crime scene, mainly for personal consumption, normally driven by hunger (unofficially defined by the SAPS).

described respectively in Pistorius (2002:6), Cameron and Frazer (1987:17), Hollin (1989:74), Levin and Fox (1991:14), Holmes and De Burger (1988:18), Ressler and Shachtman (1993), Welman and Humphreys (2000:11-13) and Mkhabela (2005), in section 3.3.1.2.1.

***Variants of repeat offenders and crime types associated with them:*** According to one respondent, variants of repeat offenders within the Nelson Mandela Metro city area include the ordinary repeat and habitual (chronic) offenders involved in mainly petty and property-related crimes, crime syndicates involved in organised crime as mentioned above, and criminal gangs involved in gang-related murders/rapes, intimidations, attempted murders, assaults, drug/firearm/abalone trafficking and the prostitution trade. Another respondent shared this view and added serial killers and rapists as possible variants of repeat offenders. This view is shared by all the remaining respondents. It is the notion of the researcher to support these views, based on the argument that all these variants can most probably be defined or classified as repeat offenders due to the repetitiveness of their criminal activities. Furthermore, the variables which may vary amongst the quoted variants relate basically to their somewhat distinct characteristics and/or motives and/or targets and/or structures and/or modus operandi. For example, although both variant types are involved in murders and/or rapes, a clear and vast difference exists between serial killers/rapists and criminal gang members in terms of the variables, i.e. characteristics, motives, targets and modus operandi. Similar to the latter, although both variants may be involved in e.g. property related crimes, a vast and clear difference exists between chronic/repeat offenders and crime syndicates, in terms of characteristics, structures, modus operandi and targets. Nevertheless, the way in which these offenders operate is irrelevant in this sense. The only commonality and/or similarity among them all relates to the repetitiveness of their criminal activities; thus, it can most probably be assumed that these are indeed all variants of repeat offenders.

The researcher could not find any supportive literature in relation to any variants of repeat offenders, but, after deductive reasoning, is of the opinion that the above-mentioned are all variants of repeat offenders due to the repetitiveness of their criminal

activities, irrespective of the variables, i.e. criminal characteristics and/or motives and/or targets and/or structures and/or modus operandi.

***Differences between crime syndicates and criminal gangs:*** Two respondents stated that no major difference exists between crime syndicates and criminal gangs, as they have more or less the same goals, i.e. self-enrichment. The remaining respondents partially shared this view and added that criminal gangs, in relation to crime syndicates, are normally less (formally) structured, they are more territorially bound, and their criminal activities involve less sophistication than crime syndicates. Two of the respondents further stated that at least twelve different gang groupings are operating in the northern suburbs in the Nelson Mandela Metro city area, mainly involved in the drug- and abalone-trafficking trade. One of these two respondents further stated that there is also a strong cultural element attached to or associated with gangs, which is not present among crime syndicate members. The same respondent further stated that gang members are more open and proud about their association with gangs in so far that it becomes public knowledge, while crime syndicate members are mostly unknown to the general public. The views of the respondents are supported by the researcher; however, they omitted to list that criminal gangs normally create an atmosphere of fear and intimidation in the communities, and their members are normally engaged in gang-focused activities, either individually or collectively, while crime syndicates, on the other hand, mainly operate clandestinely in a more organised and structured manner, with specific goals and tasks assigned to syndicate members to be fulfilled. The views of the respondents thus partially concur with the literature, as described in Gastrow (1998:9-10) in section 3.2.2.

***Primary method of detecting repeat and serial offenders:*** Three respondents stated that, from an intelligence analysis/research perspective, the primary method of detecting or uncovering incidences related to repeat and serial offenders' activities can be detected or uncovered by crime analysts through the application of the CTA process by means of crime analysis techniques such as profiling, linkage analysis and crime pattern analysis techniques. This view is shared by the researcher, based on his experience as a practicing crime and criminal analyst.

