ESSEX POLICE, FIRE AND CRIME COMMISSIONER
FIRE & RESCUE AUTHORITY
Essex County Fire & Rescue Service

Meeting	**Performance & Resources Board**	Agenda Item	
Meeting Date	28 October 2019	Report Number	
Report Author:	Matt Stalker, ESCMP Regional Project Manager		
Presented By	DCFO Rick Hylton		
Subject	**ESMCP Update**		
Type of Report:	Information		

RECOMMENDATIONS

That the Performance & Resources Board:
1.   Acknowledge the national landscape in relation to the Emergency Services Mobile Communications Programme (ESMCP).
2.   Acknowledge the Emergency Services Network (ESN) local transition strategy as recommended by the COSMOS Programme.

BACKGROUND

The ESMCP is a Home Office sponsored programme, which has been established in order to deliver the ESN as a replacement solution for Airwave.

The objectives of the programme at a national level are as follows;
▪ Replace the Airwave TETRA radio by using the commercial 4G LTE mobile network.
▪ Deliver a period of interworking allowing both TETRA radio and ESN to work simultaneously and support communication across both platforms during the national transition.
▪ EE to provide national coverage at 98% landmass to replicate that of Airwave currently.
▪ Deliver a financial saving in future levels of government spending on Emergency Services mobile communications which currently cost £1m per day.

The ESMCP has secured an extension of the Airwave Service until 31st December 2022. The Programme has undertaken a 'reset' that has resulted in a significant change in its delivery strategy. The ESMCP is now a change programme focusing on customer adoption of ESN Products rather than a centre led technology driven implementation. This fundamental change in approach now places the decision of what aspects of the ESN to adopt, and when, in the hands of each individual Service.

As a result, Services' are now expected to consider their adoption of ESN in line with their own digital strategy and associated change delivery projects/programmes as part of their overall Service Improvement strategy roadmap.

The COSMOS Programme is the method by which we will manage our transition to ESN. The programme will identify, define and manage the activity required to enable transition. It will also identify the local benefits associated with adopting the ESN, and therefore identify opportunities for Service Improvement, which once completed, will support the business justification for ESN transition.

The following outcomes are anticipated as a result of the COSMOS programme locally;

- Replace all Airwave radios with either an ESN Handheld Device or an ESN Fixed Vehicle Device (FVD)
- Systems upgraded/procured to support ESN, including Control Systems, mobilising software and the Incident Reporting System (IRS).
- ECFRS transitioned from Airwave to the ESN.
- Enhanced functionality adopted through the use of new hardware, specifically tablets on appliances.
- Supported & up to date hardware in use, specifically Mobile Data Terminals (MDTs).
- Up to date hardware asset records & improved hardware asset management & governance long term.
- Central source of ESN management through the Self Service Portal.
- Personnel correctly equipped technically for their role through the use of User Profiles.

The following milestones and dates are provided, but are still subject to change as the COSMOS Programme has significant interdependencies with the Home Office ESMCP.

Milestone	Timescales (as of 10/2019)
Appliance MDT Hardware refresh	Completed April 2019
Appliance MDT Software updated	Completed April 2019
Appliance Tablet Computers installed	Completed April 2019
ESN Connect (Data) available	September 2019
Current Frequentis ICCS Contract expires	November 2019
4i Upgrade target date	January 2020
IRS Upgrade target date	January 2020
Current Remsdaq CAD Contract expires	January 2020
Airwave Section 31 Grant Funding to continue until at least	31st March 2020
Frequentis ICCS Upgrade target date	May 2020
ESN Contracted Coverage delivered by EE	November 2020
ESN Direct available (Pre-Prime product offering early adoption functionality)	November 2020
(Proposed) ICCS & CAD Contract Extension expires	January 2021
ESN Prime available (like for like replacement for Airwave)	January 2021
New ESN Compliant Control Room Systems implemented	July 2021
ECFRS ESN Transition Commencement (Proposed)	July 2021
Airwave Shutdown Date (ASD)	31 December 2022

OPTIONS AND ANALYSIS

The following local ESN Transition strategy options have been identified and considered. **Option B** is the preferred and recommended transition strategy. See Appendix 1 for detailed ESN Product information.

a. **Option A - ESN Direct v.3 and Connect Adoption Q3/2020 (Voice & Data)**

This option is considered as the earliest practical opportunity to adopt ESN and associated new ways of working, and begin the process of off-boarding from Airwave.

