

# Implementing Ofcom's UHF Strategy

## Call for inputs

UHF Strategy Implementation Team  
23 May 2013

# Agenda

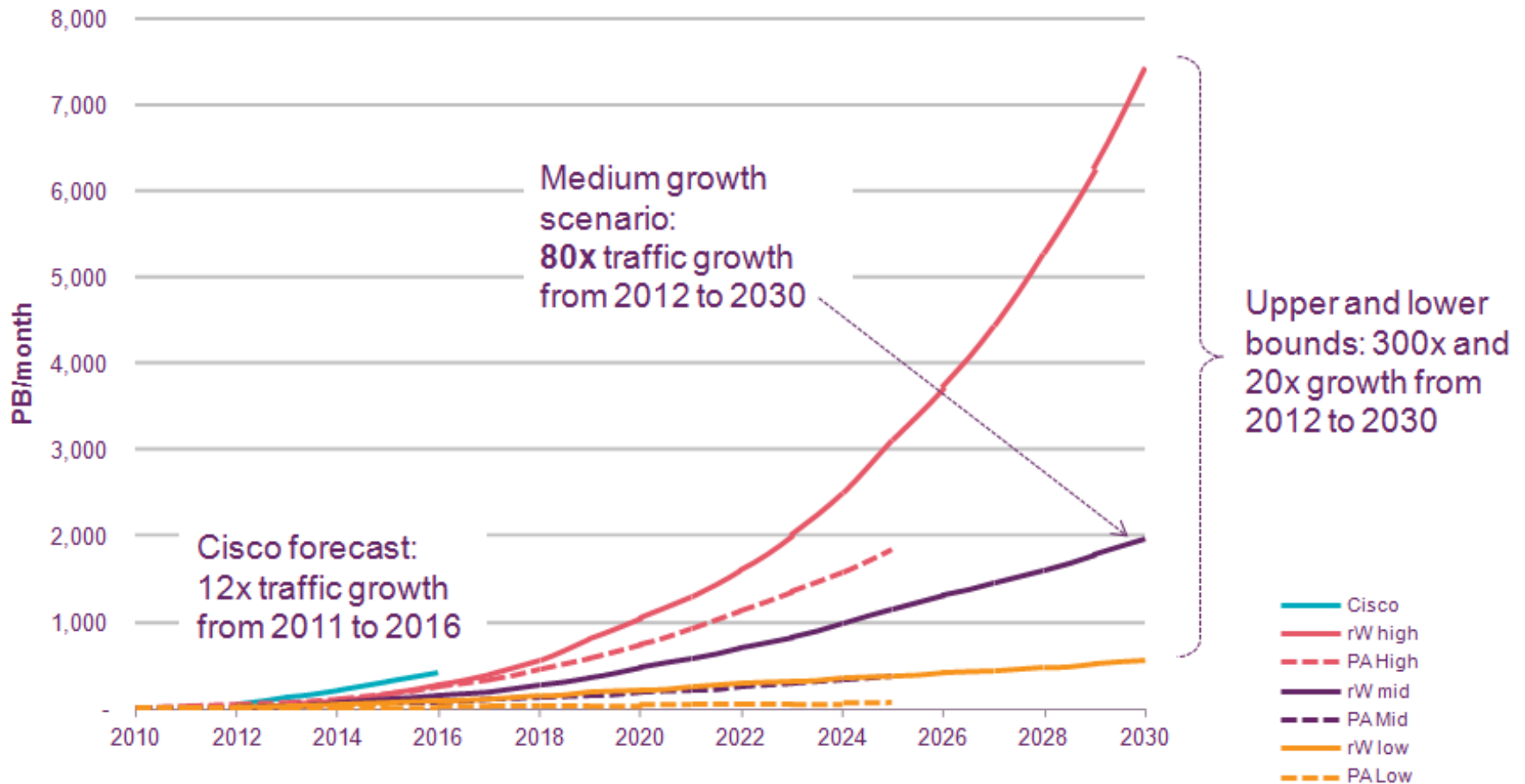
- 9:30 – 9:35 **Welcome** - *Erika Forsberg*
- 9:35 – 9:45 **Overview** - *Jon Higham*
- 9:45 – 10:00 **Assessing costs and benefits** - *Alan McNaboe/Thomas Punton*
- 10:00 – 10:15 **Reducing consumer impacts** - *Siew Yoon Tan*
- 10:15 – 11:00 **Next Steps and Q&A**

