5 reasons to refresh your fire control room technology now

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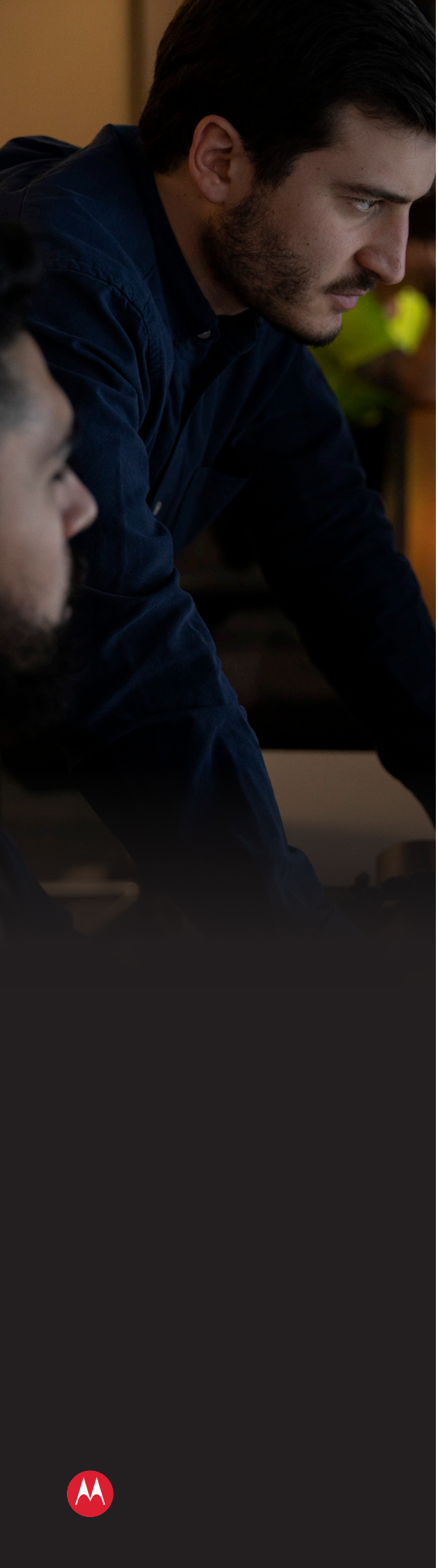
Tackling today's control room challenges

The epicentre of the Fire and Rescue Service (FRS) mission, the fire control room, isn't simply responsible for fielding emergency calls and mobilising fire services, Control Room Operators (CROs) make decisions which are pivotal in safely resolving life-threatening incidents. The design and technology of the fire control room should alleviate the demands of the role, streamlining workflows and ensuring critical information is managed effectively. However it is often slow and archaic - lagging behind today's technology standards.

Encouragingly, technological innovation is primed to transform the fire control room. With an ecosystem which facilitates collaborative and agile working practices, the ongoing challenges faced by personnel - staffing issues, extensive workloads and budget cuts - can be met. The control room can become home to a more flexible, resilient workforce, and teams can become empowered to make safer, more informed decisions. Incidents will be managed better and outcomes will improve - for both FRS teams and the communities they serve.

Below we explore how the latest technology is addressing the five leading control room challenges the FRS is contending with.



Challenge 1: Recruitment and retention

The pandemic was responsible for a lasting shift in workplace expectations for organisations worldwide. A significant number of employers moved from stipulating that their employees be present in the office for a full working week, to sanctioning days working at home - with some organisations closing their offices entirely. As home-working has become customary for many employees, recruiting and retaining a suitably qualified workforce has proved challenging for the FRS. Their existing fixed on-premise solutions limit flexible working practices and employees are currently obliged to travel to the workplace.

Recruitment and retention has been further exacerbated by the intense and emotionally-draining working conditions placed on CROs (which is also reflected in the rising levels of absence due to stress). An alternative, less stressful customer-facing role that can be managed from home is more appealing to the potential recruitment pool than a CRO role.

Solution: The virtual control room

To make working conditions more attractive to potential employees and create more efficient operations, fire services are increasingly exploring the possibility of a virtual control room. Employees can access their workplace applications through a secure web browser, allowing them to work anywhere there's a secure and reliable network connection.

