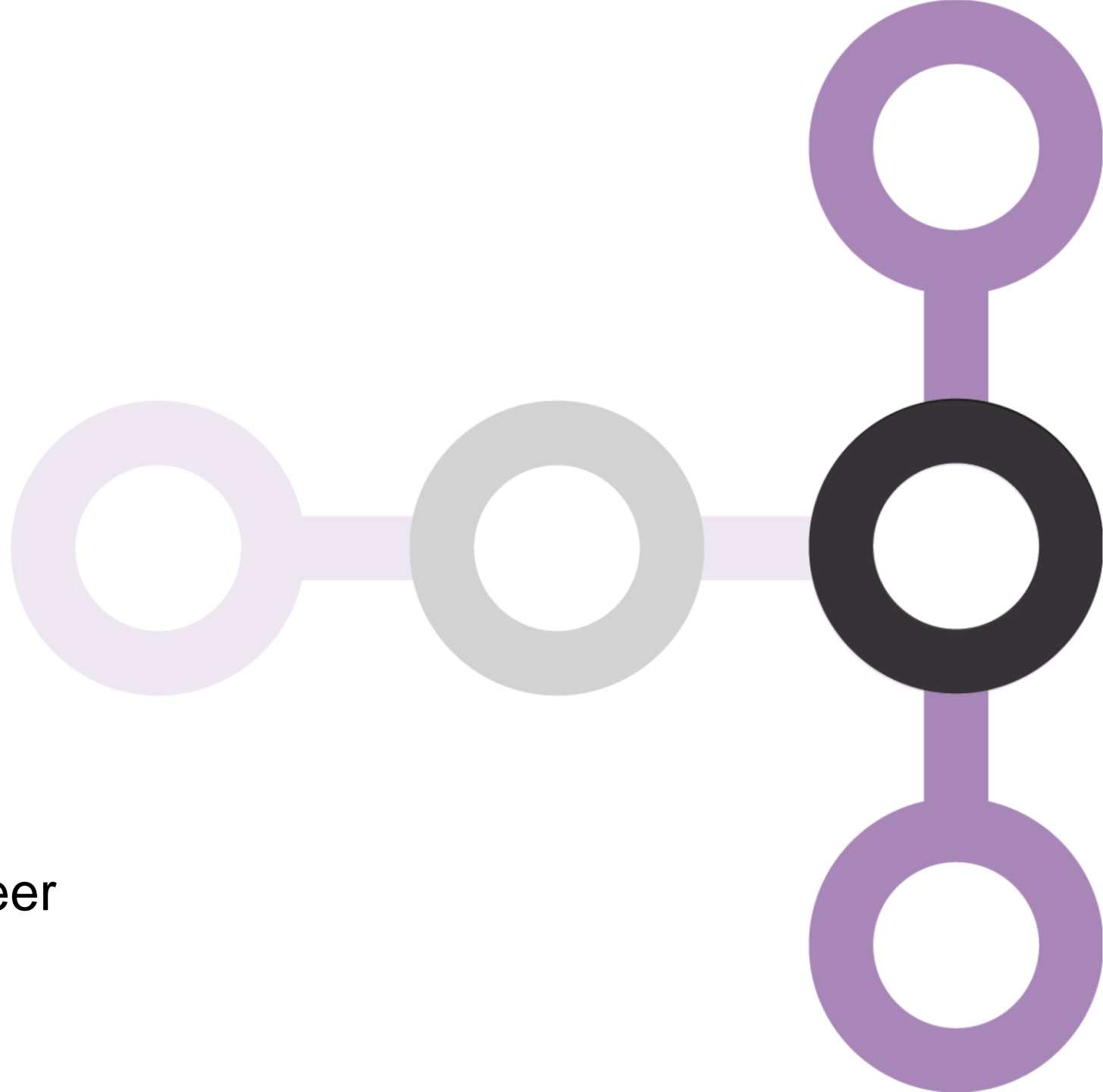


# ESN Update

Cate Walton, ESN Chief Engineer  
4<sup>th</sup> May 2023



# Contents

- ESN overview
- Spectrum for ESN
- Enabling a competitive market

# The Emergency Services Mobile Communication Programme

The Home Office is leading a cross-government programme, called the Emergency Services Mobile Communication Programme (ESMCP), to deliver a new critical communication system for Great Britain's emergency responders. This is called the Emergency Services Network (ESN).

