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E-Policing in Police Services
Definitions, Issues and Current Experiences

Research and Evaluation Branch
Community, Contract and Aboriginal Policing Services Directorate

Royal Canadian Mounted Police
Gendarmerie royale du Canada

Canada
E-Policing in Police Services -
Definitions, Issues and Current Experiences

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Foreword

This research project was carried out by Research and Evaluation in collaboration with the Urban Policing Section of CCAPS and, in particular, Inspector Craig Duffin and Sergeant Brent Kelly. Their support in translating this project into a policing perspective was very much appreciated.

We would also like to thank all the discussion group participants and the divisional contacts who assisted with setting up these groups. This study is a demonstration of the need and value of citizen expertise and knowledge for policing, now and in the future.

A very special thank you goes to all those who agreed to be interviewed during our field work. Their comments and understanding of how e-policing is working on the ground were very helpful.
Executive Summary

E-policing is the transaction of services and information between the police and citizens via the Internet. A recent review of police service models and call management suggested that use of the Internet to report calls for service was an emerging trend. This study, carried out by Research and Evaluation and Urban Policing, CCAPS, addressed these questions pertaining to e-policing:

- What does e-policing mean from an organizational perspective?
- How it is used and where?
- What are the challenges and obstacles to successful implementation and their impact on police services, citizens and police activities?

E-Policing - The State of Knowledge

DESCRIPTION OF E-POLICING

The Internet is increasingly central to public access and information. Secure reporting of non-urgent incidents is one Internet application that is proving useful. Online crime reporting allows the public to file police reports for some incidents and crimes via the Internet, 24 hours a day, seven days a week. Police departments can retrieve these reports when police resources are available. This frees up patrol officers who would otherwise spend time tracking down these incidents.

E-policing expands our channels of communication through the Internet but it does not replace telephone or face-to-face contact, which remain important. Developing an e-policing initiative requires:

- development of a strategic vision and direction
- evaluating impacts of related legislation
- evaluation of technology options
- projection of all costs, including planning, implementation and operation
- identifying such barriers to success as lack of strategy, resistance and delays in requirements

IDENTIFIED BENEFITS OF E-POLICING

For the community:

- Reporting incidents does not require face-to-face contact with the police
- Better access for those in rural or remote areas
- Ability to ask questions and get answers when convenient
- Ability to exit the process at any time without difficulty or repercussions
For the police
- Online forms assure that identical-screening questions are asked
- Ability to schedule work more evenly through the day
- Ability to deliver 24/7 police services conveniently and cost effectively without a physical presence – possibly establishing a virtual police station in crime spots and remote areas
- Improved linkages with local organizations and partners

In Summary
- E-policing opens new ways of doing business for the police, not only through newly available tools but also by creating an interactive flow of information between the police and the citizen. E-policing fosters two-way communication and provides better access for both the public and the police.
- E-policing enables initial public contacts to be handled electronically. This delivers information to the police when it is “fresh” and decreases public inconvenience of waiting on the telephone or in line at the police station to report in person.
- E-policing signals that police are in synch with current technology.

Electronic Transactions in Canada
Because e-policing depends on computer use and Internet access, we examined Canadians’ access to and use of computers. Surveys show that Internet use is increasing in Canada.

- In 2005 an estimated 16.8 million adult Canadians, or 68 percent used the Internet for personal non-business reasons. But only 58 percent of residents living in rural and remote areas accessed the Internet (Statistic Canada, 2006). In 2003 Internet use was lower among household outside the 15 most populous census metropolitan areas but 85 percent of rural youth reported almost daily computer use at libraries, compared with 4 percent of students in cities (Public Works and Government Services Canada, 2005). It means that rural Canadians have improved their situation.
- Adult users, over the age of 18 (14.5 million) spend an average of 37 hours online per month.
- The Internet was used at home for e-mail (91 percent compared to 32.2 percent in 2003), general web browsing (84 percent, 48.5 percent in 2003) and electronic banking (58 percent, 30.8 percent in 2003), to name just a few activities. The categories of crime prevention, public security or crime, were not included in the 2003 survey but a search for information about governments which could somehow fit in the category is 52 percent. (Statistic Canada, 2006; 2004).
As it can be noticed, the Internet as a means of communication is definitely integrated among the Canadian population. Internet users are represented in all age groups up to 65 and more. There is no over representation of any age group users. This means that citizens in general access the Internet and are therefore potential users of public security websites. It was also pointed out that the vast majority of Canadians accessed the Internet at home for non-business reasons, which means that the police can use this as an opportunity to link electronically with them. However, figures also show that public security/safety websites are not frequently accessed. At the moment, it seems there is no research to document this.

By comparison, Davies (2004) notes that 53 percent of households in the UK are connected to the Internet and about 70 percent of people use it occasionally. Davies compares the Internet to a new community with rules resembling democratic constitutions.

**E-POLICING CONSULTATION**

If citizens use the Internet regularly, would they communicate online with the police? This question was evaluated through a public consultation. Group discussions with a cross section of citizens and RCMP police officers were held in different divisions across Canada.

From its inception, the RCMP has continuously adapted to meet the changing needs of society and technology. Topics discussed in this consultation included:

- What components or tools are going to be required by the police to satisfy citizens’ needs?
- What might disrupt the process or destroy the tools or in some way hinder the process?
- What online services would participants like to see in their communities?
- How might the quality of police service be affected if everyone reported online and did not see a police officer?
- What types of crimes are being committed or could be committed in the future that involve technology itself?

**Discussion Highlights**

There was no doubt for participants that the majority of police services would still be delivered face-to-face. However, they also thought that initial contact and many routine tasks could be handled electronically. For participants, conventional access to services and face-to-face contact were equally important as electronic access.

Why should the police be involved in e-policing? The police must adapt and evolve with society. Examples from the banking industry or private sector were given as examples to follow and learn from.
In terms of expected services, e-policing definitely opens up two-way communication: police to citizens and citizens to police. Many participants saw that the police could be more effective at the level of service delivery. Expectations are that online reporting could reduce the demand on front line officers, switchboard and front counter staff.

- For participants, online reporting meant enhanced services such as responding to minor incidents like bicycle theft that were otherwise unmet.
- Citizens would have better/easier access (24/7) to the police from their location to report a crime, to get police information, to check on latest crime news, to send text messages or to send digital pictures. (Distance would not be an issue.)
- Police would retrieve the online reports when they had resources available but could access files 24/7. This would allow police to organize some work according to the Internet activities.
- Online reporting would allow the police to compile information better, map problems and see patterns of crime by zones, areas, etc.
- Web links could be developed with the business community and with other agencies for emergency for example. Using automated translation on the web, it would be easy to report and to read police information in one’s own language.

Two major questions surfaced regarding privacy issues

- How willing will people be to give police personal information over the Internet?
- How will we control the collection, storage and sharing of information obtained from the web? What are the accountability issues? What legal restrictions pertain to police use of information given over the internet?

In terms of future development, the evolution of technology was described as rapid and irreversible in all spheres of society. Participants used the penetration of Palm Pilot, Blackberry, iPod and home computers as examples. In the near future they assumed these systems would be integrated and connected.

Participant police officers noted that 15 years ago almost every front-line activity feedback was written by hand. Now everything is computerized, from laptops in police cars to databanks, etc. The police have evolved. However, contrary to what was expected, time spent writing reports has increased, especially with the implementation of PROS (Police Reporting and Occurrence System). IT implementation has not created more time for higher priority police activities.

Suggestions for best results and success included:

- Educate citizens on how to access the Internet.
- Let people know through publicity and advertising that the service is available.
- Educate the public when it is best to report online (small events) and when it is better to pick up a phone.
Citizens are willing to contact the police online and expect to see e-policing implemented soon. How much are police responding to this expectation for two-way communications? We surveyed police web sites to find out and, in particular, whether these sites incorporated online crime reporting.

**POLICE WEB SITE SURVEY**

All police services selected for this survey had a web page, usually separate from the municipal web page. However, not all police services in Canada have web sites. There is no standard information architecture determining features and structure, or design protocols for presenting information. Devices ranged from icons to underlined hyperlinks and simple listing of information.

Electronic communications between the police and the public are underutilized. Although 45% of Canadian police web sites offer at least one e-mail contact address there is little available above that level. Figures are not more impressive in Europe or in the USA.

