THE INTELLIGENT USE OF FORENSIC DATA

ANZPAA
Australia New Zealand Policing Advisory Agency

NIFS
NATIONAL INSTITUTE OF FORENSIC SCIENCE AUSTRALIA

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> Forensic intelligence embodies a real and new willingness of forensic practitioners to be involved in investigative and policing strategies. (...) Adoption of forensic intelligence requires moving away from the dominant conception of a patchwork of disciplines only assisting the criminal justice system towards the view of a science that studies the informative potential of traces, as remnants of a criminal activity.

Crispino et al (2015).

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Director's Foreword

Alastair Ross AM

> If forensic science is to reach its real potential then it needs to be engaged with intelligence, the investigative process and the courts.

For the past decade, the ANZPAA National Institute of Forensic Science (ANZPAA NIFS) has been involved in and committed to raising awareness of forensic intelligence in Australia.

This began with a national workshop jointly organised by ANZPAA NIFS, the University of Technology Sydney and the Centre of Excellence of Policing and Security. A key outcome from that workshop was the commissioning of a series of papers on forensic intelligence that have now been published by the Australian Journal of Forensic Sciences.

There are two questions to be asked about forensic science becoming involved in the intelligence space. The first is can we afford to go down that path? The second, and in my view the more important question is, can we afford not to? Again in my view, the answer to the second and more important question is an emphatic NO.

If forensic science is to reach its real potential then it needs to be engaged with intelligence, the investigative process and the courts.

The implementation of forensic intelligence requires a lot of planning and adaptation within an organisation. There must be commitment within an agency to refocus outcomes, so that crime prevention and the disruption of crime become priorities, alongside the traditional focus on courts.

This implies many changes, including a shift from a single to a multi-case focus and a breaking down of existing inter-disciplinary silos.

At a time of budget restrictions, the resources to implement these changes are often difficult to identify. However, established intelligence cells within forensic science facilities are realising the benefits to be gained from this approach.

The purpose of this document is to raise awareness of what is involved in engaging forensic intelligence in the prevention and disruption of crime.

Alastair Ross AM

Director ANZPAA NIFS

The intelligent use of forensic data

Introduction

For the past decade, the ANZPAA National Institute of Forensic Science (ANZPAA NIFS) has facilitated an increased focus on forensic intelligence across Australia and New Zealand and supported workshops and conferences to develop awareness of its potential contribution to law enforcement and public safety.

The importance for Australian law enforcement agencies to further enhance intelligence capabilities was reiterated by the Australian Criminal Intelligence Forum, via the publication of the Australian Criminal Intelligence Management Strategy 2012-15. Members of the Forum agreed that:

> *"A fundamental component of building law enforcement capacity involves enhancing understanding of how criminal intelligence works and how practically to develop, share and use it."*

Forensic intelligence has been identified as an additional type of criminal intelligence and has proven to be very effective internationally for law enforcement and security systems (Ribaux et Birrer, 2010; Rossy et al., 2013).

However, as an emerging form of intelligence, the value of forensic intelligence is yet to be widely embraced and implemented by police jurisdictions across Australia.

Consequently, it is intended that this document will provide readers with further understanding of forensic intelligence and:

- its related benefits
- its requirements for implementation
- examples of successful models.

Intelligence-led policing

Intelligence-led policing (ILP) is commonly regarded as the use of analysed information by decision makers to inform police resourcing and strategies.

It relies on the concept of criminal repetition (recidivism) and the observation that the majority of criminal offences are committed by a small minority of offenders, in localised areas (Clarke and Eck, 2005; Ratcliffe, 2008).

By targeting police actions on a specific prolific group it is possible to drastically reduce the number of offences and substantially influence the general level of criminality. Police can then focus on proactive strategies, including crime prevention and crime disruption.

In order to fully understand information relating to offences characterised by repetition, intelligence processes have been developed and implemented, such as the intelligence cycle (Ratcliffe, 2008). This model can be implemented in a forensic context with forensic case data as the information provider/carrier.

In line with a 'siloed' approach that often has characterised forensic science, it has mainly been used for specific offence types (such as property offences, drug trafficking, fraudulent documents, counterfeit medicines and arson). However, a general, transversal approach is possible (Morelato et al., 2014; Baechler et al., 2015). Tapping the under-utilised potential of forensic science can play an important role in intelligence-led policing.

A role for forensic science in the intelligence landscape

In 2011, Australia experienced the second highest rate of residential break and enters in the world (New South Wales Government, 2011). These cases have reported a strong recidivism component, with the estimation that a prolific burglar commits on average 38 cases per year, with other types of offences committed in addition.

Thus, arrest of a single prolific offender can drastically reduce the number of burglaries and contribute to the prevention of potentially many more dangerous crimes (Brown et al, 2014).

This shows how forensic science can, through the development of intelligence, play an important role in intelligence-led policing.

The intelligent use of forensic data

What is forensic intelligence?

Forensic intelligence is the timely aggregation and processing of forensic case data from different cases. It provides knowledge on criminal activity and may support proactive and preventive approaches.

