

# Going local

WEATHER MANAGEMENT SYSTEMS ARE GOING LOCAL, AS JON TARLETON,  
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Every highway, motorway, street, county and local road, and carriage way is impacted by the weather. Which begs the question, why isn't the management of weather handled in the same way across all roads? Why are the large ministry roads, department of transportation highways, tollways, and federal highways covered with road monitoring equipment, but our local roads are not? Are local roads less important or do they not require the same level of service?

The answer of course is 'no.' The city streets carry our children on school buses, or our families on the way to the market, all of which is pretty important to us if those are our families. Sure we hear of huge crashes on our major highways caused by weather, but most crashes and delays occur on our local streets and avenues. The major reason for such a discrepancy in the handling of weather management has nothing to do with the importance, and everything to do with funding and ownership of the local roadways.

Up to now, most cities and towns could not afford, or more than likely, just could not justify the cost of installing large weather stations, managing the gathering of the data, and service and maintain the equipment. Plus, due to the high investment, they would likely only be able to install a single weather station. If you could select the location for a weather station in your community where would that be? And remember, it has to be a location that is representative of your entire city. Not so easy, which is why cities and towns have avoided road weather monitoring solutions.

## MAJOR CHALLENGE

The major challenge with these communities is they are still responsible for managing weather's impact on their roads. Road weather information has been proven over the last several decades to be the key to a successful road maintenance plan. Having this information has been proven to save money and save lives by making the decision makers more effective and more accurate at making their decisions. In addition, by becoming more efficient the agency uses fewer road chemicals and less fuel, all of which has a huge impact on the local environment. It is, and can be done, without this technology, but it means

the decisions involve a lot of guessing because of the lack of true measurements. Most importantly, road weather solutions are most effective during times when nothing was projected to occur. The system alerts the decision maker or drivers immediately when a problem is detected, and not when the first incident has already occurred.

The good news is that all is not lost. What is changing is the landscape of road weather information and the availability of new technology that offers similar effectiveness at a much lower cost. Similar to what has occurred with traffic sensors, weather sensors are now available that can monitor surface conditions from the side of the road. This creates a significant cost savings because there is no cutting the pavement to install sensors and all the costs associated with direct pavement installations.

## LOWER COST

A second change is the improvement in lower cost weather station packages, allowing for the use of existing infrastructure to off-set costs. This trend to improve roadside equipment costs will only continue as new technology and simpler communications methods are used to collect the data.

The final way the landscape is changing is now road weather ITS companies can easily host the data for the agency, completely eliminating internal data management, and allowing users to access the information from any device that can access the internet.

The future for smaller agencies to enter the road weather community has begun. Cities and towns can now begin to realise the same benefits the large agencies have seen for years. By deploying multiple small-scale monitoring equipment throughout the city, they can begin to ensure that traffic flow continues through their streets and people reach their destinations safely. They can also lessen the environmental impact by using fewer road chemicals and less fuel to apply them.

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