

THE FUTURE OF CABLE TV

25 TO 26
JANUARY 2018

ITU HEADQUARTERS,
GENEVA, SWITZERLAND

Industry trends and implications



Agenda

Topics

1. Cable TV context
2. Technology trends
3. Service trends
4. Regulatory trends
5. Implications



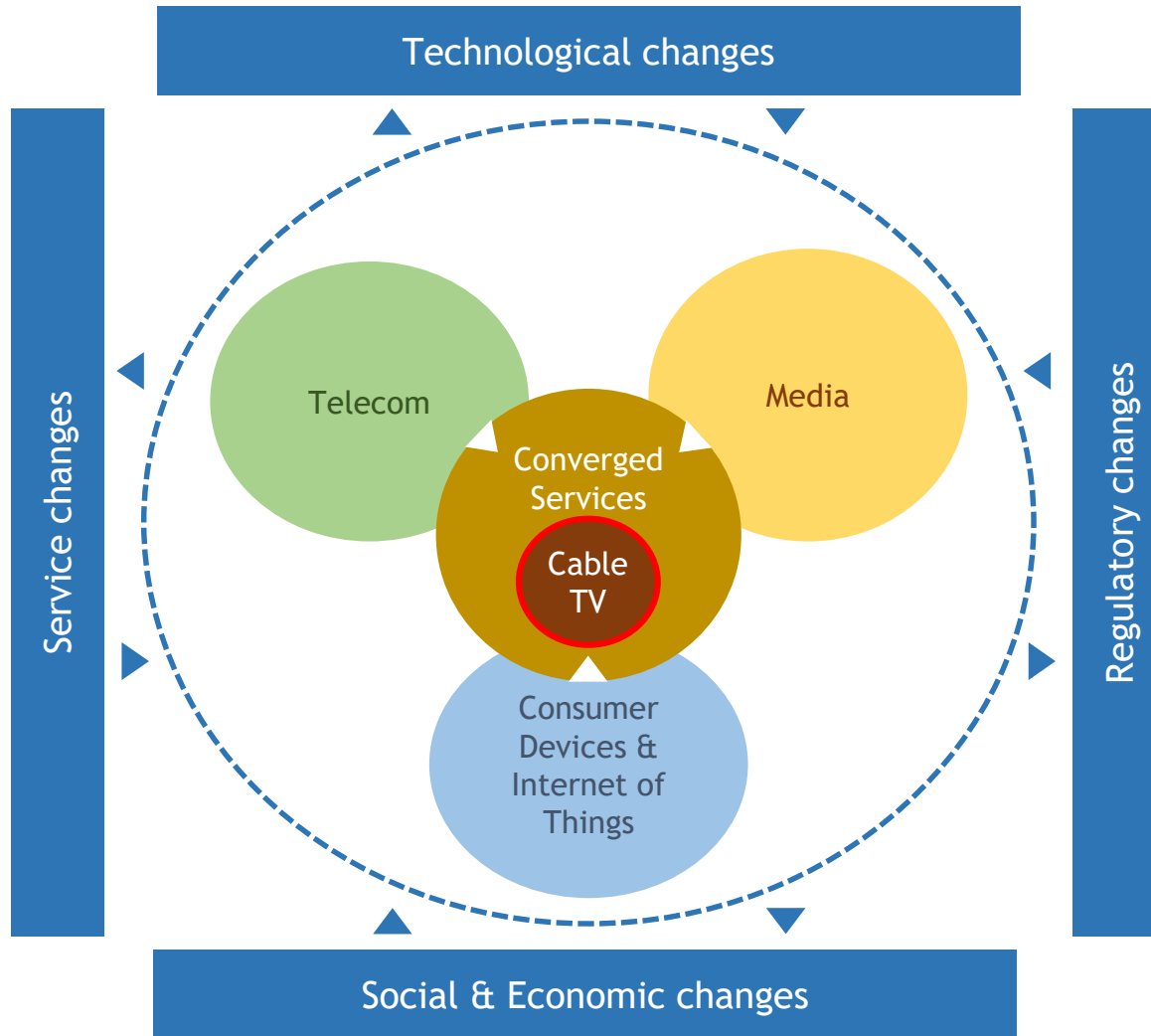
1. *Cable TV context*

- Cable TV definition
- Scoping video delivery services



