# TAKING DOWN IN EVIDENCE – FASTER AND SMARTER

WA Police implement new forensics system – with help from CSC

CSC
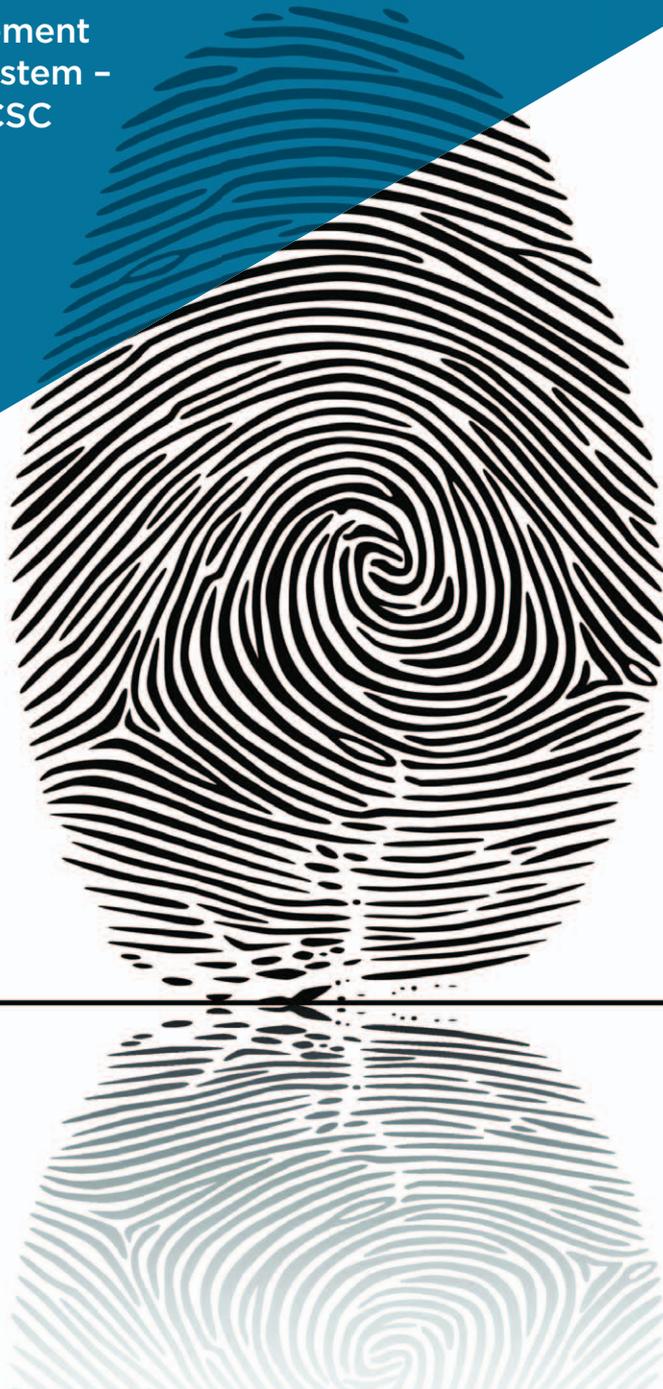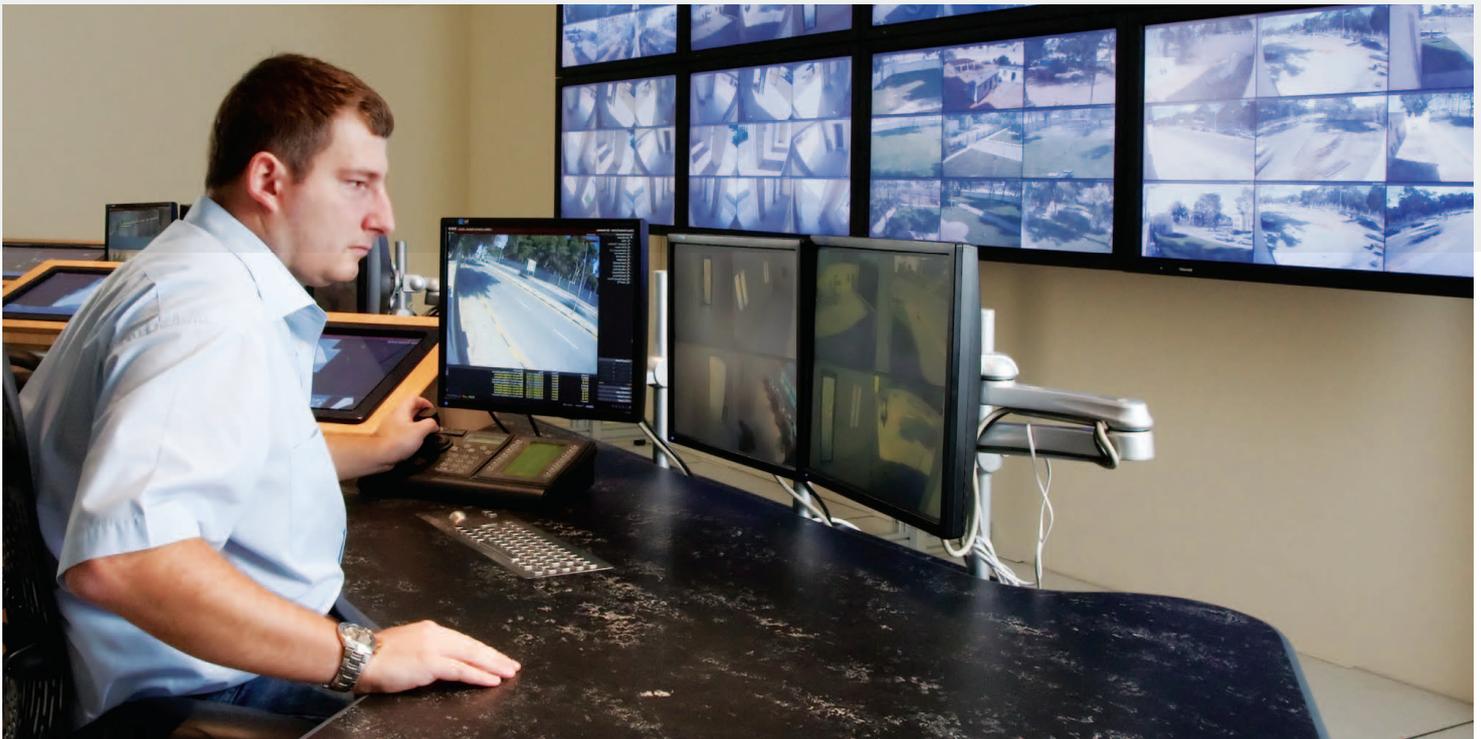
WESTERN AUSTRALIA POLICE (WA POLICE) IS RESPONSIBLE FOR THE LARGEST SINGLE POLICE JURISDICTION IN THE WORLD. WITH A MISSION TO ENHANCE THE QUALITY OF LIFE OF RESIDENTS BY PROVIDING SAFETY AND SECURITY, WA POLICE STRIVES TO ACHIEVE THIS BY HAVING OFFICERS IN THE RIGHT PLACE, AT THE RIGHT TIME, TAKING THE RIGHT ACTIONS.