"The fundamental principle of forensic intelligence is that, instead of treating each case individually with the aim of assisting the court (i.e. evidential focus), a multi-case focus and more holistic approach based on the study of crime phenomena is followed. The structured and systematic exploitation of traces[1] is essential to produce knowledge that will guide strategic, operational and tactical decisions" (Baechler, 2015).

"As it is currently understood, forensic intelligence refers to several 'treatments' of data. As a concept, it refers to the structured assimilation of forensic case data (such as DNA, fingerprint, shoeprint, glove marks and trace evidence) within a cross-referenced and indexed dataset. This dataset may be subjected to rigorous qualitative and quantitative analysis to identify meaningful patterns of criminal enterprise.

Such data analysis is held to be strategic insofar as it informs several elements of policing, including intelligence-led operations, preventative policing and resource allocation" (Legrand and Vogel, 2012).

Forensic intelligence plays a role earlier in the investigation process than the courts and "it is not a lower standard of evidence as it is sometimes represented" (Morelato et al., 2013). It also has a focus on crime disruption and crime prevention.

Ultimately, a mature forensic intelligence approach will provide intelligence prior to an event, particularly in a criminal environment with a serial component.

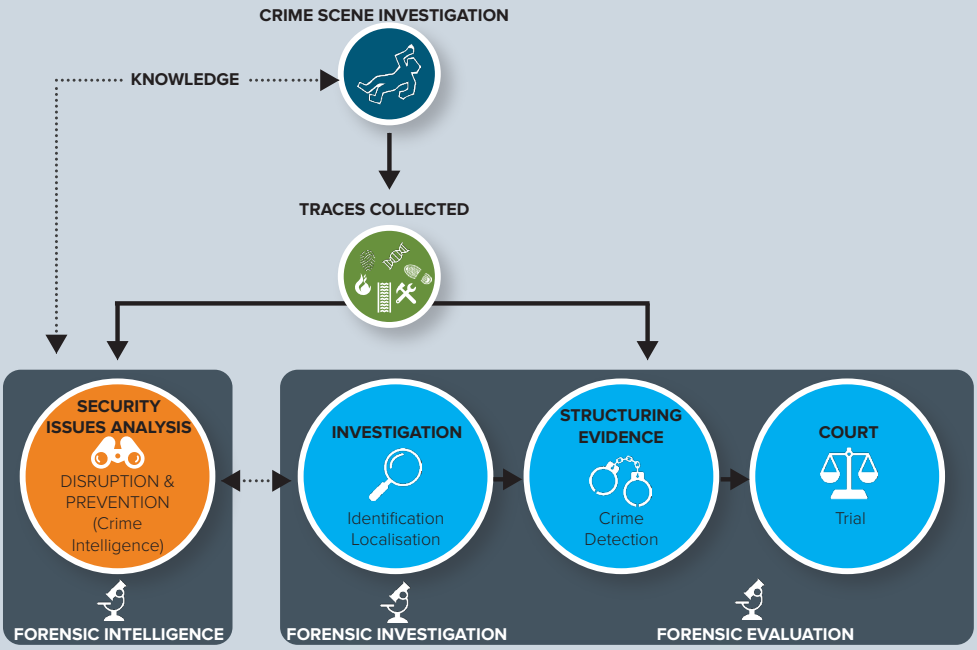

Figure 1: Adapted from Ribaux et al. 2010.

1. In this document, 'traces' is to be understood as defined by Margot (2011): "a pattern, a signal or material transferred during an event. It is the remnant (the memory) of a source and/or activity that produced it."

How does it work?

At its essence "intelligence is the result of a process that aims at transforming raw data into a form more suitable for making decisions [...] The aim is to add value to information collected by analysing it in a timely fashion" (Morelato et al., 2014). "Ratcliffe (2008) distinguishes three types of intelligence: tactical, operational and strategic.

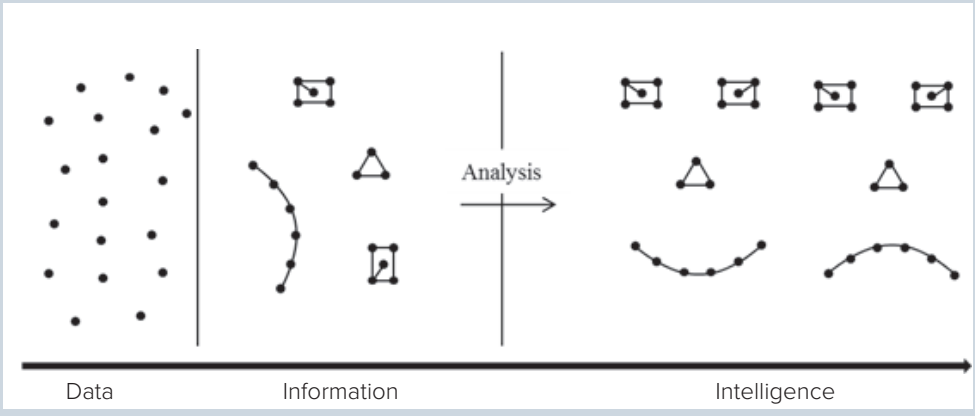

Figure 2: From data to intelligence (Cartier, 2010).

Tactical intelligence supports front-line enforcement officers in taking case-specific action and as a consequence is relevant to specific investigations. The use of this type of intelligence is case-to-case and often fails to account for long-term or wider geographical problems (Ratcliffe, 2007; Peterson, 2005).

