Next-generation mobile technology for more effective policing

It is redefining the way officers use information; making them more effective in fighting crime and serving the public.
REDEFINING THE ROLE OF MOBILE TECHNOLOGY

In today’s world, there is a growing expectation from both a citizen and employee perspective that everything can “be mobile”.

On average, people look at their phones once every 6½ minutes\(^1\)

There are over almost
1 billion smartphone users worldwide\(^2\)
1 in 4 people worldwide use social networks\(^3\)

Over 268 billion mobile apps are expected to be downloaded by 2017\(^4\)
The use of mobile technology in a policing context is not new. From the first officer radios to the current mobile data terminals and fingerprint devices, police services continue to explore how technology can make them safer and more effective. The future of mobile technology in policing is not about giving the already-mobile officers access to information in the same format that they could obtain it in the station—such as being read the result of system search conducted in the station over the radio—it is about empowering police officers by enabling real-time, two-way access to information of better quality and in multiple formats (for example, photo, voice, text, and video). The innovative use of mobile technology empowers officers, increases their security, engages citizens, optimizes ways of working, and enables analytical outputs to be delivered directly to the officer. This improves the service offered and provides new ways of collaboration—all of which ensure the police service has the capability to provide a holistic “joined-up” service to the public now and into the future.5

This point of view outlines the vision for the next generation of mobile technology in policing and is based on the findings of interviews conducted by Accenture with police services around the world, and draws on our experience of delivering mobile technology to many other industries globally. Our key findings are as follows:

**THERE’S NO SHORTAGE OF AMBITION**

Officers and police leaders see the value in using and embracing mobile technology for policing. Mobile technology projects, initiatives and strategies already exist within many police services and there is a visible desire to improve the efficiency and effectiveness of officers through use of this technology; the challenge is in how best to do it.

**OFFICERS AND INNOVATORS ARE KEY**

Success relies on the partnership of technology innovators and the practical reality of the officers on the ground.

- Innovating to do things differently: Police services need to push boundaries with pioneering ideas while being practical and focused at the same time, providing desired policing capabilities through devices that are intuitive to use and robust enough for the job.
- The “art of the possible”: Police services cannot expect to realize the total value of change from implementing technology alone. Along with pioneering technology initiatives, the police need to fundamentally change their business processes and be prepared to “think differently” to realize the desired benefits of using mobile technology.

**IT’S TIME TO BE BRAVE**

Police services are faced with significant challenges when pursuing ambitious technology strategies including: data security risks, budgetary constraints, technical limitations, specific hardware needs and a number of commercial restrictions. Police services have recognized that now is the time to be brave; to achieve the step-change in performance they must move on from existing technology and ways of working, and be prepared to confront these challenges.
LIVING IN A MOBILE WORLD

The use of mobile technology is growing—and fast.

More people have access to a mobile phone than running water.

In October 2012, smartphone users had exceeded 1 billion.

35% of people use a smartphone app before they get out of bed.

United Kingdom Twitter users outnumber newspaper readers by 1 million.
All of the police services interviewed by Accenture have been embracing varying forms of mobile technology for years; from police radios and mobile devices for issuing traffic tickets to fingerprint identification devices, automated number plate recognition technology and mobile data terminals with access to secure information systems.

The majority of police officers now own and use smartphones in their personal lives (for photography, banking, train timetables, news, social media and so on) and therefore expect the same level of technology and access to information when at work. For example, a police inspector from London’s Metropolitan Police Service commented that, when completing a specific police operation, he was able to verify that all the actions required by a specific protocol had been conducted by searching for the legislation on the Internet through a personal smartphone while at the scene. He commented: “I should be able to do that through a police-issued device; it’s publicly available information and it’s so easy to do. If I hadn’t used my phone, I would have had to return to the station.”

