Convergence of critical governmental networks

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The next generation

Operational leaders want:

- Less cost
- More interoperability
- Faster innovation

There are signs that they are:

- Frustrated by the pace of change that they can get from their technical teams
- Personally more interested in technology
- Willing to have a new debate about risk

UK: From Airwave to the Emergency Services Mobile Communications Programme

- BT Quadrant Won national contract in 2000
- First deployment in Lancashire Police in 2001
- National coverage from 2005
- All emergency services on same platform from 2006
- Deployed in London Underground 2009
- Contract managed by NPIA

NPIA National Policing Improvement Agency

Emergency Services Mobile Communications Programme (ESMCP)

Home Office

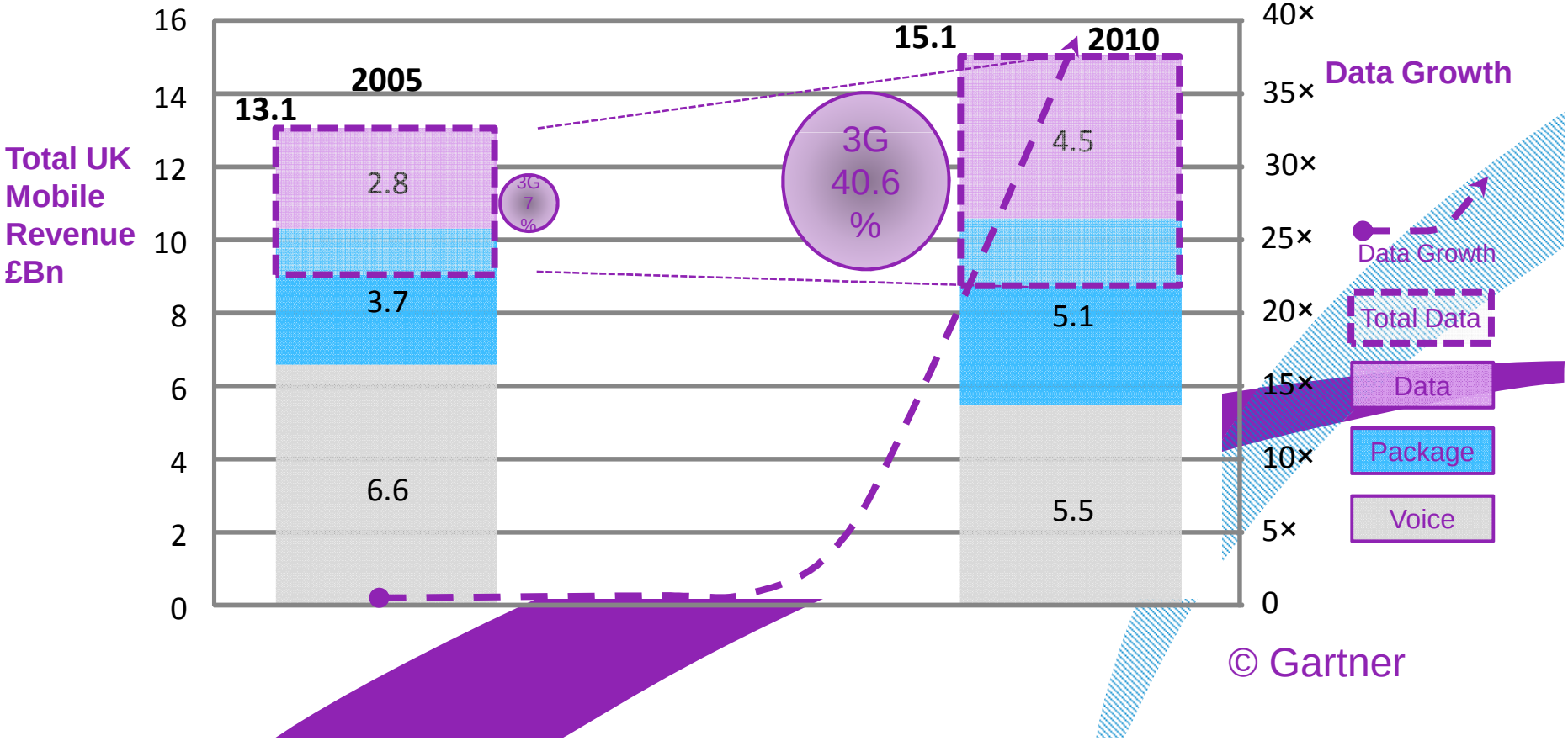
- £500M pa spend today by emergency services
- Core of 300,000 users in 3 emergency services
- More than 300 organisations as potential customers
- Current core service contracts expire 2016 onwards
- Pre–procurement development in 2012-2013
- Procurement 2013-

Aim: To deliver mobile voice and data communications services to the emergency services, other public safety organisations and potentially other public sector bodies

Emergency Services Has Started to Follow and is Transitioning to a More Data Dominant Environment

Home Office

- Gartner believes that the trend towards a more data centric set of business and operational services in the Emergency Services arena will follow that in the wider commercial market.
- In this wider sector data traffic has increased x39 time in the past 3 years with only a 40% market penetration of 3G.
- The current TETRA network is unsuitable to hosting most data centric applications and services that will be expected by an increasingly sophisticated set of user communities.



