



ESRI Canada

Case Study

Police organization uses crime mapping to achieve double digit reduction in crime



Saint John Police Force takes an intelligence-led approach to crime fighting

The Saint John Police Force implemented a visionary, intelligence-led policing model that is centered around crime mapping. As a result, they have achieved a double digit reduction in break and enters and motor vehicle theft in the first year. Crime mapping turns data into visible stories so that the police force can proactively recognize problem areas and swiftly develop crime fighting strategies.

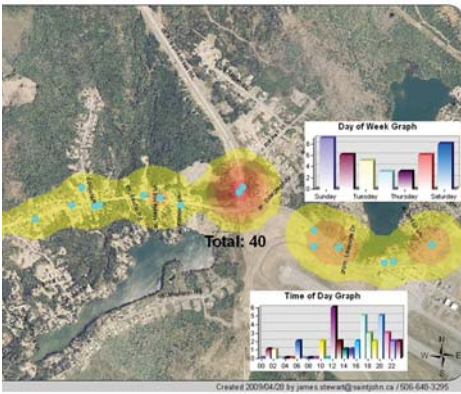


Challenge

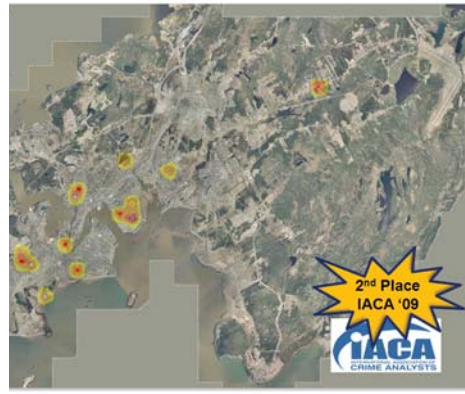
In 2007, the Saint John Police Force replaced their standard policing model with intelligence-led policing – a future-oriented and targeted approach to crime control that emphasizes crime reduction over crime reaction. It focuses on identifying, analyzing and managing persistent or developing problems or risks and provides officers with timely intelligence so that they can rapidly deploy personnel and resources in an effective manner wherever crimes are occurring.

At the core of intelligence-led policing is crime mapping. Crime mapping equips crime fighters with geographic literacy by turning a wealth of police records into meaningful visuals. To effectively implement intelligence led policing, the Saint John Police Force needed to develop a crime mapping prototype that would integrate mapping into their daily operations.

As a guide, they looked to New York's CompStat model that uses map based tools for sophisticated crime data analysis, reporting and location-based accountability. From here, the Saint John Police Force developed a hybrid Intelligence-Led Policing business model that integrates best practices in policing with an evidence-based focus on crime reduction. Once the model was developed, they searched for the right software tool to bring the plan into action.



This map illustrates concentrations and patterns of motor vehicle accidents with injury along a major arterial roadway in Saint John including day-of-week and time-of-day distribution.



This map is an extension of research predicting that the locations near a current break and enter incident are more likely to be victims of future break and enters.

“By incorporating crime mapping into our policing model, we have achieved return on intelligence (ROI). We are now able to take a targeted approach to crime control where intelligence serves as the guide to operations, and not the other way around.”

Brian Malone

Director, Knowledge Management
Saint John Police Force

Solution

The Saint John Police Force selected Omega Group’s CrimeView software as their crime mapping tool. CrimeView leverages ESRI’s latest server technology to pull Computer Aided Dispatch (CAD) and Records Management Systems data into a single map view, creating layers of data. It completely integrates with existing systems so that 911 calls and incident reports are automatically fed into the application.

With a current focus on break and enters and motor vehicle theft, CrimeView is leveraged to create pinpoint maps, hot spot maps and density maps that make it easy to analyze the concentration of crimes in specific areas. Queries can be built for incidents within any boundary or near an address or landmark such as a school or a liquor store.

For example, users can select data on break and enters that occurred within a certain radius between specific dates. This makes it easy to determine the likeliness of reoccurrence and to understand the relationship between incidents. When a break and enter occurs, the affected residence is four times more likely to be hit again within a 30 day period. Officers can now comb through data, identify high risk areas and take a proactive crime reduction approach to policing.

Benefits

Since implementing the intelligence-led policing model, theft of motor vehicles in the Saint John area have dropped by 18% while break and enters are down by 27%. There have been similar declines in the incidence of select other crimes, and a significant reduction in overall crimes.

The maps facilitate discussions at bi-weekly crime control meetings where dozens of officers meet to analyze data and develop informed crime reduction strategies. These strategies include contacting victims and neighbours at elevated risk, and identifying solutions that will prevent future crimes. The next step in the process is to deploy dedicated resources to problem areas, and continuously follow up and assess the crime situation. The crime reduction cycle then begins all over again at the next Crime Control meeting.

In the near future, the police force plans to begin sharing crime mapping data with the wider community so that they can engage community partners in crime reduction. To better protect the community, they will also widen the scope of their crime mapping to include other serious and frequent incidents such as assaults.



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Founded in 1984, ESRI Canada provides enterprise geographic information systems (GIS) solutions that empower businesses, governments, and educational institutions to make timely, informed and mission-critical decisions by leveraging the power of maps. The company distributes the world's leading GIS software from ESRI, Telvent Miner and Miner, Azteca Systems and other technology partners. Headquartered in Toronto, the company serves over 10,000 customers from 16 regional offices across Canada.

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