Operational intelligence involves assistance in planning crime reduction and prevention activities. It supports decision-makers that are responsible for geographical areas or who command teams. It allows for identification of the main priorities and is thus relevant to a part of a crime series (Ratcliffe, 2007).

Strategic intelligence provides an understanding of patterns and functioning of criminal behaviours and environments. It is thus future-oriented and proactive (Ratcliffe, 2007; Peterson, 2005). It explores long-term solutions and accommodates delays more easily than activities focused purely on operational concerns (Peterson, 2005). It is used by top-level managers and will influence not just the police activities but also non-law enforcement agencies, such as health services and policy settings" (Morelato et al., 2013).

These intelligence models work in continuum with no strict boundaries between the categories.

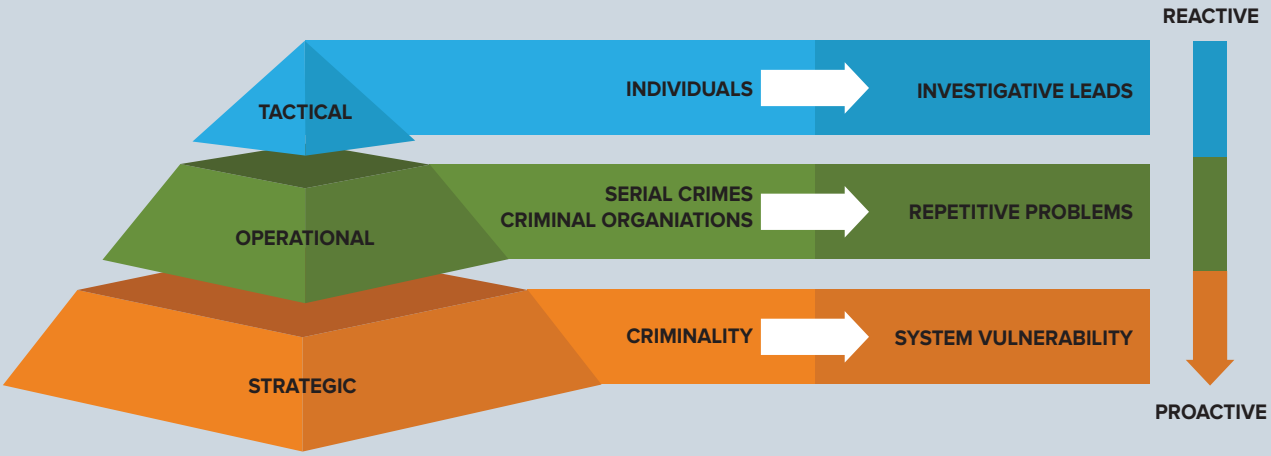

Figure 3: the three levels of intelligence (adapted from Marclay, 2014).

Current forensic effort

Figure 4 shows where the current forensic science effort is focused, that is predominantly on the courts and interpretation, which are both time and cost intensive.

The introduction of forensic intelligence necessitates a change in the forensic effort curve with greater activity in the policing and security environment.

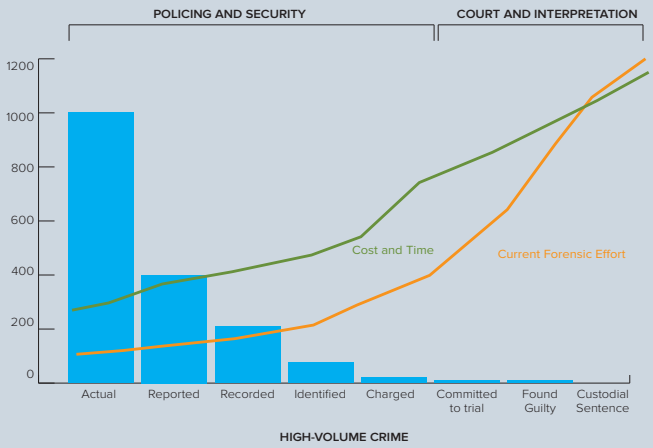

Figure 4: the current forensic effort (adapted from Ribaux, 2014).

What are the benefits?

The general benefits of implementing a model of forensic intelligence within law enforcement include:

- crime disruption and prevention
- time/cost efficiency
- early identification of suspects
- more effective use of forensic traces that inform policing and security actions
- general tangible benefits of related intelligence products such as threat assessments, situation reports and risk assessments
- better understanding of the criminal activity in focus as a whole.

Forensic intelligence cycle

Numerous examples of the intelligence cycle exist. As stressed throughout this document, Figure 5 emphasises how timeliness, accuracy and being fit-for-purpose are critical aspects of intelligence.

Greater focus, analysis and creation of intelligence products by forensic scientists and members of law enforcement as part of a forensic intelligence approach, will bring about significant benefits.

For forensic science to be in a position to provide maximum benefit through the intelligence cycle, multi-case/multi-disciplinary data should ideally be readily accessible from a single source (database) or at least complementary sources.