Online crime reporting for minor crime is only available on one Canadian police web site. However, economic crime can be reported online, sometimes without providing personal information, through the Phonebusters or Ricol programs. However, economic crime is not always a “minor crime” from the victim’s viewpoint.

There are a few other applications for e-policing such as online bicycle registration or online registration for crime prevention programs such as Neighbourhood Watch. In some cases, it is possible to “tip off” police to crimes in progress, prostitution or traffic violations.

**Online crime reporting case studies**

E-policing through online crime reporting is almost exclusively used in the UK where it is well developed. Very few studies on “e-policing” have been done in North America or elsewhere, which explains the lack of literature and evaluation studies on the subject. The fieldwork done for this study in association with police services in the UK, Vancouver Police Department (British Columbia) and Tracy Police Department (California, USA) shows how online crime reporting really works day-to-day.

**UNITED KINGDOM**

In the United Kingdom the initiative came from a government white paper requiring local councils to have their services available electronically by 2005. PITO, a non-departmental organization under the responsibility of the Home Office was created for procurement of IT systems and hardware to the police forces. A data management system – the Portal – was developed as a single point of entry for information.

The Portal has three major modules:

1. Message broadcasting (e-mails, telephone, text messages)
2. Notification of minor crimes
3. Intelligence reports

It is not mandatory for police forces to connect to the Portal, however there is no charge for to police forces for using it.

The Suffolk Constabulary experience shows how in less than 12 months, the police and the citizens learned to use the system for their specific needs:

- Four to five broadcast messages are sent every day
- Each message has the potential to reach 10,000 registrants, each of whom on average forwards the information directly or indirectly to 64 others
- A survey of public opinion recipients (by telephone and the Internet) of broadcast messages reveals not only that the public has high trust and positive opinion of their local police but that:
  - 99% deem broadcasted messages useful
  - 53% say that the messages make them feel safer
  - 90% feel more informed about policing in their area
  - 61% are satisfied with the message system
  - 70% of the population receive messages by e-mail

 **Lessons Learned**

Online crime reporting is no longer seen as a big issue. However, communication is. Since its implementation, the level of information traffic has not changed, yet the portal has changed the public/police relationship by allowing online/real time communication between the police and the public.

Whether people have computers at home or not is not an issue. There are Internet cafes, computers in public libraries, etc. The portal fits in with the current/future use of technology. The issue is more how the police can manage this relatively new source of information efficiently.

As is the case for any technological adaptation, training and planning are required before implementation. One of the police forces observed during our field study was not using the Portal to its full capacity because they did not realize its potential. There had been no strategic planning of any sort and only crime prevention initiatives had been transferred into the Portal.

The UK case study suggested that technology such as Internet portals can connect the police with segments of the community in a two-way communication process. We observed that the police had developed a new approach whereby the police authority was sending messages directly to the community or to some part of it (for example, a request for information and reply from citizens). The UK police have access to a communication network that can accommodate electronic messages in the form of illustrations, photographs, text messages and e-mails from concerned citizens or informed sources.
There is now tangible evidence that unprecedented volumes of messages can be delivered by the Portal simultaneously.

Experience shows that Portal broadcasts achieve higher penetration than traditional methods.

Broadcasted messages can deliver specific information to targeted groups such as taxi drivers, pub landlords, nurses, etc.

Surveying shows that broadcast messages are well received by the public.

The Portal gives society many thousand of eyes watching compared to a two eyes in a police car.

**VANCOUVER POLICE DEPARTMENT (BRITISH COLUMBIA)**

Vancouver Police Department (VPD) implemented its online crime reporting in 2001. In 1999 VPD reviewed service delivery and concluded that Internet reporting would be ideal for public reporting of minor property offences and non-emergency incidents. The online crime reporting system did not prove to be demanding or time-consuming for the staff dealing with the submitted forms. Dealing with service calls from the public only required a simple reorganization of schedule, no additional staffing.

The VPD web page explains the six-step process required to fill and submit the form, the time required and a list of reportable crimes. Senders are promised a response within five working days; most (62%) are notified the same day. Police review takes three to six minutes and 80 to 85% of reports require little or no modification. Once the review is complete, the sender is e-mailed an incident number. Data from valid reports are automatically transferred into the records management system (RMS).

**Identified benefits**

- The system generates the incident number; there is no manual data entry into RMS.
- The process is quick and easy; police no longer have to rely on administrators’ interpretation of events.

**TRACY POLICE DEPARTMENT (CALIFORNIA)**

Tracy Police Department worked with a private company that had developed an online crime reporting system. The online crime reporting system operates in an ASP environment, connected to an independent server that receives the information sent online, processes the information and forwards it to the police server on a secure connection. Tracy PD pays a set annual fee, which makes it easy to budget. The security and system updating are the supplier’s responsibility.

Each report is reviewed by staff dealing with calls for service. The process takes about five minutes. Notification is done electronically. There was no need for training or new personnel.
The web site invites the public to submit reports for crimes that are commonly not investigated, such as minor theft. Users receive online assistance to help write reports, which can be submitted in many different languages. The system uses automatic translation to render the report in English. Usage of online crime reporting is slowly increasing every year. TPD estimates that each online form received saves an estimated US$40 (no dispatch, no trips to the field, no phone calls, no duplication of work).

**Lessons learned**
TPD sees online crime reporting as an easy process for citizens to use and easily integrated with their own workflow:
- Convenient for the public and the police
- Increasingly popular
- Saves time and money for both the police and the public
- The online crime form must be easy to access for the general public from the police web page.
- Costs incurred by the system are low and negligible when compared with the total police budget.

**Conclusion**
E-policing is not about technical issues; it is more about cultural changes within police organizations. Are organizations ready to work with citizens with electronic tools?

**VALUE AND DEFINITION**
- E-policing is electronic collection, storage and sharing of complaints and information from citizens
- E-policing includes requesting information/tips on crime/terrorism etc. from the public, including particular communities of interest

**ISSUES RELATED TO PROCESS**
- Users and decision makers must be involved in development and planning this still-innovative approach to police-public communications.

Other issues to be addressed before adopting online crime reporting include:
- Ease of access to forms developed for the police
- Types of reportable crimes and incidents
- Penalties for false reports
- Security of the reporting system
- Thank you reply
Problems that may surface with online crime reporting include:

- Crimes reported are not from the jurisdiction
- Police may have to rewrite reports coming from the web
- False reporting

**CHALLENGES**

- To collect and store data on minor crimes that previously were unreported and unrecorded.
- The UK experience shows that e-policing can be an efficient two-way communication process. However, it must accommodate all new forms of electronic messages, such as text messaging or digital photos sent from cell phones.
**BENEFITS**

Online crime reporting offers benefits for both communities and the police. As described in the literature but seen differently during field work, e-policing is reputed to provide:

- Better access to police officers
- Less clerical work or if not less clerical work, then a different workflow
- No work duplication
- There is more choice and convenience for the citizens; they can access interactive services in a standard way.
Introduction

E-policing is the transaction of services and information between the police and citizens via the Internet. Use of the Internet to report calls for service is an emerging trend. How are police responding to such changes, given our existing challenges with information technology and electronic communications for operations and management?

This report addresses that question. It focuses exclusively on e-policing issues, challenges, processes and impact on users. It discusses the state of e-policing knowledge, and reports a survey of police web sites and community public consultations. It reviews field studies that reveal the challenges, benefits, obstacles and impact of using online crime reporting.

Finally, the report examines how the police can take advantage of established best practices in e-policing, taking into consideration related direct and indirect costs, expected results and, above all, the associated risks (human, technological, internal politics, etc.).

The Research Project

Like every other organization, police forces wish to take best advantage of information technology (IT) and electronic communications for operations and for management. However, they must do so within their organizational context and without jeopardizing security, effectiveness or efficiency. This research project examines one particular police use of IT called e-policing.

We wanted to know how e-policing was being used, where and what are the obstacles to its successful implementation. We examined its impact on police, citizens and policing activities. We asked how citizens saw e-policing and how they suggested it might be implemented.

The research project was done in four steps:

1. a literature review of e-policing (definition and concepts) in Canada and abroad
2. a survey of police service web sites in Canada, the United States and Europe
3. a public consultation with citizens and police officers in different regions
4. field work with three different police services that provide online crime reporting to their communities

The study discusses and analyzes:

- E-policing definitions and concepts
- The extent to which Canada relies on Internet/electronic transactions
- How police web sites are being used to communicate information to citizens
- Foreign experiences in online crime reporting and best practices/lessons learned
Potential impact of e-policing in the future

E-Policing - The State of Knowledge

What is E-Policing?