# PROJECT OVERVIEW

## Our strategic approach

- UHF Strategy Statement (16 November 2012) set out our dual objectives of providing more low frequency spectrum for mobile broadband whilst securing the benefits provided by DTT
- We will do this by:
  - Seeking to enable a harmonised release of the 700 MHz band for mobile broadband
  - Ensuring that the DTT platform can access the 600MHz band, alongside other services sharing spectrum with DTT, including Local TV, PMSE, and white space services

# Mobile data growth forecasts

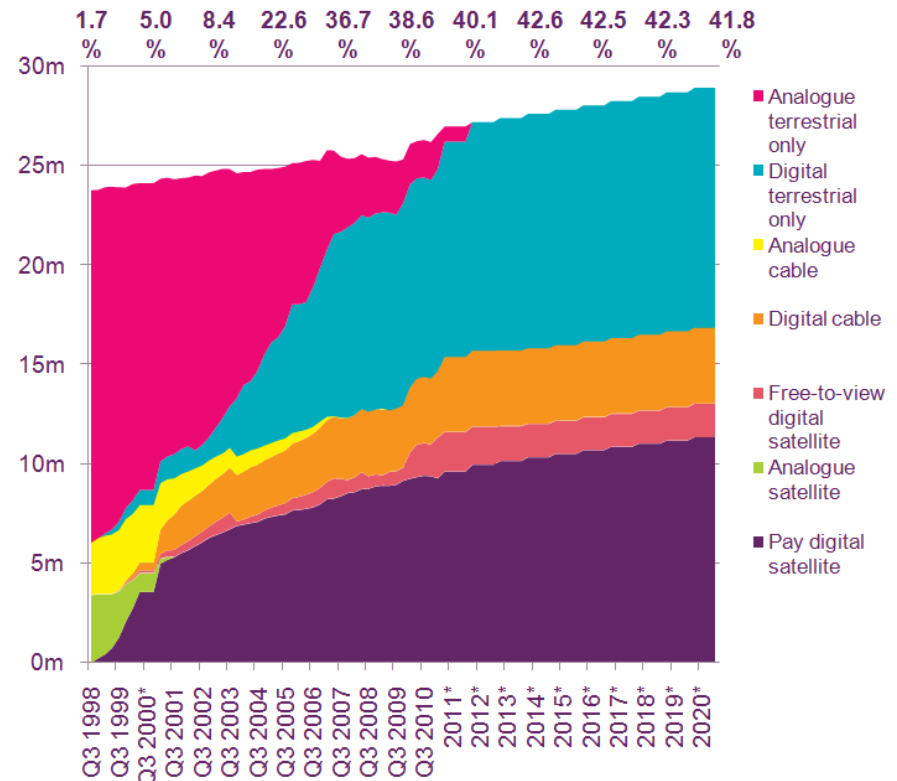


Source: Real Wireless

## Need to maintain DTT – without another ‘switchover’

- DTT currently uses 700 MHz
- Supports Freeview, YouView, Top Up TV, BT Vision etc.
- Likely to remain key platform in 2020s (right)
- Crucial for delivering low cost access to PSB channels, sustaining platform choice
- Unlikely other platforms could substitute for DTT by 2020

### Multichannel in UK homes (main TV sets)



Source: 3 Reasons Ltd

# ASSESSING COSTS AND BENEFITS

## Potential Benefits

- Meeting demand for mobile data services
- Improved indoor and rural coverage
- Reduction in mobile handset costs
- Effective competition
- Downstream market opportunities
- Emergency service use



## Potential Costs

- Changes to DTT transmission network
- Consumer equipment replacement
- Coexistence between existing uses and mobile broadband
- Consumer information and support
- Opportunity cost of 600MHz band
- Reduction in interleaved spectrum



Have we correctly identified the potential benefits?