Key considerations for forensic intelligence

Intelligence began as a military tool and has been in practice for centuries. Relatively speaking forensic intelligence is in its infancy, as the focus of forensic science has traditionally been the courts and the resolution of crime. For many within forensic science and policing it is a new way of thinking and 'doing business'; although those in policing will be more familiar with the concept of intelligence through well-established criminal intelligence capabilities. In order to promote a positive, inclusive and supportive approach toward forensic intelligence, a change in mindset is required. The current challenges to the provision of forensic intelligence are (Legrand and Vogel, 2012):

- Forensic science is currently not well suited for timely intelligence provision.
- For many it is still an unknown concept.
- Forensic science is seen as separate to investigation and a cumulative approach to criminal intelligence.
- Forensic data is difficult to standardise, combine and analyse.

For successful development and implementation of forensic intelligence, time and effort have to be invested on three levels of the policing process: strategic, operational and individual. Full commitment to, and engagement in, forensic intelligence will require both organisational and cultural changes (Raymond and Julian, 2015). The remainder of this document highlights areas where changes in thinking and processes are required.

Crime scene - role and attendance

The forensic intelligence process starts at the crime scene. Therefore its success is heavily influenced by crime scene investigator (CSI) roles and attendance policies.

CSI should be seen not only as collectors but also as investigators and as advisors (Ludwig et al., 2012). They should be "empowered to use their professional judgment at scenes" (ACPO/FSS, 1996).

Personnel providing information related to deployment, and those making decisions to deploy CSI for investigative and intelligence purposes, must be in a position to make informed decisions. This infers specific training related to scene assessment and the provision of relevant and contemporary case information (e.g. modus operandi, time of day and type of goods targeted) to enable a multi-case rather than a single case focus. CSI themselves must also be intelligence-aware.

CSI rosters should reflect peak crime times. For example a peak in the reporting of house burglaries between 5pm and 7pm when people are returning home from work should be reflected in the increased availability of CSI resources. This may involve a triage process including appropriately trained dispatch centre personnel, first responders and CSI.

While scene attendance is ideal, resource implications may necessitate a policy of 100 per cent 'informed scene assessment'. Deployment to attempted offence scenes may be warranted if they are recognised as, or suspected of, being part of an ongoing series or phenomenon.

Also of importance is the consideration of marks such as shoe and tool impressions in addition to the more traditional DNA and fingermarks. The former can have a significant impact on the volume and value of information gathered.

Arguably there is significant added value for intelligence purposes in locating CSI locally (as opposed to centrally) especially for volume crime scenes. Knowledge of local crime trends and types and the ability to recognise similarities in crimes is contingent upon local resourcing to some extent.

Figure 5: Forensic Intelligence Cycle (Ross, 2015)

IT systems and global data integration

As timeliness is a critical factor for forensic intelligence, the use of any tool reduces process time should be encouraged. This typically concerns the use of IT at the crime scene for data entry and the swift transmission of data to 'home base' to enable rapid assessment and comparison. For example, real-time digital capture, transmission and comparison of fingermarks significantly reduce turnaround times and provide high efficiency.

The use of enabling IT and remote contact helps on two fronts:

- It provides context to the offence attended and possibly directs the scene search.
- If an identification is made quickly enough, the offender might be captured in the vicinity of the scene and/or with stolen property or other evidence.

Value from forensic case data and forensic intelligence is maximised if it is a consolidated, multi-disciplinary product. Therefore, the dismantling of traditional forensic science silos and a global integration of forensic case data is paramount. Further, in an intelligence environment forensic trace types are not only searched with the view to reach identification but also to exploit their informational content and inform other security and investigative processes.

The proliferation of organisation specific IT systems and discipline specific databases is a significant hindrance to forensic intelligence, as it is paramount that the forensic intelligence process can rely on sound, structured and collective information. Ideally, crime scene data and laboratory test results should be integrated in a single system to allow for rapid analysis and evaluation (O'Malley, 2015).

The disconnect that sometimes occurs between forensic science laboratories and police with respect to IT can cause further problems, in that it restricts investigators in monitoring the status of their case analysis and informing laboratories when analysis of a submitted sample is no longer required. The latter contributes to laboratory backlogs and impacts the timeliness of any intelligence. Specified, remote access to Laboratory Information Management Systems (LIMS) for investigators would add efficiency to the forensic and investigative processes (Rossy et al., 2013).

Timeliness

Timeliness must remain a fundamental and recurring theme throughout any discussion on forensic intelligence. For example, the value of DNA or fingerprint links in volume crime (house burglary, theft of or from a motor vehicle) significantly decreases for police investigators as time passes after the committal of the offence. There is an increasing likelihood that stolen goods will have been sold and the offender will have moved on if delays in providing forensic science information are common. Typically, laboratory turnaround times are not consistent with the development and provision of intelligence, as routine analyses follow a very detailed and lengthy process focused on court outcomes. This is not compatible with the time frame required for the production of intelligence, which is measured in hours and days rather than weeks and months.

Again, triage will play an important role with respect to timeliness, especially regarding decisions on testing priorities and the inclusion of other information gathered at the crime scene (e.g. modus operandi, time of day and type of goods targeted). It may be that presumptive tests provide an answer suitable for intelligence purposes so long as that information is used only for that purpose. However, the use of such tests must be transparent, and their purpose and limitations must be clearly communicated to the end-user. Trust must be developed so the forensic specialist does not limit the availability of data potentially useful for intelligence purposes because of a default conservative position.