The programme is focused on delivering ESN in an incremental way by working collaboratively with those who will use it. The focus is on getting the products, coverage and services that emergency services need so they can be tested, adopted and used as they become available. This will allow for continuous improvement to meet the evolving needs of emergency service users.

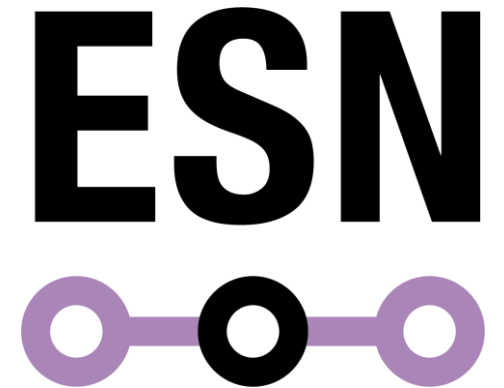


# What is the Emergency Services Network?

The Emergency Services Network (ESN) will enable fast, safe and secure voice, video and data sharing across the 4G network, giving first responders immediate access to life-saving data and images in live situations and emergencies on the frontline.

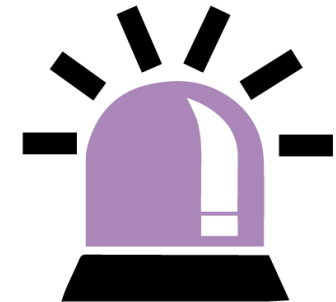
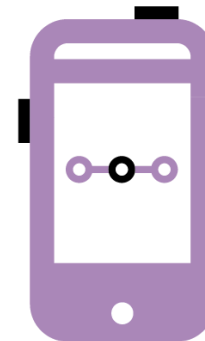
It will replace the current Airwave system used by the emergency services in Great Britain and transform how they operate.

Investment in ESN will also mean improvements to 4G network coverage, which will enable 999 calls to be made from any 4G capable mobile phone in some of the most remote and rural parts of Great Britain, where it was not previously possible.



# ESN will deliver:

- Secure and resilient mission critical communications the emergency services can trust to keep them safe
- A voice and data platform which will enable the emergency services to improve frontline operations
- A common platform to enable emergency services to work more closely together for data sharing in emergencies



# ESN summary



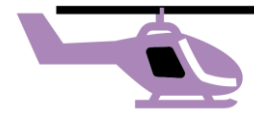
**107 emergency services**



**About 19,000 masts upgraded and 700 new masts by EE**



**100+ control rooms**



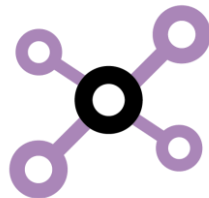
**90+ aircraft**



**Up to 10,000ft in the air**



**300,000 service users**



**32 nationals and more than 300 sharers**



**45,000 vehicles**



**538,000km of road**



**Out to 12 nautical miles**

# Spectrum for ESN

The vast majority of spectrum for ESN is provided through use of EE's mobile network

There are some niche operational requirements that require access to alternative spectrum:

- The A2G overlay network – using TDD spectrum at 2.3GHz
- Coverage extenders – currently using 1.9GHz TDD provided by EE
- Direct device to device comms – current plan is to continue to use TETRA, at least initially

# Competition in ESN Provision

There are a number of factors driving us to consider how to create a competitive market for provision of ESN services

1. It was part of the original vision for ESN
2. The recent CMA report requires us to establish a competitive pricing arrangements by 2029
3. Choice for our user organisations
4. Value for money

# What are we doing to enable future competition?

Our first objective is to complete build of ESN, maximising use of investments already made.

ESN is built using 3GPP standards based technology – we know that this is necessary but not sufficient to ensure choice in service provision.

We are commissioning a study to help us determine all the steps we need to take between now and 2029 to prepare for a future competition

# Proposed Study Scope

- Consider aspects of the current approach and architecture that are particularly important that could either stimulate or adversely constrain competition opportunities
- Identify opportunities to stimulate competition prior to 2029, in parallel to delivery of the current strategy, e.g. use of neutral host infrastructure, 5G private networks
- Review the feasibility of introducing additional MNOs into ESN to boost coverage, capacity and choice
- Make recommendations on required architectural changes
- Consider additional competition opportunities in the device, accessories, SIM, device management and MCX (Server and client) complete eco-system



**Any questions?**



**ESN**



Emergency  
Services Network

# Thank you

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