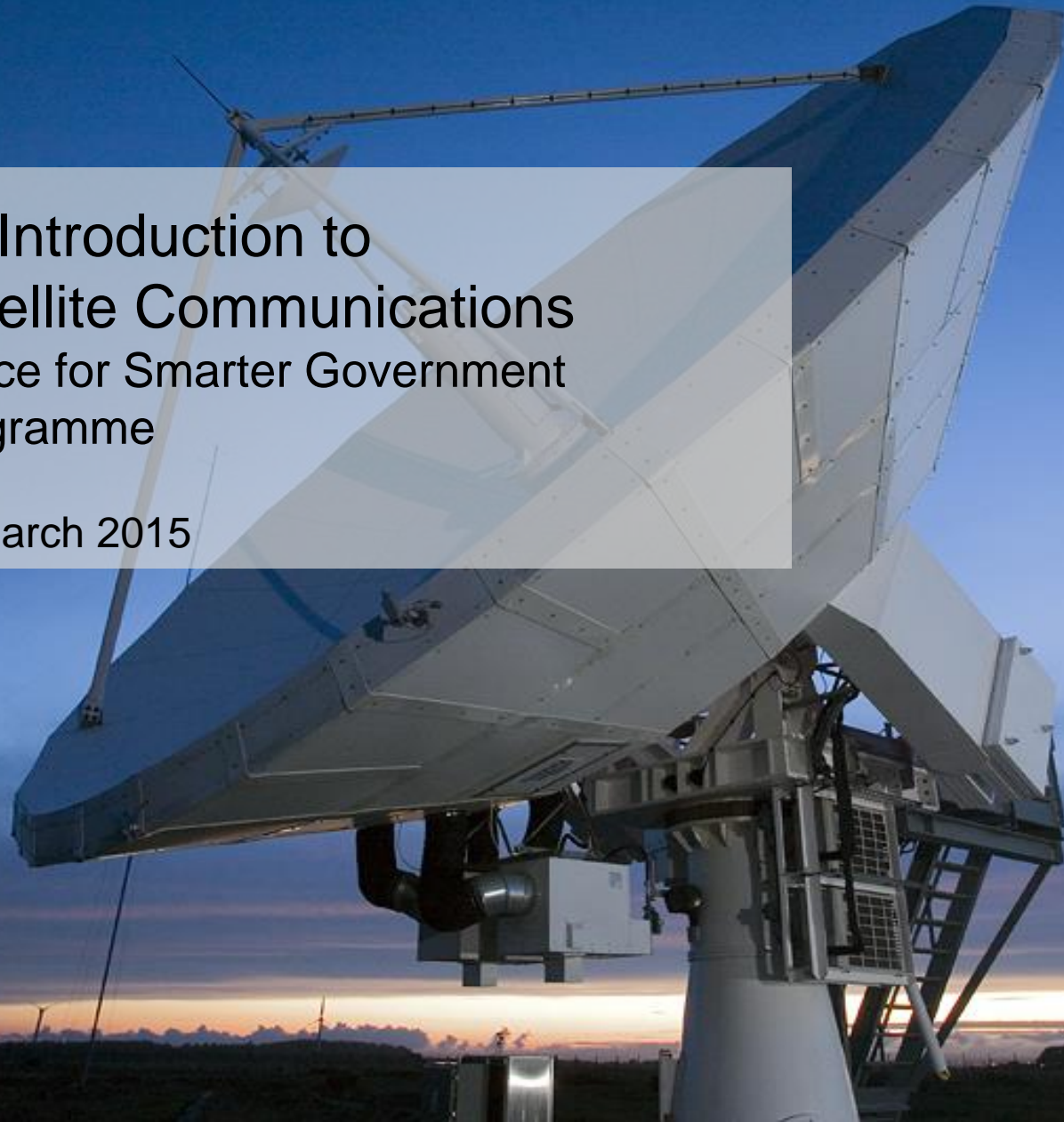




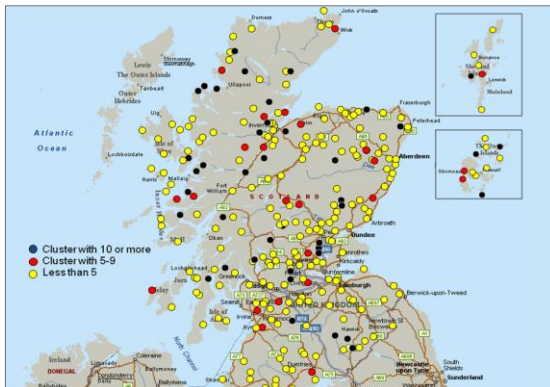
An Introduction to Satellite Communications Space for Smarter Government Programme