Worldwide advances in Forensic Science have meant it is an increasingly important and accessible tool available to police investigations. Wherever possible WA police utilise such technology to improve their response to and detection of crime. A WA Police Forensic Review (2006) identified the need for significant improvements to forensic exhibit management and tracking. In addition a number of high profile cases highlighted shortcomings with the management of forensic data.

As a result a business case was prepared outlining a number of options (re-use, buy, build system, etc) and provided comment on indicative costs and benefits. WA Police decided the Queensland Police Forensic Register System was the best solution for their business needs.

It was at this point CSC was engaged to assist in implementing essential IT solutions so that the Queensland system could be successfully integrated within WA Police.

THE CHALLENGE

Forensic science is a scientific method of gathering and examining evidence. Crimes are solved with the use of pathological examinations that gather fingerprints, palm prints, footprints, tooth bite prints, blood, hair and fibre samples. Handwriting and typewriting samples are studied, including all ink, paper, and typography. Ballistics techniques are used to identify weapons used by criminals.

Forensics is predominantly used by two different sections within WA Police:

- Major crime unit – covering homicides, violence and disaster victim identification

- Volume crime – covering burglaries, car theft, minor assaults – with fingerprints, DNA, ballistics and pathology.

Currently most forensic data is paper-based or stored in unit specific IT systems that are not readily interactive with other forensic units and often not supported within WA Police ICT arrangements.

This means that forensics officers spend two to three hours in the office at the end of the day recording the data they collected out at the crime scene. Police investigators are delayed in their investigation until they can get access to the evidence data. There is no streamlined way for the various teams to share their findings.

Whilst WA Police had recognised the need for applying more up to date technology to this process, and had started investigation IT solutions over five years ago, it was the courts that provided momentum to the project and raised its profile. The courts were critical of the process due to its potential for losing or delaying evidence with the resultant perception of a lack of professionalism.

THE APPROACH AND TIMELINE

WA Police initially considered a home grown approach, themselves updating the existing systems. However, they were interested in the system developed and used by the Queensland Police because they had seen it demonstrated a number of times and it:

- Appeared to provide most of the functionality lacking in existing systems

- Appeared to align more closely with WA Police business processes and operating procedures than systems in use by other jurisdictions, and other software systems they had considered.

- It supported the National Association of Testing Authorities (NATA) compliance criteria WA Police was aiming for. Queensland Police was already compliant and had built some functions into the system which helped maintain compliance.

- Agreement between our nation's police jurisdictions meant that Queensland Police supplied the system to WA Police effectively without cost and no ongoing license fee.

This led to an assessment of the system, which identified strong alignment to WA Police needs resulting in the decision to acquire the software and adapt it to suit local conditions and policing business processes. This customisation and implementation phase will take 12 months having commenced early September 2010. A pilot project initiated in March 2011 has limited release functionality. The new system is planned to go into full production in September 2011.

THE SOLUTION

The solution will have a large mobile component. Forensic officers in the field will have ruggedised tablet PCs so they are tough enough to withstand frontline policing requirements including resistance to chemicals, water and dust.

The tablets will have 3G connectivity, which enable the forensics officers to go into the crime scene, collect evidence and immediately relay it back to the appropriate people for further investigation. Specially designed bar codes will be attached to evidence to enable better identification and tracking of exhibits ensuring handling processes are accurately recorded for continuity of evidence. Evidence such as photographs, fingerprints and documents can be uploaded at a crime scene and made immediately available to other authorised personnel within WA Police.

THE TEAM

Working alongside WA Police IT Projects Division staff, a team of ten CSC IT specialists continue to run the project throughout the project lifecycle with:

Architecture, Analysis and Design:
Establishing the system architecture (application and technology), gathering and analysing business requirements, and designing system functions

Customising the software for WA local conditions and WA Police processes:
Transforming the software from being QLD centric to WA Police centric, and customising and enhancing it to meet WA Police business needs

Testing the system:
Leading the system, integration, user acceptance and performance testing of the system to maintain high quality delivery

Implementing the new system:
Preparing the system, and complying with WA Police IT governance processes for implementation into the live environment for use by officers

Integration:
Integrating the system with WA Police's Enterprise Service Bus (ESB) to link into other major Police IT systems such as the Incident Management System (IMS)

Providing training:
Working with the existing WA Police training officers to develop training materials and roll them out to end users

Supporting the Pilot:
Providing application support to the first small group of officers who will be the initial users of the system

Project management:
Providing PRINCE2 project management services and complying with WA Police governance structure for IT projects

The joint team use the CSC Catalyst℠ agile methodology for the development. They leverage CSC's experience implementing mobility solutions for mining companies in WA and overseas.

