CENGN

GIATEC SCIENTIFIC INNOVATION HIGHLIGHT
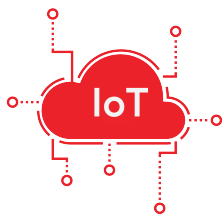

GIATEC

COMPANY OVERVIEW

Giatec Scientific Inc. is a global company revolutionizing the construction industry by bringing smart testing technologies and real-time data collection to the forefront of every jobsite. Giatec's suite of hardware & software products has leveraged advanced technologies such as; Artificial Intelligence (AI), and Internet of Things (IoT), including; wireless concrete sensors, mobile apps, and advanced non-destructive technologies (NDT) to drive innovation throughout concrete's lifecycle. For more information visit www. giatec.ca.

LOCATION: OTTAWA, ON

TECHNOLOGY

IoT

Internet of Things

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MEASURING CONCRETE QUALITY

Monitoring concrete quality is essential to understanding the design and service life of concrete and is critical for decision making on any worksite. Despite this, gathering and analyzing concrete conditions and health properties is a complex and laborious process that can lead to costly use of resources and time-consuming challenges. Current concrete quality measurement solutions are restricted by their sensor technology requiring users to be physically onsite to gather data. The user has to stand close to the sensor inside a building transferring data onto their phone using Bluetooth. This demands constant travel to locations, making constant real time monitoring an impossibility.

INFORMATION WHEN YOU NEED IT, FROM ANYWHERE

Looking for a more convenient solution, Giatec developed new sensors equipped with advanced wireless communication technologies. Like its Bluetooth counterparts, these sensors are designed to be fully embedded into the concrete before pouring. The difference is in its enhanced wireless range capacity, transmitting information through concrete to a local hub connected to the internet. This new IoT solution records and transmits concrete data every 15 minutes. Users can then view the sensor data on their mobile device in the SmartRock app or through the Giatec 360 cloud-based dashboard. This means you no longer are required travel to each sensor location and access concrete strength and temperature.

BUILT FOR PERFORMANCE

The SmartRock mobile application and Giatec 360 dashboard is a critical component of the concrete monitoring solution, acting as the information hub for the user. To ensure their application could scale while maintaining optimal performance, Giatec leveraged a CENGN project, deploying their solution on the CENGN infrastructure and simulating different levels of user traffic accessing the application.

With CENGN's advanced cloud testing environment and expert support from CENGN's Cloud Infrastructure Engineers, Giatec successfully determined the exact resource utilization of the system's infrastructure and highlighted the stable user capacity of the SmartRock mobile application.

> **"This project helped Giatec prepare its infrastructure and solution for scaling."**
>
> **Cody Scott, Manager, Software Development**
>
> **Giatec**