13 March 2015



Today's broadband satellites provide bi-directional voice, data and video communications to almost any location

- The most cost effective way of delivering IP networks or high-speed internet access to areas with low density populations or limited terrestrial infrastructure
- Ubiquitous coverage – reaches almost every premises across the UK
- Supports almost all applications, including VoIP, private data networks, internet access and video streaming.
- Deployed in days



Rural Broadband
Consumer/SME Internet
Scotland



Data Network
Environmental Services
Cape Town South Africa



VoIP and Internet Access
Internet Cafes
Misrata, Libya

Satellite data communications support many critical applications used by National and Regional Government



Reconnaissance



SCADA (M2M)



Command and Control
Networks



Specialist Applications



Critical Network Backup



Tele-medicine



Deployable Communications



Surveillance



Disaster Recovery



Satellite Broadband



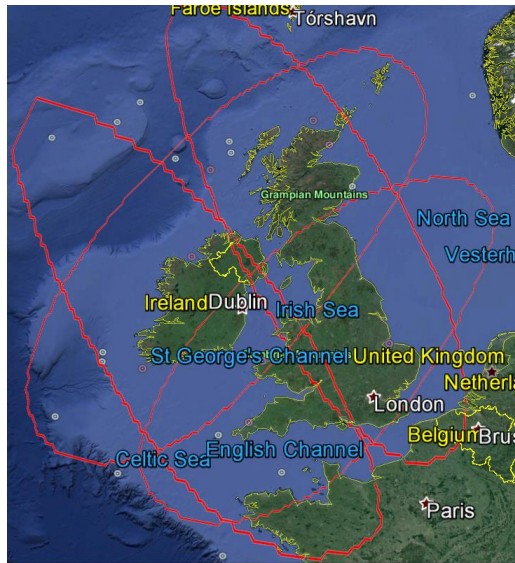
Education (Rural Schools)



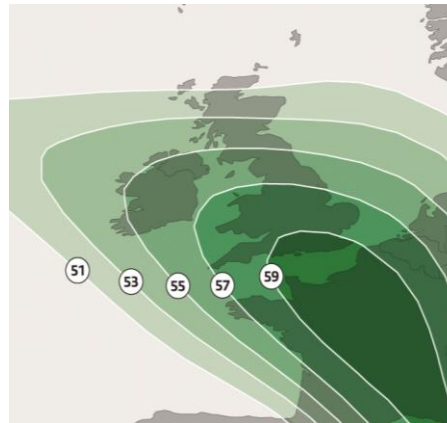
Mobile Communications

Three European satellite operators deliver Ka-band (high bandwidth) services to the UK – 100% coverage today

