Stopping today's Great Train Robbery in its tracks

Reducing cable theft, which costs over £15 million a year, is one of British Transport Police's top priorities. Steve Deaville explains how a new crime mapping solution from Pitney Bowes Business Insight is helping to counter this threat to the rail network

The 'Great Train Robbery' of 1963 is considered the largest single robbery in British history. The gang made off with £2.6million which is about £40 million at today's prices. Some 47 years later there's another great train robbery under way and it's called cable theft. The British Transport Police (www.btp.police.uk) estimates that over the last three years it has cost the rail industry £43 million and caused misery to passengers by delaying trains for a total of more than 16,000 hours.

On Friday 10 June this year, Channel 4 reported how thousands of passengers were affected after thieves stole the cables at a signal station in the south west. The report noted that: 'Cable theft has been deemed the "biggest priority after the terrorist threat" by the British Transport Police. There has been a 52 per cent jump in attacks in the past year – with Network Rail now battling six theft attempts a day'.

Specialist police service

British Transport Police is the national specialist police service for the UK's railway networks including the London Underground system, Docklands Light Railway, the Midland Metro tram system, Croydon Tramlink and the Glasgow Subway. The organisation is responsible for safe-guarding over six million passengers and 400,000 tonnes of freight over 10,000 miles of track.

Reducing cable theft is a key priority. And safeguarding the UK rail network has an even greater urgency when one takes into account the vital role that rail has to play in moving visitors in and around the London 2012 Olympics. The key challenges facing British Transport Police include:

- More accurately plotting where crime most occurs along the rail network
- Significantly reducing cable theft
- Cutting anti-social behaviour on transport networks
- Enabling proactive policing of the rail network during the Olympic Games given the huge spike in demand for public transport that will take place

Crime mapping

Sophisticated crime mapping solutions that provide deeper layers of criminal intelligence, enhance the ability to deploy police resources more

effectively. Police forces nationwide currently use crime mapping and analysis tools to process large amounts of data and identify patterns and trends. However, these tools tend to be geared towards the static representation of crime locations and can overlook the dynamic and transient nature of real-world crime.

This proved problematic for the British Transport Police, as it has a unique environment to police. Officers and support staff are dealing with a large transit population, and a significant amount of crime occurs en route. Therefore many crimes would be logged at the train's terminal destination despite occurring at an earlier point on the rail network.

The British Transport Police needed a mapping solution that provided deeper layers of criminal intelligence in order to manage and more effectively deploy police resources and address key policing challenges such as reducing anti-social behaviour and cable theft. The solution was to use MapInfo Crime Profiler and MapInfo Drivetime, from Pitney Bowes Business Insight.

Deeper understanding

By using MapInfo Drivetime to add geo co-ordinates for both the start and end location of a journey, the force can now visualise every possible location where a crime could have occurred and identify the most frequently affected sections of a train route. This accounts for the dynamic nature of its data and allows for a deeper understanding of where crimes are actually taking place.

By using the temporal analysis tools within Crime Profiler, the force can also pinpoint the correlation between certain crime types and time of day and prevent crime by increasing the visibility and presence of police officers on the network at those set times. Charlotte Crabtree, Force Principal Analyst at the British Transport Police, explains:

"We are using MapInfo Crime Profiler to map and analyse those hotspots where cable theft is most prevalent. The mapping tools pull together a number of datasets to help us identify, for example, the nearest scrap dealers so that we can direct intelligence checks as soon as a crime occurs and dealers' books can be immediately inspected by police officers to identify likely perpetrators."

She continues: "Cable theft mostly happens during the night. By using MapInfo Crime Profiler, we are able to look at geographical areas and conduct temporal analysis to look at the exact times that thefts occur and whether this coincides with when there are periods of engineering work taking place on the line. This helps us to more effectively deploy police officers in the right places and at the right times."

Olympic task

The London Olympics 2012 presents the force with the enormous challenge of safeguarding thousands of people travelling to a number of different Olympic venues across London and enabling proactive policing across the transport network.

"MapInfo will enable us to plan ahead and protect our citizens more effectively by pinpointing and identifying local gang activity and their closest stations, possible trespass routes and the most vulnerable areas. In this way we can always stay one step ahead of the criminal and stop anti-social activity before it occurs," says Crabtree.

The interoperability of the mapping solution also enables British Transport Police to forge links and share intelligence with home office forces and partners such as Network Rail. By highlighting its results to other agencies, British Transport Police can show where crime levels are particularly high and work more closely with neighbouring forces to ensure that they deploy police resources more effectively.

"MapInfo Crime Profiler and MapInfo Drivetime are innovative solutions that have enabled us to develop some interesting applications across the force. They have also opened up exciting opportunities to integrate information from multiple datasets, including human resources, professional standards and crimes and incidents. This allows for more proactive and effective deployment of frontline services in helping resolve key crime issues," says Crabtree.

Gaining the edge

Capturing data and being able to analyse its significance is the key to preventing and solving crime. PBBI's MapInfo Crime Profiler and MapInfo DriveTime enable British Transport Police crime analysts to visualise, integrate and analyse quickly a variety of location-based datasets, pinpointing those sections of rail routes that are criminal 'hotspots'. The hope is that these tools will give them the edge in the fight against crime and enable them to solve today's 'great train robbery'; namely some £15 million a year and thousands of lost travel hours.

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