Key considerations for forensic intelligence

Collaboration

A fundamental precursor of a forensic intelligence model is the presence of strong collaboration and co-operation between forensic scientists, police and intelligence units. Further developing the understanding and value of forensic science in policing is integral for a successful forensic intelligence model to operate (Raymond and Julian, 2015).

Intra- and inter-laboratory co-operation is also essential to minimise the silo-effect and to maximise complementary and timely analyses. Maximum value from forensic intelligence can only be realised through a multi-disciplinary approach. This should include a rapid and multi-disciplinary triage capability.

Sufficient opportunities have to be provided to staff to exchange information on processes, requirements and observations in an open problem solving environment, analogous to medical officers discussing a complex medical case.

As a means of reinforcing the practice and encouraging ongoing co-operation, feedback loops should be developed to make sure that staff are informed of team successes realised through intelligence.

Different purposes

Following on from the above tenet that rapid exchange of information is essential to the success of forensic intelligence, it is beneficial that both investigators and forensic scientists understand that forensic intelligence is developed and used in a different context to evidence prepared for the courts (the traditional objective of forensic science). This understanding must be underpinned by inter-organisational operating procedures and a level of trust that intelligence will be used for the purposes for which it was produced. There should also be early identification of the questions that need to be answered and then a focus on the most likely probative samples. As stated previously, testing may also only be to the level of a presumptive test early in an investigation. In this regard, a proper process for proof, verification and review of analytic products and services is required. This can be addressed through a relevant forensic science accreditation program which is assessed to the international standard ISO/IEC 17025.

Sample submission

Policies developed in relation to sample submission should take forensic intelligence into account. Timeliness of submission and appropriate use of resources should be principal considerations. This would include factors such as regular courier deliveries of tamper-evident bags rather than (often delayed) 'safe hand' delivery by police. A single point of triage and decision making at sample submission will significantly assist the overall timeliness of submission and the subsequent analysis. Where possible, a clear distinction should be made between intelligence based or court based analyses at the point of triage.

Figure 5: Forensic Intelligence Cycle (Ross, 2015).

Education and training

Education and training related to forensic intelligence (and in a broader sense, the investigative process) requires a multi-faceted approach, as the process includes multiple practitioners from police to laboratories and from managers to first responders.

Such training is pivotal in maximising utility from intelligence. The current education/training curricula in this field provide for limited awareness of the multi-disciplinary forensic processes and generally speaking, inadequate understanding of forensic intelligence in the forensic, investigative and overall criminal intelligence contexts.

Initially, the training should take an awareness-based approach so that practitioners and end-users both have knowledge and understanding of the concepts. At the same time, there is a need for senior management to understand forensic intelligence, to recognise the risks and benefits and, if committed, to support any change of process. Specific and strategic training is essential.

Joint workshops involving investigators, crime analysts and forensic practitioners should be encouraged in order to develop an agency-based and collective understanding of the different roles and future partnership strategies.

Several educational models integrating forensic science, investigations and intelligence have been proposed in a paper by Crispino et al. (2015). This paper explores various awareness and integrated academic programs and problem solving approaches. This article is considered essential reading on this topic and works toward addressing deficiencies in current programs.

Data analysis and dissemination

Data analysis is a crucial part of the provision of intelligence and traditionally this is not a skill set found in forensic science facilities. The aim of this stage is all about 'connecting the dots' and recognising patterns in traditional data, extending beyond the facts and developing hypotheses.

When establishing a forensic intelligence capability it will be necessary to embed a data analyst(s) within the forensic services group or engage with existing analysts in the policing environment. The data analysts should provide advice on software applications required to manage large data sets and provide visualisation of forensic and persons of interest links.

The establishment of any forensic intelligence capability should include a specific group with responsibility for management and dissemination of the intelligence to the relevant end-users.

The latter is essential as forensic intelligence is not 'stand-alone' and to maximise its impact must be part of the broader criminal intelligence 'picture'.

Legal requirements

The production and provision of forensic intelligence necessitates changes in procedures, the creation of databases and change in the working relationship between the different stakeholders involved. As a result, agencies developing a forensic intelligence capability are advised to liaise with relevant internal/external legal departments, to consider potential legal issues pertaining to but not limited to (McCartney, 2015):

- ownership of data
- storage of information and destruction
- legality requirements for the intended use of forensic intelligence
- evidentiary validity of data in court
- human rights and privacy
- oversight bodies
- information sharing.

Quality management

There have been some concerns regarding the provision of forensic intelligence and the accreditation process. However, there are currently no NATA or ISO/IEC 17025 barriers to providing a result to a client that is preliminary (that is, it has not been through the case review stage but has been authorised for release).

This is an accepted practice provided that the client is informed of the preliminary nature of the result. Where a written report is provided, it simply needs to highlight that it is not the final report. Facilities may issue a report stating 'not for court purposes' or 'preliminary report' (FSAAC, 2014).

One of the key points of accreditation is that 'you do what you say you do' and the processes and procedures for the development and provision of forensic intelligence should be appropriately documented for accreditation purposes.

Finally, acting on early or preliminary data does not imply that the work carried out to that point was not done to evidential and accreditation standards.

