2012 Herman Goldstein Award for Excellence in Problem-Oriented Policing

Submission

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1. Summary

Project Title: <u>Strike Force Piccadilly</u>

'Strike Force Piccadilly' is an initiative of New South Wales Police in Australia. It began in 2005 to address an upsurge in ram raids on automatic teller machines (ATMs). Strike Force Piccadilly 1 was restructured as Strike Force Piccadilly 2 in 2008, with a focus on explosive gas attacks on ATMs. The initial problem of ram raids was identified through security alarm calls to police (<u>Scanning</u>). The raids represented a highly specific type of crime occurring in the greater Sydney region, aimed at free standing ATMs, involving attacks by crime gangs utilising stolen vehicles to smash their way to the target. The attacks involved a variety of criminal offences but the Police Property Crime Squad created a new recording category of 'ATM ram raid' in order to track the problem (<u>Analysis</u>). A police taskforce – Strike Force Piccadilly – was also created to focus solely on the ram raids. Initial attempts to incapacitate the gangs through police rapid responses and traditional investigations failed to stem the increase in attacks.

The Commander of Strike Force Piccadilly moved to engage victims and stakeholders in a cooperative process to solve the problem. A stakeholder forum was used to launch a partnership that included banks, shopping centres, cash-in-transit firms, and the ATM Industry Association. The partnership operated through consultation, co-operative research, information sharing and a commitment to implement preventive measures. The initiatives (<u>Response</u>) were (1) a police priority alarm response system, (2) the application of situational prevention measures, including ATM relocations and specialist bollards, (3) the development of a risk assessment and reduction tool, and (4) the provision of e-mailed intelligence reports on all attempted ram raids, with preventive implications. Police incident data and a published evaluation (<u>Assessment</u>) showed that the increase in ram raids was halted, and the number was reduced from 69 in the 12 months pre-intervention to 19 in the 12 months following the nine month implementation period (Prenzler, 2009). For the same periods, successful raids were reduced from 30 down to two. In the 24 months since the first assessment period – May 2008 to April 2010 – there were nine unsuccessful raids and one successful raid. This meant that by the third year of implementation all raids were reduced by 94.2%. (Prenzler, 2011).

In mid-2008, Strike Force Piccadilly 2 was established in response to the commencement of 'gas attacks', a technique imported from Europe, which involve breaching ATMs using an explosive gas and accessing the cash contents. Over a period of 12 months, 54 gas attack offences were committed in the Greater Sydney Area. On one night, a total of four ATM gas attack offences were committed. These offences attracted intense community, media and government interest and concern.

Strike Force Piccadilly 2 repeated the SARA process. It aimed to incapacitate criminal gangs involved in gas attacks on ATMs, and to optimise protective countermeasures (e.g., gas detection and disabling equipment, bollards) and the provision of forensic assistance by project partners. There was a 90.7% reduction in

all gas attacks from 54 in the first 12 months to five in the following 12 months, with no evidence of displacement. For the same periods, successful attacks were reduced by 100.0% from 22 to zero. The initiative provided security to ATM operators, customers and the general public. The two evaluations (Prenzler, 2009, 2011) documented and explained major sustained reductions in violent and destructive 'signal' crimes, and demonstrated the potential for highly effective crime prevention partnerships.

2. Description

A. Scanning

In 2005 New South Wales Police were presented with the problem of a growing number of ATM ram raids in the greater Sydney area (including Wollongong, Newcastle and the Central Coast). Security firms monitoring ATM alarms were making more reports of ram raids in progress. Media reports began to describe an outbreak of ram raids, including 25 attacks in three months. The New South Wales Police established Strike Force Piccadilly in August 2005. (The term "Piccadilly" was a computer generated name.) Research by the newly formed Strike Force found that a likely trigger factor for the raids was the rapid growth in free-standing ATMs. The introduction of the smaller and lighter machines greatly enlarged criminal opportunities in terms of access routes, escape routes and portability. Information about successful methods was also spread amongst criminal groups. In addition, large shopping centres were increasingly becoming targets, despite the fact the ATMs were often deep within the buildings in atriums. Many of the raids were extremely daring, involving two stolen vehicles: a four-wheel drive to smash through the entrance and knock over the ATM, and a van to escape in with the machine inside. Traditional policing methods failed to curb the problem with thieves escaping before police response vehicle arrived and investigations obtaining little in the way of useful eye witness testimony or forensic data. In the 12 months before the main interventions there were 69 ram raids. Financial losses are confidential but they were likely to involve millions of dollars, with significant property damage, a large number of associated vehicle thefts and assaults on security officers.

