

CASE STUDY

Resilient Connectivity for Fire Prevention and Safety Technology

Overview

Fire Rover is an innovative approach to fire prevention and safety through the convergence of IoT and human intervention to help support greater safety, reduce loss in the event of a fire, and manage environmental challenges.

The Fire Rover system combines military-grade thermal detection and high-definition video to detect fires up to five minutes before a traditional smoke detector/sprinkler system would – valuable time that can help tamp out a fire before it grows.

The Fire Rover is aimed for use in high-risk industries that have highly flammable materials that can rapidly create a large fire and cause damage to valuable equipment, according to Fire Rover CEO Will Schmidt. These industries include waste and recycling facilities, materials recovery facilities, landfills, distribution centers, refineries, and more.

"These fires are so large, oftentimes by the time a traditional sprinkler system activates, it's too

deep-seated for the sprinkler system to be successful in suppressing the fire," Schmidt said.

The Fire Rover uses a concentrated, forceful spray directed precisely at the source of the fire, which is managed by a remote operator. This can quickly put out the fire and help spare collateral damage as opposed to an entire room or facility becoming drenched from an overhead sprinkler system.

This also leads to the use of less water overall in suppressing fires, which makes for a more sustainable solution that also minimizes hazardous runoff from using a large amount of water.

"Oftentimes, we're putting suppressant on a fire three to five minutes before a sprinkler system would go off and using 92 percent less suppressant to put out an equal-sized fire. It gets the fire out sooner and uses a lot less water, there's less cleanup and less water that can run off. Anything in that fire can leach off and run off into the environment," Schmidt said.

A background image of a large industrial facility with a high ceiling, steel trusses, and various pieces of machinery, including conveyor belts and large storage tanks. The lighting is bright and industrial.

"Operating with one primary vendor domestically allowed us to efficiently manage the customer activation process."

The Challenge

While the water and fire suppressant tank system ties into a facility's infrastructure, the high-tech end of the system ties into a facility's hardline internet, and it also uses cellular connectivity as a backup.

"Adding wireless was a natural feature – a feature that some [customers] opted for as backup and helped solved a few problems in areas where internet wasn't immediately available," Schmidt said.

Navigating a fragmented cellular provider ecosystem can be a challenge when an organization simply wants to bring its solution to market and make it simple for customers to use and have it work reliably, especially in the mission-critical field of fire safety.

When a fire is detected, it triggers an alert in the system that is reviewed by the operator. Sometimes, it is a non-event or an anomaly, like equipment running too hot. In those instances, the operator will act accordingly. In the event of a true fire, the operator will activate the Fire Rover system, and local emergency services will be immediately contacted to assist in the fire.

The ability for the system to work reliably for fully comprehensive coverage, utilizing cellular as a backup can help fill gaps in the event of downed primary internet.

The Solution

Fire Rover selected KORE as a connectivity provider to help simplify the deployment of their solution.

"Operating with one primary vendor domestically allowed us to efficiently manage the customer activation process," Schmidt said. If we were having connectivity challenges in the past, we were hamstrung."

KORE is able to provide Tier 1 cellular connectivity services to IoT solutions to ensure that coverage is met reliably and resiliently. KORE provides a wide selection of wireless connectivity technologies, and currently Fire Rover leverages 4G LTE enabled through traditional SIMs.

Fire Rover also uses KORE ConnectivityPro™, the award-winning connectivity management platform that allows organizations to order, provision, and

activate new SIMs, as well as manage usage, billing, and contracts in one simplified interface.

Because Fire Rover has cellular as backup, the organization needs to offer data plans to its customers. Leveraging KORE simplifies that process while also offering more customization in building data plans.

“There’s more flexibility around data utilization and flexibility for people to move between plan levels,” Schmidt said.

Additionally, Fire Rover is in the process of expanding. Already an international presence in the United States, Australia, United Kingdom, and Canada, the organization is looking at other potential European markets and using KORE as a strategic advisor.

KORE is a global leader in IoT solutions and services, with offices across the globe and partnerships with global connectivity and hardware providers. KORE has been pivotal in helping companies expand across borders with

their knowledge of carriers, network technologies, and hardware needs, as well as regulations and global logistics compliances.

Results

Fire Rover can offer its innovative fire prevention solution to its customers with the added benefit and safety of cellular failover to customers simply without worrying about the hassle of managing carriers directly, which also gives them the freedom to offer more flexibility in data plans to customers.

In fact, Fire Rover offers a detection-only version of its system with cellular-only connectivity, which is aimed at landfills. This still ties into emergency services systems but does not offer a water suppressant tank due to the lack of infrastructure.

Fire Rover also has a strategic, global leader in IoT to be able to knowledgeably explore expansion opportunities outside of its existing services areas.

About KORE	About Fire Rover
KORE is a pioneer, leader, and trusted advisor delivering mission critical IoT solutions and services. We empower organizations of all sizes to improve operational and business results by simplifying the complexity of IoT. Our deep IoT knowledge and experience, global reach, purpose-built solutions, and deployment agility accelerate and materially impact our customers’ business outcomes. For more information, visit www.korewireless.com	Fire Rover is a Michigan-based technology company that offers cutting-edge, full-scale fire prevention and safety through its Fire Rover system. Fire Rover provides full-scale services in its solution, including custom design and site survey, installation and integration, lifetime maintenance, and live monitoring with suppression when required. For more information, please visit www.firerover.com