1. Cable TV context

Cable TV definition

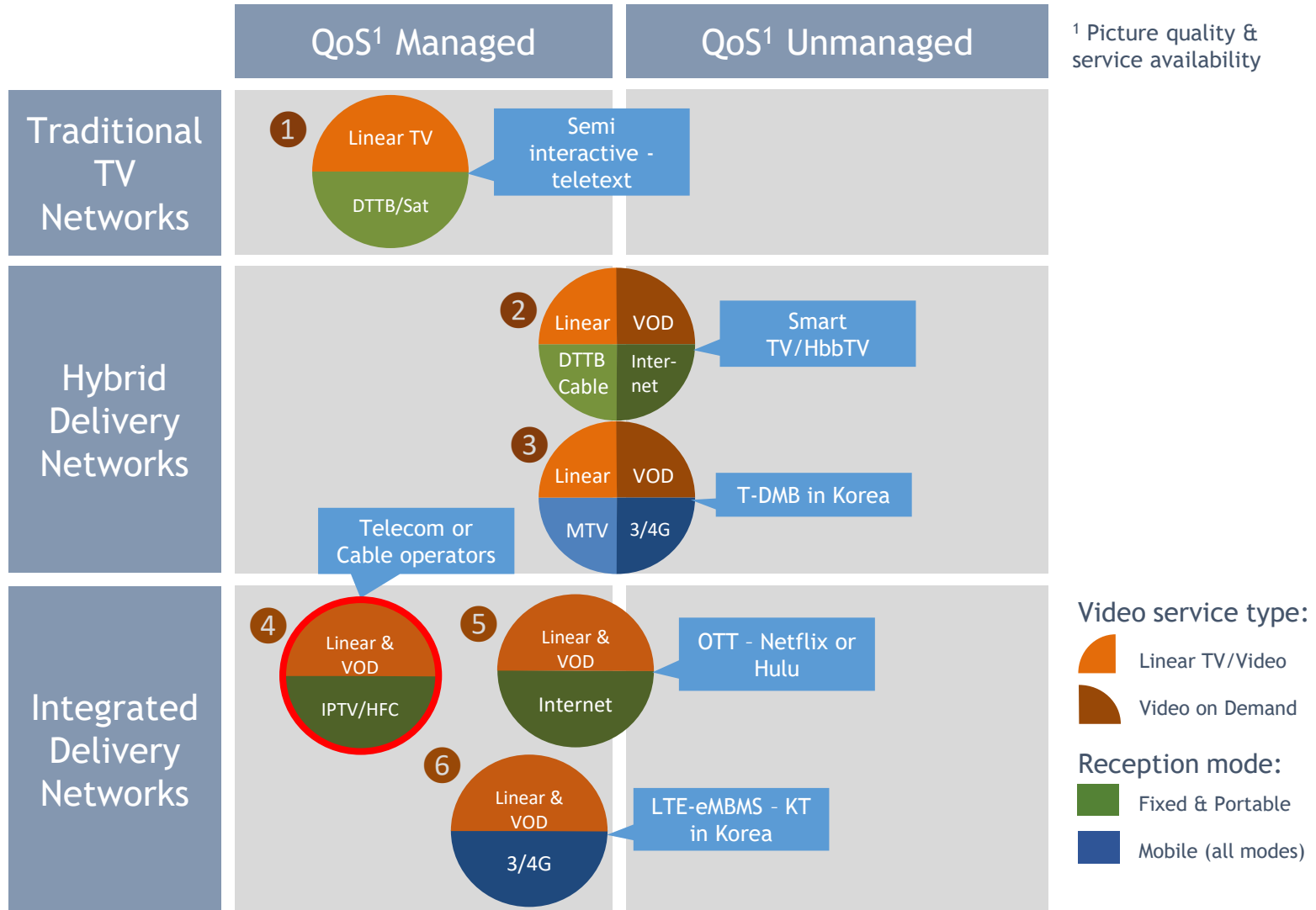


Source: ITU



1. Cable TV context

Scoping video delivery services



Source: ITU



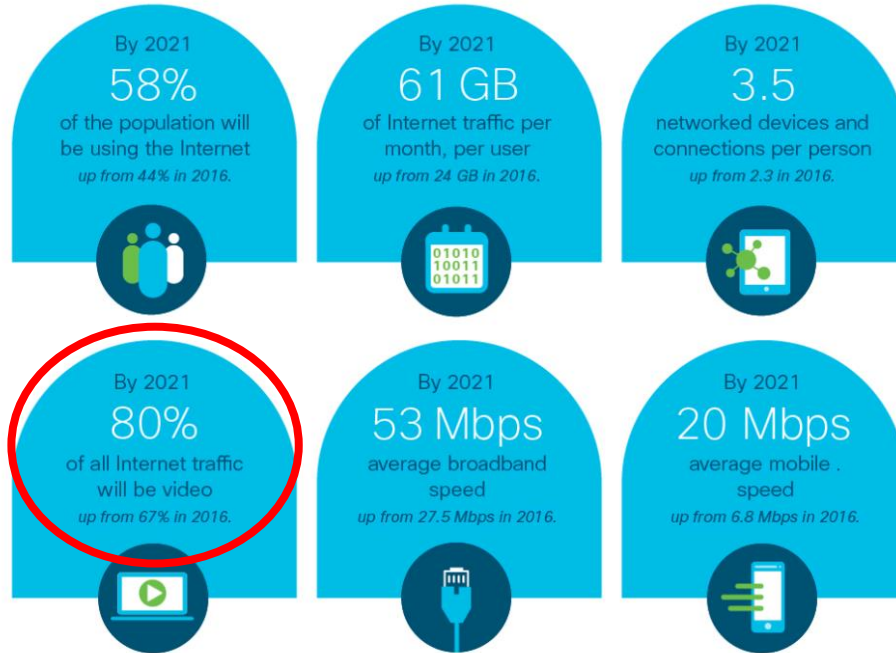
2. *Technology trends*

- Increasing bandwidth capacity
- Next generation networks
- Connected TV & IBB

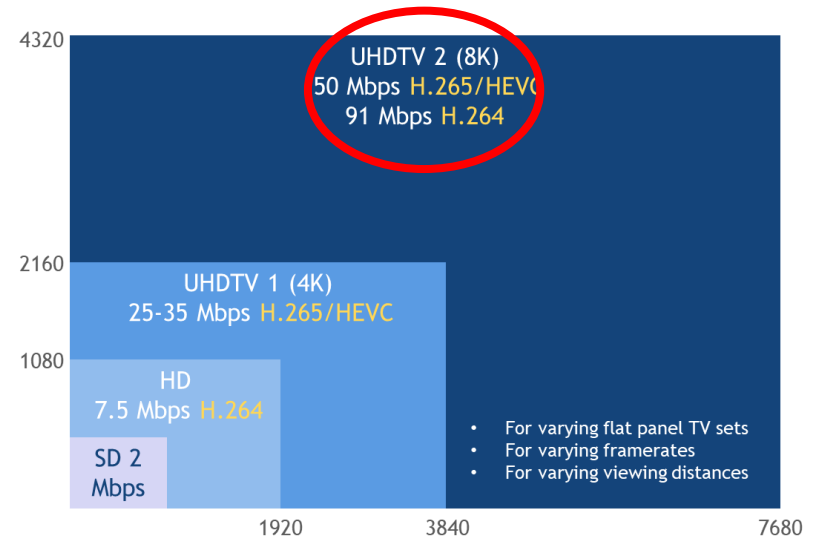