The latter views concur with the theory, namely, that profiling has proved effective in the compilation or building of offender profiles. Through careful interviewing of the victim about the offender's behaviour, investigators may be able to build a profile of the offender, as described in Gottlieb et al. (1998:60) in section 3.2.2. Also, by applying linkage analysis techniques, the crime analyst will be able to link different cases, based on the similarities or commonalities in the modus operandi and/or target information and/or offender/victim particulars, thereby uncovering a crime series with a high probability of repeat or serial offenders' involvement, as described in De Kock (2004:4), in section 2.9.2.4. Also, crime pattern analysis is the reviewing of the similarities and differences among crime incidents, to determine if they were committed by the same individual (repeat/serial offender) or a group of offenders, as described in the SAPS (1999:3), in section 2.9.2.3.

The other five respondents, from an investigative perspective, stated that repeat and serial offenders' activities can be established or determined by comparing the fingerprint imprints found at various crime scenes. For example, if the same set or portions of fingerprint imprints are found at different burglary crime scenes, it may be an indication of repeat offenders' involvement. Similarly, if the same deoxyribonucleic acid (DNA)<sup>21</sup> is found at different murder and/or rape crime scenes, it might be a strong indication of a serial offender's (killer/rapist) involvement. Two of these four respondents also stated that if the investigator carefully examines and compares the similarities (or commonalities) depicted in crime information, such as modus operandi and target information, the investigator will also be able to detect or uncover a repeat or serial offender's criminal activity. One of these respondents further claimed that source information (informers) can also provide an indication of repeat or serial offenders' criminal activities.

The researcher, from an investigative perspective, could not find any other supportive views from the literature pertaining to the primary method of detecting or uncovering

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<sup>21</sup> DNA –Biochemistry deoxyribonucleic acid is present in the cell nuclei of living organisms and it is the carrier of genetic information (Wordnet 3.0. 2006. *Dictionary*. Princeton University. From: <http://dictionary.reference.com/browse/dna> [16 December 2007]).



incidences relating to repeat and serial offenders, but as practising crime and criminal analyst, concurs with the views expressed by the respondents.

It is the notion of the researcher, based on experience, that it is important to emphasise that the detection or uncovering of incidences relating to repeat and serial offenders is the function of both the crime analyst and the criminal investigator. The crime analyst's approach in applying certain crime analysis techniques may probably differ from the investigative approach applied by the criminal investigator, but the aim and outcome ought to be the same, i.e. linking an offender to a series of crimes.

#### **4.4. Summary**

In summary, all the respondents (A-H) apply mainly the first three steps in the CTA process, as prescribed in the literature, thereby being able to generate crime prevention related crime information through a process of crime analysis techniques. However, none of these respondents (A-H) apply all the prescribed seven steps in the CTA process, as prescribed in the literature; thus, they are not in the position to identify, through a process of crime analysis techniques, a crime series or crime threat, an indication of criminal activities associated with group offenders (possible organised crime related), repeat offenders and/or serial offenders.

The responses received from all the respondents (I-H) concur with the literature where applicable, which includes the crime types normally associated with organised crime, repeat offenders and serial offenders, and also the primary method of detecting or uncovering verifiable incidences of organised crime and criminal activities relating to repeat and serial offenders. Chapter 5 presents the research findings and recommendations.

## CHAPTER 5

### RESEARCH FINDINGS AND RECOMMENDATIONS

#### 5.1. Introduction

This chapter (Chapter 5) presents the findings and recommendations derived from the previous chapters.

#### 5.2. Findings and recommendations

The following findings and recommendations are based on the responses received from the two respondent groups, i.e. respondents A-H and I-P, as well as from the researcher's own experiences as a certified and practicing criminal and crime analyst in the SAPS.

##### 5.2.1. Findings on the outcomes of the Crime Threat Analysis process

All the crime analysts in the Nelson Mandela Metro City area view the outcomes of the CTA process as basically a reflection of the crime statistics of a police station, crime patterns and trends, including a reflection of threats associated with organised crime (see section 4.1.). However, they omitted to view that the outcome of the CTA process also makes provision for the inclusion of threats associated with repeat offenders and serial offenders, as described in the literature (see section 2.9.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area be informed, through official circulars, that one of the outcomes of the CTA process makes provision for the inclusion of threats associated with repeat offenders and serial offenders. They must therefore acquaint themselves with the content of the CTA process and the application thereof, and align their functions accordingly, especially those relating to threats associated with repeat and serial offenders.