E-policing is described as electronic transactions between the police and the citizen. Usually the Internet delivers a central access point for delivery of such public services as:

- job applications
- registration for access to information on policing operations, campaigns and results (where it is reasonable to do so)
- secure reporting of non-urgent incidents and crimes (Spicer, Mines, 2002)

Information technology is now used for:

- Operations and service delivery related to intelligence gathering, surveillance, traffic control, monitoring (Closed circuit television), etc;
- Training and development including online learning and training;
- Corporate management such as video conferencing, performance monitoring, etc.

E-policing is one element in police use of information technology (IT). It includes the use of computer software and hardware and networking to:

- share information among police services (this requires IT compatibility)
- information sharing and networking among police officers (this requires system access and enforceable standards for security and accountability)
- delivery of real time information (similar to AFIS the Automated Fingerprint Identification System)

Expanding into e-policing requires some or all of:

- local upgrading of IT hardware/software (if computers are installed in the community)
- development of portal technology and directory services
- development of an operational database

E-policing does not replace conventional communications such as telephone or face-to-face contact. It provides additional web-based communication and service channels. For example, online crime reporting allows citizens to file police reports for non-urgent incidents and crimes via the Internet, 24 hours a day, seven days a week. Police can retrieve these reports during regular hours. This also frees up patrol officers who would otherwise spend time asking these reports (Smith, 2004).

Potentially, e-policing offers police services the opportunity to shift tasks to automated systems. Potentially, e-policing can facilitate:
getting information and services to the right person at the right time and in the right place
public access to individual police officers
meeting demands for services despite budgets cuts and stretched resources,
serving remote communities through public web-connected kiosks

The Devon & Cornwall Constabulary in the United Kingdom (UK) reports that the majority of services will continue to be delivered by front-line police officers face-to-face with the public. However, many services and initial public contact can be handled electronically. For example, enquiries can be handled directly via the Internet or facilitated by hand-held electronic devices (Spicer, Mines, 2002:12).

Implementing an e-policing initiative requires police services to:

- develop strategic vision and direction
- take legislation into account
- evaluate technology solutions (Spicer, Mines, 2002)
- evaluate costs associated with planning, implementation and operation
- address such barriers as lack of strategy, resistance, delays in requirements, etc.
  (Policing Bureaucracy Task Force, 2005)

**Identified Benefits of E-Policing**

**For the community**

Davies (2004) suggests several advantages in extending the police-public relationship to include Internet communications. People can access the system when convenient; they can opt out easily if they wish to; and they may find comfort in the ability to communicate without face-to-face contact. However, Internet reporting is not usually anonymous and police can normally trace back reporters using computer IP addresses.

E-policing offers more choice and convenience for the public. The forms ensure that every inquiry is documented with identical screening questions. The public can ask questions and get answers at any time and without having to see a police officer. Those living in rural or dispersed geographical areas can access the police more easily (Woods, Berry, 2001).

**For the police**

E-policing helps police manage paperwork without having to assign a patrol officer to the report (Smith, 2004). Internet access helps officers to “work smarter” while on the streets. It is also a powerful tool for expanding intelligence networks – both with partner organizations and difficult-to-access target groups such as youth.

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1 Kiosks are computers installed in key areas in communities for direct citizen access. There are over 1300 kiosks located in high streets and public areas throughout the UK. BBC News, 2004
However online services should not merely replicate existing services. The Internet offers opportunities to deliver services and increase communication in a convenient and cost-effective way. Online strategies should be designed to:

- deliver cost-effective 24/7 virtual police service in crime spots and remote areas (Woods, Berry, 2001)
- increase visibility of the police services within the local community
- link with local organizations and partners to build relationships and create a stronger community bond (British Telecommunications, 2005)

In 2004, the Metropolitan Police Service (MPS) held two e-policing consultations: one with the public and partner/community organizations, and one with MPS managers. Participants were asked their views on electronic services and the results were used in the strategic planning process (Metropolitan Police Authority, 2004). Their reports show how e-policing is promoted and how it relates to their objectives.

**Evaluating E-Policing**

Are these potential benefits realized? There is limited research evaluating the effectiveness of e-policing.

Information technology now permeates many aspect of policing. Police forces use IT for records management, mobile information access and processing in police vehicles and, e-mail. IT eases communication, facilitates data processing and promotes information sharing within organizations and with partners.

Increasing reliance on IT brings risks and challenges. At the Montreal CACP/ACCP conference in 2003, speakers noted difficulties related to information sharing and interoperability. The increasing need for police to collect and process information more effectively and to share it with law enforcement partners and the community was paramount (CACP/ACCP, 2003).

Despite the growing dependence of policing on IT, there is relatively little research on how IT affects management of police practices, policing activities, information sharing within the police and with law enforcement partners, or how well police are managing system integration and interoperability. For the most part, it is assumed that IT will reduce bureaucracy and daily paperwork (Futronics Group, 2005).
The London Police Service (Ontario) was an early adopter of information technology in policing in Canada. As early as the 1990s, the London Police Services implemented computer-aided dispatch, integrated records management, radio communications for voice and data, and mobile workstations in patrol vehicles. Benefits included electronic accessible to occurrences throughout the organization, 33% reduction in clerical positions, immediate access to operational reports, access to e-map, and complete online references such as statutes and mug shots from the car. In other words, there was no duplication of work.

One of London’s lessons learned was that implementing new IT tools was more about people than technology. Users must be part of the decision-making process and training, and senior management must be deeply involved (Amoroso, 2000).

One study examined whether IT improved management (of human resources, for example) and the execution and recording of such daily activities as automated fingerprinting and photographing those arrested. Suggested benefits included saving officers time; reducing overtime costs; reducing the need for clerical staff; helping to solve cases through relational databases and increasing crime clearance rates (The Institute for Policy Research, 2003). Another study assessed patrol officers’ and detectives’ attitudes and their perception of information sharing, online training and usage of automated information systems (such as laptops in police vehicles) (Zaworski, 2005).

Is IT a tool for police reform? A two-year case study of the Queensland Police Service (1998 to 2000) examined the impact of recommendations from an inquiry on police practices on information technology use (Chan, Bereton, Legosz, Doran, 2001). The study asked whether IT implementation had modified the accountability structure and occupational culture of policing; and whether it significantly altered police practices at the street, supervisory and management levels. As is often the case, practical and technical problems such as poor system performance and inadequacy of computer equipment surfaced during the implementation phase. Officers surveyed showed little resistance to the technology being introduced. The majority realized efficiency gains, saying that they could cope more easily with information volume. They said that IT tools (e-mail in particular) helped improve information sharing between workers. However, the study did not conclude that the use of IT changed police practices. “IT has not led to major changes in how the QPS deals with crime and disorder issues” (p. xiii).

Studies did not evaluate the opportunities for expanded relationships and linkages between the police and the public that IT offers. They focus on traditional police activities and on expected improvements. Their main interest is integration and operation of IT systems.
Some police services are using innovative approaches to communicate with citizens. As early as 1995, a police department in Arkansas (USA) used the Internet to provide its citizens with a computer bulletin board system. Since then, many police departments, not only in the USA but in Canada and in most developed countries, have developed web sites to deliver information to the public. Some examples include bulletin boards, E-lert (a Florida broadcast alert system) and online incident reporting. Few evaluations of police IT systems incorporate such e-policing tools as online crime reporting, nor do they suggest that these systems be integrated for better results (Skogan et al., 2003).

However, studies allow us to conclude that:

- IT tools are being used to facilitate more quickly such information as:
  - crime, crime data by neighbourhood, etc.
  - crime prevention, safety tips/traffic regulation, etc.
  - updates on new statutes/ legislation
  - information on police forces (management, ride-a-longs, policies, etc.)
  - information on the city/general area
  - hiring processes
- Providing such information is assumed to be part of a good public relations strategy.
- Communication is a one way direction from the police to citizens.
- The most frequent use of interactive communication is soliciting the public to send in tips and information to the police about crime, criminals (e.g. most wanted from their region).
- The police don’t seem to place priority on using IT capabilities to develop innovative two-way or interactive relationships with the public.