2. Technology trends

Increasing bandwidth capacity



Source: Cisco Visual Networking Index, 2017



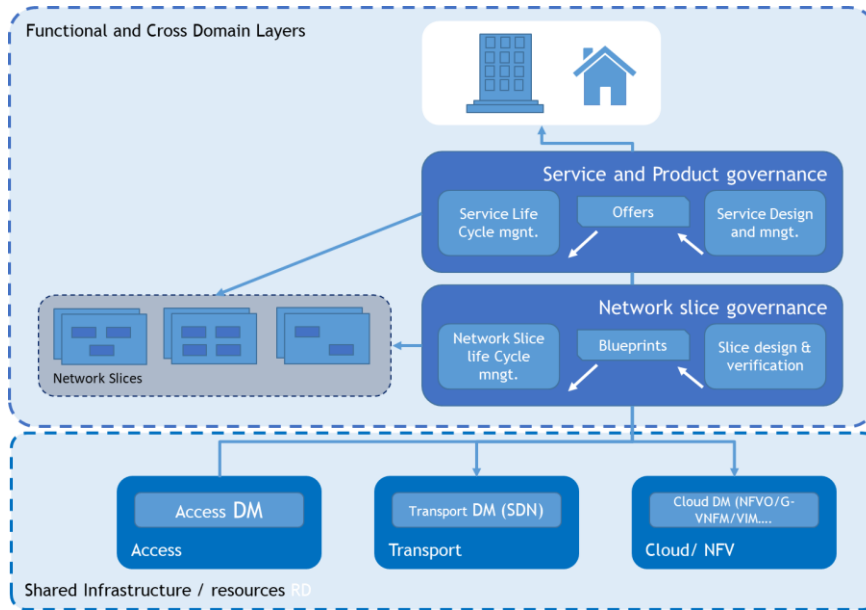
Source: ITU

- Video delivery is the key driver of increasing demand for bandwidth
- Increasing bandwidth in the local loop is critical:
 - VDSL2/Vectoring
 - DOCSIS 3.1
 - Fibre (XG PON/NG PON2)