##### 5.2.2. Findings on the application of the steps in the Crime Threat Analysis process

None of the crime analysts in the Nelson Mandela Metro City area applied all the

prescribed seven steps in the CTA process, as described in the literature (see section 2.9.). All the crime analysts mainly applied only the first three steps, i.e. crime statistical analysis, geographic crime analysis and crime pattern analysis, while some of the remaining steps (Step 4 to 7) were only applied either when crime analysts were specifically tasked to apply the latter or on an ad hoc basis (see section 4.1.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area be informed through official circulars, or attend a work session in order to acquaint themselves with application of the CTA process, especially focusing on crime linkage analysis techniques. The latter will enable crime analysts to effect linkages, thereby enabling them to identify a crime series (threat). It is furthermore recommended that, for the time being, station crime analysts omit/ignore the application of ratio per 100 000 of the population analysis technique, as population figures are not available per police station area. Population figures are only available per geographic census boundary which differs from the geographic police boundaries. The management of the SAPS are urged to establish whether population figures per police station can be established/determined via Statistics South Africa (SSA); alternatively, the SAPS must consider amending the geographic police boundaries to the extent that they can be in concurrence with the SSA geographic census boundaries, thereby enabling the determination of population figures per police station boundary (area) for crime analysis purposes.

### **5.2.3. Findings on the crime analysts' focus in the Crime Threat Analysis process**

Based on what types of crime analysis technique the crime analysts applied, i.e. crime statistical analysis, crime pattern analysis and geographic crime analysis, it suggests that their primary focus is more directed to aid and assist crime prevention initiatives rather than focusing on crime detection - specifically threats relating to group offenders, repeat offenders and serial offenders, as described in the literature (see sections 4.1. and 2.9., including Chart 3).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro

City area undergo a training work session pertaining to the application of the seven prescribed steps in the CTA process, to enable them to aid and assist both crime prevention and crime detection endeavours. It is demonstrated that the analysis findings derived from the application of the first three steps, i.e. crime statistical analysis, crime pattern analysis and geographic crime analysis, will provide operational crime management information essential for crime prevention purposes, while the analysis findings derived from all seven steps will provide operational crime management information essential for crime detection purposes.

#### **5.2.4. Findings on the application of crime threshold analysis**

Five crime analysts ceased to apply crime threshold analysis, based on the SAPS' national directive 26/1/1, dated 21 February 2005, which dispensed with the application of the latter (see section 2.9.2.1.1), while the literature prescribes that the police need to know the upper and lower limits of each crime in order to determine if it is either within, above or below the thresholds of crime (see section 2.9.2.1.1.). Three crime analysts, however, still apply the technique as prescribed in the literature.

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area maintain applying crime threshold analysis for the interpretation of crime at station level, and not for crime measurement purposes. The intent of the directive to dispense with the application of crime threshold analysis was in fact meant for crime analysts or statisticians placed at provincial and national police level(s). The findings of crime threshold analysis reflect only the percentage differences above, within or below the thresholds of crime, while the findings of crime trend analysis, as a measuring tool, reflect the percentage change, i.e. increases/decreases/stabilisations in crime. With the latter application, the SAPS can determine whether the South African government's set target of a 7% decrease in serious crimes is being achieved or not.

#### **5.2.5. Findings on the application of crime trend analysis**

All crime analysts applied crime trend analysis, as described in the literature, which states that the crime analyst must provide information regarding the direction of crime, i.e.

increases, decreases or stabilisations (see sections 2.9.2.1.2. and 4.1.).

Recommendation: All crime analysts in the Nelson Mandela Metro City area apply best practice, whereby they retrieve and interpret crime statistics (crime trend analysis) covering a one month period, for operational management purposes, and also retrieve and interpret crime statistics covering quarterly and annual time periods, for strategic management purposes. This best practice must or ought to be implemented in the SAPS, as it will enhance crime management planning.

