

BEREC STAKEHOLDERS FORUM MEETING

**CÉCIL AMEIL
ESOA REGULATORY WG**

Brussels, 16 October 2014

sg@esoa.net
www.esoa.net



The Satellite Sector adds value for Europe



Serving the EU:

TV - Broadband - Disaster Management - Development – Aeronautics -
Maritime Communications - Security - Energy Efficiency - Climate Change

- **EU is the hub of the global satellite industry:**

- ⇒ Operators, launchers, manufacturers, insurance...

- **Significant economic contribution:**

- ⇒ 2013 Booz&Co report identified direct & indirect contribution of 200,000 highly skilled jobs, *€10bn revenue with growth potential to €100bn for EU economies*

- **Private investment today for the future:**

- ⇒ Euroconsult figures indicate approximately 200 GEO satellites are on global order to 2021 = almost *\$70bn of satellite operator investment alone*

- **ESOA members deliver value-added services:**

- ⇒ Oxford Economics found that satellite operators investments provide a massive multiplier in the downstream space sector
 - ⇒ Euroconsult found that *every €1 of public investment into satcoms generates €47 of downstream turnover*

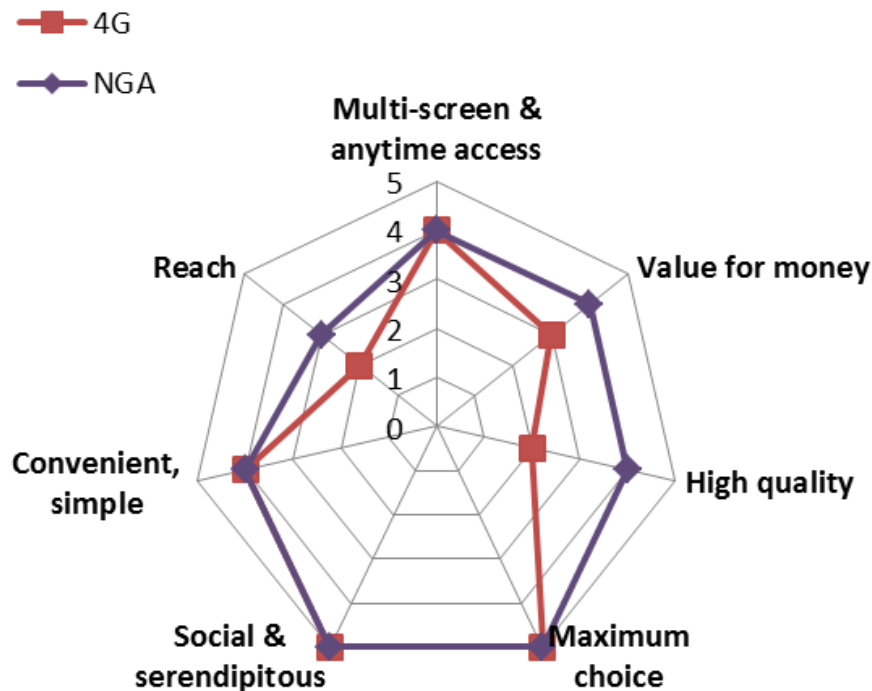
- **BEREC Strategic Priority 1:** “promote effective competition, and in so doing promote efficient investment and innovation in new and enhanced infrastructures and services”
 - ⇒ *ESOA fully subscribes – investments and policy decisions should favour the most efficient services / solutions, e.g. broadcasting where appropriate, offloading when possible, connecting all citizens, ensuring resilience in M2M connectivity*
- **BEREC Strategic Priority 2:** “(high) minimum level of services and benefit from pan-European services wherever they are, to the extent possible”
 - ⇒ *Satellite supports BB4All by access to pan-EU satellite services, same with NGNs, also expanding mobile comms to ships & airlines*
- **BEREC Strategic Priority 3:** “respond to ensure end-users’ continued ability to choose the services of their choice, at appropriate levels of price and quality”
 - ⇒ *Satellite is a functional part of the mix of technologies (5G, ATAWADAC, hybrid platforms, BC-BB convergence)*

