

## Combatting organised crime with ArcGIS

# Leicestershire Constabulary

### The Challenge

- Breaking down crime networks to reduce crime
- Fusing and interpreting data on crimes and criminals

### The Solution

- Developed new crime-tackling strategies
- Reduced crime and increased arrests

### The Customer

Leicestershire Constabulary provides a policing service to the people of Leicester, Leicestershire and Rutland. The force is responsible for protecting nearly one million residents across an area of Britain that is over 965 square miles in size.

### The Challenge

Leicestershire Constabulary knew that multiple networks of criminals operated in its region, connecting petty thieves at the lower levels of crime with serial burglars and 'category A' drug dealers at the higher levels of crime. The force recognised that by developing a better understanding of these crime networks, they might be able to dramatically reduce crime in the county.

A mass of intelligence relating to individuals who were thought to be part of these networks was already available, but fusing this data together to identify patterns and relationships presented a real challenge.

### The Solution

Leicestershire Constabulary selected Esri UK as it had the right mix of high performance GIS solutions and specialist experience of working with police forces. Initially, the mass of crime data was layered onto digital maps; the system's ability to absorb all manner of location-based information also enabled the force to quickly incorporate external sources of socio-economic data, creating an even richer picture of the region. Activities can now be co-ordinated across multiple regional teams, comparing areas of police coverage with crime hotspots *"ArcGIS is a fantastic tool for showing the connections between different crimes,"* says Jones. *"Sometimes links between crimes can be difficult to explain in a report, but with a map the networks are immediately clear for everyone to see."*

Crime network analysis capabilities are used to help develop and implement new strategies for reducing crime. For example, the force made the decision to proactively target 'middle men'. *"Removing the 'middle men' means the upper echelon of crime has no contact with the lower echelon, which impacts their ability to move money and drugs, for example,"* explains Detective Chief Inspector Simon Jones from the Leicestershire Constabulary. *"By targeting the individuals in the middle, we will cause the greatest disruption across the whole of the criminal network."*



Esri UK | Millennium House  
65 Walton Street | Aylesbury  
Buckinghamshire HP21 7QG  
T 01296 745500 | F 01296 745544  
E [info@esriuk.com](mailto:info@esriuk.com) | [www.esriuk.com](http://www.esriuk.com)

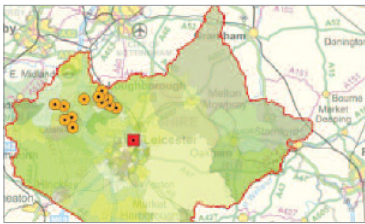
Copyright ESRI (UK) Ltd 2008. Official Authorised Distributor. All rights reserved. The Esri globe and Esri products, services and trademarks mentioned are trademarks of Environmental Systems Research Institute, Inc.

Other companies and products mentioned herein are the property of their respective trademark owners.

Learn more at: [esriuk.com/publicsafety](http://esriuk.com/publicsafety)

“Our GIS has provided us with a major new capability. We see it as an important resource for helping us to improve our effectiveness across all areas of policing.”

Chief Superintendent Mark Wilson, Director of Intelligence

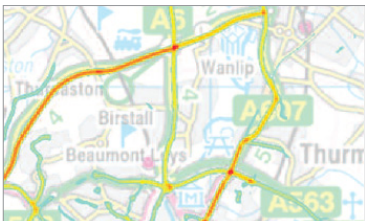


Using ArcMap to plot dealers, drug runners and users, identifying the supply network and its impact in each area

### Benefits

Leicestershire Constabulary has been able to identify links between crimes and extend its knowledge of how crime networks operate across the whole region. It has discovered patterns in criminal activity and can now plan operations much more strategically. As a result, the force is successfully restricting the activities of crime networks in Leicestershire.

Chief Superintendent Mark Wilson, Director of Intelligence in the constabulary, has been closely involved in the crime networks initiative and he believes that ArcGIS has delivered significant cost efficiency benefits for the force. He says: *“Because we have good quality, reliable information at our fingertips, we can direct our police resources to precisely the areas where they are most needed. This enables us to save valuable time and improve our overall effectiveness in disrupting the activities of crime networks and preventing crime.”*



Using the CrimeAnalyst's Sequencer tool to show probable routes used by subjects, combined with the hotspot tool to highlight which of the two routes identified were used more frequently.

On one occasion the force received intelligence that a large consignment of heroine had become available in the region. The force was able to use CrimeAnalyst to detect an increase in crime, demonstrating the existence of a network and precisely identify the affected areas. It then quickly allocated additional police resources to this region. *“Although the crime rate did go up, we were able to be more proactive”,* says Jones. *“We made lots of arrests, which effectively prevented what might have been a crime epidemic.”*

Leicestershire Constabulary has also used its Esri GIS capabilities to map and monitor gang activity. There are as many as thirteen known gangs in the region with members as young as eleven. The force has plotted the locations of gang-related incidents, along with the addresses and schools of known gang members, to build up a clear visual picture of gang activity in the county.

*“Rather than doing crime prevention talks in all schools, we can now focus our attention specifically on those schools where we know gang membership is high,”* says Jones. *“The use of ArcGIS has given us a real opportunity to spot potential problem areas and do preventative work with the youngsters who are most at risk of turning to crime.”*