#### **5.2.6. Findings on the application of linkage crime analysis**

None of the crime analysts applied linkage crime analysis (see section 4.1.) as prescribed in the literature which maintains that the application of linkage crime analysis will allow crime analysts to link cases based on distinct criminal patterns and similarities or commonalities in terms of victim particulars, offender particulars or physical description, modus operandi and target information, thereby enabling the identification of a crime series (threat) (see section 2.9.2.4.). Crime analysts indicated that they do not possess the knowledge or experience to manipulate data in a database (spreadsheet) or automated matrix in order to effect linkages - evidently a clear indication of a training need (see section 4.1.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area undergo training sessions pertaining to spreadsheet (database) operations, in order to enable them to effect linkages. It is furthermore recommended that the SAPS amend the prerequisite requirements (see section 2.4.) before employing a crime analyst in the SAPS, by adding an additional prerequisite requirement whereby applicants must have proven knowledge and experience in Microsoft Office suite (Word, Access and Excel) at (minimum) intermediate levels. This additional requirement ought to address or counter computer literacy training needs among newly appointed crime analysts in the SAPS.

### **5.2.7. Findings on the application of case docket analysis**

The majority of crime analysts do not apply case docket analysis as an integral part of the CTA process, and view the latter as part of strategic research/analysis (see section 4.1.). The literature, on the other hand, states that case docket analysis increases one's knowledge about crime and can serve several purposes, one of them being the identification of a common modus operandi which could be indicative of the presence of repeat offenders, serial offenders or a group of offenders (see section 2.9.2.5.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area undergo training work sessions pertaining to the purpose of case docket analysis within the context of the CTA process, and not only to view or to apply the application strategically. The intent of case docket analysis is not to generalise the application thereof to include all or a random sample of case dockets, but rather to narrow case docket analysis and focus on case dockets relevant and limited to an identified crime series.

### **5.2.8. Findings on the application of fieldwork**

The majority of the crime analysts do not apply fieldwork as an integral part of the CTA process. They apply the latter for the sole purpose of information gathering on the more serious and/or sensational crime scenes. Furthermore, all crime analysts claim that not all crime scenes could be visited nor could all witnesses be interviewed due to the high extent of crime volumes (see section 4.1.) The literature, on the other hand, claims that fieldwork is one of the most important activities of the crime analyst, and also, the intent of fieldwork (interviewing and crime scene visits) within the context of the CTA process, is not to generalise the activity to include all crime scenes, but rather to be narrowed to focus on crime scenes and witnesses linked to an identified crime series (see section 2.9.2.6.).

Recommendation: Crime analysts in the Nelson Mandela Metro City area must be made to understand the importance placed on fieldwork, by means of work sessions or official circulars. Furthermore, it is not expected from crime analysts to visit all the crime scenes

or to interview all the witnesses; it is only expected from them to apply fieldwork activities in relation to an identified crime series, with the aim of uncovering incidences related to group offenders (possible organised crime related), repeat and/or serial offenders.

#### **5.2.9. Findings on access to automated source information**

Ready access to information contained in the corporate systems of the SAPS and other external databases, for crime analysis purposes, is either limited and/or not easily accessible to crime analysts stationed at precinct levels in the Nelson Mandela Metro City area. Furthermore, a training session is required by the employer (SAPS) before a crime analyst (or any other member/official) can be registered as an end-user of information. A further constraint is that such training sessions are not always readily available, mainly due to budgetary constraints and restrictions (see section 2.6.).

Recommendation: The management of the SAPS ought to take serious cognisance of the constraints placed on crime analysts regarding training, end-user registration, and accessibility to information contained in the corporate systems of the SAPS, including external databases. It is further recommended that more and frequent end-user training sessions be budgeted for, especially for crime analysts, as they are the primary end-users of information for crime analysis purposes.

#### **5.2.10. Findings on crime types normally associated with organised crime**

The following crime types within the Nelson Mandela Metro City area are normally associated with organised crime: drug trafficking, fraud-related crimes (including corruption and money laundering), theft of motor vehicles, robbery of motor vehicles (carjacking), other robberies (i.e. bank robberies and cash-in-transit robberies), stock theft, illicit dealing in firearms/gold/diamonds/emeralds, and abalone trafficking (see section 4.2.).

