

Police National Database

It is almost unheard of that a major national infrastructure project can be traced back to a single event, but the Police National Database (PND) is one rare example.

RESPONDING TO THE BICHARD ENQUIRY

In 2002 in the UK, two children, Holly Wells and Jessica Chapman, were murdered by school caretaker Ian Huntley. This led to a public inquiry led by Sir Michael (now Lord) Bichard. His primary recommendation was that all UK police forces should share the intelligence – observations, reports and suspicions – held on their individual systems. If such a system had been in place, Huntley was likely to have been identified as a serious threat to children far sooner.

The Home Office, as the main body providing nationwide services to support frontline policing, has led the delivery of what is now known as the PND. It is changing the way British police forces work.

WHAT THE HOME OFFICE NEEDED

Joining up the existing intelligence held by police forces across the UK was a huge task involving around 200 different databases, many of which held information in incompatible ways – it was not simply a matter of connecting the databases but of converting their contents so they were compatible. The system also needed to be totally secure, so no data could fall into unauthorized hands.

THE CHALLENGE

As an interim measure, an Impact Nominal Index (INI) was set up. This allowed police forces to see that information was held on an individual or event by another force or forces. But retrieving that information meant sending an e-mail or fax requesting details and the reply could take up to two weeks to arrive. The subsequent PND had to make access to the full original intelligence easy and fast.

All 43 autonomous police forces in England and Wales hold intelligence data, as do the eight Scottish forces, the Police Service of Northern Ireland, British Transport Police and other national law enforcement agencies such as the Serious Organised Crime Agency (SOCA) and the Child Exploitation and Online Protection Centre (CEOP), with existing crime, intelligence, custody, child abuse and domestic violence data held in hundreds of individual databases across the country.

Bringing them together as one, coherent, searchable database was a challenge. Forces recorded people, events and even colors in different ways. Names are not always spelt correctly, while many people on the databases have several aliases. Links between individuals are recorded differently.

CASE STUDY

JUSTICE

“A strategic change in policing has taken place with the introduction of the PND. It is a prime example of the benefits of collaborative working between forces and ourselves and a trusted commercial partner.”

Nick Gargan

**Chief constable and former
NPIA chief executive**

There had to be strict controls over access to the consolidated database, as well as a way of allowing each separate database to update the central database in near real-time.

The data also needed to be reviewed and, through the Home Office Management of Police Information project, each force was urged to examine its data for duplications and outdated intelligence before preparation for sharing through the PND.

OUR ANSWER

CGI and the Home Office worked with each force and agency to standardize its data, using a specially adapted program that automatically converts disparate methods of recording data into the single method to be used by the PND. This has saved months of manual changes. The same program automatically converted new data into the format used by the PND. The program is helping to address some of the complex IT challenges which PND's development and delivery has presented. Depending on the characteristics of a force's databases, it automatically updates the PND, either when new data is input or in daily batches.

The PND was established at one of our secure data centers and linked to force databases and terminals via a fully encrypted network. We installed an intelligent search function that allowed searches by person, object, location or event. This would highlight, for example, aliases; events in a named road or area; and known or suspected associates. The search function also suggests possible alternatives to look at, such as different spellings of a name or the same date of birth of differently registered people, which could identify a person using more than one name.

The PND is a "Confidential" system so we needed to introduce robust security procedures. Fixed computer terminals linked to the PND were placed in secure rooms approved by a Government inspector (mobile devices are not allowed to connect). Access to the terminals is through a combination of smartcards and passwords. Access to information is also role-based – users can only view the data they are pre-authorized to see. User activity is time stamped and recorded, as are search results. There is therefore a full audit trail of every inquiry made. Access to the PND can also be monitored in real-time.

Working with the Home Office and the forces involved, it took us and our suppliers and partners – Cable & Wireless, IBM, Microsoft, Oracle, Northgate and SunGard (now Capita) – less than two years to install the initial functionality. As Jennie Cronin, at the time Home Office PND program director and now leading the creation of the new police ICT company, says, "It was extremely complex and demanding collaborative work."

The first data loads onto the new system started in May 2010 and the PND was officially launched in June 2011 – with further functionality to come to complete the full delivery of PND later in 2012.

A SUCCESS STORY

Criminals and terrorists do not respect force boundaries. Before the PND, they were able to take advantage of slow or absent intelligence-sharing between forces.

While police were able to make national checks of proven facts, such as convictions, through the Police National Computer (PNC), it was difficult for them to check intelligence nationally. This was highlighted following the conviction of Huntley, who had come to the attention of the police, using two different names, in relation to eight separate sexual offenses over a four-year period. Had his employers known this, he would not have been given a job as a school caretaker.

More importantly, the PND is likely to have identified him as a concern – despite using aliases – earlier in his criminal career, allowing police to investigate him sooner.

The PND closes gaps and enables the police to see the complete intelligence picture. Intelligence checks that were previously very difficult to carry out manually or that took up to two weeks via the stopgap INI system now take minutes. Depending on their access grade, 12,000 registered PND users can now directly make connections between suspects, events and locations.

Results followed within days of the system becoming operational. Examples include:

- A northern organized crime group found operating in the south
- New information about more than a third of missing sex offenders registered in the London area
- Information relating to one man's child sex offenses dating back seven years, which led to safeguarding action
- A major drugs supplier found to be operating across several police force areas

As Holly Wells' parents, Kevin and Nicola, have put it,

"The PND is a superb investigation tool which could well change the face of policing. This is a significant moment for the NPJA, the police and for us."

(NPJA is a former agency of the Home Office)

We are now moving onto a second phase, where analytics will be overlaid onto the data, allowing police to move even faster by automatically seeing suggested connections between people, objects, locations and events in a simple, graphical format.

WHY CGI

Few organizations have the ability to manage such a large project involving so many suppliers or can create a completely secure and reliable data system that is used by thousands of people in dozens of separate organizations.

Just as we did when we created a similar but smaller system for use in France by the Gendarmerie and Police Nationale, we delivered on time – and under budget.

The result is more than an IT system. It is a new weapon in the fight against crime and terrorism, which we will progressively hone and improve.

For more information, please contact us at government@cgi.com or visit www.cgi.com/government.

Founded in 1976, CGI is a global IT and business process services provider delivering high-quality business consulting, systems integration and outsourcing services. With 69,000 professionals in 40 countries, CGI has an industry-leading track record of on-time, on-budget projects, aligning our teams with clients' business strategies to achieve top-to-bottom line results.

The project referenced in this case study was delivered by Logica, which CGI acquired in August 2012.