That is not to say that every police force ignores the potential advantages of the Internet and e-policing. It underlines the lack of studies that examine and evaluate how e-policing can and is being used to help police develop closer relationships to the diverse communities they serve. Unanswered question include:

- How can e-policing be used to develop innovative practices?
- Do such initiatives modify or change daily work practices and linkages with citizens?

SUMMARY

- E-policing is a new way of doing business – not just because it involves novel tools, but because it can change the way the police and the public interact and communicate information.
- E-policing increases two-way communication between citizens and the police and provide better access to both.
- E-policing increases police accessibility, the timeliness of information and the ease of submitting information to the police.
Adoption of e-policing is a signal to the public that the police are in step with social and technological progress.

E-policing depends on electronic transactions via the Internet. Therefore its adoption into police practices is somewhat dependent on the penetration of the Internet. We will focus on this issue.

**Electronic Transactions in Canada**

**Internet Access**

The Internet is used by almost one billion people; e-commerce is flourishing and e-mail has become a ubiquitous means of communication (Talbot, 2005). Internet usage and access in Canada is significant and, according to Statistics Canada, increasing:

- In 2005 an estimated 20 million adult Canadians, or 68% used the Internet for personal non-business reasons. But only 58% of residents living in rural and remote areas accessed the Internet (Statistic Canada, 2006). In 2003 the Internet use was lower among household outside the 15 most populous census metropolitan areas but 85% of rural youth reported almost daily computer use at libraries, compared with 4% of students in cities (Public Works and Government Services Canada, 2005). It means that rural Canadians have improved their situation.

- Adult users, over the age of 18 (14.5 million) spend an average of 37 hours online per month.

- The Internet was used at home for e-mail (91% compared to 52% in 2003), general web browsing (84% compared to 48.5% in 2003) and electronic banking (58% compared to 30.8% in 2003), to name just a few activities. The categories of crime prevention, public security or crime were not included in the 2003 survey from but search for information about governments which could somehow fit in the category is 52% (Statistic Canada, 2006; 2004).

- As it can be noticed, the Internet as a mean of communication is definitely integrated among the Canadian population. Internet users are represented in all age up until 65 and more. There is no over representation of any age group users. It means that citizens in general access the Internet therefore becoming potential users for public security web site. It was also pointed out that the vast majority of Canadians accessed the Internet at home (90%) for non-business reasons which means that the police can take this opportunity to link electronically with them. However, figures also show that public security/safety web sites are not frequently accessed. At the moment, it seems there is no research to document actual usage.
By comparison, Davies (2004) notes that 53% of households in the UK are connected to the Internet and about 70% of people use it occasionally. Davies compares the Internet to a new community with rules resembling democratic constitutions.

Adoption of the Internet is uniformly distributed throughout the Canadian population – from children to users up to age 65 and more. This has positive implications for e-policing applications, which ideally should reach all sectors of the population. At the moment, it appears that public security/safety web sites are not frequently accessed. However, there is not enough research to document actual usage.

E-policing has great potential in rural and remote areas but this is where Internet penetration is lowest. This presents a challenge for the RCMP, which is mainly active in such areas.

**RCMP Public Consultation on E-Policing**

Every Canadian’s life is intertwined with technology. We can submit tax online, pay bills online, buy books online and even date online. But how much interaction do citizens have with the police online? For members of the public that do or do not use the Internet, how will e-policing be accepted? This question was evaluated through group discussion.

**THE PERSPECTIVE**

The introduction of new programs like e-policing can irreversibly change public-police relations. It is essential to include the public in how such changes will be implemented and whether they should be implemented.

The RCMP has continuously adapted to meet the changing needs of society and technology. Part of that is adoption of sophisticated information networks such as record management system PROS (Police Reporting and Occurrence System), which allows members to see files anywhere in the country and permits transmission of investigation details to court electronically via CD. In addition, the RCMP has extensive electronic networking capability with other law-enforcement agencies. However, without e-policing, the RCMP lacks such connectivity with the general public. Public-police communications remain predominately face-to-face or by telephone.

The question remains, though, how willing would people be to do so? How comfortable would people be with giving personal information over the Internet? How might this change over the next 10 years?

Most public-police communication takes place in relation to security-related incidents. This is not the best foundation for discovering how best to serve the public. The police need the expertise and knowledge of citizens to look to the future. Group discussion represents an extraordinary opportunity for police officers, participants and the research team to exchange ideas, make suggestions and listen to other participants’ opinions in a non-confrontational setting.
Topics discussed in this consultation included:

- What components or tools are required for the police to satisfy citizens’ needs?
- What might disrupt the process or destroy the tools or in some way hinder the process?
- What online services would participants like to see in their communities?
- How might the quality of police service be affected if everyone reported online and did not see a police officer?
- What types of crimes are being committed or could be committed in the future that involve technology itself?

**ISSUES, SUGGESTIONS AND QUESTIONS**

The following themes emerged from the consultation:

- Why do we need e-policing
- What services should be available
- E-policing impact/consequences
- Privacy issues
- Future of IT
- Education/self awareness and community policing
- Suggestions for success

**Why we need e-policing**

There was no doubt for participants that the majority of police services would still be delivered face-to-face in the future. However, they also thought that initial contact and many routine tasks could be handled electronically via the Internet, telephone calls and hand-held electronic devices such as the Blackberry, voice recognition tools, etc. For participants, conventional access to services and face-to-face contact were equally important as electronic access.

Participants said that police must adapt and evolve with society. Examples from the banking industry or private sector were given as examples to follow and learn from.

The Internet is capable of creating communities of interest with their own rules, much like democratic institutions. Using e-policing, it is possible to create virtual police stations to serve small communities or those that are remote from major centres. E-policing could help police integrate with the community, not only to report minor crimes or incidents but also to retrieve current information about the area where they live, especially (but not only) for remote communities.

**What services should be available**

Participants expected e-policing to open real two-way communication between the public and police.
For participants, online reporting meant enhanced services and meeting needs such as responding to minor incidents like bicycle theft that were otherwise unreported.

Citizens would have better/easier access (24/7) to the police from their location to report a crime, to get police information, to check on latest crime news, to send text messages or to send digital pictures. (Distance and time would not be an issue.)

Some participants saw e-policing as an empowering of the public. They said that citizens were more likely to report a crime when they had the time and had a moment to think. They might be more comfortable reporting online because there was no need to see a police officer. Having the opportunity to report incidents easily could decrease the frustration of thinking nothing is being done about the problem and increase a sense of citizen engagement.

E-policing could be used to broadcast messages to the public, elicit opinions and consult, explain police services and procedures or develop and run e-watch programs, etc.

Web links could be developed with the business community and with other agencies to increase our ability to handle public emergencies, for example.

It was felt that e-policing would result in more crimes being reported to the police. The question asked by participants was then: could the police respond to the electronic demand?

Participants suggested that automated translation could be used to report and read police information in one’s own language.

**E-policing impact/consequences**

Possible impacts and obstacles to implementation of e-policing raised some dichotomies that should be taken into consideration for any future development.

Will e-policing open the door to two levels of police: one for violent crimes and one for other type of crimes?

Will e-policing create two groups composed of younger citizens and police officers on one side and older people and regular officers on the other?

Will online reporting disadvantage those who can’t/don’t use computers compared to those who can and do?

Finally, will the wealthy be in a better position that those that can’t afford information technology tools?

Paradoxically, computer access was not seen to be an issue because it was assumed there would always be other ways to connect with the police. It was thought that the police should maintain multiple paths of communication to ensure that all citizens were served.
Many participants thought that e-policing would make police more effective at delivering services. It was generally expected that online reporting would reduce demand on front-line officers, switchboard and front counter staff. It would allow the police to assign more resources to deal with local issues as they surfaced and free up members for higher priorities\(^6\). They suggested that:

- E-policing offers 24/7 police services for reporting minor crimes (hate crime, theft, vandalism, theft from motor vehicle, stolen bikes, B&E; cottages areas, back yard sheds, etc.) or incidents, as well as access to community information and latest news.
- Police would retrieve the online reports when they had resources available but could access files 24/7. This would allow police to organize some work according to the Internet activities.
- Online forms give concrete information, are easy to read when printed and could save time because the statement was already in electronic form.
- Online reporting would allow the police to compile information better, map problems and see patterns of crime by zones, areas, etc.
- More crime would be reported (especially minor events).
- Although more people are involved in the system through e-policing, there may be a conflict between the increase in information and the availability of human resources to deal with it. The police assume there is a link between technology and effectiveness but this was yet to be proven for participants.

