

The danger posed by the collapsing infrastructure in Montreal, Canada has been no secret to the nation in the past few years.

The city's concrete mishaps had been making steady headlines for years until 2012, and have only recently resurfaced in the news. One of the most shocking incidents was the death of a 33 year old woman caused by a falling concrete slab attached to the Marriott Hotel in the city center. A poll taken by MaClean's Magazine in 2011 after a 25-tonne piece of concrete fell onto the Ville-Marie expressway, showed a significant amount of Montreal citizens, 88 percent, expressing concern or worry for the state of concrete infrastructures throughout the city. In addition, over half of citizens would use the word "scared" to describe their feelings towards traveling under overpasses, through tunnels and on bridges.



Now over three years later, there has been little mentioned on the issue of eroding infrastructure within the city, however, there have been few efforts made to put the civilians' minds at ease. Back in August 2007, firefighters and police evacuated many in the downtown core of Montreal, due to a large crack in a 1,000 tonne concrete slab, vital to the stability of the underground tunnel connecting The Hudson's Bay to McGill University. Over seven years later on December 20th 2014 was the law suit between The Bay and the city settled with a compensation sum of \$690,000.

Many recommendations to the city can be made on how to handle the issue of crumbling concrete infrastructures, however, the city does not seem to be prospering in line with other major Canadian cities and is experiencing an economic downturn. Although the city is constantly taking on new construction projects and investing money into refurbishing the city, the problem lays deeper. With a GDP of only 1.5% in the past year and a high unemployment rate, the government is quick to neglect small construction projects. The Port

of Montreal project has recently received a generous investment of \$43.6 million from the City of Ottawa. This is a great start, but the city should also be focusing on repairs and ensuring the newer projects are sustainable to avoid this problem in the future.

All these incidents involving the deterioration and unsustainable concrete structures could have been prevented if proper testing technologies were used in the beginning to ensure durability. It is not too late for Montreal and other cities worldwide to incorporate newer technologies to ensure longer lasting structures and invested money is well spent. Giatec Scientific is the only engineering firm in Canada currently designing and manufacturing advanced concrete testing solutions for the concrete construction industry. The company has just released a new, innovative product to the market called the Smartbox. This small but smart device continuously measures electrical resistivity in concrete and all the data is sent to an android device (smartphone or tablet). By measuring electrical resistivity, researchers can analyze the water content in concrete mix, as well as, how well it will set and harden upon impact. This tool is one of many designed by the firm to ensure sustainability of newer infrastructures and ensure their longevity.



The use of the new Smartbox device, along with many other Giatec Scientific products, will not only save the reputation of contractors and other organizations, but innocent lives as well. In the past, these tools were not available to construction companies due to a lack of technological advances, however, now that the technology is in existence, it should be taken full advantage of. If a small investment can help reassure an entire city of their safety, or help avoid a seven year law suit, the choice is seemingly obvious.

Sources: [National Post](#), [Peter Hadekel](#) , [Montreal Gazette](#), [CTV News](#)