Recommendation: It is recommended that all crime analysts in the Nelson Mandela Metro City area be informed by means of official circulars as to which crime types are

normally associated with organised crime. Crime analysts can then align their focus and render a more effective and efficient service to the Organised Crime Unit (Port Elizabeth), by providing the latter with crime analysis findings, derived from the CTA process, pertaining to possible organised crime related incidences for crime detection purposes.

#### **5.2.11. Findings on detecting or uncovering verifiable incidences of organised crime**

The primary method of detecting or uncovering verifiable incidences of organised crime, from an investigative perspective, is through source information - mainly informers and police agents (see section 4.2). Furthermore, from an intelligence analysis/research perspective, by applying certain crime analysis techniques, such as linkage analysis, one can also identify possible incidences of organised crime where a crime series has been identified. The latter must still however be verified through informers or police agents (see section 4.2.).

Recommendation: It is recommended that crime analysts submit their findings, derived from the CTA process, to the Crime Intelligence Gathering Unit (Port Elizabeth) for the verification of possible organised crime activities; because, system-based information/data alone is not sufficient to verify incidences of organised crime. At most, system-based information/data will provide indications of possible organised crime involvement, based on probabilities.

#### **5.2.12. Findings on abalone trafficking in the Nelson Mandela Metro city area as an indication of possible organised crime involvement**

All the respondents alledged that abalone is being poached along the coastal area in the Nelson Mandela Metro city area, whereafter it is being illegally exported to the Far East via Oliver Tambo International Airport (Johannesburg) and/or Durban Harbour. The latter is, as yet, unconfirmed information, but the possiblity of organised crime involvement cannot be excluded.

Recommendation: It is recommended that this unconfirmed information be verified



through either source information and/or the application of overt and/or covert investigative/intelligence techniques. Furthermore, it is recommended that if the information is confirmed or verified, indicating organised crime involvement, intelligence-driven projects must be instituted to neutralise and address the crime threat effectively.

### **5.2.13. Findings on crime types normally associated with repeat and serial offenders**

The following crime types within the Nelson Mandela Metro City area are normally associated with, or being committed by, **repeat offenders**: burglaries (residential and business), theft out of or from motor vehicles, theft of motor vehicles, common and armed robberies (i.e. handbag snatching, ordinary street robberies and business robberies), fraud related crimes, petty theft, stock theft (especially “potslag” incidents), indecent exposure and domestic related violence. The criminal activities of **serial offenders** are restricted to incidences of either murder and/or rape (see section 4.2.).

Recommendation: It is recommended that all crime analysts in the Nelson Mandela Metro City area be informed by means of official circulars as to what crime types are normally associated with repeat and serial offenders. Crime analysts can furthermore align their focus and render a more effective and efficient service to the various Detective Services and Crime Prevention Units (Nelson Mandela Metropolitan City), by providing the latter and former with crime analysis findings, derived from the CTA process, pertaining to repeat and serial offenders’ criminal activities, for detection and prevention purposes. Furthermore, due to the city’s geographic area, a centralised database ought to be maintained at the city’s cluster<sup>22</sup> Crime Information Analysis Centre for co-ordination and linkage analysis purposes, thereby enabling crime analysts to detect or uncover repeat and serial offenders’ criminal activities which cross over the different police station boundaries.

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<sup>22</sup> A cluster comprises an accountable police station [main police station] with its sub-police stations [smaller police stations]. The smaller police stations are accountable to the main police station (researcher).

