

From: Matthew Scott, Kent Police and Crime Commissioner
To: Kent and Medway Police and Crime Panel
Subject: Emergency Services Network update
Date: 15 November 2017



Introduction:

1. Further to a paper submitted to the 15 November 2016 Panel meeting, this paper provides an update on the Emergency Services Network (ESN) – the next generation communication system for the police, ambulance and fire & rescue service.
2. Radio communications between police officers and control rooms currently take place on Airwave, which is the commercial name for a Terrestrial Trunked Radio (TETRA) network set up in the early 2000's. It is a private network with a dedicated frequency spectrum providing national coverage.
3. Airwave is now expensive and functionally limited compared with newer communications solutions. In addition, the changing data requirements of the public and emergency services cannot be met by the narrowband Airwave system. The maintenance and compatibility of the ageing Airwave hardware also adds increasing cost and complexity to managing the network.

The Emergency Services Mobile Communications Programme (ESMCP):

4. The ESMCP, set up by the Home Office, will provide the next generation communication system for the emergency services and other public safety users, via the 4G Long Term Evolution (LTE) commercial mobile telephony network. The system, known as the ESN, will operate within the commercial 4G environment but with additional geographical coverage and prioritised transmissions over and above the standard network.
5. The UK will be the first country in the world to migrate its emergency service communications entirely to 4G LTE; as such, the development of ESN is challenging and complex for the Home Office and partners. The rationale for change is also underpinned by the fact that the call costs for Airwave are approximately £1m per day higher than they will be in steady state ESN, which will represent a significant and sustained saving to the public purse.
6. ESN will offer a service that has integrated voice and broadband data as standard, provides national coverage, high availability, end-to-end security and is able to rapidly adapt to changing demands. Streaming high resolution video is an eagerly anticipated feature, with other capabilities including allowing front line officers to instantly check relevant databases and the ability to easily add users from across the emergency services, enabling better management of major incidents.
7. Police officers and PCSOs will be provided with new hand held devices, similar to smartphones, and new devices will be installed in all police vehicles. The exact device will be determined by each Force, but they will be tougher than the average iPhone or Samsung in order to survive the rough and tumble of emergency services work. As well as enabling access to applications designed specifically for police use, including a 'Push-To-Talk' feature and an emergency button, they will offer a wider range of functions including body worn video and Android computing functions.
8. In terms of coverage and capability, EE are contractually committed to delivering a service that will be at least equal to the current Airwave system in terms of coverage for voice communications, and that will be significantly better in terms of data capability and cost.

Progress to date:

9. Kent Police began its preparation for ESN in 2015 with the appointment, in partnership with Essex Police, of a programme lead. Since then, the workload has grown to the point where there is now a small transition team. The main strands of work for the in-force team at present are as follows:
 - **Replacement of Integrated Communications Control System (ICCS) in the Police & Fire Control Room**
The ICCS needs to be replaced with a new system as the current platform will not work with ESN. The ICCS is an IT system that allows Control Room operators to speak via radio with officers and via

telephony and other means to the public, integrating all methods of communication to ensure that an effective response is provided to public and police communications.

- **ESN Device Specification and Development**

ESN will require the procurement of new devices to work on the network. There are a number of significant technical and operational challenges that will drive both the specification of the device and how it is deployed.

- **Working Practices, Transition and Interworking**

The transition period where both Airwave and ESN will be operational will present challenges, particularly to ensure service to the public is not adversely impacted. The team are working with both the Home Office technical team and local stakeholders to ensure the transition process is designed to minimise the impact of changes to ICCS and ESN as far as possible.

- **Network Coverage**

A fundamental area of work is to ensure ESN network coverage at least matches that of Airwave, particularly in key strategic locations. The team's coverage lead has been working closely with EE to ensure these areas are identified and mapped, so they can be held to account if the coverage is not as promised when testing of the network formally begins.

10. Since the award of the national ESN contracts in late 2015, the programme has been subject to delays. This was not unexpected given the ambitious timescale set by the Home Office, together with the inevitable technical challenges brought about by the UK's leading position in developing 4G LTE emergency services communications. In particular, the delays have been caused by technical challenges in remote coverage areas, the development of bespoke vehicle devices and both underground and airborne solutions.

11. Notwithstanding these delays, EE are on track to deliver network 'service ready' to the UK emergency services by early 2019. Service ready marks the stage mobilisation activities are delivered and the network is ready to be fully tested and assured. This is not the same status as 'operationally ready', where organisations determine that the required end-to-end functionality of ESN is in place and users can commence transition. It is expected that this point will be reached later in 2019.

12. Once operationally ready status is achieved, the North West police region will be the first to go live on ESN. Once they have gone live, their full transition from Airwave to ESN is expected to take 9 months, with a further 3 months as a contingency. The remaining UK forces, including the Metropolitan Police, will go live and commence transition to ESN in a staggered process thereafter. It is expected that the Eastern Region will go live about 3 months after the North West, taking a similar amount of time to fully transition.

Benefits:

13. What ESN will bring to Kent Police will be a significant and sustainable set of business benefits that will be worth the cost and implementation challenges. These are summarised in the following table:

Category	Feature	Benefit
Data Provision	ESN handsets will allow use of broadband data	Data provision to frontline officers will be integrated so they will not need separate tablet and radio devices; the features will be incorporated into one ESN device with a single contract.
Body Worn Video	ESN handsets can have integrated body worn video (BWV) capability	The current multiple devices an officer carries can be reduced to one, minimising the need for multiple device replacement costs and keeping data provision to one single contract.
Device Support Costs	Overall costs of communications support will be lower with less devices	Integration of devices and contracts will mean that both up-front and support costs are significantly reduced; supporting multiple devices financially, operationally and technically is expensive and results in unnecessary duplication.
Cost of Calls	The call costs for ESN are significantly lower than Airwave	Less money will be spent on voice communications, albeit the force does not expect to see an overall reduction in costs due to the significant predicted increase in data usage - a consequence of the vastly improved and enhanced data capability.
Data Capability	Images can be shared, crime reports created and updated remotely	The enhanced data capability and additional functionality over and above Airwave will ensure that officers remain out of the police station, interacting with the public, for longer periods of time.

Conclusion:

14. ESN presents great opportunities for the policing of Kent, with the enhanced data capability of the system able to transform the way officers do their jobs and serve the public.
15. ESN will enhance the capability of officers for work, with the repetitive functions that are sometimes currently necessary transformed into a series of up to date, streamlined transactions that will maximise their potential to provide an effective policing service to the communities of Kent.
16. The benefits of ESN, both in financial and operational terms, are so significant that the development work being undertaken will pay dividend to the public purse and emergency services for many years to come.
17. Once the technological, coverage and transition challenges are overcome, the UK will lead the world with a capable, flexible and affordable emergency communications system fit for the demands of policing in the next decade and beyond.
18. The Commissioner's Chief of Staff (CoS) and Chief Finance Officer attend the quarterly Strategic IT Steering Group where progress against the delivery of all Kent Police IT projects is reviewed. In relation to ESN specifically, the CoS meets regularly with the Programme Manager to monitor and review progress.