“It’s a game of cops and robbers, but the robbers have all the latest technology.” A UK Police Officer

Officers also expressed that they were often at a disadvantage when compared with the criminal fraternity with respect to access and use of technology, such as the use of secure messaging services to communicate and coordinate criminal activities, general disorder and to mobilize groups against the police, as seen during the London riots of 2011.10

In the commercial world, mobile technology has been proven to improve speed, quality and access to information. Businesses and citizens are using mobile technology to save money and many businesses issue employees with laptops or other mobile devices to enable “remote working” from home, client locations or on the move, increasing productivity and reducing demand on office space. Mobile technology can also help to improve customer satisfaction; citizens can now use their phones to order shopping, browse catalogues and book restaurants at their convenience. An Accenture survey illustrated how police services worldwide have a unique opportunity to engage with citizens using digital channels, with 71 percent of citizens saying that the use of digital channels would fill the communications gap between the police and the public.11 Most of these digital channels are also now mobile channels.

Police services globally must recognize these advances in mobile technology and seize the opportunities they bring to increase officer effectiveness and security, improve citizen satisfaction and drive down costs.
NO SHORTAGE OF AMBITION

Police services globally have shown their ambition to use mobile technology effectively, however the potential exists to go much further than has currently been attempted.

The following examples from around the world show the variety of initiatives that have been undertaken by police services in recent years:

• In Portugal, “Sistema de Contra-ordenações de Trânsito” (SCoT), is an integrated information system that supports traffic infringement processes for police services, namely, registering and issuing notices, collecting fines and associated functions.

• Redlands Police Department in the United States have issued their officers with smartphones and tablets which allow the officers to quickly record search and share data, send and receive e-mails, and access satellite mapping and the Internet, as well as a number of bespoke apps that include searchable editions of the California Penal Code and California Vehicle Code. The City of Redlands has also released a number of apps allowing citizens to report incidents such as illegal dumping and graffiti.

• The Italian Carabinieri have implemented in-car terminals that allow officers to control in-car systems, and share data, pictures and video in real-time. The officers can also remotely search databases through voice-commands or via a touch-screen interface.

• In the UK a number of initiatives have been launched. The Hampshire Constabulary in the United Kingdom deployed 53 mobile fingerprint devices across the county with 244 trained users. Results from Hampshire demonstrate that the devices prevented arrests on one in every six transactions, each prevented arrest saving three hours of officers’ time. Hampshire has also trialed “Smartform” electronic witness statements and has recently introduced a performance management capability to assist the constabulary in adopting the change. The London Metropolitan Police Service installed mobile data terminals in vehicles and is piloting the use of Personal Digital Assistants (PDA’s) for response, traffic and neighborhood teams.

• The New Zealand Police is developing custom mobile devices, including smartphones and tablets, to be deployed to more than 6,000 frontline officers with anticipated time savings of 30 minutes per shift per officer. Tablets will be issued to those officers whose role involves more complex data entry. Officers will be able to access the Police National Intelligence Application, view and update events, and to track their location and that of other officers.
Despite this ambition to pursue mobile technology solutions, the overall success of these initiatives remains limited and the full range of benefits offered by the capabilities of modern technology are yet to be fully realized by police services.

The majority of police services are currently ill-prepared to adopt or keep pace with rapid advances in mobile technologies. Mobile technology initiatives are piece-meal and based around “point” solutions. This approach is perpetuated by the use of traditional procurement processes, single-provider network coverage, concerns over device security, and the challenges of integrating with legacy applications. As a result, officers often have multiple devices for various tasks, meaning increased costs, high levels of maintenance and a significant training commitment. Speaking about the limitations of current technology at the Metropolitan Police Service a senior officer commented that “devices have been too single issue, which becomes a fraction of the work requirements of officers on the street. It needs to be multi-dimensional!”

Even more fundamentally, police services globally have not given enough consideration to the wider business and process changes required for the full benefits of mobile technology to be realized. The United Kingdom’s Public Accounts Committee report revealed past mobile police programs have achieved “woeful” savings and poor device delivery with the UK National Audit Office signposting the reason for this as being that previous mobile programs have focused on disseminating mobile devices rather than how to integrate mobile technology through effective change programs.

