



Wireless Audiovisual Dilemma – Co-existence or Convergence

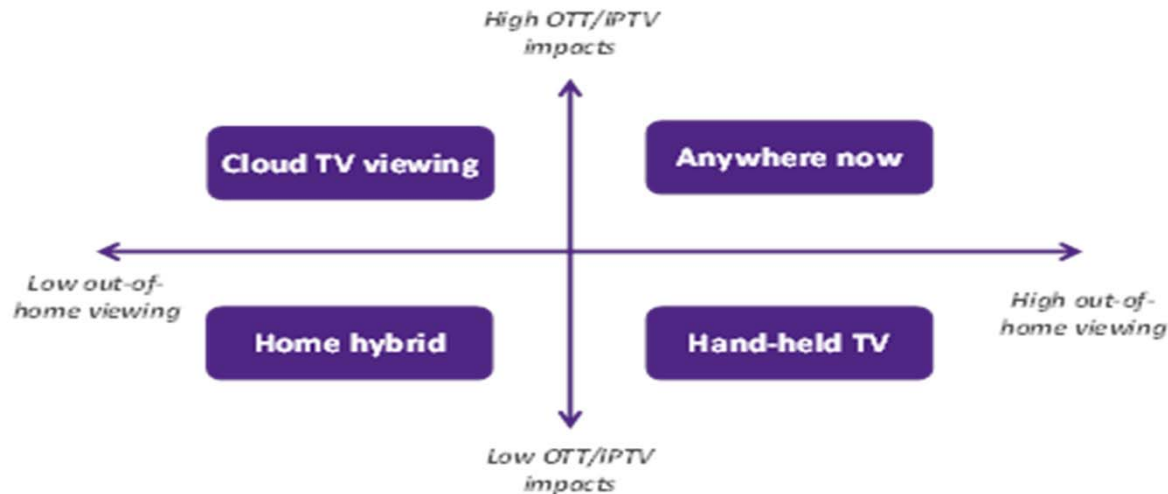
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** Disclaimer: the views expressed are those of the author and cannot be regarded as stating an official position of the European Commission.*

4 AV consumption scenarios in 2030



Requirements for a converged platform

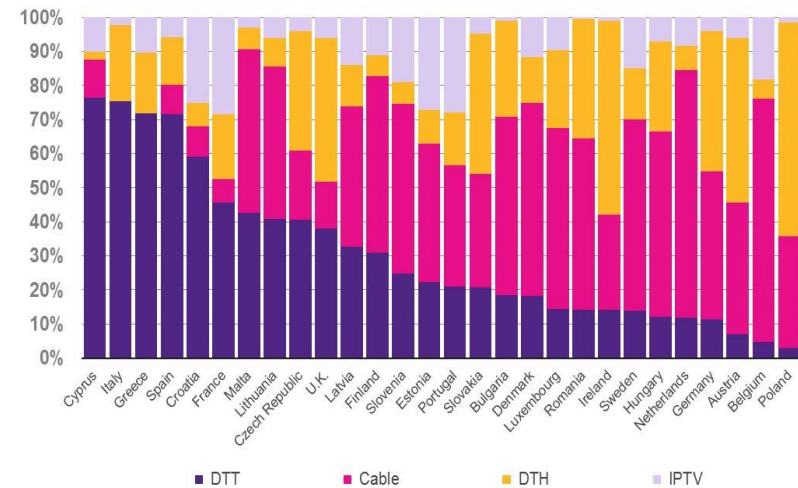
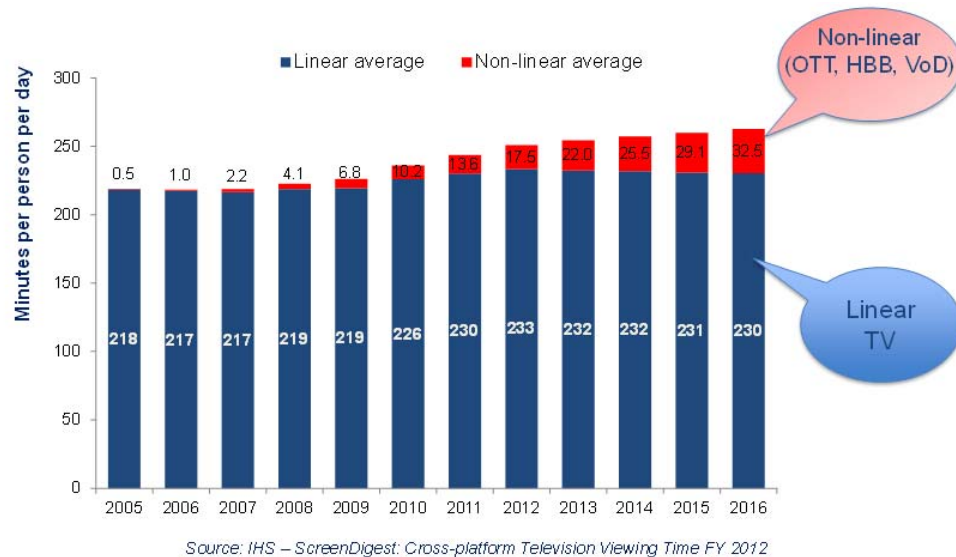
- ❑ Universal free-to-air coverage
- ❑ Adequate number of TV programmes (60-180 Mb/s)
- ❑ Bidirectional broadband service
- ❑ Usage of sub-700 MHz band for reasons of spectrum and cost efficiency (> 2025)

Recommendations

1. Develop measures for video consumption
2. BC community to provide relevant guidance to 5G R&D
3. Mobile and broadcast communities to cooperate to produce viable innovative broadcast-broadband converged services
4. Investigate feasibility/cost of co-channel SFN
5. Long-term spectrum home for audio PMSE
6. Commission to review the 'convergence case' (by 2020)
 - resolve CBA uncertainties, define way forward
 - public policy support (?)

