

Case studies in

Innovative thinking from New Zealand's public sector

Case study #4:

InterCAD mobilises multi-agency response

Successfully building an electronic bridge between New Zealand's emergency services was a complex challenge that owed as much to inter-agency collaboration as it did to technical innovation.

InterCAD is a system that allows essential information provided by 111 callers to be shared immediately between Police, the Fire Service and Ambulance. It was implemented in July 2009 and, by June 2011, had been used to deal with more than 135,000 emergencies. Emergency services describe it as a 'no wrong door' solution – it doesn't matter which service takes the initial call, as the others are mobilised immediately.

But the benefits InterCAD has brought go beyond improving public safety. Those involved in its development say it has also had extremely positive effects on inter-agency relationships and communication – business benefits that far exceed the original project brief.

The challenge

The project began in 2008 with an ambitious vision: provide better, faster and safer emergency services to the public through a shared electronic information transfer system.

To realise this vision, two existing world-class dispatch systems needed to be linked – the I/CAD (Intergraph Computer Aided Dispatch) system used by Police and the Fire Service, and the VisiCAD system used by Ambulance.

Whenever one service received a 111 call about an incident that required another service to attend as well, they had to pass on the relevant information by phone. Sometimes, this caused delays and errors.

The existence of separate dispatch systems reflected fundamental differences in the information that the agencies need when responding to emergencies. Independent dispatch systems are the norm internationally, and only Canada had ever previously attempted to link them.

But by 2008, growing workloads and increasing technical advancement meant New Zealand was keen to explore the idea of an integrated emergency response system.

The potential benefits to the public and to the emergency services themselves were considerable. When people phoned 111, they would spend less time on the phone and provide key information only once. The response would be faster, more coordinated, and appropriately resourced. Emergency staff would be safer because all agencies would have access to the same information about potential dangers, such as the presence of weapons.

But could the three existing dispatch systems be integrated?

Unprecedented cooperation

After initial investigations by a large multi-agency project team which prepared a joint business case, it was decided to proceed with the challenge of building a linked system. The budget was set at \$600,000. Responsibility for implementing InterCAD rested with a Project Management Committee comprising operational and technical representatives of each agency and the vendors, overseen by a Steering Committee.

From the outset, it was clear that some significant technical and organisational hurdles needed to be overcome.

Each agency's call handling processes – developed to meet their own particular needs – had to be aligned. Privacy and security of information had to be assured. It

was essential that the design and testing of InterCAD did not compromise the agencies' other IT systems, or the quality of services provided by their own Communications Centres. Extensive offline testing was needed. Common terminology had to be developed, as each agency described key information differently.

Working through these challenges took an "unprecedented level of cooperation" between the three services and their system providers, said project owner, Police Communications Centres National Manager Superintendent Andy McGregor.

"It required a willingness on the part of the three agencies' business owners to tackle a joint problem, be open to others' points of view, accommodate differences, problem-solve and ultimately be accountable to the public for improved emergency response."¹

Working together

To the public, InterCAD is invisible. But behind the scenes, it is paying dividends. Emergency callers are spending less time on the phone conveying time-critical information. Information is sent from one emergency service to the others much faster: it involves only one keyboard stroke

rather than the 11 required previously.² Anecdotal, call response times have improved.

But perhaps a more unexpected result of the InterCAD project has been the improvement in inter-agency relationships and information flows.

The three emergency services now have a Memorandum of Understanding setting out protocols for information-sharing, and plenty of plans to develop InterCAD further. A common set of place names is being developed to replace the agencies' separate mapping databases, a potential source of confusion in the past. Regional groups of Communications Centre supervisors – initially formed to iron out InterCAD's teething problems – continue to meet regularly, finding it a "useful forum for resolving day-to-day operational issues that can arise when three quite different agencies are working together."

That InterCAD has changed the way New Zealand's emergency services work together was endorsed by Intergraph's US-based Executive Director of Security Solutions. Commenting on a presentation about InterCAD made by Anne Speden of New Zealand Police at a September 2010 conference in Washington, Robert Scott said that it "opened up several eyes about how sophisticated New Zealand is with respect to ICT in Public Safety. Our panel was oriented to getting the concept

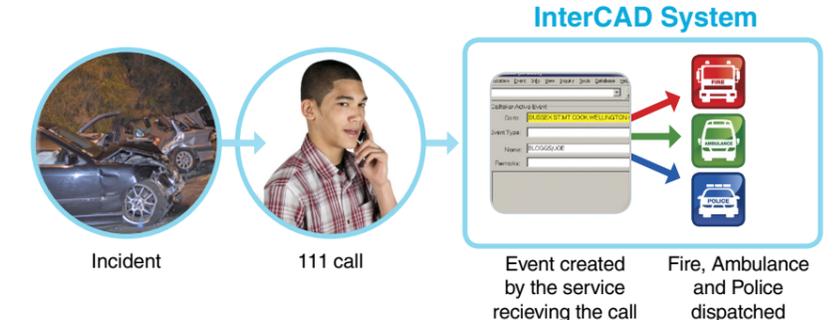
¹ From NZ Police submission to the IPANZ Gen-i Public Sector Excellence Awards 2010. Unless otherwise stated, all quotations are from this source

² NZ Police Association, *Police News*, Vol 42, No 7, August 2009, p170, available at www.policeassn.org.nz/system/files/file/2009-08.pdf, accessed 12 July 2011

Before InterCAD



After InterCAD



Fast work helps baby

In mid-2010, InterCAD proved its value when the panic-stricken mother of a baby having seizures mistakenly called Police instead of an ambulance. Police Communications Centre staff immediately transferred the information to Ambulance and also to the Fire Service, in case its staff were closer.

According to Fire Service Senior Station Officer Michael Dombroski, this transfer of information took only seconds. His team was en route within 50 seconds and arrived at the address within three minutes. Officers immediately cooled the baby and administered oxygen until the ambulance arrived.

"As a direct result, critical care was provided to the baby in the quickest possible time. This is an excellent example of how our emergency services can work together to achieve the best possible outcome for the public."

From: <http://www.tenone.police.govt.nz/tenone/July10Action.htm>

of information sharing between agencies highlighted and the need for standards and a partnership between ICT and operations... New Zealand is clearly out in front in this area."

Those involved in InterCAD say it's a game-changing initiative that demonstrates what can be achieved when agencies join forces to tackle significant technical and organisational complexities and achieve a common purpose. InterCAD won the Excellence in Networked Government category at the IPANZ Gen-i Public Sector Excellence awards in 2010. ■