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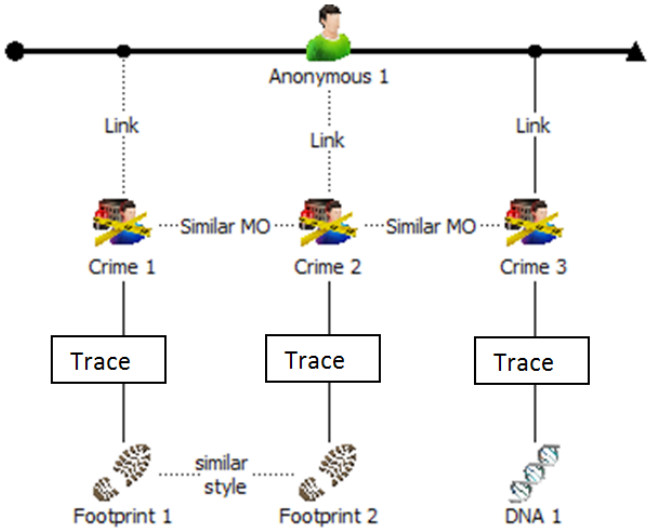
Appendix: Successful Examples

Example 1: Break and enter

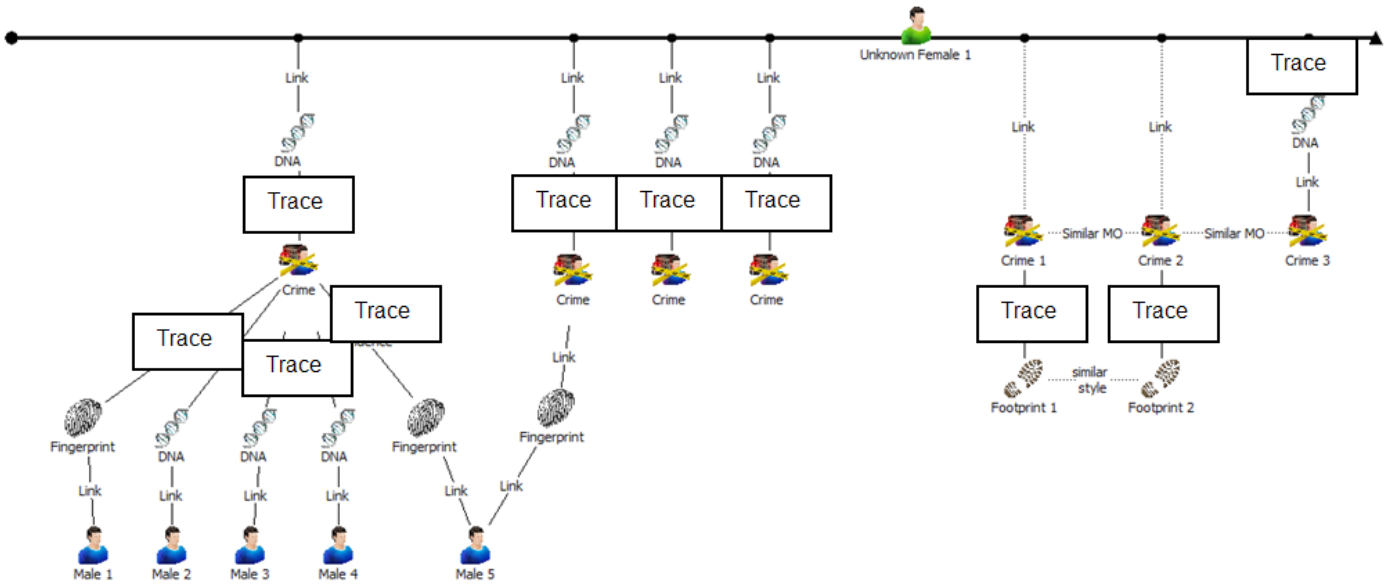
Natasha Horne, Katrina Edmondson, Mark Harrison and Brett Scott. "The applied use of forensic intelligence for community and organised crime". *Australian Journal of Forensic Sciences* 47, no. 1 (2015):72-82.

A series of burglaries occurred across Canberra during a single evening. CSIs attended each incident and observed that three burglaries appeared to be linked. These particular burglaries involved two hairdressing salons and a café all located in the southern suburbs of Canberra. Each business had its glass doors smashed, and CSIs observed pieces of green painted brick on the floors inside. Various items were collected from each scene including fingerprint and DNA samples. In addition, the same style of shoe mark was observed at two of the burglaries. At this stage it was believed that the three incidents were linked based on timeframe, geographical location and modus operandi (MO).