**Privacy issues**

Participants addressed both personal privacy and security of data.

Will individuals give personal information to police over the Internet? Younger participants who used the Internet every day are not afraid to give personal information. Some participants suggested that people are not comfortable giving personal information over the Internet because they fear the consequences. Others did not care at all.

Management and control of data were raised as important issues. What governance model exists for collecting, storing and sharing information obtained from the web? Who is accountable? What are the legal restrictions for the police to use the information given over the Internet?

**Future of IT**

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\(^6\) Whether e-policing will have such an effect remains to be seen. However, past experience from the London Police Force (Canada) showed that system integration (computer dispatch, record management system, radio communication for voice, mobile work stations) allowed a reduction in clerical positions of 33 % (Amoroso, 2000).
In terms of future development, the evolution of technology was described as rapid and irreversible in all spheres of society. Participants used the penetration of Palm Pilot, Blackberry, iPOD and home computers as examples. In the near future they assumed these systems would be integrated and connected.

**Education/self awareness and community policing**

In terms of future development, the evolution of technology was described as rapid and irreversible in all spheres of society. Participants used the penetration of Palm Pilot, Blackberry, iPOD and home computers as examples. In the near future they assumed these systems would be integrated and connected.

Participant police officers noted that 15 years ago almost every front-line activity feedback was written by hand. Now everything is computerized, from laptops in police cars to databanks, etc. The police have evolved. However, contrary to what was expected, time spent writing reports has increased. IT implementation has not created more time for higher priority police activities.

From a police perspective, 12 years ago, no one could have predicted how police work practices would be modified. Before, only police officers were responsible for dispatch, answering emergency calls, etc. Now these tasks are mainly done by civilian workers. How e-policing will help redefine the police remains to be seen.

**Suggestions for success**

- Educate citizens on how to access the Internet.
- Let people know through publicity and advertising that the service is available.
- Educate the public what is best reported online (small events) and when it is better to pick up the phone.

Citizens are willing to contact the police online and expect to see e-policing implemented soon. How much are police responding to this expectation for two-way communications?

**Police Web Site Survey**

We surveyed police web sites to find out and, in particular, whether these sites incorporated online crime reporting. This study analyzed 55 police web sites including 33 from Canada, 8 from the USA, 3 from Europe and 9 from the UK. We surveyed the following:

- How accessible and visible reporting was from the Home page. What links existed for citizens to contact the police (at first view, with no links or clicks of the mouse?) (to report a crime, to report an incident, for an emergency, for any security questions, for general inquiries, for general information etc )?
- What was the status of online crime reporting?
CURRENT POLICE EXPERIENCES WITH THE INTERNET

Computer Bulletin Board

The Searcy Police Departments in Arkansas was the first police department to post a computer bulletin board system as an information gateway to the public. As early as 1995, citizens were able to post questions, leave messages with individual officers or the chief, and even file complaints. The system provides up-to-date information to citizens on new laws, general safety tips and reminders of basic traffic regulations. Documents can be downloaded and printed or viewed online. The system therefore gives police the ability to disseminate information to a wide audience by posting just one message. Citizens pose questions via the bulletin board system; a response is posted when an officer has time to research the concern and draft a reply. The system offers a comfortable distance level that users find reassuring.

E-Lert

E-Lert is an electronic public alert system operated by the Seminole County Sheriff's Office in Florida. Through E-lert, information is sent to subscribers about sex offenders, sexual predators or registered felons who have moved into their neighbourhood. It also offers crime alerts about travelling criminals, people with active warrants or others the public should be aware of. The subscriber and information databases store information by ZIP code.

First Coast Fugitives

The State of Florida and local law enforcement agencies have formed a partnership with a newspaper to catch fugitives. Their web site features fugitives and includes a direct contact number and e-mail address for the detective and agency submitting the information. The site includes a link to participating agencies and links to other sites associated with the Florida Department of Law Enforcement. Anonymous tips have come flooding in by e-mail and phone. The site has been instrumental in involving citizens with the process of apprehending criminals.

Citizens online [www.co.arlington.va.us/police](http://www.co.arlington.va.us/police)

The Arlington County Police Department (Virginia) offers Internet reporting form for such offences as destruction of property, fraud, simple assault, eight types of theft (vehicle licence plate, bicycle, cell phone, etc), as well as threatening or harassing phone calls.

GENERAL COMMENTS

- All police services selected for this survey had a web page, usually separate from the municipal web page. However, not all police services in Canada have web sites. A survey in 2000 of Canadian police departments and law enforcement agencies found that only 54% had one at the time (LeBeuf, et al., 2000).
- The prime objective of web sites surveyed was not always apparent. Sites included:
  - introductions to police services (as in a brochure)
  - current information on services available
  - latest crime news or information about missing persons
  - general news about the region
There is no standard information architecture determining features and structure, or design protocols for presenting information. Devices ranged from icons to underlined hyperlinks and simple listing of information.

**Home Page Content**

One part of this survey evaluated how easy it was to access primary information. Sites that provided such information directly on the Home Page (i.e. without requiring a mouse click) were judged more accessible (see Figure 1).

The following information was available on Canadian Home pages (accessible without a mouse click):

- emergency/911 numbers (15 sites)
- administrative telephone numbers (16 sites)
- what’s new (9 sites)
- web link and/or phone numbers to partners (police board, community resources, etc) (7 sites)
- e-mail link/address (7 sites)
- street address of headquarters and/or district police stations (5 sites)
- national security info line (2 sites)
- criminal record check (2 sites)
- fax number (2 sites)

The United Kingdom has the most developed e-policing program and UK sites tended to be more complex. We took this into consideration when evaluating UK sites, most of which offered extensive information (including online reporting) on subpages. A few provided direct information on Home without a mouse click.

**Figure 1: Police Web Pages/ Contacts Most Common Features**

<table>
<thead>
<tr>
<th>Home Page Features</th>
<th>Canada (35 sites)</th>
<th>Europe (3 sites)</th>
<th>United Kingdom (9 sites)</th>
<th>USA (8 sites)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no mouse click required</td>
<td>no mouse click required</td>
<td>no mouse click required</td>
<td>mouse click required no mouse click required</td>
</tr>
<tr>
<td>Emergency or 911 number</td>
<td>15</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Telephone numbers/ list of units</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>What’s new/local news/recruiting</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address of units</td>
<td>7</td>
<td>3</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

---

8 A police web site can offer more than one possibility; therefore the total number of options does not equal the number of sites.
| Headquarters street address | 7 | 1 | 7 | 2 |
| Mailing address | | | | 1 |
| Web link or phone numbers for partners (police board) | 7 | 4 | 5 |
| E-mail | 7 | 2 | 3 | 6 | 2 |
| Fax number | 5 | | | 1 |
| Police service crime news or missing persons | 4 | | |
| Definition/values | 2 | | 2 |
| National security info line | 2 | | |
| Criminal record check | 2 | | |
| Crime stoppers | | | | 6 |

Figure 1 shows the most common home page features, ranked by most popular down (for Canadian sites). If this is an indication of what police deemed important, then police services consider emergency numbers the most critical information. Other contact information is next most prevalent.

- Despite the fact that web technology offers many ways for police sites to link with partner agencies or the police board, only 20% provided such links.
- Public input could be elicited either by an e-mail link or an online form that could submitted via the web site or printed and submitted by regular mail, fax or in person but this was seldom offered.
- By definition one could expect a police web site to be easy to use, provide quick access to information – in other words to be designed as a tool to deliver up-to-date information to the public and police alike. This was not always the case.
- Some web sites were quite sophisticated, incorporating professional graphic design and thoughtful information architecture, which together facilitated access to information and navigation through the site. These were more likely to include online forms and content-rich pages.

**ELECTRONIC COMMUNICATIONS**

The vast majority of Canadian police web sites visited provided only one-way communication from the police to the public. E-mails and online forms are defined as electronic or two-way communications.
E-mail

E-mail is the most common form of two-way communication between the police and the public. As shown in Figure 2, 17 police services provide at least one e-mail address to contact the police:

- the service (13 sites)
- webmaster
- chief’s office
- media relations
- recruitment
- police board
- investigation units
- library
- comments/questions
- compliments/complaints directly and indirectly

It is not known whether a return e-mail is sent to citizens acknowledging their input. However, our group discussion confirmed that senders do expect such an acknowledgement.