Expanding and decentralising the control room dramatically increases the home-working opportunities for control room staff, broadening the catchment area for recruitment and attracting a greater number of suitably qualified staff. The flexibility can lead to a reduction in staff stress levels, boosted morale and decreased staff turnover. Additionally, virtualising operations means that in the case of an act of terrorism or a natural disaster, teams are already equipped to maintain services, and are not reliant on one static centralised control room.

Challenge 2: Overloaded systems

The FRS control room represents a uniquely pressured environment, with several factors demanding an employee's focus and threatening to cause both stress and fatigue. CROs make life or death decisions, multiple times a day. The amount of emergencies a call handler deals with will vary in each region, but it can be up to 450 calls a day in heavily populated areas such as London[1] - a figure which is increasing. This is owing to the growing population, as well as the prevalence of smartphones. Citizens are more likely to have the means to place an emergency call than they were previously, and also call unnecessarily, with non-urgent issues, due to the various contact methods available.

For genuine emergencies, CROs manage a significant cognitive load. They are expected to maintain multiple contact channels in addition to the verbal call, including emails, text messages, webchats and social media messages - as well as manual, often repetitive, paper-based tasks. A responsibility which is exacerbated by the amount of digital information contributing to each incident: citizen-generated photos and videos, and social media posts. During a major incident, multiple reports and duplications across channels will arrive, all pertaining to the same emergency. Call handlers must confidently manage this deluge of information, whilst navigating different systems, interfaces and screens. These complex tasks can be prone to misinterpretation and error, with systems often crashing when overloaded with users and information - typical in a major incident. Any oversight or delay can immediately jeopardise the safe outcome of an incident, impacting frontline fire personnel and putting citizens in danger - which further adds to the pressure placed on a CRO.

Solution: A technology ecosystem

Seamlessly centralising voice, video, data and analytics, an advanced technology ecosystem can handle multiple streams of information. Supported by a simplified user interface, it considerably reduces the stress and cognitive impact on CROs. Siloed systems are replaced with one unified workflow, allowing critical information to move faster, presenting fewer opportunities for human error. This impacts staff retention, contributing to the better handling of calls and reducing costly training for new team members.

[1] https://www.independent.co.uk/news/uk/london-fire-brigade-london-lincolnshire-enfield-police-b2130579.html

Challenge 3: Disruptive technology cycles

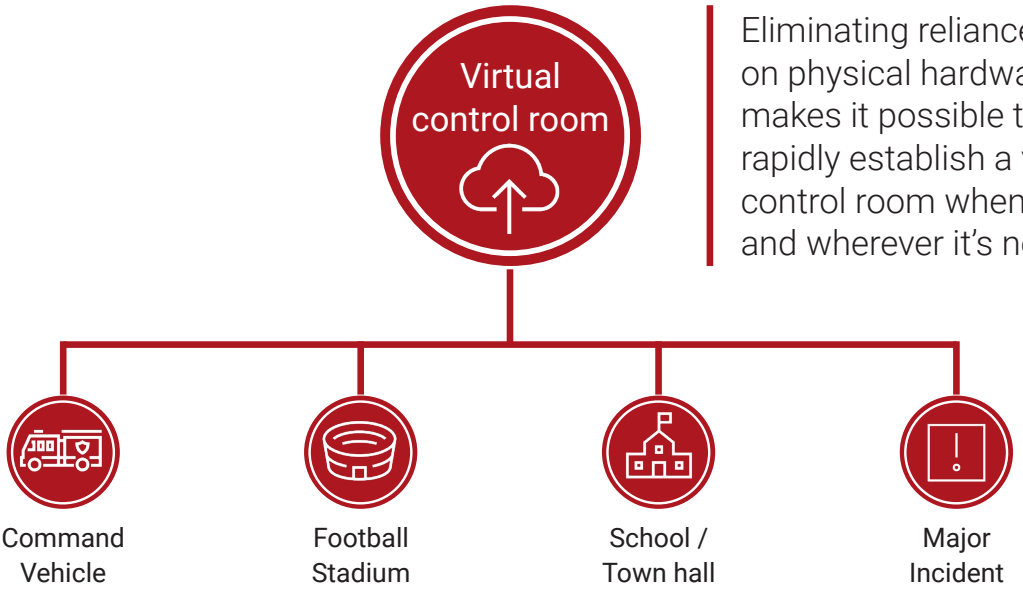
Organisations invest significant budget in both procuring new systems and training staff to operate them efficiently. Whilst this new technology affords the FRS improved productivity and safety, its integration can pose further issues. To continue to meet control room demand whilst users are onboarded, personnel are expected to support failing, near-obsolete systems. For CROs this 'infinite loop' of technology cycles means that their efforts are constantly being thwarted by either the struggle to adapt to new systems, or the limitations of end-of-life technology not fit to meet the role's demands.

