Jul 29, 2015 |

Halton police fighting crime with analytics

Oakville Beaver
By David Lea

Halton police can't be everywhere, but thanks to the work of their analytics unit they're getting where they need to be.

Halton police Superintendent Nishan Duraiappah talked about the Police Analytics Unit, which was established in 2014 to help officers increase their efficiency in a growing Halton community.

The analytics unit is made up of four civilians with backgrounds in mathematics, the sciences and software programming who have organized the massive amounts of data coming to police from calls, emails and other sources into something usable and readily available.

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Oakville Beaver- File Photo
Halton police Superintendent Nishan Duraiappah

"We have a system that collects building security information, we have a system that collects phone call information. On the road our dispatch system records what officers do and where they go. We have GPS in vehicles that map vehicles," said Duraiappah.

"All that data exists and we've been able to put it into one pot so it is easy to extract."

This organization means more Halton police are now scheduled to work at times and in areas where crimes and other situations requiring police attention are most likely to occur.

The result, said Duraiappah, has been a more evenly divided workload for officers and a decrease in the amount of time a resident has to wait when they call for police.

The improved system also frees up officer time so they can do more proactive crime prevention work in the community instead of rushing from call to call.

"The use of data is improving community safety because we are able to do things more efficiently," said Duraiappah.

"We have taken that principle and applied it to a bunch of things. We've been able to monitor thinks like officer safety and how fast we are travelling in our vehicles. We've looked at analysis of where people patrol and where the most effective areas for them to patrol physically are on a map."

Shift scheduling is not the only area improved by the analytics unit.

The data organization can also help in situations where officers receive reports of a suspicious person in the area.

If that officer, who is on patrol in their cruiser, gets a description of the suspect, Duraiappah said they can see how many people have been charged with breaking and entering within half a kilometer of the officer's location.

They can then compare the description with photos of people charged in the area.

"We've increased the ability of the officer to use data and analytics to make their decisions," said Duraiappah.

"They still have to make the policing decision of what to do next and how to proceed with the investigation, but they have those resources. This has given officers more tools for problem solving."

In other instances, Duraiappah said these analytics can help Halton police give troubled individuals the help they need so they stop having confrontations with police.

He said data collected from previous encounters with certain individuals can now be examined in real time to determine next steps.

"Instead of waiting until the next Friday night where this person does something, we are trying to use this information to meet with our partners and say, 'We have someone here who could use your mental health or employment assistance,'" said Duraiappah.

"This stops the person from having to deal with the police every week and maybe getting charged with something."

This use of analytics for law enforcement, which Halton police describe as the first of its kind in Canada, has resulted in provincial, national and international recognition for Halton police.

The Halton Police Analytics Unit has received site visits and shared methodologies with police agencies across North America.

Their work has also been published in law enforcement publications and the group has presented in Amsterdam, Netherlands at the IACP (International Association of Chiefs of Police) World Innovation Conference about the future of law enforcement information management.

They have presented at technology conferences in the United States, and they recently received the International NICHE Technology 2015 Innovation Award for application of records management innovation.