Case Study: **Avon Fire and Rescue Service**

Telent deliver station end refresh for Avon Fire & Rescue Service in preparation for ESN transition

Operating across an area of 134,753 hectares and responsible for keeping a population of more than one million people safe, Avon Fire and Rescue Service (FRS) provides emergency and protection services to the communities of Bath & Northeast Somerset, Bristol, North Somerset, and South Gloucestershire.

Headquartered in Portishead and with 21 fire stations across the area, Avon FRS's 500 Wholetime firefighters, 120 on-call firefighters, 35 control room personnel and 120 support staff, responded to over nine thousand incidents in 2021.

Replacing legacy systems

Many secondary bearers used as back-up networks for station end mobilisation systems in fire stations across the UK are rapidly approaching end-of-life and need upgrading and replacing. PSTN is scheduled to be retired in 2025 and mobile operators have announced the phased withdrawal of 3G and 2G networks from 2023. The legacy Paknet service that Avon FRS was using for its secondary bearer – the back-up network connecting the station end to the control room – was scheduled to be withdrawn at the end of March 2022. Avon FRS needed an alternative solution as a back-up bearer in addition to its primary bearer of a wired WAN link, to ensure continuity of service for its station end solution.

In addition, the organisation's fire coders – the core hardware technology that mobilise crews – needed to be upgraded as they approached end-of-life. A fire coder is the intelligent device at each fire station that is at the heart of Telent's station end solution. It receives information from the control room, via the primary bearer (or secondary bearer if there is an issue with the primary bearer) to operate multiple devices to directly mobilise resources in the fire station.

"We are delighted with our collaboration with Telent to upgrade and replace our legacy technology for our mission-critical station end communications in readiness for the transition to ESN. Working with Telent has provided us with the complete confidence that our firefighters have access to unfailing and continuous communications to effectively and diligently undertake their daily duties."

John Craig, Station Manager at Avon Fire and Rescue Service

The equipment activated by the fire coders includes printers in the station and Mobile Data Terminals in the fire appliances, both receiving critical information about the incident. A wide range of other devices are also activated in the fire station to mobilise crews, including radio paging for retained stations and control relays to flash lights, open doors and turn off cookers. It was therefore essential that Avon FRS remained connected via a replacement system for Paknet and was utilising the most up-to-date, supported and secure operating systems.

Meeting rural and urban needs

To upgrade its station end solution, Avon FRS employed the services of Telent to deliver a cost-effective solution to upgrade the operating system in the fire coder and implement a new solution for its secondary bearer. This was the first deployment of its kind and replaced Paknet with a router solution that terminated the primary bearer and provided a secondary back-up bearer using a mobile network data service for over-the-air connectivity. The router is equipped with a multi network SIM. This allows the most appropriate mobile service provider to be automatically selected for the back-up bearer removing any issues of mobile service coverage which is particularly important for rural and remote based stations.

As part of the full-service offering, Telent provided comprehensive design, testing and deployment services. This started with initial development and pilot testing of the solution in its specialised lab followed by pre-staging all equipment to minimise time on site and maximise quality of service for the main project deployment. The pre-staging of equipment in Telent's secure facilities included testing and fully configuring all equipment to reduce any early-life failures and associated on-site engineering visits.

"Telent offers an end-to-end integrated upgrade route for fire and rescue services across the UK. Our 4G-enabled ESN-approved technology is the perfect solution to replace existing systems that are imminent for retirement, and our fully managed service has ensured a seamless transition for Avon Fire and Rescue Service in preparation for ESN."

Barry Zielinski, Operations and Services Director at Telent

Prepared for the ESN transition

The end-to-end proven solution from Telent can be easily procured and rapidly deployed through several Crown Commercial Service (CCS) purchasing frameworks. The new solution has provided Avon FRS with improved resiliency and security and delivered an alternative back-up bearer to replace its legacy Paknet network to ensure its fire stations remain connected even if the main network goes down. Avon FRS now has a solution that ensures business continuity through its upgrades to the fire coders and the new router solution that is compatible with the ESN Connect service, providing readiness for the nationwide transition to ESN.

The new router solution is equipped with a cloud management application that provides secure remote monitoring that can be conducted on behalf of the customer. Telent can administer new change configurations centrally and across all of Avon's 21 stations via the secure cloud platform. The cloud management solution also has the ability to directly monitor and alert Telent's network operations centre should any issues be detected.