

Spectrum sharing

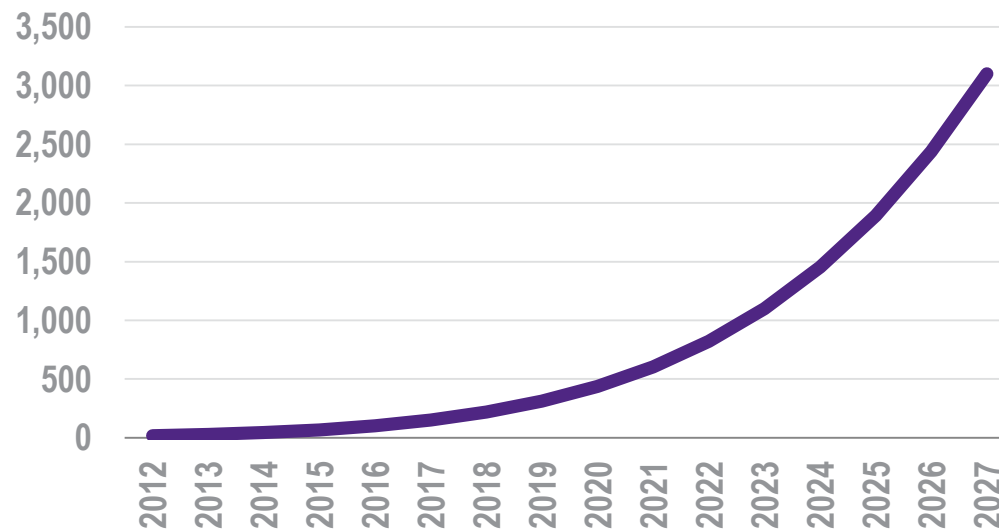
Tony Lavender
UK Spectrum Policy Forum, Cluster 2
9 September 2015

The need for sharing

- Spectrum use needs to be more efficient
 - The number of spectrum using applications is growing
 - Many (but not all) spectrum using applications need more spectrum to cope with rising demand (for example mobile, PMSE)
 - There are spectrum sweet spots where demand for spectrum is likely to peak

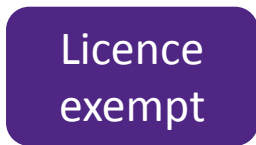
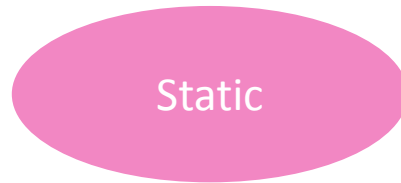
Mobile data traffic projection

PB per month



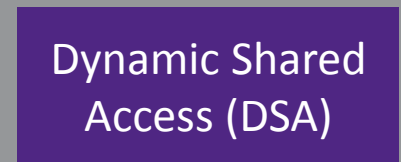
Different options for sharing

Sharing



Geo-location database(s)

A vertical dashed line passes through a grey rectangular area labeled 'Geo-location database(s)', which is positioned behind the 'Licensed Shared Access' and 'Dynamic Shared Access (DSA)' options.

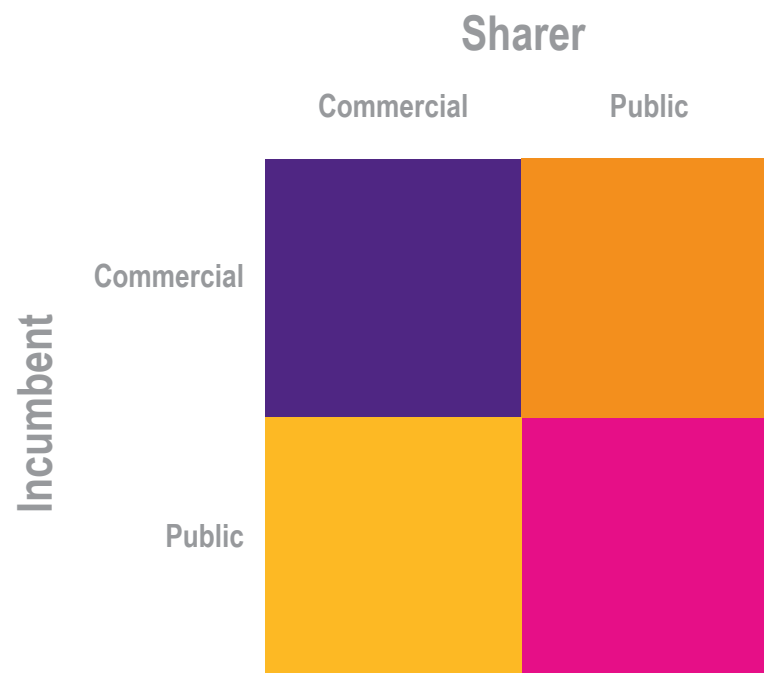


Trading



Public sector sharing

- In theory sharing could occur between any combination of incumbent and user
 - In reality some scenarios will be more likely than others
 - There is public sector spectrum that could be shared
- But public sector spectrum users need to be:
 - Incentivised to share
 - Legally able to share