THE BENEFITS

Increased compliance with court disclosure and trial requirements

- Full disclosure of exhibits and forensic case information for legal counsel

- Fewer delays resulting in deferred trial cases

- Increases in the ability to meet reporting due dates

- Improved operational efficiencies resulting in greater public confidence and public perception of police

The Forensic Register will provide legal representatives full disclosure of exhibits and forensic case information from a consolidated source. This mitigates substantial risks of critical information being overlooked that can result from disjointed case information.

Supervisors will be provided with greater oversight of cases and the reporting requirements to be completed. If requirements are overdue alerts will become visible.

Increased productivity in case management

- Reduced risk in exhibit location tracking
- Decreased time spent tracking exhibits
- Improved chain of evidence management
- Reduced time spent on research
- Decreased time spent collecting and recording evidence
- Decreased back office data entry
- Improved officer job satisfaction.

The forensic register enables a faster and enhanced clearance of offences through significantly improved business processes, forensic examinations and analysis. The system provides increased capacity to meet business needs through improved targeting of high yield results contained within scenes, thus reducing effort relating to collections and recording.

The ability for Forensic Officers to enter data onto the register remotely will improve operational efficiency and reduce the amount of office time spent entering data. Forensic reporting requirements regarding serious crime will be more transparent for investigators with the registers automated status reports. The officer and management will be alerted of deadlines and work to be completed.

Improved information management

- Increased ability for knowledge sharing and collaboration
- Strengthen intelligence capability
- System auditing capability.

The forensic register will allow for external agencies such as PathWest, and ChemCentre to receive outputs and deliver inputs via an electronic interface into the system. Both agencies will receive and enter details pertaining to the analysis of exhibits. Access

to the Forensic Register will afford Laboratory Technicians greater detail on circumstances surrounding exhibit seizure and it is recognised this will enable them to better apply and exhaust the forms of analysis to be performed. The Forensic Register will allow PathWest and the ChemCentre to electronically post analysis test results directly to WA Police Investigators. Timely access to such information will aid investigations and in some cases assist in quickly apprehending offenders before they can commit more offences.

Improved quality of forensic analysis

- More accurate collection and analysis of statistical data/evidence
- More comprehensive case analysis
- Increased visibility and control of quality and performance of District Forensic Investigation Offices (DFIO) in all WA locations.

With the implementation of the forensic register, management will have greater access to and control over the quality of work completed by all DFIO. This will ensure that standards and processes are enforced and maintained across the state. Having a singular system containing historical and statistical data that is accessible by all forensic officers allows for a better quality and more comprehensive analysis for investigations.

Increased ability for timely identification of high-priority persons of interest

- Timely identification of potential lines of enquiry
- Decreased time required for fingerprint matching.

With the utilisation of the mobile 3G network, Forensic Officers will be able to remotely access the forensic register. This will provide the officers with the ability to enter exhibit, examination and forensic case information at the crime scene. This includes sending fingerprint photographs across the network to a Fingerprint Officer who can then analyse them and forward them to the National Automated Fingerprint Identification

System (NAFIS) for matching, as opposed to the current process of transporting the samples back to the office (usually done at close of business). This will, in major cases, allow officers to receive results and possibly identify persons of interest whilst at the incident scene.

Increased capability to comply with NATA requirements

- Improved visibility of officer proficiencies and training requirements.

The forensic register provides a proficiency status of all Forensic Officers and only allows tasks to be assigned to officers that are qualified for that specific job. This requirement will enforce the need for all Forensic personnel to be up to date with training, and qualifications, thus complying with the requirements set by NATA. It also allows for the ability to remotely quality-check and performance-manage the operations of Regional WA based investigators.

Increased ability for future upgrades and enhancements

With the replacement of the current manual environment with modern technologies, WA Police will have the capability for future enhancements and upgrades to the forensic system in line with contemporary Information, Communication, and Technology (ICT) standards.