Have we correctly identified the potential costs?





## Timing of a 700MHz release

**The costs and benefits could differ depending on when release occurs.**

### Potential Benefits of earlier release

- Meeting demand for mobile data services
- Improved indoor and rural coverage
- Effective competition

### Potential Costs of earlier release

- Possible increase costs of changes to DTT transmission network
- Possible increase to consumer equipment replacement costs
- Possible increase in opportunity cost of 600MHz band
- Possible increase in impact of reduction in interleaved spectrum



**Have we correctly characterised the impact of timing on costs?**

## Release date determined by market mechanism



**Could there be scope to use a market mechanism e.g. Incentive or Overlay auction to determine the timing of releasing the band?**



**What would the challenges associated be?**

# REDUCING CONSUMER IMPACTS

## Minimising impact to DTT viewers

Impact	Initial pre-emptive measures
<p>Due to change in DTT frequency plan, some consumers may need new aerial.</p>	<p>Work with industry to:</p> <ul style="list-style-type: none"> <li>▪raise awareness of potential future changes;</li> <li>▪ensure consumers receive correct information on aerial which is compatible with future re-plan;</li> <li>▪encourage promotion and wider availability of aerials which is compatible with future re-plan.</li> </ul>



## Minimising impact to consumer DTT viewers

Impact	Initial pre-emptive measures
<p>If there is a future platform transition to DVB-T2/MPEG-4 technologies, some viewers may need to replace their receivers (TVs or set top boxes) to continue to receive all DTT channels.</p>	<p>Work with industry to</p> <ul style="list-style-type: none"> <li>▪ raise consumer awareness of DVB-T2 equipment compatibility.</li> <li>▪ Understand the extent to which DVB-T equipment will continue to be available in the future</li> </ul>
<p>There may be potential interference from mobile handset operating at the lower 700 MHz band.</p>	<p>Engage with industry on the need to improve design of both TV receivers and mobile handset to minimise interference.</p>

## Minimising impact to PMSE users

Impact	Initial pre-emptive measures
<p>Due to change in geographically interleaved spectrum (spectrum unused by DTT), some PMSE users may need new equipment.</p>	<p>Promote use of equipment operating below 700 MHz as less vulnerable to future changes in geographically interleaved spectrum.</p> <p>Work with industry to support continued effort to improve PMSE equipment to operate in more congested and fragmented spectrum.</p>

## Minimising impact to future white space devices

Impact	Initial pre-emptive measures
<p>Potential release of 700 MHz band would reduce the overall amount of interleaved spectrum available for WSD</p>	<p>WSDs are designed to operate across the whole UHF TV band so we don't expect impact on equipment functioning.</p> <p>Ensure stakeholders are fully informed about potential future changes in availability of interleaved spectrum</p>

## We are doing further studies to understand

- type of aerial being used by households
- consumers TV purchase behaviour, particularly motivation for HD content
- stock of PMSE equipment operating in the UHF band
- technology vs. cost trade-off to improve performance TV receiver and mobile handset



- Do you have any comments on the pre-emptive measures we have identified?



## Next steps

- 5 July Closing date for CFI responses
- End August Studies on costs and benefits complete
- End 2013 Cost Benefit Analysis
- Ongoing International engagement and work on implementation policy



# Questions

# Thank you!

[UHF-SI@ofcom.org.uk](mailto:UHF-SI@ofcom.org.uk)