Figure 2: E-mail Links on Police Web sites

<table>
<thead>
<tr>
<th>E-mails to</th>
<th>Canada (35)</th>
<th>Europe (3)</th>
<th>the UK (9)</th>
<th>USA (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The service</td>
<td>13</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Webmaster</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief’s office</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media relation/public affairs</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police board</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investigation unit</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments -questions</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compliments/complaints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submitted directly via web site</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submitted indirectly - online</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>form printed and sent by mail</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Electronic forms

Online forms used on police web sites include:

- online crime reporting
- complaints against the service form available online but sent by regular mail (5)
- compliment from citizens, form available on line (4)
- citizen denunciation (no personal information is required) for traffic violation, prostitution, form available online (2)
- bicycle registry, form available and fill in online (1)
- crime prevention for business, form available and fill in online (1)
- criminal record checks, form available online but need in person presence (1)

A closer look at online crime reporting via the Internet. Shows that

Figure 3: Crime Reporting Online/Submitted Online or Not

<table>
<thead>
<tr>
<th>Online reporting</th>
<th>Canada (35)</th>
<th>Europe (3)</th>
<th>United Kingdom (9)</th>
<th>USA (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor crimes (lost property, vandalism, etc.)</td>
<td>1</td>
<td></td>
<td>portal for all police services</td>
<td>3</td>
</tr>
<tr>
<td>Economic crime- phone buster</td>
<td>3</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Crime reporting/ cyber crime</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compliment form citizens</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Complaint available online not submitted online</td>
<td></td>
<td>3</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Citizen reporting of traffic violations, prostitution (sometimes anonymous)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Questions from citizens</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle registry</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Business registry- crime prevention</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property recording</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Recruiting</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Publications</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>
Online crime reporting is available in Canada at the Vancouver Police Department only which accommodates online reporting of minor crimes, and is rarely available in the USA\(^1\) or in Europe. In the UK, it is more common for police services to offer online crime reporting. It is used to report minor crimes whether individuals are victims or not.

Three Canadian police web sites include e-mail links to PhoneBusters for notification of economic crime (such as phone frauds).

The definition of minor crimes varies by jurisdictions. Some examples are given in Figure 4.

**Figure 4: Types of crimes reported online**

<table>
<thead>
<tr>
<th>Canada</th>
<th>United Kingdom</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

\(^1\) A 2003 New Jersey survey of police web sites in the USA found that none of the 226 web sites provided online crime reporting (Barthe, Lateano, 2006).
Lost items valued at less than $5000
Stolen items valued at less than $5000
Vandalized property or car
Theft from car
Illegal use of personal credit card, bank card or cheques valued at less than $5000

Theft
Criminal damage/vandalism
Theft from a motor vehicle
Hate crimes
Hate incidents
Race crime
Racist incident
Homophobic crime or incident
Transphobic incident
Faith-related incident
Sectarian incident
Disabled incident

Vehicle burglary
Theft
Theft under $500
Theft of services
Theft from auto
Bike theft
Suspicious activity
Traffic violations vandalism/mischief
Emergency at business after business hours (broken windows, open door, etc)
Trespassing
Lost property
Gas drive-off
Phone harassment
Defacing property (graffiti)
By-law violations (sidewalk snow removal, barking dogs, abandoned vehicles)
Drugs, weapons
Identity theft
Economic crime (bad checks, credit card)
Cybercrime

The USA stands out in its inclusion of potentially major crimes such as identity theft, cyber crime and “economic crimes” in online crime reporting. All of these could entail major financial loss for victims. The fact that these crimes can now be reported to some police services could be seen as a first step towards electronic transactions between the police and public. More than that, this suggests that people are now willing and ready to use e-policing options to address all crimes.

**SUMMARY**

Electronic communications between the police and the public are underutilized. Although 48% of Canadian police web sites offer at least one e-mail contact address there is little available above that level. Figures are not more impressive in Europe or in the USA.

Online crime reporting for minor crime is only available on one Canadian police web site. However, economic crime can be reported online, sometimes without providing personal information, through the PhoneBusters or RECO L programs. However, economic crime is not always a “minor crime” from the victim’s viewpoint.

There are a few other applications for e-policing such as online bicycle registration or online registration for crime prevention programs such as Neighbourhood Watch. In some cases, it is possible to “tip off” police to crimes in progress, prostitution or traffic violations.
We conclude from this survey that:

- Police use web sites to communicate with citizens on such topics as
  - Neighbourhood and regional crime data
  - Crime prevention /safety tips/traffic regulation
  - Updates on new statutes/legislation
  - Information on police force (management, ride-a-ongs, policies, etc);
  - Information on the city/general area
  - Hiring processes

- Web communication tends to be one-way from the police to the public.

- Two-way communication is more likely to take the form of “tip-offs” to the police about crime and criminals (e.g. most wanted)

- There are too few studies to conclude whether expanded communication networks have helped police get closer to the diverse communities they serve.

- However, it can be assumed that providing more and better information to the public citizens is – at least – a good public relations strategy.

It remains to evaluate:

- What are the innovative e-policing practices?
- Has e-policing been shown to change daily work practices and linkages with the public?
Online Crime Reporting Case Studies

E-policing through online crime reporting is almost exclusively used in the UK where it is well developed. Very few studies on "e-policing" have been done in North America or elsewhere, which explains the lack of literature and evaluation studies on the subject. For that reason it is rather difficult to identify potential pitfalls, daily concerns or challenges likely to be faced by users, police officers and citizens. The fieldwork done for this study in association with police services in the UK, Canada and the USA shows how online crime reporting really works day-to-day.

Police Electronic Communication Experience in the United Kingdom

The principal driver for the introduction of e-policing in the UK was the modernising government\(^2\) objective:

"By 2005 all services (with exclusions for policy or operational reasons) should be available electronically."

The Police Service was required to plan to provide electronic facilities for the range of communications expected from citizens as an alternative to the traditional face-to-face contact. In addition to the improved accessibility to police services, other factors in the modernizing government agenda are of importance for e-policing in:

- building services around citizen choices;
- providing for social inclusion; and,
- making better use of information

This undertaking required the UK to develop an online strategy and common standards for the 43 police services in England and Wales. The following section describes how online crime reporting was developed and implemented. It will be followed by impact and consequences as well as lessons learned.

PITO, THE ORGANIZATION

Police Information Technology Organization (PITO) is a Non Departmental Public Body (NDPB). PITO operates within a policy framework established by ministers through a management and financial statement, the published corporate business plans, and through guidance on the operation of NDPBs formally issued to it by its sponsor department or other government departments.

PITO's vision is to be a trusted and valued partner in the delivery and operation of information and communications solutions to meet the needs of the police service, its partners and stakeholders. The National Policing Improvement Agency (NPIA) is planned to become operational from 1 April 2007, supporting the police service to improve the way it works across many areas of its business. The NPIA will replace PITO and will take on significant areas of its operations.

THE PORTAL

Development

PITO has worked closely with IT consultants to make its Portal an efficient tool. The Portal is a single point of contact to all forces in the UK. It is interconnected with local web sites and incorporates powerful database and security features to deliver two-way information from police to police, police to public and public to police. Its first application was minor online crime reporting, non-urgent but important crimes or events. It incorporates a powerful database (www.police.uk)

PITO’s objectives for the Portal included:

- Increasing transactions without increasing time required
- Secure information access through the Internet
- Secure message sending
- Increased capacity for sending and receiving messages from the public

The Portal manages and stores the data it receives for all the UK police services, which use it for data storage as well as information search and retrieval. The Portal incorporates extensive security features. Because the Portal is a real-time configurable system it required a costly intruder detection system.

Features

The Portal has three major modules:

1. Message broadcasting (e-mails, telephone, text messages)
2. Notification of minor crimes
3. Intelligence reports

Message broadcasting (e-mails, telephone, text messages)

The Portal is an electronic bridge between the police and the public. Using the police Portal, individual police services can send broadcast messages to community members who have registered and inform or alert them or request information on anything they wish. The expectation is that these people will forward the messages to others in their community, their networks or region. The police can also send messages requesting information from citizens. Citizens can send electronic text messages, digital photos and e-mails to the police. They can also contact the police by telephone or in person.
Notification of minor crimes

Local police web pages can include a connection to the Portal in the form of a linked logo, which enables citizens to report minor crimes or hate crime or incidents online. Experience shows that in addition to specific categories of crime, the public will make use of the Portal to report matters other than those specified. Once a web form is completed, it is processed by the Portal, which redirects the report to the appropriate police service. The report is forwarded by the force to the proper crime unit. Reports are dealt with within two working days and this is indicated on the web page. Citizens know that they should receive a reply within this time. The online crime reporting system generates a tracking or incident number that can be used for insurance purposes.