Major conclusions

- ❑ 2020-2030-2025: balanced **co-existence & review**
- ❑ Flexibility option: DL-only (!), promoting **convergence?**



Flexibility studies (< 700 MHz)

- ❑ Telecoms rules (neutrality, access, must-carry, billing ...)
- ❑ Spectrum sharing and international agreements (GE-06)

European 5G roadmap

- ❑ 2013: 5G-PPP → EU technological leadership
- ❑ 2016: 5G socio-economic study and action plan
- ❑ 2019-20: (additional) spectrum and standards
- ❑ \geq 2020: commercial deployments

Media and entertainment: **part of 5G!**

- ❑ 5G-PPP white paper on '5G and media & entertainment'
- ❑ ETSI, 3GPP, ITU-R work items on 'convergence'

Connectivity-based business case, trials, common calendar

→ early deployment

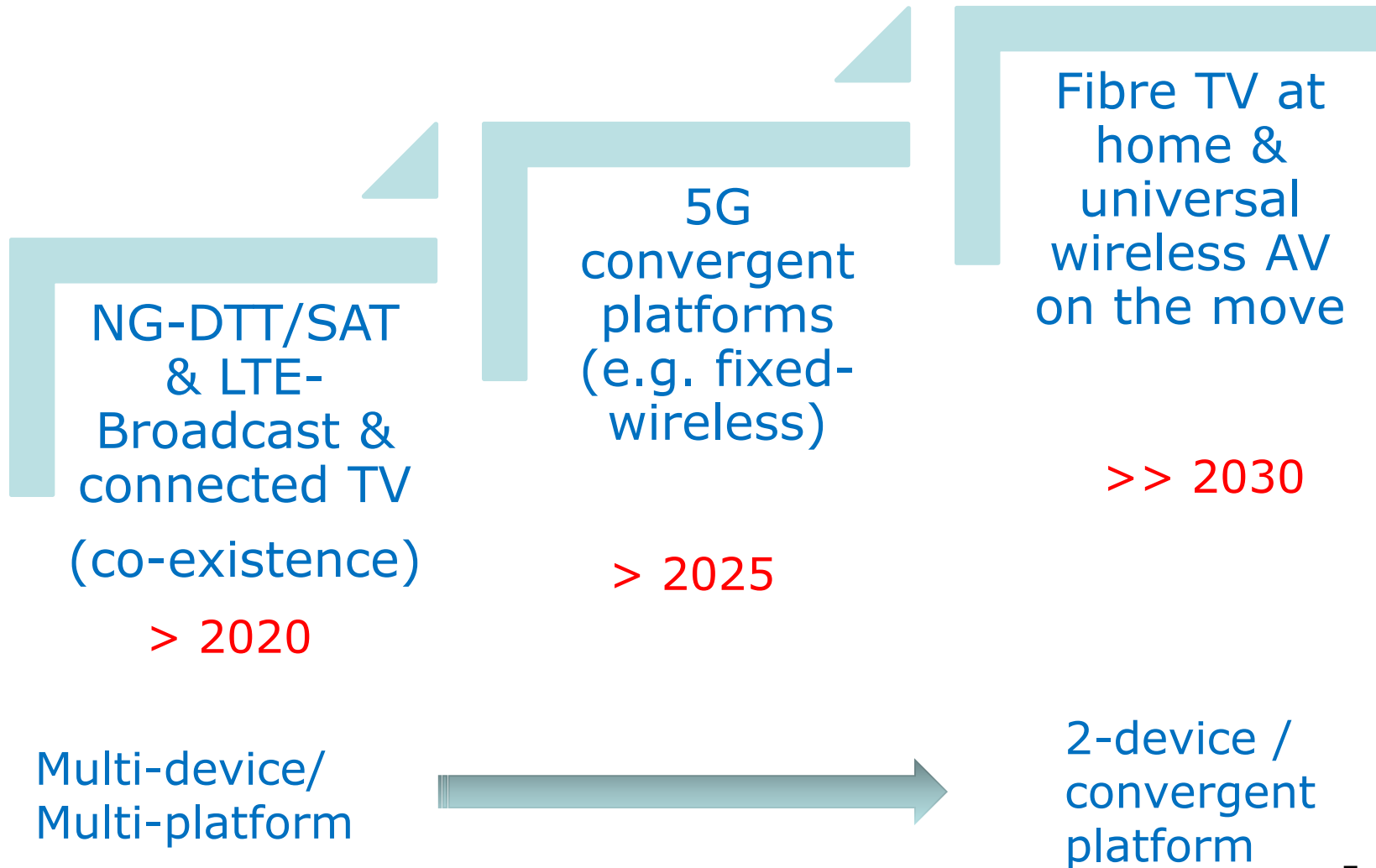
Some key messages (5G-PPP WP)

- ❑ 5G integrates unicast with broadcast and caching
- ❑ Better **connectivity** – enabler of convergence
- ❑ Network **scalability** – crucial for sustainable business case
- ❑ Business models based on network **cooperation**

Spectrum / Regulatory implications

- ❑ How much bandwidth for video to connected cars?
- ❑ What bands? Sub-700 MHz (coverage)?
- ❑ What '5G-ready' (spectrum) rules in telecoms review?

Elements of a Vision





THANK YOU !