#### **5.2.14. Findings on detecting the criminal activities of a serial offender (crime analyst's perspective)**

From a crime analyst's perspective, by analysing the definition and/or general characteristics of a serial offender, it is evident that the activities or presence of a serial killer/rapist will be difficult to detect by merely applying normal crime analysis techniques. The reason for this is that serial killers/rapists normally maintain a cooling-off period in between killings/rapes (see section 4.2.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area be informed, through official circulars, of the so-called cooling-off period normally maintained by serial offenders in between killings/rapes, during the analysis of murder and rape incidences. Thus, the electronic search for possible serial offenders must cover a longer period in order to cover the so-called cooling-off period (intervals between incidences). The crime analyst must always be alerted when incidences of murder and/or rape are reported, especially where the offender is unknown or unrelated to the victim, and also taking the brutality level of the incident into account. The latter might be possible indications to suspect the involvement of a serial offender. Furthermore, comparison of similar incidents which have occurred in the past in the specific police station area and/or in the neighbouring police station area(s), will (ought to) strengthen the suspicion of a serial offender's involvement - which cannot be excluded.

#### **5.2.15. Findings on additional methods to ensure the detection of serial offenders' activities**

In an attempt to detect the criminal activities of serial killers/rapists, additional methods must be employed such as the keeping of proper records, in an automated matrix format, of all unsolved and solved murder and rape cases, for a prolonged period, in order to effect possible linkages, mainly because of the cooling-off periods in between incidences (see section 4.2.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro

City area be instructed, by means of official circulars, to keep proper record in an automated format (spreadsheet or database) of all unsolved and solved murder and rape cases. This is to attempt detecting the criminal activities of possible serial killers/rapists. The reason why solved murder and rape cases are included in the record/database is based on the probability that an arrested offender may also be involved in another unsolved murder and/or rape case(s). The latter can thus be viewed as a counter-measure to ensure a more effective way of detecting serial offenders, by including both solved and unsolved cases.

#### **5.2.16. Findings on the variants of repeat offenders (including crime involvement)**

Variants of repeat offenders within the Nelson Mandela Metro City area include: (1) Habitual (chronic) offenders involved mostly in property-related crimes; (2) Crime syndicates involved in organised crime; (3) Criminal gangs involved in gang-related crimes (i.e. murders, rapes, intimidation, attempted murders, assaults, drug/firearm/abalone trafficking, and the prostitution trade; and (4) Serial killers/rapists. The finding is based on the commonality or similarity detected among all variants of repeat offenders, i.e. the repetitiveness of their criminal activities (see sections 3.3.1.1., 3.3.1.2., 3.2.2. and 4.2.).

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro city area be informed by means of official circulars as to what variants of repeat offenders exist, with reference to the crime types with they are normally being associated. Crime analysts can then align their focus and render a more effective and efficient service to the Crime Investigation Services by providing the latter with crime analysis findings, derived from the CTA process, pertaining to the criminal activities of repeat offenders for crime detection purposes.

#### **5.2.17. Findings that crime analysis findings are based on probabilities**

The crime analyst's attempts to detect or uncover repeat and serial offenders' criminal activities by applying crime analysis techniques or methods, are based on probabilities and are not factual. Thus, the verification of crime analysis findings can only be

established through intensive investigations, forensic-related evidence and interviewing - which are the main functions of criminal investigators (see sections 3.2. and 4.2.).

Recommendation: In order to verify information relating to repeat and/or serial offenders' activities, derived from crime analysis findings, crime analysts in the Nelson Mandela Metro City area must forward such findings to criminal investigators and/or crime intelligence operatives for verification purposes - which can mainly be achieved through source information (informers and police agents) and/or intensified investigations.

#### **5.2.18. Findings on uncovering or detecting a crime series through crime analysis techniques**

None of the crime analysts were able to effectively uncover or detect the criminal activities of group offenders, repeat offenders and serial offenders through the application of crime analysis techniques (see section 4.1.). In the literature, the application of linkage analysis techniques will enable crime analysts to effect linkages (see section 2.9.2.4.). The non-appliance of linkage analysis techniques can be attributed to a lack of knowledge about spreadsheet operations; thus, serious training needs are being experienced.

Recommendation: It is recommended that crime analysts in the Nelson Mandela Metro City area attend training work sessions pertaining to spreadsheet operations, as indicated in previous findings.