Solution: Evergreen IT

Motorola Solutions has become aware of the impact technology cycles can have on organisations, and are now offering their applications and services on an Evergreen IT and a Software as a Service (SaaS) basis. Evergreen IT is described as 'a technology ecosystem that is continuously changing and evolving, never becoming out-of-date or obsolete'[2]. Typically hosted in the cloud and refreshed with the latest features and security updates, Evergreen IT allows the FRS to benefit from the latest software - with minimal input.

A hosted service reduces the burden on in-house IT teams tasked with maintaining dated applications, freeing up valuable time to focus on other IT matters. What's more, operations are no longer disrupted by systems being periodically taken offline to execute updates and upgrades. For the FRS, SaaS provides a welcome shift to a more manageable financial model, spreading costs over the total lifespan of the solution - which could be at least a decade.

SaaS also contributes to the idea of the virtual control room. By implementing advanced technology, it's easier for personnel to access resources from any location with only a network connection. They can also create remote control rooms close to the scene of a major incident, such as a natural disaster, at short notice.



Eliminating reliance on physical hardware makes it possible to rapidly establish a virtual control room whenever and wherever it's needed

[2] Benefits of Cloud, Scottish Government, https://www.gov.scot/publications/benefits-of-cloud/pages/evergreen-it/#:~:text=The%20meaning%20of%20the%20term,of%2Ddate%20or%20obsolete

Challenge 4: Limited protection for costly assets

The valuable equipment housed in fire and rescue stations - which is left unattended frequently - makes them particularly vulnerable to acts of vandalism and theft, trends which are unfortunately on the increase. Commonly, the CCTV in place is insufficient - it can't capture incidents in low light, nor will it alert staff to unusual activity. Even for those stations operating more advanced surveillance systems, they tend to be built solely for one purpose, which prevents CCTV incidents from being easily shared across functions.

Solution: Open technology integrations

An ecosystem driven by open technology will allow for the integration of numerous systems, all linked and able to share crucial data in one seamless workflow. By connecting the station's video surveillance system to the control room ecosystem, incidents can be managed immediately. The impact of theft and vandalism is reduced and firefighter and citizen safety is improved.

