
Your connected fire engine
Emergency one
Our Internet of Things network
Emergency One knows where fire engines are and when they need maintenance.
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Emergency one

“Any vehicle or piece of equipment that a firefighter uses needs to be fully reliable and constantly working. The benefit with working with Vodafone IoT is... we’re assured that it’s going to work.”

Elliott Boyce
Project Manager
Emergency One

Innovation for emergencies

Emergency One was founded in 1989 in East Ayrshire, Scotland and in the years since has grown into the UK's leading manufacturer of fire, rescue and emergency vehicles and appliances. Through partnerships with several fire and rescue services across the country, Emergency One aims to listen and respond to the operational needs of firefighters. The company works to create safer and more reliable firefighting equipment by innovating in sensors, wireless connectivity and the Internet of Things, through which everyday appliances are able to connect to the internet. Emergency One uses Vodafone Internet of Things technology to power its telematics and tagging innovations, which have revolutionised the capabilities of fire services.

Challenge

Needed to track fire engines, monitor fuel and water efficiency, and ensure equipment is available and operational

Enable firefighters to access Wi-Fi and stream fire footage or issue public safety warnings while out in the field

Prevent vehicle downtime while repairs are made

Make cost savings and optimise efficiency in the engineering and repair schedule

Solution

Vodafone IoT-enabled SIM cards installed in fire engines allow them to stay connected to the internet

Emergency One can track its fleet at all times with RFID-tagging and telematics systems

With IoT SIMs, Emergency One can remotely assess the status of equipment, predict and repair faults, monitor water levels and more

Benefits

Wi-Fi-connected fire engines make it easier for firefighters to communicate critical safety messages to the public

Remote problem-solving results in cost savings for fire and rescue services, and less downtime for vehicles

Global SIMs mean Emergency One can expand into the international market and know that its vehicles' connectivity will work

Cutting-edge firefighting technologies

Emergency One has almost 30 years' experience in building fire, rescue and emergency vehicles and appliances. The company is now responsible for around 82% of the UK fire market and works alongside fire and rescue services around the UK to understand the needs of firefighters.

By listening and responding to firefighters' needs, Emergency One can ensure that their products are safer and more reliable, and use the latest technology to save lives.

"Industries are moving with technology, including the fire and rescue services," says Elliott Boyce, a project manager at Emergency One. The next generation of firefighters has come to expect that technologies such as GPS or WiFi will be available to them on the job.

Elliott explains: "Young firefighters are used to working with technology and when they're going to complete a job, they expect to see that technology. We've got to move with the world in terms of innovation... We want to replicate what they're used to at home in a fire engine."

Internet of Things technologies can provide particular benefits to future-facing fire and rescue services, such as secure WiFi access so that firefighters stay connected, and telematics that allow vehicles to be tracked and faults to be diagnosed and repaired remotely.

Emergency One turned to Vodafone IoT to power its innovative technologies and provide cutting edge products to fire and rescue services around the UK.

> "We put a SIM into all our technology and Vodafone's resilient network allows us to connect them and access them remotely. That is how a fire engine becomes a connected fire engine."
>
> Elliott Boyce
> Project Manager
> Emergency One

Connectivity for resilient solutions

The first step was installing Vodafone SIM cards in all of Emergency One's new products. "The innovative technologies that we are constantly creating and currently using on vehicles around the UK are all connected using Vodafone Internet of Things," Elliott explains. "We simply put a SIM into all our technology and Vodafone's resilient network allows us to connect them and access them remotely."

This connectivity allows Emergency One to provide a telematics system that is bespoke for fire engines. The system collects data on everything from the vehicle's location and when it arrives at the scene of an incident, to when it uses its blue light functions and how much water it pumps. This data can then be accessed through a web portal, thanks to Vodafone's high-speed network.

An additional service provided by Vodafone has been a Wi-Fi solution, available onboard Emergency One's fire engines, that enables fire services to communicate more effectively.

Firefighters can stream live information from incidents back to control rooms, or even issue warnings to the public in the vicinity of an incident. Because of the flexible capabilities that Vodafone provides, Emergency One can continue to innovate and respond to firefighters' evolving needs. "If there's anything that fire services want that we don't currently have, we've got a team of people that are there to make it happen," adds Elliot.

The resilience of Vodafone's network is vital, because it means firefighters can always rely on the technology they need, even in life-or-death situations. Elliott says: "Everything we do at Emergency One has got to be resilient. Everything needs to work when the firefighters use it. The benefit with working with Vodafone IoT is... we're assured that it's going to work."

Remote diagnosis

The connectivity that Vodafone provides has already delivered cost savings by enabling remote diagnostics and repair on fire and rescue vehicles and appliances. Elliott explains: "With our remote diagnosis tool, we're able to catch problems before they happen and to do remote fixes, which prevents downtime and saves cost because there's no need for an engineer to travel." By solving problems remotely, Emergency One can ensure that equipment is always ready and available when it is needed.

The company's e1Tag RFID system goes a step further, tagging operational equipment so that firefighters receive an alert when a piece of equipment is missing via a control screen in the cab of the fire engine. This way, firefighters can ensure that all the necessary equipment is available and working before they leave the depot.

Emergency One's partnership with Vodafone has powered growth within the company, both in terms of its sales and the number of products it offers. Vodafone's IoT services have enabled the development of a range of innovative products. "We don't always just sit back and work with what we've got," continues Elliot. "We always want to create new technologies to assist the fire and rescue services with what they do."

What's more, thanks to Vodafone's network and global SIMs, Emergency One can connect vehicles wherever they are in the world, meaning that the company is now expanding into the international market.

Most importantly, with comprehensive connectivity in their technology, firefighters feel reassured that they can rely on their equipment when entering dangerous situations. "They are called to life-threatening incidents and they need to rely on everything they've got to work fully. They can't afford to turn up and their equipment or vehicle isn't working," Elliott concludes.

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