Initial View : Solution Capabilities

Home Office

- Interoperability
- Availability
- Coverage
- Voice, including fast set up group calls
- Data, ranging from short messaging to video streaming

- High levels of QoS
- Open standards
- Appropriate security
- Flexible service offering

Additional Solution Constraints

Home Office

- Core service plus **flexible menu** of additional capabilities
- Standards based architecture to support **access to evolving technology** and upgrades
- Must facilitate reliable **transition** without loss of service
- Must support high degree of **integration** with legacy IT environments
- Core solution based on open industry standards and commercially available technologies
- Highly decentralised procurement envisaged through multiple autonomous public sector bodies
- a standards and framework approach with strong competition around core offerings

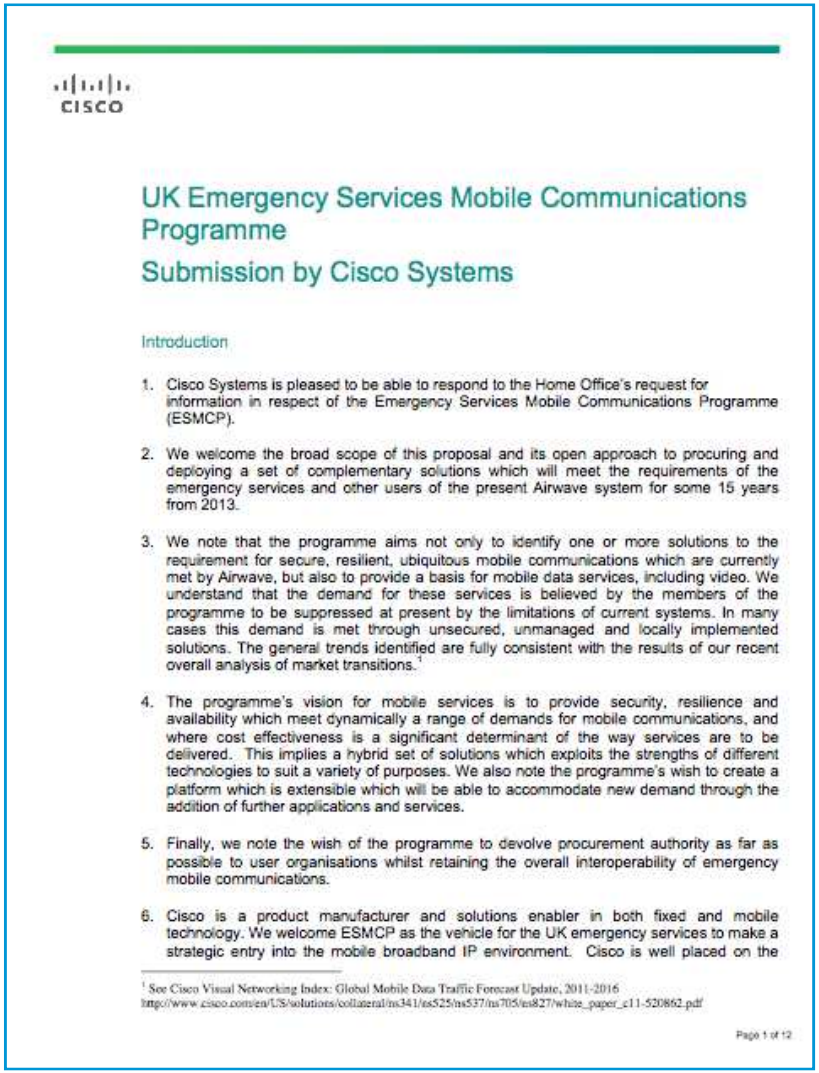
Required Solution

Home Office

- Core solution based on open industry standards and commercially available technologies
- Highly decentralised procurement envisaged through multiple autonomous public sector bodies
- Aim is to create a standards and framework approach which facilitates strong competition around core offerings

Cisco response to RFI (1)

[The] technology landscape will evolve in a way which is supportive of the high level aspirations of the ESMCP to create an environment which will support hybrid solutions, a separation of networks from the applications that run on them and which allows different use patterns according to operational requirements.



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UK Emergency Services Mobile Communications Programme

Submission by Cisco Systems

Introduction

1. Cisco Systems is pleased to be able to respond to the Home Office's request for information in respect of the Emergency Services Mobile Communications Programme (ESMCP).

