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CASE STUDY

One Michigan Police Department Reduced Crash Incidents by 50 Percent Leveraging Crash Data

Lansing and other Michigan law enforcement agencies are saving more lives with a preventive approach to traffic safety. Discover how one agency is using crash data and proactive measures to yield positive results.

Michigan Crash Reporting is Almost 100 Percent Automated

Read how the Lansing Police Department successfully lowered crashes leveraging the data collected

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Michigan is at the forefront of automated crash reporting. Presently, 99 percent of the state's law enforcement agencies record crash-related information electronically. That means command staff have a plethora of data at their fingertips from which to make strategic decisions and appropriately deploy patrols. When put to use, that data can show where to act, and how, in order to help prevent crashes that can result in serious injuries and fatalities.

Fatal crashes remain stubbornly high in the United States. According to estimates of the National Highway Traffic Safety Administration (NHTSA), fatal crashes remained flat in 2022 after two years of dramatic increases[1]. Way too many lives lost. The key to tackling this problem using the technology available today, is accurate, complete and timely data. Visualizations of robust data analytics, such as crash mapping, dashboards and reports are powerful tools not only for solving immediate problems, but for developing strategies that can help prevent crashes from happening. In short, they are the catalyst for advancing from the current mindset that crashes are inevitable to a long-term global vision that crashes can be prevented.

Leveraging the substantial collection of electronic crash data, almost all of Michigan's agencies are using systems and products that transform that data into meaningful visualizations to help them make data-driven traffic safety decisions. Crash-related information is fed into these systems and automatically analyzed. This happens in near-real time just a few minutes after the data is collected at the crash scene. As a Chief of Police, you have the power to implement measures that can significantly improve traffic safety in your community. *Michigan Police Chiefs Magazine* invited me to help build awareness of how you can do that leveraging the power of your crash data. Let's go!

A roundabout on the road to Vision Zero

Communities across the country are signing on to the Vision Zero initiative, which aims to achieve zero crash fatalities by the year 2050. Many cities look to reach that mark by 2030.

To achieve this goal, law enforcement officials in charge of significant amounts of data, as is the case in Michigan, can take a position of leadership to bring together a team of collaborative and accountable stakeholders, including transportation professionals, city council and community members. While steering this collective task force, you can identify the most effective strategies to improve traffic safety in your community. Let me show you a recent example from one Michigan law enforcement agency.

Case Study: Saving lives in Lansing

The Lansing Police Department (LPD) has taken a proactive approach to addressing traffic safety concerns in their city. Utilizing their comprehensive crash data, they conducted an in-depth analysis to identify intersections with a high frequency of accidents. By studying factors such as collision types, contributing factors and traffic flow patterns, they pinpointed the areas most in need of intervention. These findings enabled them to secure state grant funding to tackle these problem areas.

Image 1
Crash heat map

With the grant funding secured, LPD implemented a multifaceted approach to address the identified high-accident intersections. They intensified enforcement efforts, focusing on speed enforcement, red light violations and other traffic infractions. Through increased patrols and the strategic placement of traffic officers, LPD effectively deterred reckless driving behaviors. In addition to enforcement, the LPD collaborated with local transportation authorities to implement physical improvements such as enhanced signage, improved visibility and optimized traffic signal timings to enhance overall intersection safety.

Proactive measures yield positive results

Through targeted enforcement measures and increased public awareness, LPD has reduced crash incidents in the targeted hotspots by 50 percent since 2013.

The decline in accidents not only protected the lives of motorists and pedestrians, but also helped alleviate traffic congestion and associated economic costs. The LPD's successful use of crash data, coupled with their efforts to secure grant funding, demonstrates their commitment to improving traffic safety and the power of crash data.

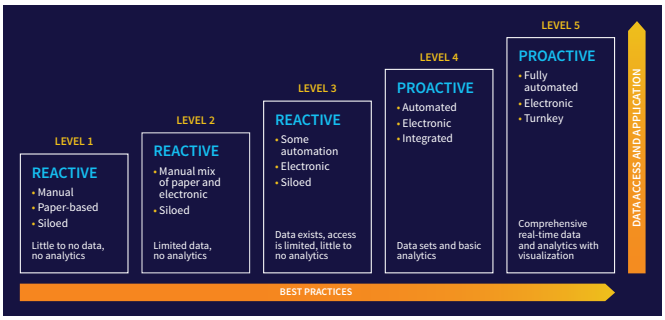
Lansing Police Department's multifaceted approach:

1. Lower speed limits on all roads approaching the cross-roads.
2. Increase patrol during school's start and dismissal.
3. Strictly enforce traffic laws, such as speed limits, stop lights and crosswalks.
4. Install additional traffic infrastructure that can effectively reduce the risk of crashes, such as speed humps, roundabouts and chicanes.
5. Educate the community on safe driving behaviors: avoid distractions, wear seatbelts, never drive after drinking or taking drugs!

Moving from a reactive to proactive to preventive strategy

We can better understand the positive impact of automation, normalization and usage of robust data and analytics visualizations by looking at this five-level framework, the data sophistication model.

Traffic safety data sophistication model



Customized dashboards

In attaining data sophistication Level 5, agencies are accessing advanced data visualization tools which display the data in useful dashboard formats. Officers can customize dashboards to see hotspots (image 1), accident and traffic trends by cause, age, weather condition and other factors that offer a better understanding of the root causes of various incidents (image 2). The dashboards are dynamic as well, allowing for clear views of the reports behind specific data points (image 3).

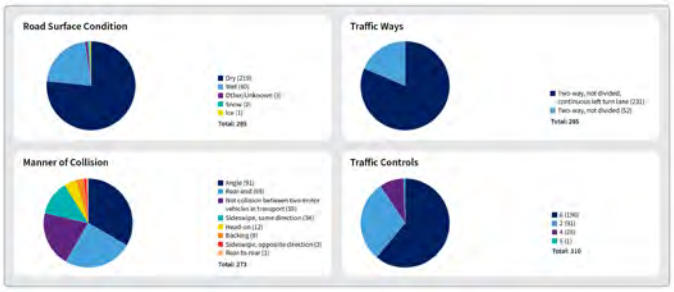


Image 2
Causation dashboard

Image 3
Summary dashboard

Advancing data sophistication can help agencies improve their police work on many levels. Internally, it provides a broader view and understanding of their assignments for the officers on the street. Data and insights can be shared with community stakeholders (adhering to data privacy rules), building collaboration and accountability while informing them of how the agency is helping to keep streets and neighborhoods safer. Through easy-to-understand maps and dashboard reports, agencies can show where, when and why crashes are happening leading to appropriate enforcements. This transparent, data-driven approach facilitates easier collaboration between law enforcement agencies and the communities they serve.

It is impossible to overstate the benefits of reducing the number of crashes. Fewer crashes save lives. Fewer crashes can help lower the costs across the board, the cost of insurance, vehicle repairs and time lost from work, not to mention the expense of additional agency resources.

1 NHTSA Early Estimates: 2022 Traffic Crash Deaths

To discover how you can gain access to crash hotspots and trends visualizations call **877.719.8806** or email **solutionsinquiry@lexisnexisrisk.com**

To learn more about the Coplogic Solutions data sophistication model, visit **risk.lexisnexis.com/TakeMeThere**

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