For deployed officers, if you get the mobile platform right you reduce the need for them to be in the station, you increase their visibility in communities which is a strategic imperative for policing.

A Detective Chief Superintendent, Metropolitan Police Service (London, UK)
INNOVATING TO DO THINGS DIFFERENTLY: THE “ART OF THE POSSIBLE”

“All I want is excellent mobile coverage and access to all the information I need, without even knowing that I need it!”
Police Constable, Metropolitan Police Service (London, UK).

As bold as this statement seems, this desire fits with a vision for the future of mobile technology within policing and is neither unrealistic nor unreasonable. Mobile technology has the potential to alter the way police officers and staff work by changing the way that they are able to access and use information. The next generation of mobile technology in policing must deliver new capabilities and ways of working to police officers, enabling them to deliver improved outcomes to the public they serve.

Mobile technology also delivers benefits for the citizen. In a pulse survey conducted by Accenture, 88 percent of the public believe they have an important role to play in preventing crime. The potential for mobile technology to simplify interaction and to improve the experience of citizens, victims and witnesses is widely recognized as a key benefit; a view confirmed by an officer from Guardia Civil in Spain who commented that “mobile technology can help us offer a more personal experience to the public.”

Consequently, the “art of the possible” vision for mobile technology in policing must also enable the public to use mobile technology to communicate with the police through “police apps”—allowing them to report crimes, to submit evidence, record lost property, create victim or witness statements or simply allow the public to chat to, “follow” and hear from their local policing team real time.

MOBILE TECHNOLOGY CAPABILITIES
- Access to data and information from any location
- Real-time, targeted analytics and intelligence
- Real-time evidence capture
- Secure data transfer
- Real-time communication
- Real-time collaboration
- Location and activity tracking
- Real-time management information

OUTCOMES
- Increased citizen satisfaction
- Improved performance (e.g. increased detections, reduced crime)
- Increased officer safety
- Improved decision-making – intelligence and information available “then and there”
- Improved data quality and speed of capture with reduced duplication of effort
To bring this vision to life, let us imagine some policing situations which might be improved using a mobility solution...

An officer is deployed to a potential house burglary. En route to the call, the officer is sent the required information and context on their personal issue device and, while driving, receives information of any recent relevant incidents in the neighborhood, calls from the house, or previous law enforcement visits. The officer is also informed of where all other officers are positioned in the surrounding area, should she need back up or help. The officer arrives at the house and takes statements from the witnesses and photos of the scene. The officer enters all this information into their mobile device and, by the time they have returned to their car, the crime report and victim/witness statements have been filed and descriptions, methods, and pictures are being matched against information in existing databases to identify leads on which the officer can act immediately.

While out shopping, Julie, an older citizen has her handbag stolen and is injured in the process. The police arrive and immediately take down descriptions of the suspect, photos of her black eye and statements from witnesses on their mobile devices. From this information, they are able to pull up images of likely perpetrators to show Julie, who subsequently identifies the suspect and signs a statement. All case file notes go straight to the Prosecution Service. Artificial intelligence linked to automatic facial recognition technology locates the suspect on a bus, while intelligence analytics identifies likely locations of the suspect and informs the officers. The suspect is caught and, once back in the station, can be booked into custody within five minutes, as much of the information has already been remotely recorded, allowing the court session to be automatically scheduled.

This vision is achievable and elements are already being realized successfully in other industries and areas of the public sector.
ART OF THE POSSIBLE

With today’s technology the front-line officer could receive artificial intelligence feeds of real-time information pushed directly to the relevant mobile devices.

Incident, event, person and location information can be updated, an officer’s workload can be managed and crime scene information be recorded instantly. In this way, investigations can progress without delay, improving the chances of detection and conviction. Mobile technology is not for the street alone, apps and mobile devices can help manage tasks in the station, augment the custody suite system by mobilizing detainee checks, and aid property and evidence management in both property stores and forensic labs.