Connection to the Portal by UK police services is optional and at present there is no cost for doing so. PITO pays for text messaging sent to the Portal, which creates an economy of scale. Incremental costs for the forces include a few days training on how to use the Portal.

Intelligence reports

The Portal has evolved since 2002 from an online crime-reporting tool to an intelligence gathering network. There are legal requirements when writing and using information in messages. PITO operates under the Data Collection Act, which allows PITO to store information sent though the Internet and forward it to police services. However, ownership of information sent by the Portal resides with the police force itself.

The Portal receives a very high quality of information on incidents and crime in general. It includes tools for geographic profiling (following a neighbourhood policing approach) and demographic profiling.

The Suffolk Constabulary experience shows how in less than 12 months, the police and the citizens learned to use the system for their specific needs:

- Four to five broadcast messages are sent every day
- Each message has the potential to reach 10,000 registrants, each of whom on average forwards the information directly or indirectly to 64 others
- A survey of public opinion recipients (by telephone and the Internet) of broadcast messages reveals that the public has high trust and positive opinion of their local police:
  - 99% deem broadcasted messages useful
  - 53% say that the messages make them feel safer
  - 89.5% feel more informed about policing in their area
  - 61% are satisfied with the message system
  - 70% of the population receive messages by e-mail
LESSONS LEARNED

Communications
Online reporting is no longer seen as a big issue. However, communication is. Since its implementation, the level of information traffic has steadily increased, and the portal has changed the public/police relationship by allowing online/real time communication between the police and the public.

The portal/Internet offers yet another vehicle for secure information transfer. It offers:

- Rapid communication
- Constant updating of information
- Many modes of messaging including text/images/voice
- It engages a wide range of the population

Access to computer
Whether people have computers at home or not is not an over-riding issue. There are Internet cafes, computers in public libraries, etc. The portal fits in with the current/future use of technology. The issue is more how the police can manage this relatively new source of information efficiently.

Online reporting
There has been an increase in crime reporting without any publicity campaign to inform the public as to what services the Portal provides. For example, between June 2005 and October 2006 reporting increased from 2000 to 4500 reports monthly. Public access to www.police.uk is only possible directly or by following hyperlinks from visiting local police web sites, which increases contact between local police and the public. It has been estimated by police services using the Portal that each online report received is equivalent to a saving of 30 minutes of police officer time. For the Metropolitan Police Service, which received 1786 web reports in September 2006, this translates into an additional 886 hours (53,180 minutes) of personal hours saved.

Portal daily use - police
The Portal provides a powerful back-end network that can facilitate data management at every level and makes it easy to broadcast secured messages. PITO provides Chief Constables (police chiefs) operational statistics on their force as well as crime statistics, etc. PITO is the only organization to have a complete file of Internet fraud in the UK.

Best uses include:

- The fewer times information is handled, the more efficient the operation; keep the process as simple as possible.
- Use the Portal as a central databank for information.
**Portal daily use - public**

Although the Portal was developed for minor crime reporting, PITO says that people report just about anything online – from major crimes to rumours. What does this say about the Portal?

- It responds to public need to communicate quickly with the police.
- The Internet is a tool used daily for many other uses, why not with the police?
- Online reporting systems should include a “general” category for the public to report unlisted crimes over the Internet.
- From research undertaken by world class consultants on behalf of Warwickshire Police it was found that some minority groups such as young Asians would rather communicate with the Police via Text or E-mail than have face to face contact or visit a police station. Police officers say that people want to talk directly to us but this may be because it was only or most effective option available in the past.
- The portal allows people to report anonymously, especially for religious issues.

**Police services and the Portal**

**Training**

As is the case for any technological adaptation, training and planning are required before implementation. One of the police services observed during our field study was not using the Portal to its full capacity because they did not realize its potential. There had been no strategic planning of any sort and only crime prevention initiatives had been transferred into the Portal.

**Human resources**

Police services need a strategic level steering group dedicated to the full functioning of the Portal. Training should focus on deployment, not technical requirements There are no barriers to actually using the system: it is a business and cultural change rather than a technology change. The Portal allows police to transform traditional ways of working with the public. It facilitates linkages between the police and the community but first requires a change in attitudes and mentality, especially for the police.

**Usage**

The Portal potentially links all police web sites but each police force manages its own website. PITO enables online crime reporting and broadcasts messages with Portal support. The rationale is that the Portal is a highly secure system far beyond what any one force could develop. It is low cost to connect and use.

The UK case study suggested that technology such as Internet portals can connect the police with segments of the community in a two-way communication process. There is now tangible evidence that unprecedented volumes of messages can be delivered by the Portal simultaneously.
Experience shows that Portal broadcasts achieve higher penetration than traditional methods.

Broadcasted messages can deliver specific information to targeted groups such as taxi drivers, pub landlords, nurses, etc.

Surveying shows that broadcast messages are well received by the public.

The Portal gives society many thousands of eyes watching compared to two eyes in a police car.

Organizational perspective

New technologies have to be professionally planned and developed by external IT and business consultants/experts to meet police needs. Once developed, the next challenge is to encourage adoption of e-policing and to make sure that the system is used to its full potential. To achieve the latter requires training, not on technical operation but to demonstrate to police how the system can be adapted to meet their business needs. Otherwise, unstructured implementation and/or operational exploitation could create frustration, incomprehension and rejection of the system.

Although systems like the Portal open the door to change and implementation of new practices, a high-performing system can also be adapted to programs by police officers. For example one force transformed a crime prevention network that required personal meetings into a web-accessible implementation guide for all communities.

The two other police services assessed had a much more limited approach to e-policing. They have focussed primarily on online crime reporting.

Vancouver Police Department (British Columbia)

IMPLEMENTATION

Vancouver Police Department (VPD) has 3166 sworn police officers. VPD serves a population of 600,000 people. VPD implemented its online crime reporting in 2001. In 1999 VPD reviewed service delivery and concluded that Internet reporting would be ideal for public reporting of minor property offences and non-emergency incidents. VPD wanted to reduce the telephone and walk-in wait times. They were experiencing significant phone queues for the non-emergency line and needed alternatives.

VPD had already enhanced its in-house online reporting system; expanding it to the public raised the following considerations:

- Whether data was compatible with records management system (RMS) or conversion to RMS
- Whether/how files should be structured like regular reports
How to incorporate online reports with workflow
Architecture allowing servers to talk and process information
How to secure the site
Where to locate data
What types of crimes should be reportable online

CRIMES TO REPORT
An icon on the VPD web site connects the users to an online crime reporting form. The public can report the following events online:
- Lost items valued at less than $5000
- Stolen items valued at less than $5000
- Vandalized property or car
- Theft from car
- Illegal use of personal credit card, bank card or cheques valued at less than $5000

CURRENT SITUATION
The online crime-reporting system did not prove to be demanding or time-consuming for the staff dealing with the submitted forms. No additional staffing was required to deal with service calls from the public, only a simple reorganization of schedule.

The web page explains the six-step process required to fill out and submit the form, the time required and a list of reportable crimes. Senders are promised a response within five working days; most (62%) are notified the same day.

The original complaint form generates an XML file, which is sent to the Vancouver City server, then rerouted to VPD. Online submissions are reviewed to ensure that they comply with requirements (for example, that they address an online reportable crime). The report includes a narrative explaining what happened. Review takes three to six minutes and 80 to 85% of reports require little or no modification. Once the review is complete, the sender is e-mailed an incident number. Invalid or declined reports (about 10%) receive no number. Valid reports are automatically transferred into the RMS via E-Comm, a databank system that serves all of Greater Vancouver. The public can query the status of his/her complaint using the incident number.

VPD does not accept anonymous reports; all submissions require a contact name, address and e-mail address for follow-up.