#### **5.2.19. Findings on the differences between crime syndicates and criminal gangs**

Some respondents viewed syndicates and gangs as basically similar, while other respondents viewed them as separate entities with distinguishable differences. The respondents, however, omitted to acknowledge the differences, i.e. that criminal gangs operate in the open, i.e. they create an atmosphere of fear and intimidation in the community and execute gang-focused activities, either individually or collectively – hence, they are proud to be associated with gangs, while crime syndicates only operate clandestinely, and they are more organised and formally structured with specific goals

and tasks assigned to syndicate members (see sections 3.3.2. and 4.2.).

Recommendation: Crime analysts in the Nelson Mandela Metro City area must be made aware, by means of official circulars, that major differences exist between crime syndicates and criminal gangs - this will assist them in the analysis of syndicate and gang activities and incidents.

### **5.3. Achieving the aims of the study**

This section outlines whether the aims of the study, as described in section 1.4., were achieved or not, based on the findings derived from the study. The latter includes the following aims:

#### **5.3.1. Assess the application of the Crime Threat Analysis process at station level in the Nelson Mandela Metro city.**

The aim was achieved in the study, in which it was established that crime analysts (respondents) in the Nelson Mandela Metro city area do not strictly apply all seven prescribed crime analysis steps within the context of the CTA process. As a consequence of not applying the crime analysis steps, crime analysts will be prevented from effectively uncovering a crime series (threat) related to the criminal activities of group offenders (organised crime related), repeat offenders and serial offenders.

Crime analysts (respondents) tended only to apply the first three steps in the CTA process, thereby only focusing on and generating crime prevention related management information, while crime analysts were also supposed to focus and generate crime detection related management information by applying the prescribed seven steps in the CTA process. However, some of these remaining steps (4-7) are only applied by crime analysts when specifically tasked to do so, or on an ad hoc basis for other purposes or reasons than those prescribed in the CTA process.

### **5.3.2. Identify any shortcomings and/or impediments in the Crime Threat Analysis process (practice and/or theory).**

The aim was achieved in the study. The shortcomings and/or impediments established in the study related mainly to:

- (1) A general lack of computer end-user skills among crime analysts, i.e. the application of spreadsheet operations. No crime analyst was able to apply spreadsheet operations (MS Excel or WP Quattro Pro application). The latter skills will enable or allow crime analysts to effectively apply linkage crime analysis techniques, thereby ensuring the prompt identification of crime threats relating to the criminal activities related to group offenders (organised crime related), repeat offenders and serial offenders. Thus, all crime analysts must be empowered through training sessions on the application of spreadsheet operations - a major constraint and/or impediment, presently.
- (2) The limitations or constraints regarding access to source information contained in the corporate systems of the SAPS (including external databases), and the subsequent registration of crime analysts as end-users of such information. The latter places a serious impediment on access and on the ready availability of source information for crime analysis purposes.
- (3) Crime analysts tend to view, interpret and apply the CTA process indifferently, thereby impeding its relevancy and utility as an effective crime management tool.
- (4) No major shortcomings and/or impediments relating to the CTA process were uncovered in the theory.

### **5.3.3. Formulate possible solutions that could be used to standardise the Crime Threat Analysis process at all stations in the Nelson Mandela Metro city.**

The aim was achieved in the study. A possible solution to standardise the application of the crime threat analysis process at all stations within the Nelson Mandela Metro city

area, will be to draft comprehensible guidelines in this regard and/or to compile a CTA manual for training and future reference purposes. Intensified training sessions must be conducted, and guidelines and/or CTA manuals must be disseminated to all crime analysts in the Nelson Mandela Metro city area. The application of the CTA process must thereafter be monitored on a continual basis in order to ensure its effective utilisation by the various crime analysts. Furthermore, all crime analysts must be empowered through training sessions relating to the application of spreadsheet operations - a major constraint and/or impediment.