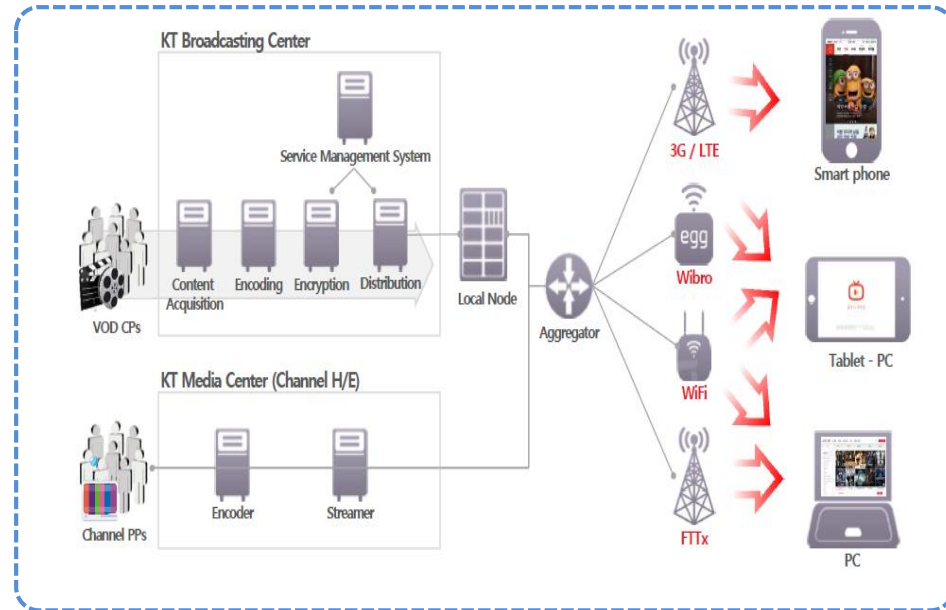


2. Technology trends

Next generation networks



Source: Ericsson technology review 2016



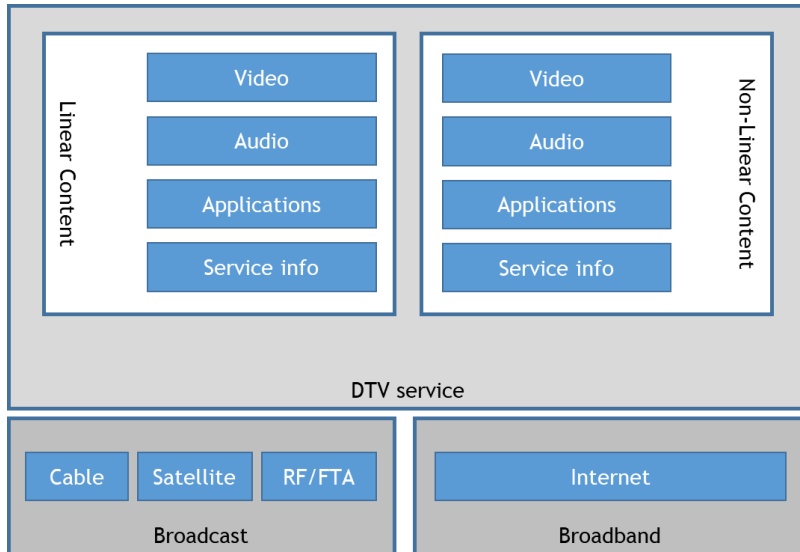
Source: KT

- Video services are delivered across various fixed and mobile networks
- Future network concepts:
 - Network Function Virtualization & Software Defined Networks
 - Network slicing

