CASE STUDY

ACP INTERNATIONAL & QUANTUMIOT

Providing the technology expertise to help ACP develop an IoT-enabled line of connected roadway products

Flash flooding, icy roads, and wrong-way drivers can be deadly. Large cities and transportation agencies are tackling these problems with smart, connected roadways. But smaller municipalities often lack the resources to develop high-tech solutions for their roads. ACP is producing turnkey connected roadway systems - easy for any municipality to install - that alert drivers to dangerous situations in real time.

QUANTUM^{IOT}

THE CHALLENGE

Build the technology for ACP to transform from a traditional metal sign manufacturer into a smart roadsign and IoT business.

THE SOLUTION

ACP partnered with us to create a new line of connected roadway products that address some of the key problems faced by transportation departments across the country. Together we designed roadway solutions that analyze environmental and driver data in real time so that both drivers and municipalities can be alerted to dangers instantaneously.

All of ACP's connected devices are protected with strong encryption, anomaly detection, fast-rotating session keys, intelligent load balancing, and intrusion detection. Additional security is provided in the device design by using bare metal MCUs to minimize exposure to attacks. All of ACP's devices and sensors use 3G cellular connectivity to further protect against WiFi intrusions.

DEADLY ROAD CONDITIONS

We helped ACP to connect environmental sensors that detect ice and flooding to road signs, lights, and railroad-style crossing gates that automatically warn drivers of dangerous conditions and automate road closings in real time.

WRONG WAY DRIVERS

Using speed and location sensors, we helped ACP to develop high-tech alert systems that trigger flashing signs and lights that alert wrong-way drivers before they enter a highway.
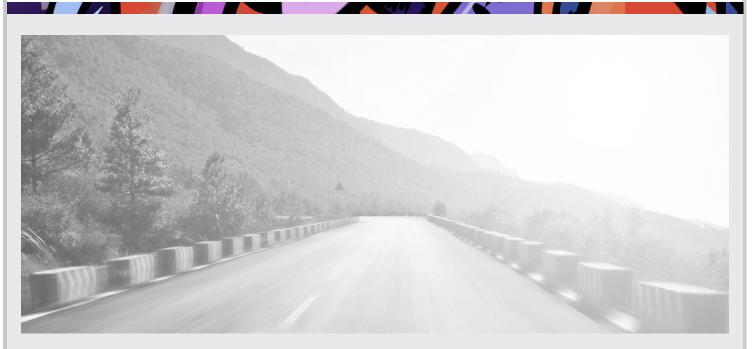
SCHOOL ZONES

School districts can now update school zones signs in real time to accommodate for special events, holidays, and changes in routine. We equipped the signs with IoT hardware and software to allow for remote programming.

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> With QuantumIOT as our technology partner, we're helping cities replace outdated, manual, labor-intensive systems with connected and automated roadway solutions.

ACP'S VISION

With ACP's new line of products, they're helping communities of any size to join the smart cities movement. Deadly road conditions and dangerous drivers can be detected in real-time, triggering alerts and automated road closures.

Soon, data analytics from large numbers of smart road signs will allow QuantumIOT to help identify the most dangerous roadways and have the system automatically recommend areas for additional road signs and surveillance.

ACP is poised to lead their industry in developing a Sign-as-a-Service subscription model to maintain smart signs and manage the data and alerts.

Have a project in mind?

We'd love to help.

Learn more at QuantumIOT.com

or email us at contact@quantumIOT.com

About QuantumIOT

We are a professional IoT services firm specializing in complex, end-to-end design and build projects.

We were founded on Jeff's Smith's vision of assembling an elite team of IoT engineers and data scientists whose experience spans every step of IoT project development, from hardware to telcom technology to data analytics and machine learning. Each member of the leadership team is highly accomplished and seasoned in his or her field. As a team, we're both agile and powerful, so that we can tackle the big problems that many enterprise companies face in executing their IoT goals.

Simply put, we help the world's best companies bring their IoT projects to life.