Rationale Assumptions:
  I. Airwave provision beyond 04/2020 is sufficiently cost prohibitive and is deemed as financially unsustainable
  II. Business Analysis has identified significant business service improvement in adopting ESN Connect (supported by a Business Case that justifies financial investment)

Conditions / Prerequisites:
  I. ECFRS have ESN compliant Control Room (CR) Systems implemented
  II. ECFRS have an installed and commissioned Direct Network Service Provider (DNSP) (or access to one) and has obtained ESN Code of Connection (CoCo) approval.
  III. ESN England Urban Coverage has been achieved
  IV. National Programme have demonstrated that the Interworking Solution has been tested, trialled and deemed operationally fit for purpose
  V. The impact of adopting ESN Direct ahead of ESN Prime on ICT BAU is known and accepted (lack of Self Service Portal (SSP) to manage configuration items)

b. **Option B - ESN Connect and Prime Adoption Q3/2021 (Voice & Data)**

This option is based on the premise that there are no business or financial advantages of adopting ESN for ECFRS prior to this date, and instead seeks to align our adoption with our new Control Room solution implementation and transition before the Airwave Shutdown Date of 31st December 2022.

Rationale Assumptions:
  I. Airwave provision post 04/2020 is deemed affordable, with no significant financial benefits identified with an earlier ESN transition
  II. Business Analysis does not identify any significant business service improvement in adopting ESN Connect ahead of this time

Conditions / Prerequisites:
  I. ECFRS have ESN compliant CR Systems implemented
  II. ECFRS have an installed and commissioned DNSP (or access to one) and has obtained ESN CoCo
  III. ESN England Urban Coverage has been achieved
  IV. National Programme have demonstrated that the Interworking Solution has been tested, trialled and deemed operationally fit for purpose

c. **Option C - ESN Connect Adoption ahead of ESN Prime Option B schedule (Data before Voice)**

This option is based on the premise that there are sufficient business advantages in adopting new ways of working to exploit the additional mobile data provision that the ESN will afford ECFRS.

Rationale Assumptions:
  I. Business Analysis identifies significant business service improvement in adopting ESN Connect (Data) ahead of Option B schedule (supported by a Business Case that justifies financial investment)

Conditions / Prerequisites:
  I. ECFRS have an installed and commissioned DNSP (or access to one) and has obtained ESN CoCo Lite
  II. ESN England Urban Coverage has been achieved

d. **Option D - ESN Direct v.3 Adoption Q3/2020 (Voice Only)**

This option is based on a premise that it is financially unsustainable to continue with Airwave for critical voice communications; however, the ESN does not offer sufficient business advantage over commercial offerings for mobile data provision.

Rationale Assumptions:
  VI. Airwave provision beyond 04/2020 is sufficiently cost prohibitive and is deemed as financially unsustainable
  II. Business Analysis hasn't identified significant business service improvement in justifying the adoption of ESN Connect over other Commercial Data providers

Conditions / Prerequisites:
  I. ECFRS have ESN compliant CR Systems implemented
  II. ECFRS have an installed and commissioned DNSP (or access to one) and has obtained ESN CoCo.
  III. ESN England Urban Coverage has been achieved
  IV. National Programme have demonstrated that the Interworking Solution has been tested, trialled and deemed operationally fit for purpose
  V. The impact of adopting ESN Direct ahead of Prime on ICT BAU is known and accepted (lack of SSP to manage configuration items)

e. **Option E - ESN Prime Adoption Q3/2021 (Voice Only)**

This option is based on the premise that there is no business or financial advantage in adopting the ESN for critical voice communications prior to this date; and considers that ESN does not offer sufficient business advantage over commercial offerings for mobile data provision. Our transition to ESN (for critical voice only) will therefore simply be aligned with our new Control Room solution implementation and transition to the ESN before the Airwave Shutdown Date of 31st December 2022.