B. Analysis

Up until the establishment of the Strike Force the phenomenon of ram raids was partly hidden across a range of specific offences. The Strike Force recognised the distinct nature of ATM ram raids through the creation of a new internal offence category, including a subdivision: 'successful' and 'unsuccessful'. With unsuccessful raids, the criminals failed to obtain the cash, but in the process numerous crimes were completed, including motor vehicle theft and major damage to property. In successful raids the offenders were able to escape with cash.

Strike Force Piccadilly 1 moved into a new phase when the Commander organised a stakeholder forum in June 2006. The meeting was attended by members of the Australian Bankers' Association (ABA), the cash-in-transit industry, the Shopping Centre Council of Australia and the ATM Industry Association (ATMIA). The purpose of the meeting was to obtain as much information as possible about current security strategies, their strengths and weakness, and the key factors facilitating ram raids; as well as to engage stakeholders in the development of a

coordinated prevention strategy. The approach represented a shift from a traditional "investigate and charge" methodology, with a police monopoly, to a wider cooperative situational prevention approach. The meeting identified the following points.

- A number of organisations were attempting to address the problem in isolation from the others.

- Existing security devices were fairly basic, including back-to-base alarms, CCTV, bollards, and wall and floor fixings.

- Organisations were scoping alternative strategies in different areas. These included target hardening strategies (such as chain guards), techniques to reduce rewards (including money degradation and dye packs), and devices that aid the location and recovery of stolen property (such as smoke bombs and tracking devices).

- Most organisations used a combination of alarms, including seismic alarms (triggered by vibrations), reed switches (triggered when doors on the machines or premises are breached), panic buttons for guards, power failure alarms, and heat/smoke alarms (that detect attacks with oxy acetylene or cutting tools).

- In isolation, most of the prevention strategies could be defeated. For example, thieves defeated camera identification by wearing balaclavas and using stolen vehicles. Standard bollards and fixtures were easily defeated with large vehicles or cutting equipment. GPS tracking only led to an empty vandalised ATM.

- Some strategies, such as dye explosives, were considered to pose a safety risk to security guards.

- Alarm response times by security firms were usually well above the time taken by the gangs, who were coordinated, efficient and well equipped.

- A large number of false alarms was generated, as many as 40 per night across Sydney, which made security firms reluctant to call police. Police also held a power to fine firms for nuisance alarm calls. Alarms could be set off by cleaning equipment, or even by passing trucks and nearby construction.

- Alarm response firms tended to call police only after machines had been stolen. This could be up to half an hour after the raid occurred.

From these findings the Strike Force Commander developed a more refined set of questions about the features of successful and unsuccessful raids. Subsequently, stakeholders fed back data that showed promise for more systematic exploitation:

- There were no ram raids against ATMs located in areas that could not be accessed by a vehicle, such as upper floors of shopping centres with restricted access or at the end of narrow passageways.

- There were also no raids against ATMs with a combination of (1) alarmed premises and (2) internal bollards or barriers directly adjacent to the machine (see Figure 1 in Appendices).

- A strong indication of a genuine ram raid in progress was when multiple alarm systems activated, and this usually occurred on average only once a night in Sydney.

- Multiple alarm activations occurred mainly between 10.30pm and 5.30am, but mainly around 1-2am.

While this consultative process was underway, police analysts were engaged in data assessments. Evidence from crime scenes and interviews with arrested offenders revealed two crucial facts:

- The ram raiders were extremely concerned about capture and gave themselves a very short operating window of approximately two minutes. If they encountered a delay they would abandon the raid.

- The raiders used scanners to listen in on the police radio system. If police were called, they would usually abandon the raid.