IDENTIFIED BENEFITS
The VPD crime-reporting system is unadvertised and the VPD has not conducted any detailed client satisfaction surveys.
- The system generates the incident number; there is no manual data entry into RMS.
An internal survey shows when most reports are submitted:

- In 2006, January led with more than 260 reports, followed by July 253 reports, October 213 reports and November 176 reports.

- In November 2006 most reports were made on Tuesdays (33), Mondays (32) and Fridays (32)

- Pick time is around 2 pm the same month

- It takes 11 to 17 minutes to fill out a report.

**Tracy Police Department (California)**

**CURRENT SITUATION**

The Tracy Police Department (TPD) has 79 sworn police officers. TPD serves a population of 78,000 people from whom a large percentage commute for work to San Francisco. TPD started offering online crime reporting in 2005. TPD wanted to offer a service that would be convenient for the public (easy to report from home, no cost, no time lost at the police station), which would meet their needs (many residents commute to San Francisco for work) and would be inexpensive to implement.

TPD worked with a private company that had developed an online crime reporting system. They looked at how they could integrate this system into their IT system. The online crime reporting system operates in an ASP environment, connected to an independent server that receives the information sent online, processes the information and forwards it to the police server on a secure connection. Tracy PD pays a set annual fee, which makes it easy to budget. The security and system updating are the supplier’s responsibility.

Staff review the reports received and if they are valid return a tracking number to the sender via the Internet. Data is sent to RMS and stored. Report processing takes three to seven minutes. If the report is declined or the information is deemed inaccurate (does the crime meet the criteria, is the person from the jurisdiction, etc), the reply message informs the sender that it will not be processed until corrected. Online reporting has never been viewed as creating more work; no staff have been added to process online reporting.
Online reporters receive a temporary number for insurance purposes that is different than the police incident numbers. Responses are promised within 24 hours; normal practice is that the reply is sent within minutes of reviewing the report.

TPD did not advertise the system when it was launched in 2005. Their consultant advised TPD to implement the system, then allow staff a few months for orientation. That way the staff and the police department could manage any impact at their own pace. It turned out that the system did not produce any significant changes for staff dealing with calls from the public. Three months after the system was available, TPD advised local newspapers, which published articles on the system.

CRIMES TO REPORT

There is an icon on the police web page that clearly indicates the following:

*Online Policing: You may now submit an online report by following the link on the right side of this page, or in the link.*

The link connects the user to a form that invites the public to submit reports for crimes that are commonly not investigated, including:

- Lost property
- Identity theft
- Theft
- Vehicle burglary
- Harassing phone calls
- Vandalism

These crimes are generally not investigated.

Users receive online assistance to help write reports. Reports can be submitted in many different languages; the system uses automatic translation to render the report in English.

TPD estimates that each online form received saves an estimated US$40 (no dispatch, no trips to the field, no phone calls, no duplication of work). Online reporting accounts for about 10% of total known crimes. According to TPD statistics, this percentage is slowly increasing. In October 2006, TPD received 72 reports.

The service provider reports monthly to TPD including when (time of day, day of week) and in which language the form was submitted. It limits the number of reports per day that can be sent from one IP address. This helps control spam and hackers.

TPD has not yet done an internal survey. Currently its online crime reporting system is not much more than a database. In the future, TPD envisions the web page becoming more interactive, permitting citizens to ask question about crime prevention or about crime trends where they live and receiving targeted responses.
LESSONS LEARNED

TPD sees online crime reporting as an easy process for citizens to use and easily integrated with their own workflow:

- Convenient for the public and the police
- Increasingly popular
- Saves time and money for both the police and the public

Cost incurred by the system are low and negligible when compare with the total police budget.

The development, implementation and operation of the system have had no significant impact on staff dealing with front-line calls. Thanks to the online reporting system, TPD now has records of vandalism done in city parks. Previously, there was no systematic way to record and know about these events. This has helped focus crime prevention strategies on problem areas.

They note that the online crime form must be easy to access for the general public from the police web page.
Conclusion

E-policing is not about technical issues; it is more about cultural changes within police organizations. Are organizations ready to work with citizens with electronic tools?

Value and Definition

For the police

- E-policing is electronic collection, storage and sharing of complaints and information from citizens.
- E-policing includes requesting information/tips on crime/terrorism etc. from the public and could focus on specific communities such as ethnic groups or certain occupations to obtain digital pictures, text messages, general comments, responses to surveys etc. Therefore, e-policing implies processing information and storing the information.
- E-policing allows the police to send out its message directly to citizens and communities without having to contact the media – it is direct communication.
- It could become for a surveillance police tool through tracking incoming addresses and callers.

For citizens

- E-policing makes possible electronic requests for information and electronic responses.
- E-policing can empower citizens within their communities.
- E-policing allows the public to report crimes online.

Issues Related to Process

- Users and decision makers must be involved in development and planning this still-innovative approach to police-public communications.

Other issues to be addressed before adopting online crime reporting include:

- Ease of access to forms developed for the police
- Types of reportable crimes and incidents
- Penalties for false reports
- Security of the reporting system
- Acknowledgement

Problems that may surface with online crime reporting include:

- Crimes reported are not from the jurisdiction
- Police may have to rewrite reports coming from the web
- False reporting
Challenges

- To collect and store data on minor crimes that previously were unreported and unrecorded.
- The UK experience shows that e-policing can be an efficient two-way communication process. However, it must accommodate all new forms of electronic messages, such as text messaging or digital photos sent from cell phones.

Benefits

Online crime reporting offers benefits for both communities and the police. As described in the literature but seen differently during field work, e-policing is reputed to provide:

- Better access to police officers
- Less clerical work or if not less clerical work, then a different workflow
- No work duplication

For the community

- There is more choice and convenience for the public; they can access interactive services in a standard way.
- Ability to report minor crimes or incidents without visiting a police station; people can choose when to report or to exit the system at any time without repercussion.
- Completed forms can be printed from one’s own computer and keep on file. At Vancouver PD and Tracy PD there is a desktop at the police station for citizens to complete and print reports.
- It is claimed that e-policing offers rural or remote areas better access to the police. We could not measure this in the departments visited. This would require further evaluation in the future work.

For the police

- Police can retrieve reports when resources are available.
- The police can better manage the demand: filling police reports via the Internet can be done without having to assign a patrol officer to the report (Smith, 2004).
- The Internet provides opportunities to deliver different and enhanced police services in a convenient and cost-effective way. An online capability should not merely replicate existing police programs and services;
- E-policing extends 24/7 police services to the community.
- It is possible to deploy a virtual police station in crime spots or remote areas.
- E-policing frees police time, giving forces more freedom in how resources are deployed.
- E-policing facilitates linkages with local organizations and partners to help build relationships and create a stronger community bonds.
It is suggested that increasing Internet service to rural and remote environments could reduce the demands on staff and provide more freedom for deployment of resources to deal with local issues, as it is in Scotland (BBC News, 2005), however this remain to be evaluated.

**Police Role in the Information Society**

In a world of Internet communication and evolving communication technologies the public’s reach and demand for connectivity is extensive. It remains for police officers and police organizations to mind the gap between everyday services and the needs and expectations of communities where they work.

Bicycle theft, vandalism, theft from shed and hate crimes are often left unattended by front-line patrol officers. E-policing may imply, as the UK experience showed, an increase in crime reporting. The more crime is reported, the more current information/intelligence police have about the level of crime in their community. Minor crimes become less hidden, allowing crime prevention programs to be adapted to meet the needs and problems of individual neighbourhoods instead of taking a “one size fits all” approach.

Are officers isolated from petty events/crimes that the public deem important because police focus on major level 1 and level 2 crimes? Efficiency in police work is gained when police officers have the time and capacity to concentrate on major events. At the same time, it may limit overall communication between the police and the public.

Most discussion group participants no longer expected to meet a police officer personally for every problem, social issue or petty crime in the community (unless it involved a major crime). Foremost, they wanted their problems dealt with quickly and successfully. They saw the public being increasingly empowered to deal with petty crimes or related events themselves. They placed value on the ability to report and resolve problems via the Internet.

E-reporting is meant to be one more easy access to the police. However, access to the Internet or other electronic communications (including the capacity to use these tools) by some elderly people, or those with mental disabilities, the poor and the computer illiterate concerned some participants. These groups may be hard to reach but nonetheless have special needs and are a concern for social services, social institutions and the police. Apart from this concern, the majority of discussion group participants expected to be able to communicate with the police electronically and be answered in the same way by 2007.
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