

Mobile Data – Realising the benefits

“(MDT is all about) sharing information, targeting resources and getting results.”

Hazel Blears, MP Minister of State
Policing, Security and Community Safety

How it all Began

The Metropolitan Police Service (MPS) has a world class reputation and has a unique place in the history of policing. Founded by Sir Robert Peel in 1829, the original establishment of 1,000 officers policed a seven-mile radius from Charing Cross and a population of less than 2 million.

Today, the MPS employs 31,141 officers, 13,661 police staff, 414 traffic wardens and 2,106 Police Community Support Officers (PCSOs), and, since the re-alignment of police boundaries in April 2000, it covers an area of 620 square miles and a population of 7.2 million.

The implementation of in-car Mobile Data Terminal (MDT) technology has been a key technological advance for the MPS and part of its provision of 21st century policing to the people of London.



Mobile Patrol Officers now have live access to information that was only previously available through the Control Rooms or back at the station – making additional information available for Officers and the Control Room improves officer safety and makes resource management more effective.

Through the MDT system, Control Room staff have access to precise response vehicle location, which provides improved information on Patrol Officer availability and resources to respond to incidents, ensuring that the right unit is deployed to the right place at the right time.

Officers now have direct remote access in their response vehicles to the Police National Computer (PNC), Computer Aided Despatch (CAD) messages, in-car mapping, Quick Address for address checks and a text messaging service and Patrol Supervisory functions giving Patrol Supervisors additional capacity to manage their response resources.

Access to these services has freed up radio airtime and released latent demand, especially for PNC. MDT, together with the Global Positioning Systems (GPS) mapping software, allows Control Room dispatchers to view and interact with response resources.

Data transmitted by MDT is fully encrypted to provide extra security for MPS information.



The Metropolitan Police Service

The project has been complex – working with six core suppliers to deliver the solution:

APD Communications is the mobile data and vehicle location software provider for all the MDT suite of applications, the INCA GPS-unit and the mapping software.

Arqiva provides the in-field maintenance services, second line repair facilities and an overarching one-stop-shop helpdesk to users.

Microbus supplies the MDT hardware – the in-car computer and screens – fitted in the response cars/vehicle units by **MacNeillies**.

BT redcare provides the mission-critical packet switched, wireless data network used to enable the GPS and other applications deployed by the Patrol Officers in their vehicles.

Unisys produces a specific XML application (CDI) to interface with the MPS's Command and Control systems.

The project has also involved considerable business change activity, engaging staff and encouraging new working practices.

MDT has now been rolled out to over 1,500 vehicle response units across the MPS's 32 Boroughs – one of the largest roll outs of mobile data solution across Europe.

"The new service is benefiting the people of London and police officers alike," says Cmdr Bob Broadhurst (Patrol), "These new in-car computers are another step in delivering 21st century policing by ensuring we can assign the most appropriate police officers to an incident and that they are primed with the necessary information to manage and

resolve situations. MDTs allow us to focus on delivering the best service to our citizens by using our resources more effectively to make London a safer city."

Functionality

MDT provides the following functionality to the MPS:

- Automatic Vehicle Location System (AVLS) through on-board GPS. This tracks the vehicle in real time providing accurate location information both to the officers in the vehicle and dispatchers in the Command and Control environment.

A record is created in the MDT database at regular intervals giving a status feed to the Command and Control system – and the Control Room and Supervisors real-time information on current incidents.

The record contains data on:

- vehicle location
- time vehicle is at the location
- direction of travel (when moving)
- vehicle speed (when moving) and it will also indicate when vehicle is stationary
- vehicle status displayed through colour coding.

- An incident list – providing information to Patrol Officers and Patrol Supervisors on incidents that are current, resolved and need to be allocated with a mobile supervision facility.

- Ability for Control Room staff to send Incidents directly to MDTs, allowing directed despatch. Control Room staff are notified when the incident is accepted by the MDT operator.



- Patrol Officers can directly update the CAD Incident via the MDT unit, this update is seen straightaway by Control Room staff.
- Emergency activation of an MDT leads to an incident being created in the Command and Control system that contains the map reference, this allows support to be despatched immediately to the correct location.

Access to:

- Police National Computer (PNC)
- Computer Aided Despatch (CAD) including access to Critical Police Information through the mid screen comments
- QuickAddress for address checks
- Secure text messaging
- In-car mapping

Project Planning and Delivery

Motivated by operational needs to provide access to real-time information to officers, the MPS MDT project was initiated in 1999. Initially researching other police forces systems, the MPS visited Sussex Police to discuss the MDT project they were implementing.