The first point shed some light on the earlier finding about internal bollards. In the words of the Strike Force Commander:

> During debriefs a number of offenders reported they we're happy to stay in a carpark, in high performance cars, and cut bollards outside the entrance of shopping centres because they didn't want to activate intruder alarms. They would cut the bollards, and if the police turned up they would make good their escape out the carpark exits. Once they drove the four-wheel drive and the van through the front of the shopping centre they'd breached an intruder alarm and the clock started ticking. Plus they would be stuck in the mall and they would then have to get out of the truck and defeat the bollards around the machine before they could ram the machine. Basically they were all worried that once the security guard or the police turned up they would just put their car across the entrance and they'd be stuck in the shopping centre.

C. Response

The combination of these factors led to reconsideration of the utility of police rapid response, subject to a number of determining factors. If false alarms could be screened out, and police could prioritise genuine calls, it might be possible to reach the scene inside the thieves' window of opportunity, especially in the quiet period after midnight. The Commander took these ideas to meetings with the stakeholders, who were strongly supportive. The Head of Security for Westfield proposed that the priority response should be complemented with a system for sharing information about security. Theoretically, the police rapid response would be enhanced by reducing the window of opportunity through the widest possible application of best practice security measures: restricting vehicle access, and the inner bollard/alarm combination; as well as advancing and trialling some of the more promising strategies

under review, such as more resistant bollards. An immediate likely benefit of this combination of strategies was the capture, and incapacitation in prison, of the main gang members. An additional long-term benefit was the likely deterrent effect on other criminals, as word spread that the risks in ATM attacks outweighed the potential rewards.

A detailed plan and rationale were developed that received approval from the Police Deputy Commissioner Operations. A dedicated 1800 toll-free number was given out to all relevant alarm monitoring companies. This number bypassed the public emergency call system. The companies agreed to use the 1800 number when a "multiple alarm" activation occurred and to provide police dispatchers with the location of the ATM. Multiple activations that triggered 1800 calls usually involved two alarms (e.g., seismic alarm followed by power failure) or often three. The monitors were given discretion about what combination of alarms they thought constituted a probable ram raid. (Single or questionable alarm activations were investigated by security firms and/or referred to the general police call number.) Police agreed to broadcast the 1800 calls over the radio dispatch system as "ram raid in progress" and to proceed "on urgent duty with lights and sirens". Dispatchers and patrol officers were informed about the system and instructed about the need to prioritise a response. The 1800 system came into operation in Sydney in July 2006. In December it was extended to the greater Sydney area at the request of industry partners following a round of meetings with stakeholders in regional centres.

The second idea regarding information sharing resulted in five main practical outcomes:

1. The development and distribution of a 14 page easy-to-read illustrated booklet outlining all key aspects of ATM security. The guidelines describe how situational factors – such as vehicle access, alarms, bollards and barriers, and lighting – can be modified to reduce the risk of attack. The guidelines allowed site managers and organisations to carry out a simple assessment themselves and make improvements based on best practice.

2. The New South Wales Police made Crime Prevention Officers (CPOs) available to carry out on-site risk assessments and provide reports with recommendations for improved security. (The New South Wales *Environmental Planning and Assessment Act* gives police input into the development approval process.)

3. Strike Force Piccadilly analysts generated confidential intelligence reports that were distributed by e-mail to stakeholders shortly after each attempted ram raid. The de-identified reports gave details of attempted ram raids and reinforced the factors set out in the guidelines, by focusing on security devices absent in successful raids and present in unsuccessful raids. Westfield security took a lead in designing the form used to produce the intelligence reports:

    > None of us got hit more than three or four times, but aggregated it's an awful lot. So we created a form that the owners of properties would fill out whenever they had a ram raid. There was a set of questions: "Was it open entry? Were there bollards? Did they run over the bollards? Did they cut the bollards? What did they use to cut the bollards?" … The initial response was, "We don't want to share that information. It's confidential."

So we said, "We don't want to know how much money was taken, we don't want to know the victim's name or the name of the company, just the suburb it happened in and the MO" [*modus operandi*].