Challenge 5: Reduced investment in the FRS

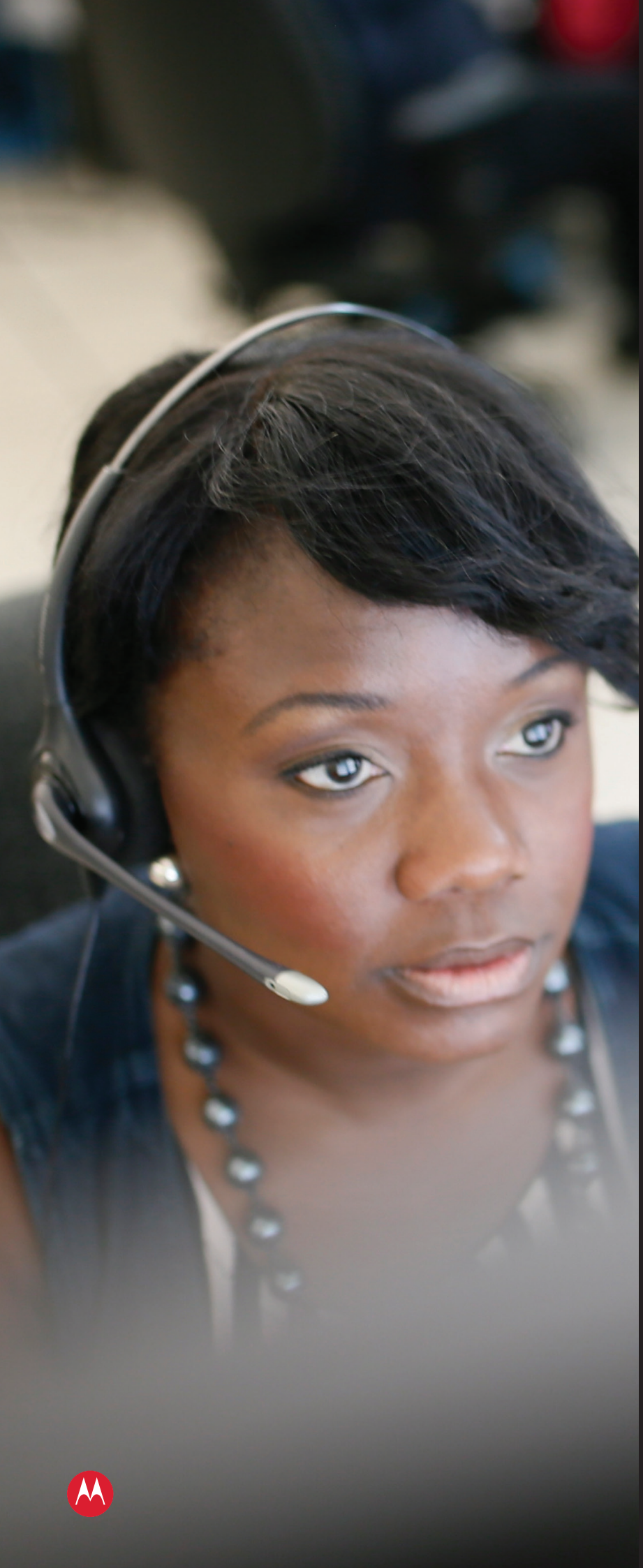
Like many public services, budget cuts are placing further strain on the FRS. Crew numbers have been significantly impacted and response times have reached a 10-year high - averaging 9 minutes and 12 seconds[3]. Furthermore, the scope of the emergencies the service is being asked to handle is growing.

Solution: Drive greater operational efficiencies

In this challenging commercial environment, the FRS must realise greater returns from their investments - notably their IT costs. The SaaS model not only creates efficiencies in workflows and operations, it facilitates a shift away from the capital-intensive procurement process to an operating expense (Opex) model, reducing the costly burden of maintaining a patchwork of legacy systems.

Eliminating the need for an investment in multiple individual services, SaaS reduces upfront expenditure and maintenance costs. It allows the FRS to scale their operations and capabilities as required - as well as reduce response times. A sudden spike in demand can also be met with a quick response, without compromising performance or incurring significant additional costs.

[3] Fagg, Jonathan, O'Brien, Marcus, and Elgueta, Adriana, "Fire brigade response times across England highest in 10 years, data shows", BBC, 20.08.23, https://www.bbc.co.uk/news/uk-england-london-66544094



Your next generation control room

As well as tackling five of your main challenges there are many more advantages to refreshing your control room technology.

The benefits of a cloud-hosted control room solution, such as our communication and mobilising platform, accelerate when implemented as a shared service. The FRS Hub can be shared by multiple fire and rescue services enhancing operational capabilities and improving service delivery, enabling organisations to exchange best practices from one shared, centralised platform. Processes and workflows are standardised, generating more consistent operations, data management and reporting methods. Data-rich analytics can be aggregated from multiple sources, creating a broader perspective on operational trends and performance metrics, and assisting in decision-making, risk assessment and policy development.

The enhanced collaboration between the emergency services this fosters is especially beneficial in the case of a major incident. FRS can more easily draw on the additional call-handling capacity provided by a ‘partner’ service in a neighbouring county – or anywhere else in the country.

From working conditions to erratic weather, today’s control rooms are under immense pressure for numerous reasons. Though, as illustrated, advanced technology is effectively addressing them. At Motorola Solutions, we’re ‘Solving for safer’, using technology to enable critical collaboration in public safety, helping to better protect people, property,places, and agencies. If you recognise these challenges and want to learn how our technology can solve them, get in touch with one of emergency services experts.

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