Plausible sharing

Successful sharing requires incentives

Ability to make viable investments

Ability to coexist on a technical basis

An adequate compensation mechanism

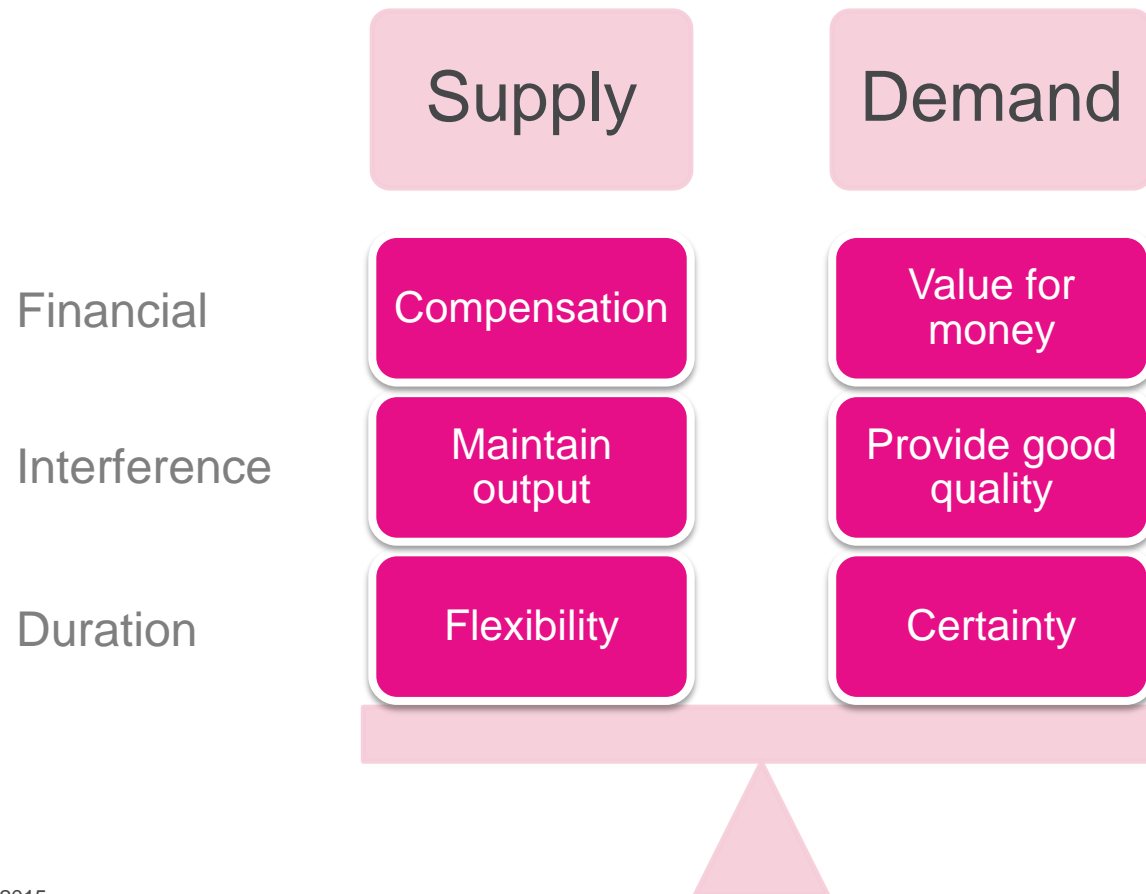
Favourable regulatory requirements

Political pressure

- As far as possible incentives should align across incumbents and sharers
- Market driven is better than imposition
- No or wrong incentives = no effective sharing

Balancing supply and demand

Regulatory environment
voluntary | transparent | enforceable



Public sector sharing

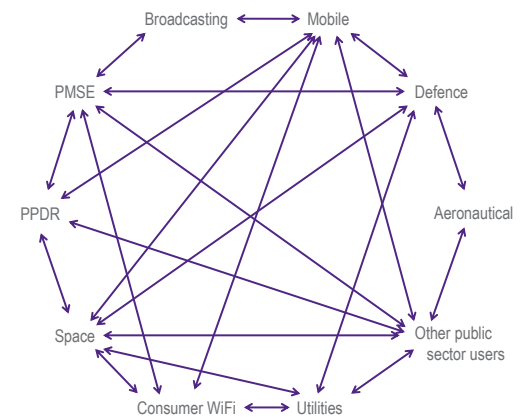
Public sector issues

- Are the incentives right to encourage sharing (public sector to public sector and public sector to commercial)
- Is the Crown RSA process fit for purpose as a means to enable sharing of spectrum?
 - Can it cope with change of use on a short or long term basis?
- Can public sector players who share spectrum be adequately compensated?
 - Most see this as an issue at the moment

Projected sharing

Sharing in the long term

- The easy pickings have mostly gone
 - Spectrum clearance will become more costly
- As the demand for spectrum increases, so will the value of spectrum
 - The willingness to pay for shared spectrum will increase
- Long term economic trends drive towards more spectrum sharing
 - There will be a role for both LSA and DSA
 - Technology improvements may make sharing easier
- The demand for shared spectrum will not just come from mobile
 - Other users will want access to shared spectrum



Issues to address in UK to make LSA work

Clarify UK regulatory framework for sharing

Cover in next Ofcom consultation / statement on sharing – now published

Support development in Europe

Industry and Ofcom to continue to support CEPT, ETSI and other bodies

Coexistence criteria

Undertake studies for a sharing world – use less conservative criteria – change the culture

Improve transparency of supply and demand

Policy makers and industry work on making it easier to match supply and demand

Ensure the public sector can easily share spectrum

Clarify and deal with the technical, legal and incentive issues

Tony Lavender

@plumconsulting

+44 7775 940356

tony.lavender@plumconsulting.co.uk