#### **5.4. Conclusion**

Based on the findings derived from the study, the following concluding comments are:

- The importance and value of the CTA process in the SAPS cannot be overemphasised. The process lends itself as an effective and efficient crime management tool, and the findings of crime analysis are designed for crime prevention and crime detection purposes. The emphasis on the latter is specifically designed to uncover criminal activities relating to group offenders, repeat offenders and serial offenders.
- The application and the finding outcomes of the CTA process in the Nelson Mandela Metro city area will benefit, improve and enhance intelligence-led policing practices.
- Similar research can be conducted at other police stations in South Africa in order to determine the general application and effectiveness of the CTA process within the SAPS.
- Other police stations in South Africa which encounter similar constraints or problems, can most probably benefit from the findings and recommendations derived from this study.
- In conclusion, no other process or procedure currently exists in the SAPS to effectively and efficiently generate operational and strategic crime management information for crime prevention and crime detection purposes, with specific focus on organised crime, repeat offenders and serial offenders.

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**APPENDIX “A”:** INTERVIEW SCHEDULE: RESPONDENT GROUP (A-H)

**Question 1:** Biographic profile of respondents

Gender	Male	Female			
Age group	26-30 years	31-35 years	36-40 years	41-45 years	
Rank level	Civilian (SAC)	Sergeant	Inspector	Captain	
Total years of police service	10-13 years	14-17 years	18-21 years	22-25 years	
Total years of crime analysis experience	4-5 years		6-7 years	8-9 years	
Highest education level	Grade 10	National Certificate: Policing	National Higher Certificate: Policing	National Diploma: Policing	
Crime Information Management & Analysis course attended	Valid motor vehicle drivers' licenses		Security clearances		

**Question 2:** According to your knowledge and experience as a crime analyst, what is the objective of crime analysis in policing?

**Question 3:** According to your knowledge and experience as a crime analyst, what are the outcomes of the CTA process?

**Question 4:** As crime analyst, please indicate what type of crime analysis technique(s) and activity you apply (1) as integral part of the CTA process, or (2) on an ad hoc basis when specifically tasked to apply - or otherwise:

Types of crime analysis techniques—and activity	Apply as integral part of the CTA process	Apply on an <i>ad hoc</i> basis or when tasked to apply	Do not apply
Crime threshold analysis			
Crime trend analysis			
Ratio per 100 000 of the population analysis			
Crime pattern analysis			
Geographic crime analysis			
Linkage crime analysis			
Case docket analysis			
Interviewing (activity)			
Crime scene visits (activity)			
Profiling			

**Question 5:** Derived from your answer in question 3, if any, can you explain why some/all of the prescribed crime analysis techniques and activities, as listed here below, are not being applied as an integral part of the CTA process?

#### Types of crime analysis techniques and activities

- | Crime threshold analysis
- | Crime trend analysis
- | Ratio per 100 000 of the population analysis
- | Crime pattern analysis
- | Geographic crime analysis
- | Linkage crime analysis
- | Case docket analysis
- | Interviewing (activity)
- | Crime scene visits (activity)
- | Profiling



**Question 6:** According to your knowledge and experience as a crime analyst, are you able to detect or uncover a crime series by applying a crime analysis technique(s) and/or any other method?

**Question 7:** According to your knowledge and experience as a crime analyst, are you able to detect or uncover the criminal activities of group offenders (associated with organised crime), repeat offenders or serial offenders by applying a crime analysis technique(s) and/or any other method?

**Question 8:** As a crime analyst, what types of sources of information do you utilise during your crime analysis endeavours?

**APPENDIX “B”: INTERVIEW SCHEDULE: RESPONDENT GROUP (I-P)**

**Question 1:** According to your knowledge and experience, what crime types are normally associated with organised crime within the Nelson Mandela Metro city area?

**Question 2:** According to your knowledge and experience, what is the primary method of detecting or uncovering verifiable incidences of organised crime?

**Question 3:** According to your knowledge and experience, what crime types are normally associated with repeat and serial offenders?

**Question 4:** According to your knowledge and experience, what variant types of repeat offenders are eminent in the Nelson Mandela Metro city area, with reference to the crime types or crime categories they are normally being associated with?

**Question 5:** According to your knowledge and experience, what are the differences, if any, between a crime syndicate and a criminal gang?

**Question 6:** According to your knowledge and experience, what is the primary method of detecting or uncovering incidences related to repeat and serial offenders?