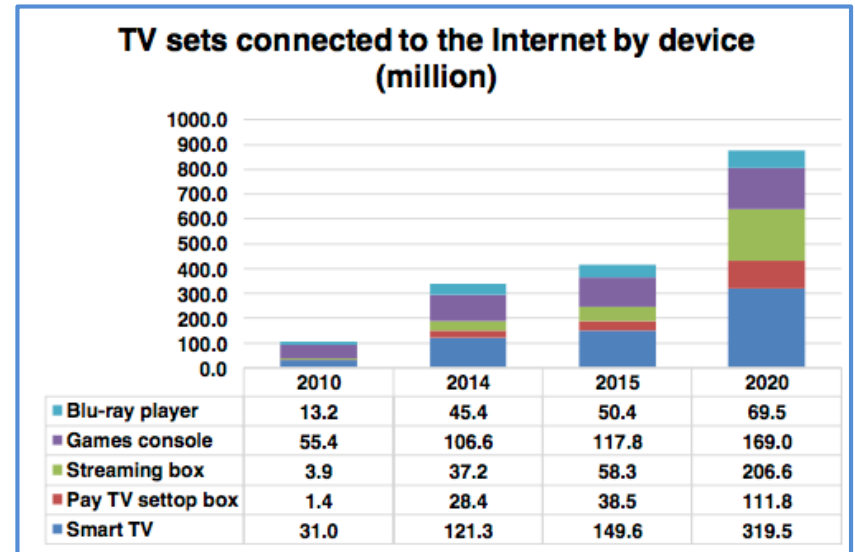


2. Technology trends

Connected TV & IBB



Source: ITU



Source: Digital TV Research, 2015

- Adoption of connected TV sets is predicted to rise sharply
- Connected TV sets provide new advertising opportunities:
 - Long-form video watching = long attention span of viewer
- Integrated Broadband Broadcasting concepts:
 - Standardized HbbTV apps/smart TVs
 - Proprietary TV apps/dongles



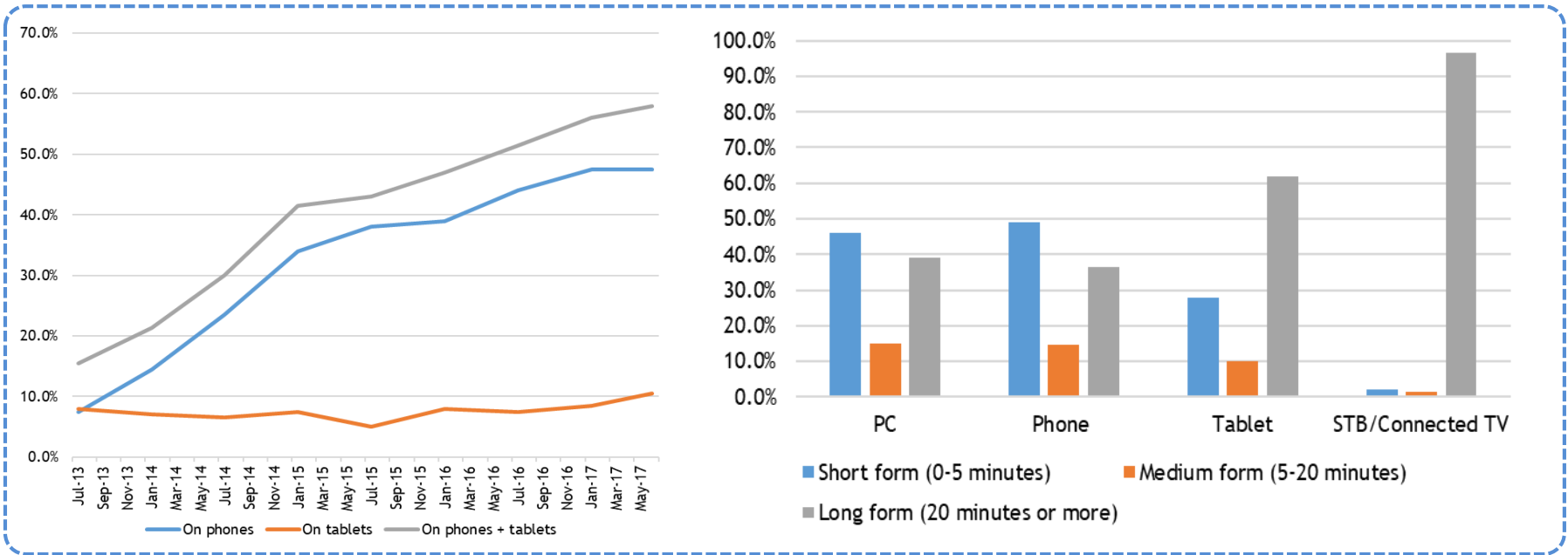
3. *Service trends*

- Video anywhere & anytime
- Multi-screen & media meshing
- OTT & traditional viewing
- OTT & cord cutting