Key to this vision is the personalized, individual, single device that officers use for a given role. Custody officers may require a tablet device to manage prisoners; response officers may require durable hand-held mobile devices for crime reports, witness statements and intelligence, while traffic officers need ticket-printing devices. All of these capabilities are available through apps specifically designed for a range of police mobile devices from a “police app store.” The store provides apps to the police and relevant agencies allowing the officer to access the specific apps they need for their current role.

DEDICATED POLICE APP STORE

Example Apps

- Secure dedicated police app store
- Officers can select the best apps for their role
- Opportunities to encourage innovation by officers and staff
- Updates easily pushed across all devices
- Single user-interface across apps, reducing training requirement

CORE POLICING APPLICATIONS AND DATABASES

INTEGRATION LAYER

SECURE INFRASTRUCTURE

- Devices and communication paths protected with leading security techniques
- Agile security policy
- Dedicated and prioritized local and national guidelines
- Risk assessments
- Awareness and compliance training for all users

NETWORK COVERAGE

- Reliable service
- Secure transmissions
- Cross network capability:
  - Select the best network available
  - Fast data speeds (3G/4G)
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**INTELLIGENCE UPDATES**
- CRIME REPORT
- FINGERPRINT SCANNER
- WORK BASKET
- MAPS & HOTSPOTS
- PENALTY NOTICE

**INTEGRATION LAYER**

**FORCE LEADERSHIP**
- Clear mobility strategy with senior backing
- Aligned ICT and mobility strategies
- Flexible operating model
- Performance management
- Real-time case display
- Real-time management information
- Intrusive supervision

**COMMAND AND CONTROL**
- Increased operational oversight
- Presence/beat footprint, able to map officer presence to incident
- Fully integrated with command and control system.
- Stream CCTV to officers.
- Intuitive operation

**TASKING**
- Real-time tasking
- Complete intelligence picture
- Enables a flexible response to events

**OFFICERS AND STAFF**

**NEIGHBORHOOD**
- I can book appointments with community members
- I can easily contact and collaborate with other community groups
- I’m informed about events in the community as they happen
- I can quickly report local information I gather back to the force

**RESPONSE**
- I know the situation I’m walking into and receive updates as things develop
- I can perform my own searches of our intelligence databases
- I can complete my incident reports in the field
- I can capture and share photos and videos
- I know where my colleagues are at any one time

**SPECIALIST**
- I can access and view maps, street-level images, and floor plans
- I can quickly design and share operational plans between teams
- I can remotely capture incident or operational details

**DETECTIVE**
- I can manage investigations and investigation plans in the field
- I can access and search intelligence databases when necessary
- I can capture photos and video in the field
- I can quickly share information with team members
- I know the locations of all nearby CCTV cameras

**CITIZENS**
- Officers able to spend more time in the community
- Access to mobile apps to offer new ways to interact with the police
- Citizens have a choice over how they wish to engage with the police
- Citizens are kept better informed about their local area
- Victims can track the status of the case at a time and place that suits them

“I like knowing what the police are doing where I live.”

“The police use the same technology as I do.”

“I feel safe seeing the officers on the street.”

“We can easily raise our concerns with the police.”

“I get updates on my case when and where it suits me.”

“The officers are well informed and know what’s going on in my community.”
ACHIEVING THE VISION

“I sense that the police service is heading for a change. The time to be brave is now.”
Detective Chief Superintendent, Metropolitan Police Service (London, UK)

Police services recognize that it is time to leap-frog forwards from their existing technology capabilities to enable their officers to work more effectively with mobile technologies. For most police services, the benefits mobile technology can offer are clear, but understanding where to begin and how to overcome the barriers is not straightforward. Mobile technology strategies need to be innovative, imaginative, driven by the needs of police officers and staff, and they need to change business processes and deliver better outcomes.

