





International Training Program 2014

Spectrum management and demand forecasting

Allan Major

General Manager

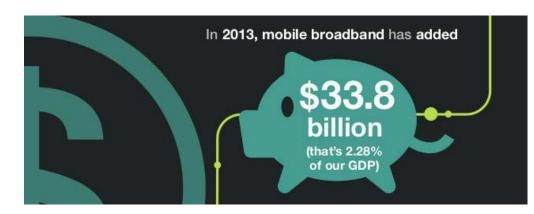
Communications Infrastructure Division

Spectrum management today

- > Scarce resource, growing demand and use
- > Spectrum decisions ripple through society
- Management needs future and current focus
 - > Informed by many factors

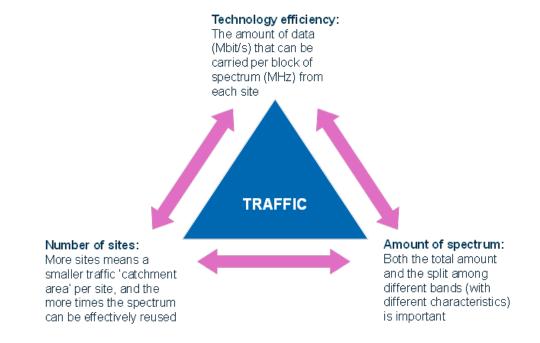
Drivers for change

- > Global agenda
- Sovernment efficiency and evidence-based decision making
- > Spectrum-hungry technology
- > Big money in spectrum



Mobile Network Capacity Forecasting Model

> Looks at the trade-off between three factors



What has been the development process so far (1)?

- Analysys Mason built a spreadsheet model to examine the spectrum requirements for the three cellular mobile operators in Australia – Optus, Telstra and Vodafone
- Inputs such are subscriber numbers, assumptions about spectral device efficiency, roll out of new technologies (4G) etc from each carrier and the Australian Mobile Telecommunications Association.

What has been the development process so far (2)?

- The Mobile Network Model has undergone changes and fine-tuning as a result of substantial internal and external stakeholder consultation
- > The model was peer reviewed as part of AM's Quality Assurance process.
- > The model was released for public consultation.
 - > Submissions closed on 27 June 2014.
 - > Submissions currently being considered by Analysys Mason
- > Potential model update scheduled for 2015

Spectrum demand forecasting toolkit

Economic value of MBB to date Future traffic from MBB and how to meet demand **Economic Impacts of Mobile Broadband,** Mobile network capacity forecasting 2006-2013 (CIE report part 1) model •Value of take up and use of mobile Data traffic projections broadband technologies •Models how traffic can be met Market and productivity data •Trade-off scenarios (infrastructure, •Value of spectrum allocation to mobile additional spectrum or efficiency technology) sector to date Economic impact of future spectrum allocations Impact of spectrum availability on market for MBB (CIE report part 2) **Spectrum** •Economic impacts of allocation at differing traffic levels •Uses AM model data to show when projected traffic will occur research •Modelling from CIE report part 1 to show economy-wide impacts Other research filling information gaps ഗ FILTER **ACMA** policy decisions and considerations Policy and regulatory factors Social, economic, technological factors **Outputs Outcomes** Informing and contributing to: Strategic focus and Corporate strategy Pricing, valuing and MBB strategy Input to FYSO allocating spectrum alignment work program Licensing Maximum public Regulatory reform framework & tool specific to WAS benefit unsold lots conditions

Why do we do research?

- > evidence to inform an ACMA mobile broadband strategy
- > to understand how spectrum is used
- > inform ACMA policy positions
- > evidence to support the ACMA's requirement to report on the future of the unsold lots
- > Spectrum management framework update

Spectrum management framework review

- > Reduce complexity
- > Improve flexibility
- > Promote consistency and harmonization
- > Ensure efficient allocation, use and management
- > Whole-of-economy approach to spectrum valuation