

# Meeting the increasing market needs for wireless broadband

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# This is the EBU



80+ active members from 56 countries

45 associate members around the world

470+ TV channels and 900+ radio channels

195 million TV households and 600+ million viewers every week

more than 60 million people visit EBU members' web services every day

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- ***Which problem are we trying to solve?***
- ***Spectrum demand for wireless broadband***
  - ... the supply side
  - ... the demand side
- ***Broadband and broadcasting, both are needed***
  - ... a case for co-operation
- ***Why is this relevant for the Digital Agenda?***



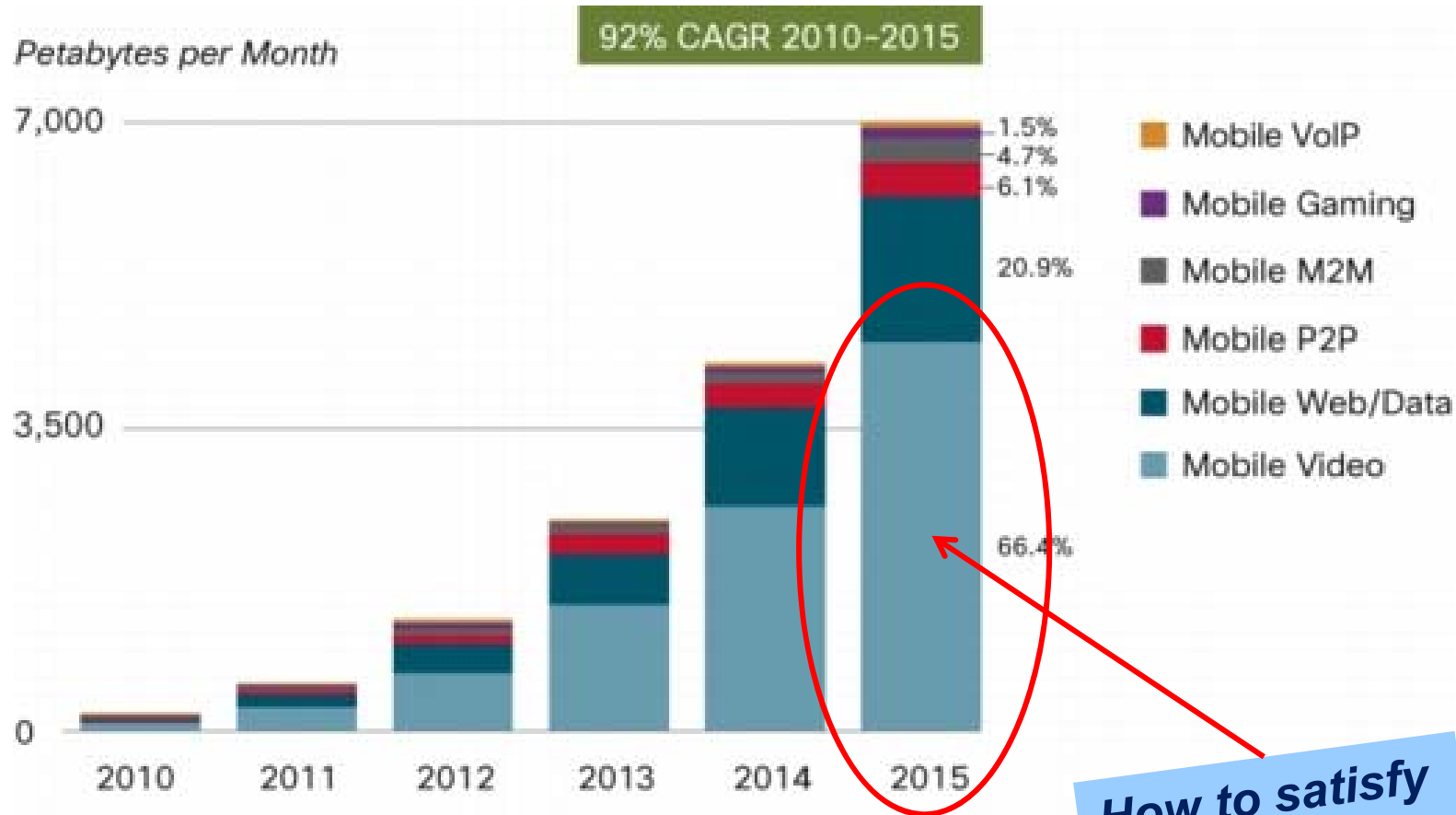
**The problem is ...**

**The looming lack of **CAPACITY**  
in mobile broadband networks.**

**This cannot be resolved by more spectrum.**



# The demand side



VoIP traffic forecasted to be 0.4% of all mobile data traffic in 2015.