4. Industry members agreed to share information about the benefits and problems associated with trial technologies.

5. Police undertook to continue to consult with the stakeholders, to obtain feedback on the project and provide advice and assistance on any relevant matters.

The intelligence reporting system began in September 2006. The guidelines were published and distributed in December 2006. The communication and assistance strategies were maintained from the initial conference.

D. Assessment

The main variables used to measure the impact of Strike Force Piccadilly were the New South Wales Police Property Crime Squad monthly reports employing the categories 'successful ram raid' and 'unsuccessful ram raid'. Access to these data for the purposes of independent evaluation was granted to Professor Tim Prenzler (Griffith University). He was also interviewed key stakeholder representatives (see Prenzler, 2009, 2011).

Figure 2 in the Appendices shows all successful and unsuccessful ATM ram raids from August 2005 to April 2010 as reported in the follow-up evaluation (Prenzler, 2011). The data show an immediate and dramatic drop in the number of raids from a peak of 14 in July 2006, following the implementation of the 1800 hot line on July 20th. While there were fluctuations in the number of attacks, there was a strong overall decline. All raids were reduced by 72.4% from 69 in the 12 months before the nine month intervention to 19 in the first 12 months after the intervention. Raids were subsequently reduced by 91.3% (from the pre-intervention period) to six in the second year, and by 94.2% to four in the third and final year. Successful raids – in which offenders escaped with cash – were reduced by 96.6% from 30 in the 12 months before the intervention to one in the first 12 months after the intervention, then by 100.0% to zero in the second year and by 96.6% to one in the third and final year. Most of the later attacks were on 'soft targets', such as service stations and licensed premises, with ATMs that contained smaller amounts of cash.

The evaluations were not able to fully map the implementation of all countermeasures, given the number of organisations managing machines and their confidentiality requirements. It is clear that the introduction of the 1800 number coincided with a marked reduction, but it was not until March 2007 that all initiatives were fully implemented, and the installation of on-site security measures was ongoing. Police intelligence was able to explain the effect of the 1800 hotline by assessing crime scene data and debriefing arrestees. In the first activation of the system, the offenders heard the police radio communication over their scanners and abandoned the raid. They were captured while escaping. This pattern continued, with offenders leaving behind forensic evidence in their haste to escape. This led to more arrests. Between August 2005 and June 2007, 97 persons were arrested for 491 offences related to ATM ram raids; and 21 separate gangs were identified and incapacitated. Interviews with arrested persons also showed that the cut-resistant

bollards and internal bollards were providing a significant deterrent because of the extra time involved in trying to breach these lines of defence.

The information sharing and situational prevention aspects of the project also appeared to produce positive outcomes. The results of experimentation with security devices were shared amongst stakeholders, disseminated via the police. Bolted down and/or hollow bollards were found to be completely ineffective. Thieves could cut through them in seconds with high powered cutting tools, or simply knock them over. Attempts to fill bollards with a special concrete mix or "steel cruciform" also proved fruitless, as did rubber materials designed to melt onto the cutting blade. Chain guards similarly had limited effect, unless they were combined with other measures. Two types of target hardening/access control devices, however, were shown to be effective in either preventing or significantly delaying removal of bollards (and ATMs). One was the invention of a "rotating core". Steel ribbing on the free spinning core would catch the blade and grind it down or make the blade spin uselessly. Initially it was found that a drill bit could be used to stop the core spinning. However, a process for toughening the metal was then developed, making the core resistant to drilling. Soon after this breakthrough, two other groups invented more effective fill. Another successful intervention from this period was the "Raminator". This is a device that utilises either a bracket or base plate, attaching the ATM to the floor, which bends to absorb impact but does not break and is difficult to cut.

The private sector stakeholders were unwilling to release figures regarding the installation of security devices – for reasons of confidentiality and security. The Task Force Commander estimated there were a large number of installations, and that "banks aggressively installed internal bollards at their most vulnerable locations and made this a priority security measure". The bank Security Manager emphasised the value of the intelligence system in deciding where to prioritise security upgrades. Some stakeholders indicated that moving machines to safer locations would compromise customer access. Nonetheless, there were relocations of machines as well as installations of cut-resistant bollards outside premises. There were only a few requests for risk assessments by police as organisations developed their own capacity. However, the Crime Prevention Officers reported they found the guidelines particularly useful when advising on ATM security in relation to development applications under the *Environmental Planning and Assessment Act*.

