

Assessing the spectrum crunch

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“Spectrum Crunch”

- Demand for spectrum for some applications potentially leads to contention for spectrum in certain bands (especially <6 GHz)
- Spectrum for wireless broadband is the main driver for additional spectrum but demand must be viewed in the context of other applications demand for spectrum
 - Incentives should be set to arrive at an efficient use of the spectrum
- More than one mode of spectrum use
 - Exclusive
 - Shared
 - Licence exempt basis
 - Licensed shared basis

Sharing spectrum

- Many acronyms
 - ASA – Authorised shared access
 - LSA – Licensed shared access
 - PA – Protected access
 - DSA – Dynamic spectrum access
 - TVWS – TV white space
- Sharing can take place on a geographic or temporal basis
 - Scenarios can be relatively static or more dynamic
- All attempt to provide a framework that provides incentives for incumbents and new users to share – without a framework there would be no access to bands by new services
 - Some key facets for sharing: mutually beneficial, predictable, legal certainty, rights and obligations are clear
 - Voluntary

Example for LSA

- The 2.3 GHz band has been standardised for LTE TDD by 3GPP and there is now a CEPT harmonisation measure
- There is extensive incumbent use of the band (defence, police, PMSE, fixed links)
- LSA at 2.3 GHz gives scale for Europe-wide use of the band for mobile broadband

	2015	2020	2030
Equivalent population coverage <u>with</u> LSA	71%	83%	84%
Equivalent population coverage <u>without</u> LSA	1%	17%	17%

- Estimated benefits of at least €12bn Implementation costs of ~ €100m

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