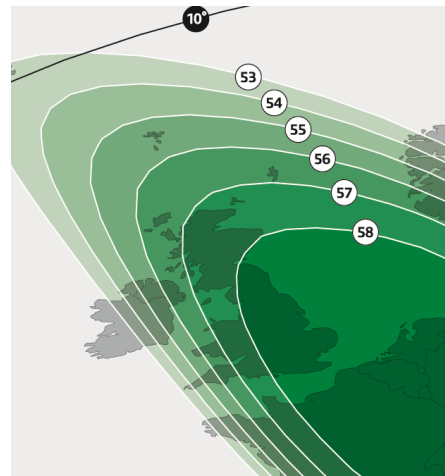
Geostationary Ka-band Satellites



Avanti Communications
HYLAS 1 & HYLAS 2



SES
Astra 2E & Astra 2F



Eutelsat
KASAT

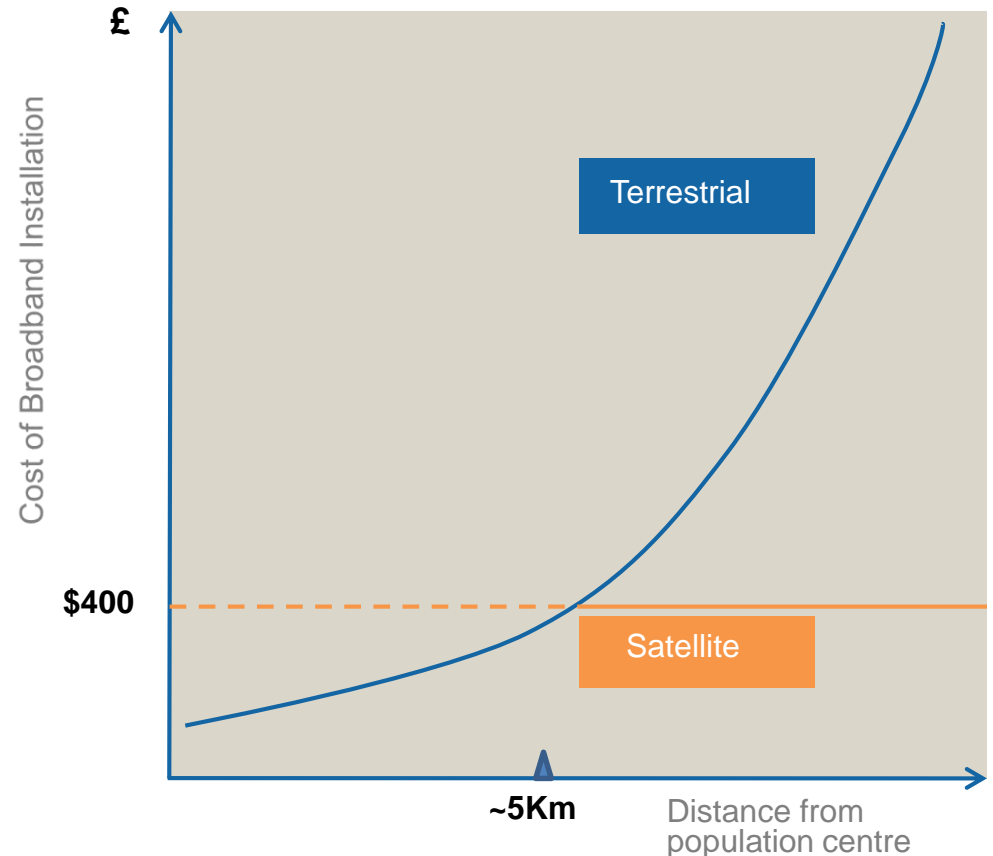


Satellite Broadband for the “Final 5%”

- European Commission vision of 100% superfast (30Mbps) broadband availability across the EU by 2020
- UK Government targets for broadband are:
 - Universal access to broadband speeds of 2Mbps by end of 2016 (the universal service commitment)
 - Superfast broadband (24Mbps+) for 90% of the UK by December 2016, 95% by end 2017
- BDUK (DCMS) and local authorities responsible for delivery
- BDUK has identified a 5% gap that will not be met by fibre or BT’s copper network
- Satellite broadband can help deliver the UK’s targets today

The Economics of Satellite Broadband

- Unlike terrestrial networks, the cost of delivering satellite broadband is broadly the same to any location
- Distance is not a barrier to download speed – the same satellite broadband packages are available to every end user
- Commercial satellite broadband services today typically offer 10Mbps – 22Mbps download speeds
- Nearly 2 million end users in USA, tens of thousands across Europe
- Excellent resources for local authorities considering satellite broadband schemes available from Project BRESAT (www.cip-bresat.eu)



BDUK Innovations Project (Market Testing Pilot) is deploying superfast satellite broadband for homes and SMEs

- The pilot is restricted to Aberdeenshire, Borders, Dumfries and Galloway, Antrim and Fermanagh
- Planned launch date of pilot in mid-May 2015.
- New developments in satellite technologies will deliver three service packages:
 - 30Mbps/6Mbps at £49.99 per month (including VAT)
 - 24Mbps/4Mbps at £40.00 per month (including VAT)
 - 10Mbps/2Mbps at £25.00 per month (including VAT)
- BDUK will fund customer premises equipment and installation costs