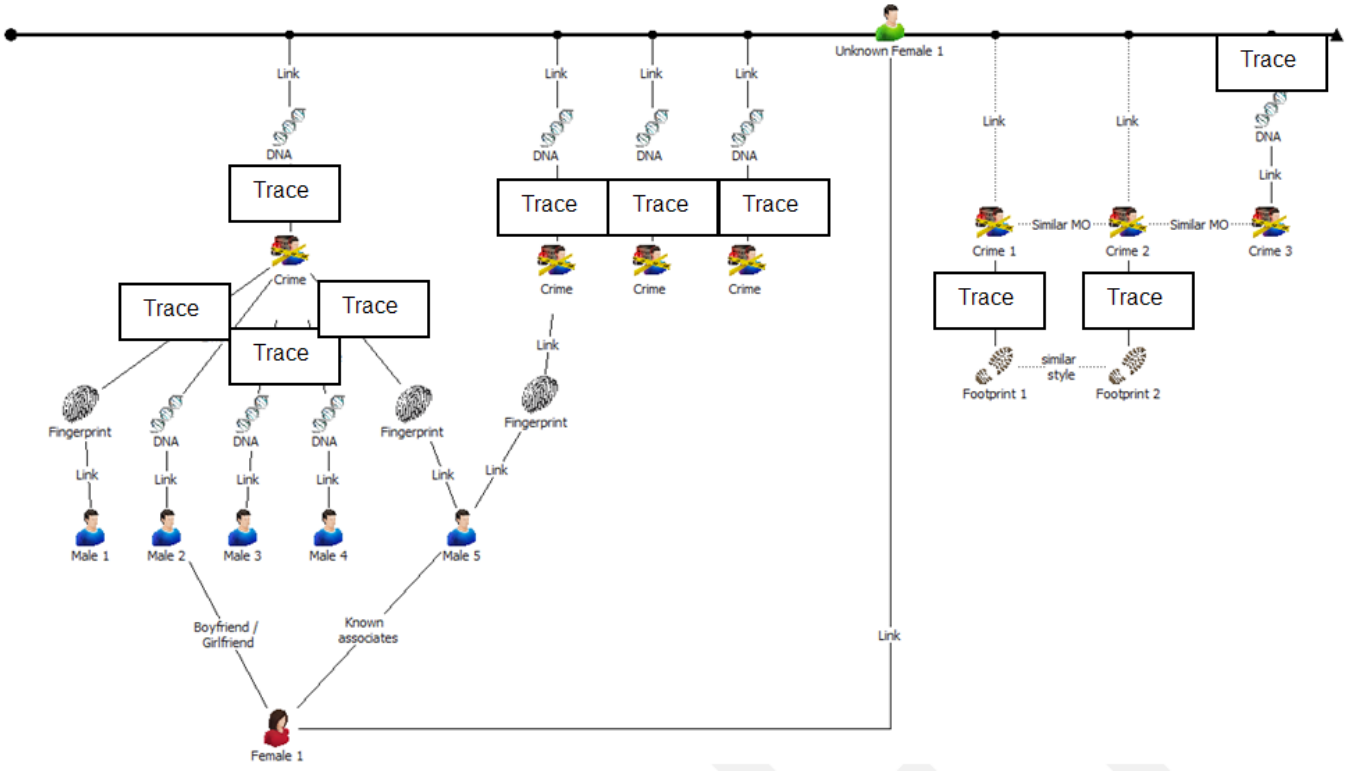


Within 24 hours of the CSIs examining the scenes, all fingerprints had been examined and searched through Australia's National Automated Fingerprint Identification System (NAFIS). However, no fingerprints could be linked to an offender. Also within 24 hours, the partial shoe marks recovered from two of the crime scenes were searched through the (SICAR) footwear database. This search was able to identify the type of shoe that had created the shoe marks, and also establish that this type of shoe mark had not been recovered from any other crime scene in Canberra.

The DNA analyses returned a number of scene-to-scene matches to an unknown female person. This female was not represented on Australia's national DNA database. However, her DNA had been recovered from four additional crime scenes in Canberra. An interrogation of these additional four crime scenes by the FORINT cell found that a number of male persons had been identified through fingerprints. The FORINT cell began looking into these males and their known female associates to try to identify a suspect for the unknown female DNA.



One of the males from one of the linked incidents was well known to police and had a girlfriend who was increasingly raising police attention. This female was also a known associate of a second male identified at one of the linked incidents where the unknown female's DNA had been recovered. This female became the suspect for this series of linked crimes and the FORINT cell produced an intelligence product for police which enabled her arrest and subsequent fingerprint DNA sampling.



At court the female pleaded guilty to 22 incidents.

Example 2: Repetitive deliberate fires

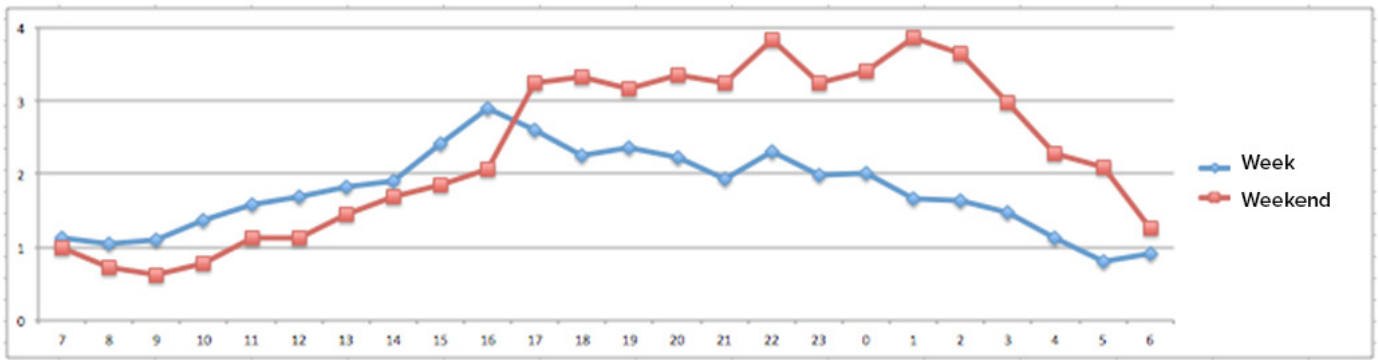
Repetitive deliberate fires are known to be one of the most difficult offenses to detect and to solve due to various specific challenges. However, considering that repetition is a reality for some cases of deliberate fires and encouraged by successes obtained in previous studies of repetitive crime types, a comparable approach, adjusted to the particulars of fire events, has been developed. It allows a systematic analysis of these events.