The first evaluation (Prenzler, 2009) reported that police intelligence indicated there was a partial displacement effect, with some ram raider gangs moving into armed robberies of cash-in-transit. However, Strike Force Piccadilly was able to work with an armed robbery taskforce to arrest these offenders and stop the problem. During the period 2006–2008 the number of relevant offences recorded by police in the Sydney Metropolitan Area was either stable or in decline. These were "Robbery with a firearm", "Robbery with a weapon not a firearm", "Robbery without a weapon", 'Break and Enter – non-dwelling". However, further displacement became observable in 'gas attacks' beginning in 2008. These involve offenders pumping gas into an ATM and then setting it alight, resulting in an explosion.

Gas attacks peaked in late-2008 and early-2009, with 6.25 attacks on average per month over a four month period. Most of these were 'unsuccessful'. The attacks led to a restructuring of Strike Force Piccadilly 1 as Strike Force Piccadilly 2, focused on gas attacks. The rapid enlargement of the Strike Force to 42 police investigators and analytical staff led to the capture and incarceration of 23 persons and the dismantling of four specialist gangs. Arrests and convictions were assisted by CCTV, fingerprint and DNA evidence. The preservation and collection of this material was

facilitated by the Strike Force partners. The private sector partners also introduced gas detection and disabling equipment into at-risk ATMs. Gas detection normally triggered a back-to-base alarm that alerted police on the priority response system. Detection equipment could also trigger an audible alarm and release of smoke – designed to act as deterrents – or the release of a gas that mixed with the explosive gas making it inoperable. Strike Force Piccadilly 2 also continued to provide intelligence reports and assistance with risk assessments in regard to the location of ATMs and installation of countermeasures such as bollards and CCTV.

Unlike Piccadilly 1 it was not possible to identify a clearly defined implementation period for the project. It was also the case that specific data on the number of times gas detection systems were triggered and foiled attempted attacks were not available due to confidentiality concerns. However, across 14 months of data, there was a 90.7% reduction in all gas attacks from 54 in the first 12 months to 5 in the final 12 months of data available (Figure 3). For the same periods, successful attacks were reduced by 100.0% from 22 to zero. There was also no evidence of evidence of displacement to related crimes, which declined overall.

References

Prenzler, T (2009) Strike Force Piccadilly: A Public-private Partnership to Stop ATM Ram Raids. *Policing: An International Journal of Police Strategies and Management, 32*(2), 209-225.

Prenzler, T. (2011). Strike Force Piccadilly and ATM security: A Follow up study. *Policing: A Journal of Policy and Practice, 5*(3), 236–247.

3. Agency and Officer Affiliation

Key project team members

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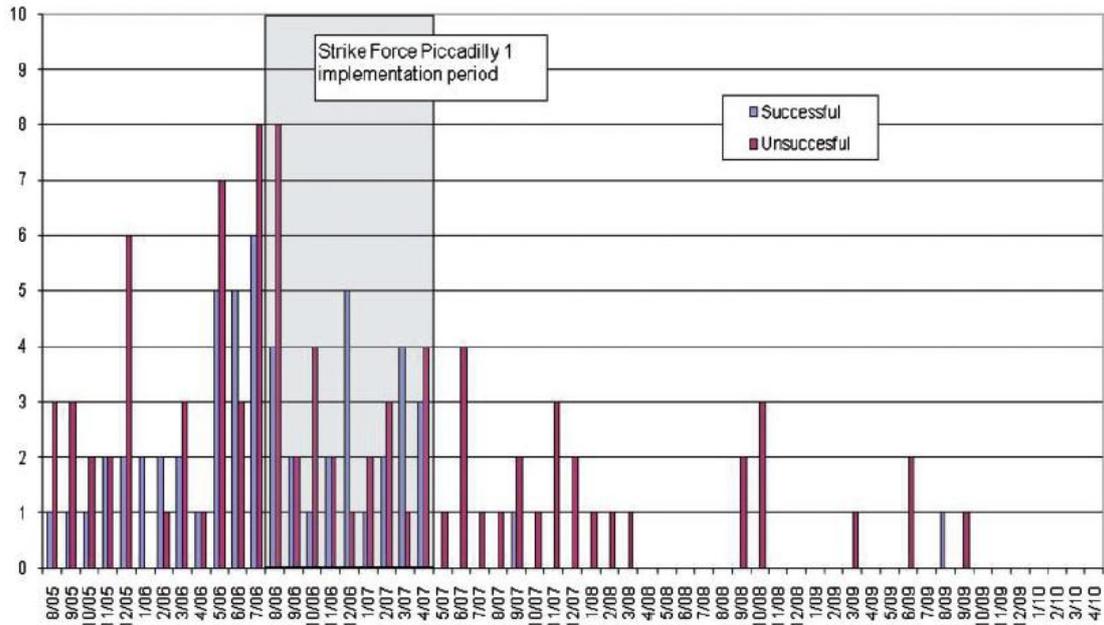Email: newb1gre@police.nsw.gov.au