MDT system trials took place at four MPS Operational Command Units in 2000. Feedback from trial users and other forum were used to develop the service and highlighted changes that, for operational reasons, needed to be made to the specifications – with changes made to data presentation, functionality and the provision of in-car keyboards.

The project roll out was phased to take in testing of PNC, text messaging, AVLS, CAD and INCA Map Client and has now been rolled out across the 32 London Boroughs and a number of pan-London OCU's. Due to the scale of implementation, there has been a need for considerable business change activity to deliver the MDT solution to users before the benefits could be realised.

Shaun O'Neill, MPS MDT Business Change Manager and Senior Sponsor said;

“Through a robust evaluation framework and ongoing user feedback sought and acted upon throughout the introduction of the system, we have produced an MDT system that meets not only the business needs but the user needs.”

“As with the implementation of any IT project that involves process business change, there has been a period of time while users get used to the system before potential benefits have been realised. As officers have seen how the system can help them, we have started to see these benefits realised, with officers becoming innovative with their use of it. We have clearly released a latent demand for the systems offered on MDT; and are seeing increasing effectiveness in the way we work and improved officer safety.”

“This is not just about officers being able to make faster checks on CAD and PNC; this is meeting a demand we knew was there, but can now be fulfilled through the use of mobile data technology.”



What the users say

“MDT is very useful in helping units find locations, allowing in-car vehicle checks and Controllers, CAD staff and supervisors to view where the units are and use it for fair and effective deployment. MDT is very user-friendly”

Borough Operation Command Unit (BOCU) Supervisor

“By sending incident records directly to the vehicle there is no confusion over where officers are going or what the incident involves, quickly reducing time spent explaining over the radio.”

CAD Room Supervisor

“I particularly find incident lists and ‘unit status’ useful!”

Patrol Supervisor

“An MDT emergency alarm sounded in Kennington’s Control Room during a late shift. The Control Room contacted the officer whose alarm had been activated on the radio to hear the sounds of the officer struggling with a suspect. Using MDT’s tracking system, the control room knew the exact location to send assistance to. Three arrests were made.”

Patrol Officer

The Benefits

More intelligence – more arrests

- Control Room staff can see where response vehicles are at all times so that support and response can be directed more accurately and respond faster.
- The mapping feature allows Patrol Officers to locate incidents more quickly.
- Patrol Sergeants have MDT in Patrol Supervision Vehicles providing them with a command picture of police officers in attendance, those potentially able to offer back-up and the range of incidents on individual Boroughs requiring a response.

Improved officer safety and empowerment

- With information being sent via MDT, officers spend less time on the radio requesting background information for incidents freeing the radio for co-ordination and command of incidents and improving officer safety.
- Through direct access to MPS and national databases, Police Officers are empowered through more direct access to critical police information designed to protect their safety.

Management information

- Full audit trail of Officer and patrol activity.
- Potential being realised for Borough SMTs to review and enhance patrol patterns.



Greater efficiencies

- Improved call deflection with Officers using QuickAddress and other MDT programmes to reduce the demand on the Control Room.
- Improved direct provision of information to mobile staff.

Releasing latent demand

The MPS are seeing the benefits realised – with an upward trend in usage since full roll out at the end of 2004.

- PNC checks on MDT up more than a third in the past year:
Total PNC vehicle checks made = 2,362,596
Total PNC name checks = 1,558,394
Checks by Patrol Supervisors of the BOCU Open incidents report up 25%.

“We are seeing a marked increase in the number of vehicle checks on the move – Officers are realising the ease of using the system while on the move and the potential to make arrests as the result of one simple check on the MDT. Officers are also aware of the benefits to their safety – enabling Officers to protect themselves with data that is now at their fingertips!”

Shaun O'Neill, MPS MDT Business Change Manager and Senior Sponsor

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APD Communications Ltd

Head Office Newlands Centre, Inglemire Lane, Hull, HU6 7TQ, United Kingdom

Sales and Marketing 16 Shenley Pavilions, Chalkdell Drive, Milton Keynes, MK5 6LB, United Kingdom

Tel: +44 (0) 1482 808300 Fax: +44 (0) 1482 803901 Email: info@apdcomms.com www.apdcomms.com