To implement this next generation of mobile technology in policing successfully, services must first define their own clearly defined vision of what they aim to achieve. To do this successfully and to maximize the outcomes police services must:

ASSESS AND DEFINE A STRATEGY.
Define the target vision for mobile technology without conceding to the constraints of the current technology landscape. The vision should be about the “functionality” needed by the officers, consider the “art of the possible” and be demanding in terms of desired outcomes, rather than focus only on what is already being achieved.

LISTEN TO OFFICERS AND USE YOUR IMAGINATION.
The first step toward a “user-driven” mobile technology transformation is to understand what the officers need, what they want and what they expect from mobile technology. Mobility initiatives need to be developed for the officers, by the officers, in partnership with innovators that can deliver the technology.

BE PREPARED TO THINK DIFFERENTLY.
Mobile technology is different to traditional information, communications and technology (ICT) implementation and demands a change in approach to be successful. This includes bold procurement decision; different ways of working, reassessing buying behaviors and creative approaches to working with suppliers and innovators.
Above all, the priority is to understand the holistic “outcomes-based vision” to be achieved, knowing which capabilities you want to be “mobile”. Start with the end state in mind, and then understand how this can be delivered; with each “capability” being released to the users, incremental benefits can be achieved. This approach differs from that used on previous implementations where the requirements, scope, and phases of delivery and implementation of the initiatives have been locked down at the start of the process, making it inflexible and causing significant time, effort and budget to be expended before any benefits are realized. In contrast, this approach provides a flexible mechanism for delivery, where, once the target vision is defined and delivery of the mobile capability has started, the service can review and evolve the phases and the development to meet the changing needs of the officers and incorporate feedback from the users (both officers and the general public).

**EXAMPLE ITERATIVE DELIVERY ROADMAP**

The above diagram illustrates how the iterative approach enables the desired end-state to be achieved whilst balancing operational priorities and providing flexibility to react to changes in operational requirements or to incorporate new advances in technology.
It is time to make the changes that can have the greatest impact in terms of the desired outcomes; perhaps to adopt risk-based security models, to lobby governing bodies to mandate cross-network access for the emergency services or to develop joint innovation in mobile technology with suppliers. Achieving these outcomes means moving away from simply digitizing an officer’s notebook to promoting the next generation of mobile policing capabilities through automated and real-time analytics. Focusing on desired outcomes rather than every specific technical requirement can enable improved citizen satisfaction, increased productivity, reduced crime and the ability to catch more criminals.

A number of recurring critical success factors have been identified from those police services that have successfully implemented mobile technology:

**Champion**
A champion is needed to define the vision, build a collaborative strategy and to influence buying behaviors. Many police services are hesitant to make the bold decisions that can, ultimately, produce significant performance benefits and yield savings.

**Process driven technology**
Technology should not be adapted to fit existing processes; instead, the processes should be reviewed with the objective of deriving the most from technology.

**User driven change**
A centralized policing perspective is required; where innovation and experience can be shared to increase the pace of change. This group would be able to address and advise on specific technology and business process challenges such as data security risks.

**Consistent Framework**
It is all too easy to hand-pick a range of point solutions that share very little in common. A carefully designed framework of governance and common architectural components addresses this without restricting your ability to work with vendors, and by ensuring consistency and cohesion between apps and systems increases adoption rates and long-term operational benefits.

**Connectivity is critical to confidence**
Cross-network access is vital; the agility to use the most appropriate mobile network at the time will give officers confidence in their devices, and their ability to use them where and when they need.

**Clear and comprehensible benefits**
Structured performance management frameworks need to be in place to assess and understand business impact, aid the correct use of devices and help maximize investment costs.

“I foresee stuff that isn’t even imaginable today. Think back 150 years ago compared to what we have now. Today the speed of development is unprecedented and all kinds of new developments keep coming up.”
Sheriff, Lamoille Country Sheriff Dept. (Vermont, USA)
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