**Overall objective: addressing the zettabyte challenge
in the most cost & quality effective way!**

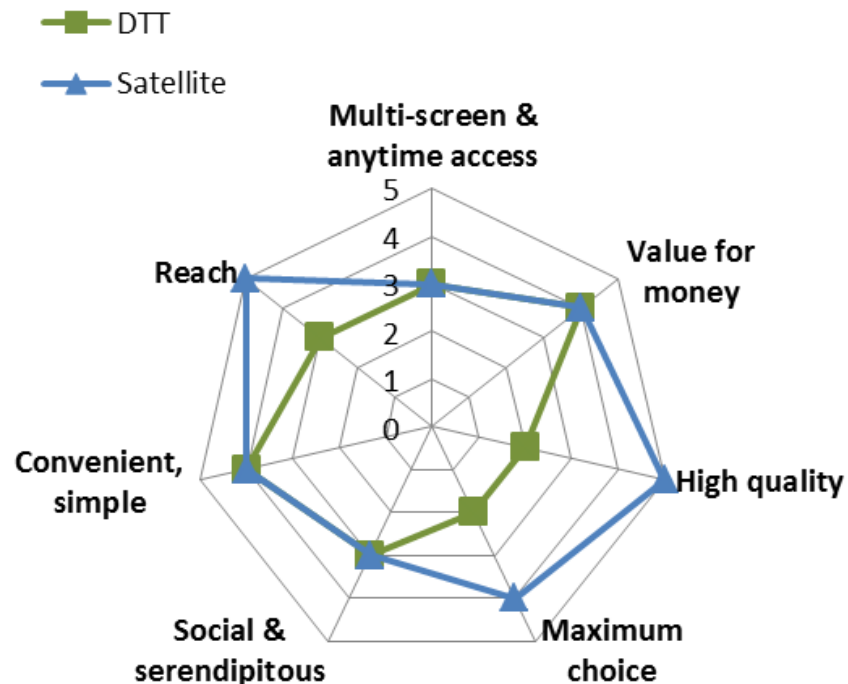
Broadband – Broadcast Convergence Comparing technologies

Making this new video experience available to all EU citizens requires distribution networks capable of enabling and supporting all required video-related features

Broadband Technologies



Broadcast Technologies



No single technology ticks all boxes

Broadband – Broadcast Convergence

A distribution challenge: Terrestrial

Making this new video experience available to all EU consumers creates several challenges – the toughest being distribution, both from a cost and reach perspective

An individualised HD-quality full OTT video consumption

35x

requires **700 Gbytes per month /HH**,
where EU's current average consumption is ~20 Gbytes /HH

4x

requires a sustainable **peak-time 20Mbit/s** access /HH,
where EU's current observed average speed is 4.6Mbit/s

54%

would hence theoretically only reach 54% HHs currently
passed for NGA, **creating another divide**