2. We welcome the broad scope of this proposal and its open approach to procuring and deploying a set of complementary solutions which will meet the requirements of the emergency services and other users of the present Airwave system for some 15 years from 2013.

3. We note that the programme aims not only to identify one or more solutions to the requirement for secure, resilient, ubiquitous mobile communications which are currently met by Airwave, but also to provide a basis for mobile data services, including video. We understand that the demand for these services is believed by the members of the programme to be suppressed at present by the limitations of current systems. In many cases this demand is met through unsecured, unmanaged and locally implemented solutions. The general trends identified are fully consistent with the results of our recent overall analysis of market transitions.[1]

4. The programme's vision for mobile services is to provide security, resilience and availability which meet dynamically a range of demands for mobile communications, and where cost effectiveness is a significant determinant of the way services are to be delivered. This implies a hybrid set of solutions which exploits the strengths of different technologies to suit a variety of purposes. We also note the programme's wish to create a platform which is extensible which will be able to accommodate new demand through the addition of further applications and services.

5. Finally, we note the wish of the programme to devolve procurement authority as far as possible to user organisations whilst retaining the overall interoperability of emergency mobile communications.

6. Cisco is a product manufacturer and solutions enabler in both fixed and mobile technology. We welcome ESMCP as the vehicle for the UK emergency services to make a strategic entry into the mobile broadband IP environment. Cisco is well placed on the

[1] See Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2011-2016 http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-520862.pdf

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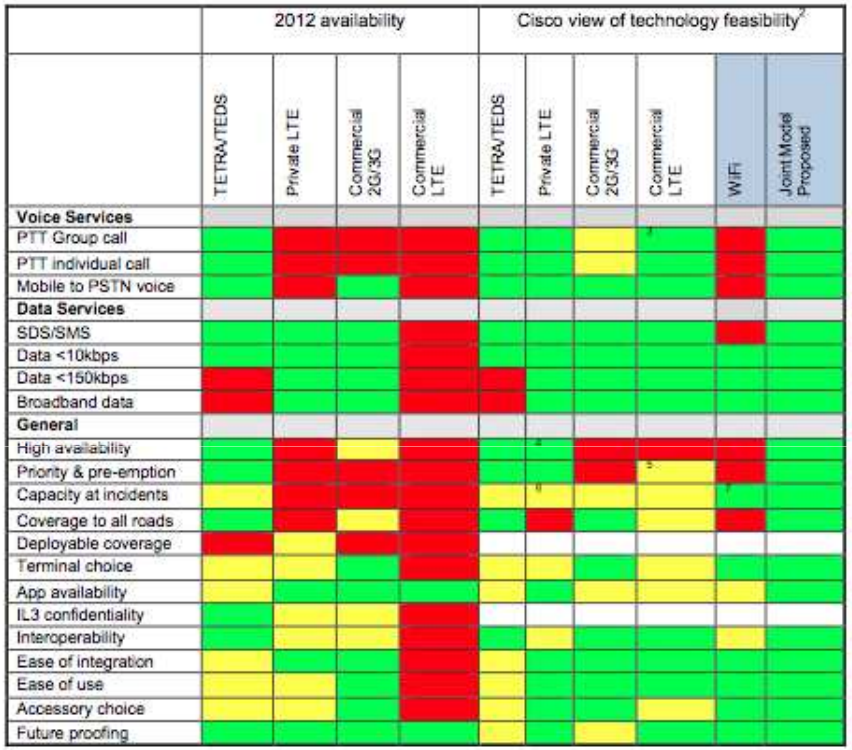
Cisco response to RFI (2)

2 areas of disruption

- Market disruption: the new systems will combine services from commercial networks (‘best effort’) and purpose built ones (‘critical’)
- Technology disruption: LTE (4G) will be the platform for future critical systems

Managing a hybrid environment

- Legacy and transition
- interoperability
- A service provider organisation acting as a mobile virtual network operator (MVNO)



	2012 availability				Cisco view of technology feasibility[2]					
	TETRA/TEDS	Private LTE	Commercial 2G/3G	Commercial LTE	TETRA/TEDS	Private LTE	Commercial 2G/3G	Commercial LTE	WiFi	Joint Model Proposed
Voice Services										
PTT Group call										
PTT individual call										
Mobile to PSTN voice										
Data Services										
SDS/SMS										
Data <10kbps										
Data <150kbps										
Broadband data										
General										
High availability										
Priority & pre-emption										
Capacity at incidents										
Coverage to all roads										
Deployable coverage										
Terminal choice										
App availability										
IL3 confidentiality										
Interoperability										
Ease of integration										
Ease of use										
Accessory choice										
Future proofing										