3. Service trends

Video anywhere & anytime



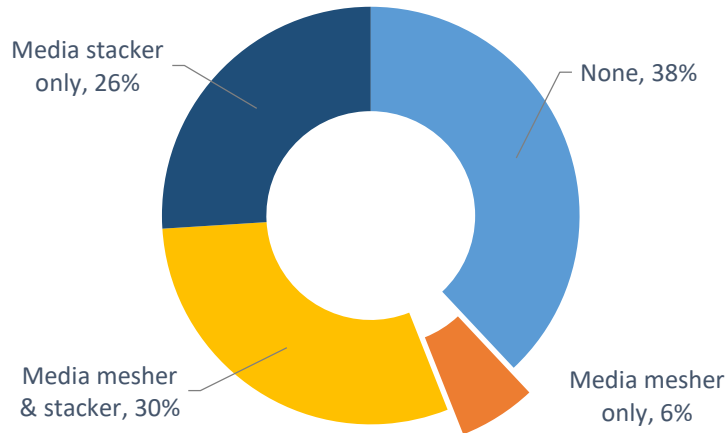
Source: Ooyala Global Video Index Q2 2017, adapted

- Video anywhere & anytime = mainly short-form video on mobiles
- Is video watching on mobiles cannibalising TV revenues?
 - Only 'idle time' (when on the move) is used
 - TV is long-form video and mobile is short-form
 - 4k/8k (UHDTV) viewing not on mobiles
 - Short-form viewing by mobile users changes viewing habits also at home
 - Mobile can be used for media meshing



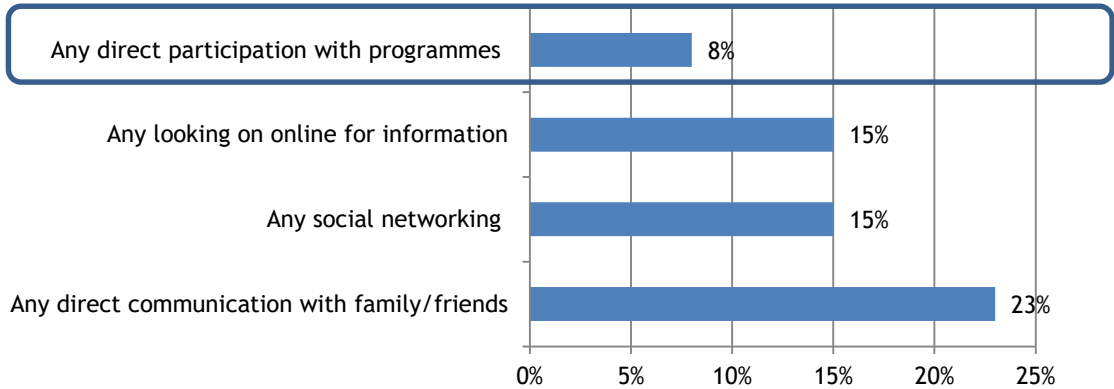
3. Service trends

Multi-screen & media meshing



Source: Ofcom

- Most multi-screen usage is media stacking, which can cannibalise revenues
- True media meshing is still limited
- Media meshing can increase:
 - Customer loyalty
 - Revenues