Ultra

100x

2.2TB / month

10x

50Mbit/s

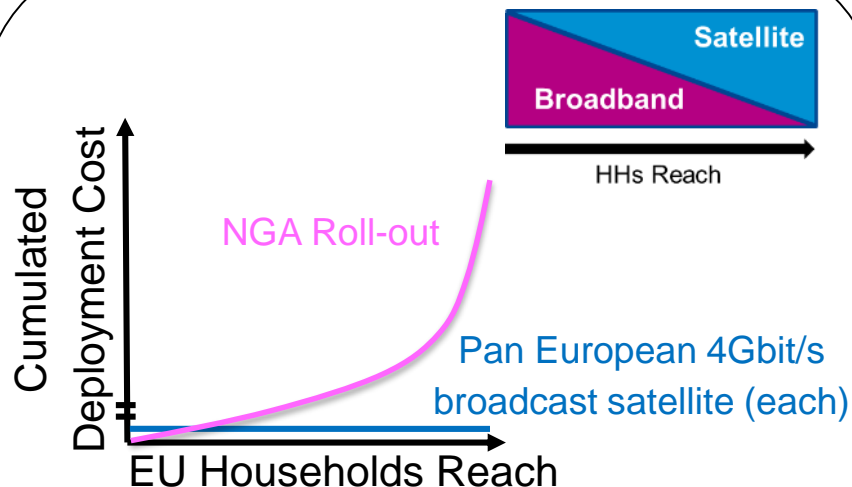
20%

Significant & costly upgrades would be required to go terrestrial only

Broadband – broadcast convergence

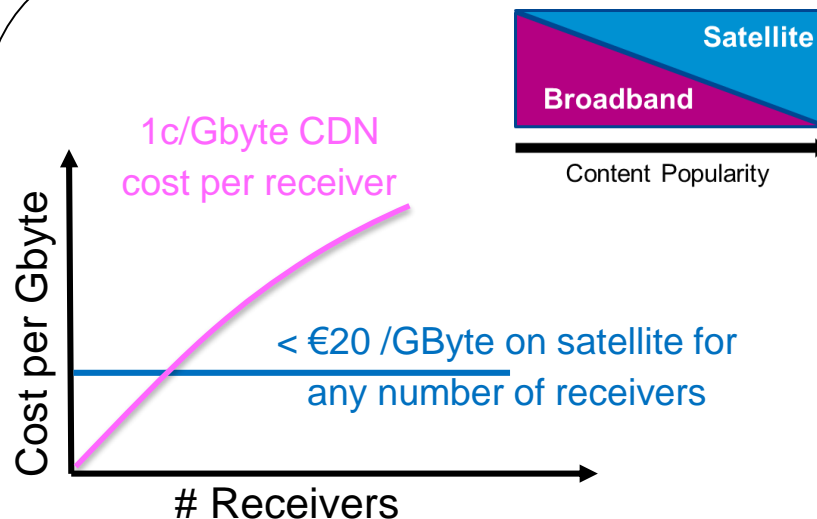
A distribution solution: Hybrid

Reach



- ▲ NGA deployment cost going exponential
- ▲ Incremental satellite user cost unchanged and an installed basis of 86 Mio Houses in EU

Distribution Cost



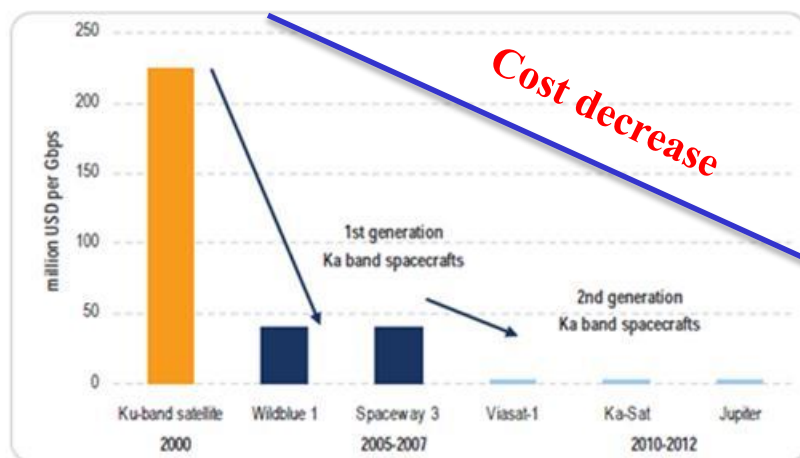
- ▲ Satellite to stream and push most popular content (video + others) to a “home –CDN”
- ▲ Terrestrial for interactivity, long tail and time-critical access

Joining forces to deliver a sustainable state-of-the-art experience

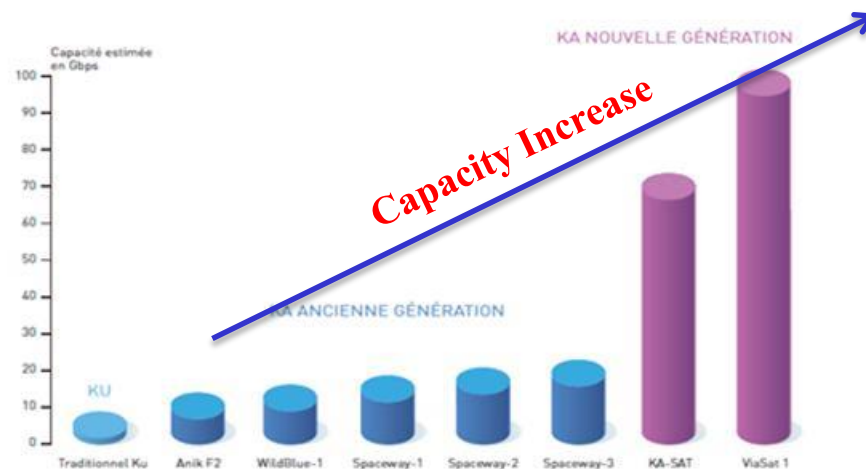
Satellite Broadband An Ongoing Revolution

Drastic performance evolution in the last years thanks to multi-beams payload and frequency re-use technique: High Throughput Satellites (HTS)

Operators decide whether to embark broadband specific payloads or to fully dedicate the satellite to broadband services (business plan).



Source: IDATE



To Support EU Digital Agenda 2020 Objectives:

Next generation HTS systems providing a significant improvement.

Target: **Terabit/s satellite capacity** at viable economical conditions in the 2020 – 2025 timeframe.