Data was collected on 7886 potentially deliberate fires events that occurred between January 2004 and December 2012 in a Swiss State. The following analyses were conducted: strategic (trends), tactical (systematic repetitions) and operational (crime series).

Strategic analysis relies on frequency statistics of various criteria (such a geographical, temporal, modus operandi).

As an example for this paper, single parameter analyses were conducted on the potentially deliberate fires data and showed that over a nine year analysis period:

- June and July are the most active months
- forty per cent of all events happen on Saturday and Sunday
- 10pm is the most active time of the day during the weekend.



Time of the fire versus the type of day (week or weekend)

The analysis of the geographical criteria showed that seventy per cent of the cases were concentrated among eight districts and fifty per cent of these cases (1886) were confined to 180 streets only. Forty percent of the fires occur outdoors. These statistics provide baseline information and set a framework for the study of fires in areas of interest. With these data, it is possible to put the time observations into perspective and assist with the detection of repetition. Examples of tactical and operational analyses can be found in the literature.

Example 3: Shoemarks, toolmarks, glovemarks

Ribaux, Olivier, Alexandre, Girod, Simon J., Walsh, Pierre Margot, Seymour, Mizrahi, Vincent, Clivaz. "Forensic intelligence and crime analysis". Law, Probability and Risk, 2, no. 1 (2003): 47-60.

'Hot spots' of crime can potentially be revealed based on traces of a fragmentary nature, without the implementation of complex matching algorithms. A study was conducted in regards to shoe, tool and glove marks. A very general classification system was defined for each of the three types of trace and implemented through databases of stored evidence. The classification system for shoemarks was based on 30 patterns generally collected at scenes and the database contained more than 3000 records. The toolmark database was limited to traces made by pliers used by an offender to break the locks of doors and contained 128 records. Glovemarks were classified in four categories representing the make of the glove and combined in a database containing 441 records. Images were also stored in order to help scrutinize further specific selections of sets of cases. Cases were then displayed:

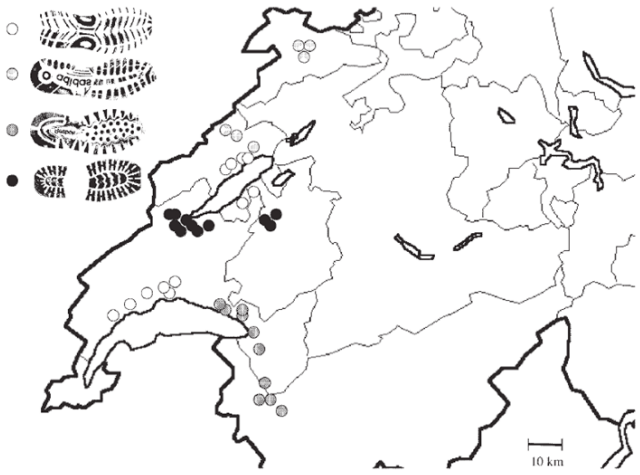


FIG. 5. Hot spots based on shoemarks

- on a map in order to reveal 'hot spots'
- on a cumulative diagram showing the occurrences of cases over time, with the aim to reveal increases and decreases in the appearance of patterns

Example 4: Illicit drugs

Pazos, Diego, Pauline Giannasi, Quentin Rossy, Pierre Esseiva. "Combining Internet monitoring processes, packaging and isotopic analyses to determine the market structure: Example of Gamma Butyrolactone". Forensic Science International 230, no. 1-3 (2013): 29-36.

"Based on an Internet monitoring process, thirty-nine websites selling Gamma Butyrolactone (GBL), mainly in the Netherlands, were detected between January 2010 and December 2011. Seventeen websites were categorized into six groups based on digital traces (e.g. IP addresses and contact information). In parallel, twenty-five bulk GBL specimens were purchased from sixteen websites for packaging comparisons and carbon isotopic measurements. Packaging information showed a high correlation with digital data confirming the links previously established whereas chemical information revealed undetected links and provided complementary information. Indeed, while digital and packaging data give relevant information about the retailers, the supply routes and the distribution close to the consumer, the carbon isotopic data provides upstream information about the production level and in particular the synthesis pathways and the chemical precursors. A three-level structured market has been thereby identified with a production level mainly located in China and in Germany, an online distribution level mainly hosted in the Netherlands and the customers who order on the Internet."

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