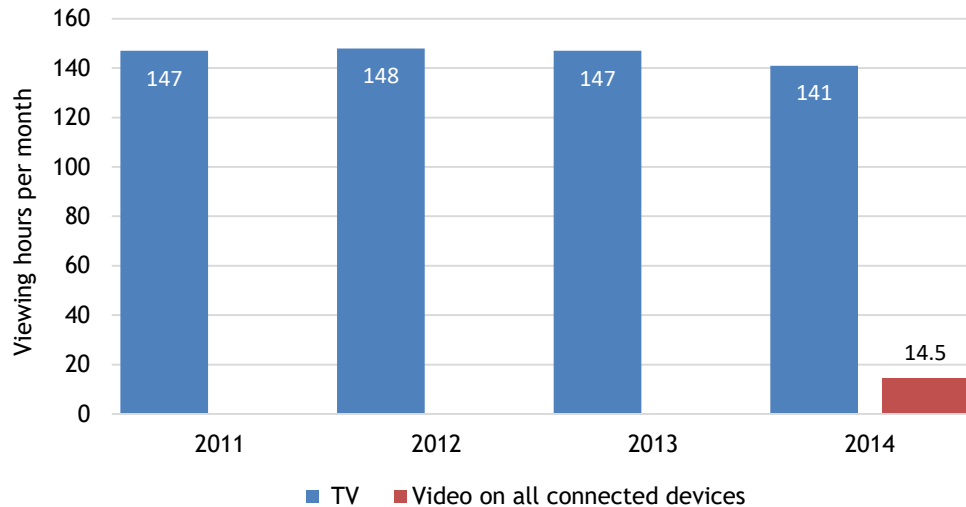


Source: Ofcom

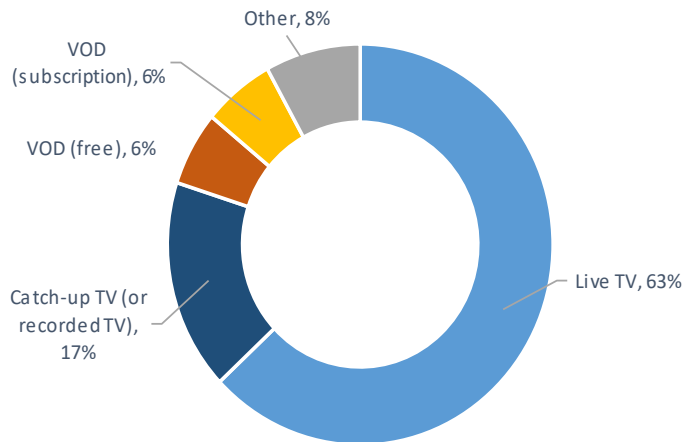


3. Service trends

OTT & traditional viewing



Source: Nielsen US



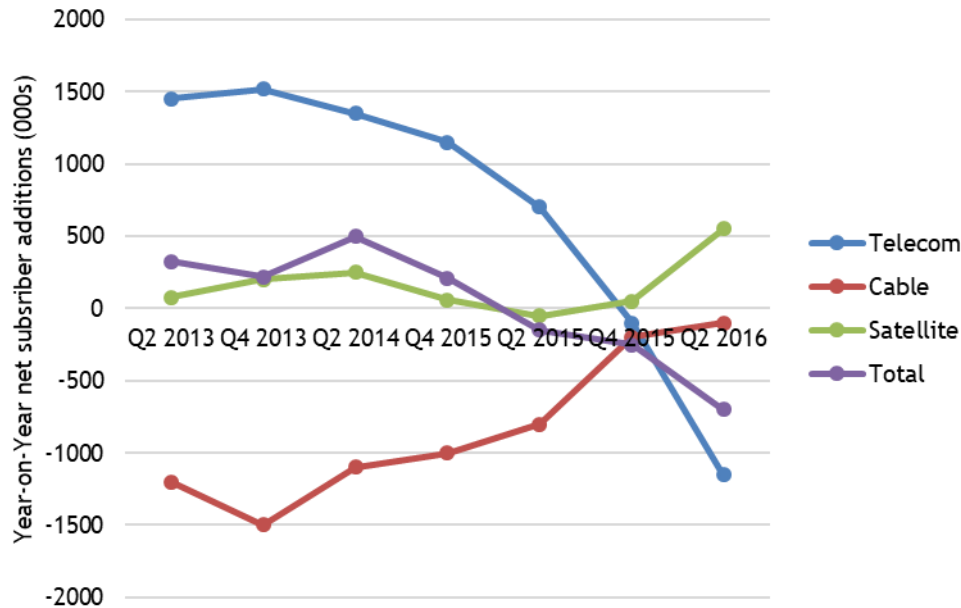
Source: Digital UK

- OTT impact slower than anticipated in US (and elsewhere)
- Also in Europe, as shown by EBU 2015 study:
 - 95.5% live viewing
 - 4.5% time shifted viewing
- Digital UK and RTL Germany also showed (2017):
 - 80% of viewing is live and recorded TV (via traditional delivery)