Appendices

Figure 1: Examples of Internal Bollards and Barriers
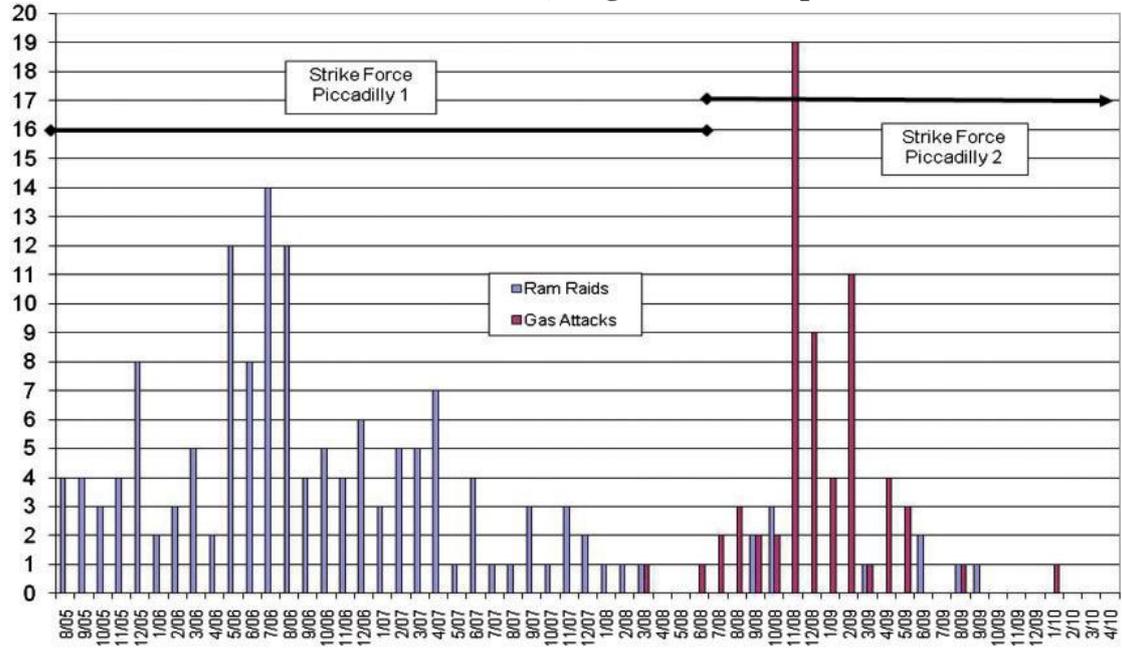

(Source: New South Wales Police)

Figure 2: Strike Force Piccadilly 1, Successful and Unsuccessful ATM Ram Raids, August 2005 to April 2010

Source: Prenzler, 2011, p. 240

Figure 3: Strike Force Piccadilly 1 & 2, All ATM Ram Raids and Gas Attacks, Combined Successful and Unsuccessful, August 2005 to April 2010

Source: Prenzler, 2011, p. 241.