Rationale Assumptions:
  I. Airwave provision post 04/2020 is deemed affordable, with no significant financial benefits identified with an earlier ESN transition
  II. Business Analysis does not identify any significant business service improvement in justifying the adoption of ESN Connect over other Commercial Data providers

Conditions / Prerequisites:

    I.   ECFRS have ESN compliant CR Systems implemented

    II.   ECFRS have an installed and commissioned DNSP (or access to one) and has obtained ESN CoCo

    III.   ESN England Urban Coverage has been achieved

    IV.   National Programme have demonstrated that the Interworking Solution has been tested, trialled and deemed operationally fit for purpose

BENEFITS AND RISK IMPLICATIONS

All identified Benefits have been defined with the COSMOS Programme Definition Document.

All identified Risks have been assessed and controlled within JCAD, with both Risks and Control Measures assigned to Owners as appropriate.

Benefits and Risks are reviewed monthly and reported as part of the COSMOS Programme Board Minutes

FINANCIAL IMPLICATIONS

Whilst there are no financial implications as a direct result of this paper, it should be noted that Airwave Section 31 Grant funding has only been guaranteed at its current level until 31st March 2020. It has been indicated that future grant funding will be provided on "broadly similar terms", however the exact terms are yet to be confirmed by National Resilience & Fire Programmes (NRFP), Home Office.

EQUALITY AND DIVERSITY IMPLICATIONS

There are no equality or diversity implications to be considered as part of this paper.

WORKFORCE ENGAGEMENT

Workforce engagement has included all key internal stakeholders and representatives attend COSMOS Programme Board. Representative Bodies are engaged appropriately at Project level.

LEGAL IMPLICATIONS

None specific to this report.

HEALTH AND SAFETY IMPLICATIONS

None specific to this report.

APPENDIX 1

ESN Connect - What is it?

- ESN Connect is the Emergency Services Network (ESN) SIM-only offering.
- It is designed for scenarios where an organisation wants to connect to the ESN network for data only communications.
- Connect has access to priority and pre-emption subject to DNSP installation and adherence to "CoCo".

  Connect example use cases:

- Installed in a vehicle 4G router to provide a W-Fi hotspot for connection between a User Organisation and non-ESN data devices.
- Installed in a handheld tablet device to access online applications on-the-move.
- Installed in a network enabled devices such as cameras, telemetry sensors and access control systems for quick setup and deployment in the field.
- Installed in a 4G vehicle router to provide a secure mobile data connection between a User Organisation and a vehicle mobile data terminal.

ESN Direct - What is it?

- ESN Direct is a Pre-Prime Product offering early adoption of ESN functionality.

  Features include:

- Priority and pre-emption for Push-To-Talk (PTT) communications
- The opportunity for public safety video streaming via the ESN handset
- Operational status i.e. fixed messages such as "call back" or "at scene"
- User profiles for easier sharing of pool devices
- Interworking capability between Airwave

ESN Prime - What is it?

- ESN Prime is the product to replace the Airwave service for all ground based front line users. It will operate with air assets and, with interworking, users still on Airwave.
- A range of both Handheld and Vehicle devices will be available.
- Prime is based on Kodiak v10 and includes essential usability and feature improvements (over ESN Direct offerings)

  Additional features include:

- Hook signalling allowing users to choose whether to answer or reject one-to-one PTT calls
- Large talk groups to enable national-scale communications
- Users can log in to multiple devices concurrently
- Realtime affiliation - control rooms can see who is attached to which talk groups
- Remote group selection for users in the field by the control room
- Full emergency button