Source: Cisco VNI Mobile, 2011

How to satisfy this demand?



# The demand side

- **Cisco VNI:**  
*'Global mobile data traffic will increase **26-fold** between 2010 and 2015.'*
  - Spectrum supply could be increased, at best, by a factor of **2**.
- **Cisco VNI:**  
*'Two-thirds of the world's mobile data traffic will be **video** by 2015.'*
  - Broadband unicast is very inefficient for the delivery of video.
- **Cisco VNI:**  
*'The major generators of traffic are laptops and netbooks.'*
  - Most of the traffic is happening indoors.
  - It is inefficient to use outdoor transmitters to provide indoor coverage.

# The impact of new devices



# The supply side

- ***A number of ways to increase the net capacity:***
  - ... improve network configurations
  - ... upgrade to more efficient technologies
  - ... use the improved compression and streaming techniques
  - ... reduce the signalling overhead
  - ... offload the traffic
  - ... reduce fragmentation
  - ... aggregate the spectrum to achieve higher speeds
  - ... use the underused spectrum
  - ... additional spectrum
  - ...
- ***Capacity shortage is only happening in the dense urban areas***
  - ... where, generally, fixed broadband infrastructure exists
- ***Mobile broadband coverage is incomplete***
  - ... investments are needed in rural areas
  - ... 800 MHz and 900 MHz band are sufficient





# Broadcast vs. broadband

	Terrestrial TV	Mobile broadband
+	<ul style="list-style-type: none"><li>• near universal coverage</li><li>• any reception mode</li><li>• guaranteed, predictable quality</li><li>• cost-efficient delivery to large audiences (independent of the number of simultaneous users)</li><li>• every user has access to the total capacity of the network</li></ul>	<ul style="list-style-type: none"><li>• bi-directional</li><li>• mobile</li><li>• potentially unlimited choice of services</li><li>• well suited to serve small audiences</li><li>• growing population of user equipment</li><li>• IP</li></ul>
-	<ul style="list-style-type: none"><li>• one-way, no return channel</li><li>• the offer is limited by the platform capacity (no niche channels)</li><li>• no access to IP-only devices</li><li>• delivery to mobile environment</li></ul>	<ul style="list-style-type: none"><li>• limited coverage (with sufficient quality)</li><li>• best efforts QoS</li><li>• cost proportional to the number of users, not suitable for large audiences</li><li>• total capacity is shared between users</li></ul>

***Terrestrial TV and mobile broadband are complementary!***



# Why is it relevant for the Digital Agenda?

- ***Mobile broadband alone cannot satisfy the users' demand for mobile data***
    - ... because of the capacity constraints, incomplete coverage and difficulties to consistently meet high QoS requirements
  - ***Mobile data 'tsunami' will not be tamed with more spectrum***
  - ***Broadcasting networks, in particular DTT, are complementary to mobile broadband***
    - ... DTT could compensate for the weaknesses of mobile broadband
      - coverage - DTT networks already cover most of the population
      - QoS - optimised for the delivery of high quality video
      - costs – DTT is cost effective for mass delivery
    - ... DTT networks use the spectrum very efficiently
- ***Mobile broadband and digital broadcasting should be combined!***



# The benefits

- *Optimal use of the existing infrastructure*
- *Less investments required to meet the targets of the Digital Agenda*
- *Consumers would have access to a full range of services*
- *Better use of the spectrum*
- *Reduced strain on mobile broadband networks*
- *Reduced risk of interference*
- *Scope for development of both broadcasting and mobile*





***Thank you  
for your attention !***



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