3. Service trends

OTT & cord cutting



- Cord cutting trends differ per sector
- To combat cord cutting:
 - Service bundling and multi-play offerings by Cable TV operators
 - Partnering with OTT providers
- Regulators may limit (unfair) service bundling

Source: Company reporting, Jackdaw Research Analysis, US market



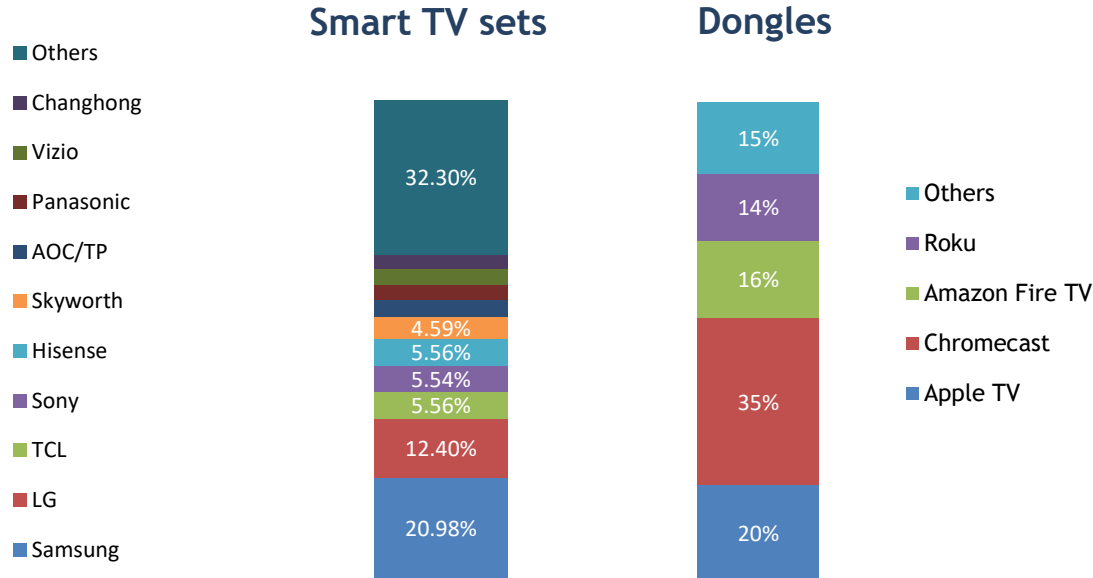
4. *Regulatory trends*

- Eco-system access & connected TV
- Net neutrality & audio-visual services
- Local AV content requirements



4. Regulatory trends

Eco-system access & connected TV



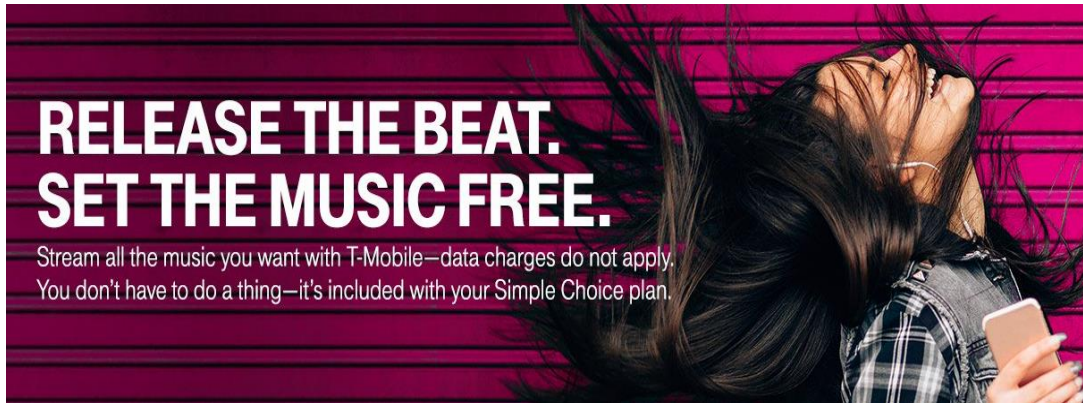
Source: Statista, Strategy Analytics, 2016

- Providing access to TV Apps (TV eco-system) can be critical, however:
 - Competition is fierce
 - Standardisation helps
- Latest Eco-system disputes:
 - Sep 2017: Google pulled YouTube access from Amazon's Echo Show (= smart speaker)
 - Dec 2017: Amazon not selling Google's Chromecast and Home products

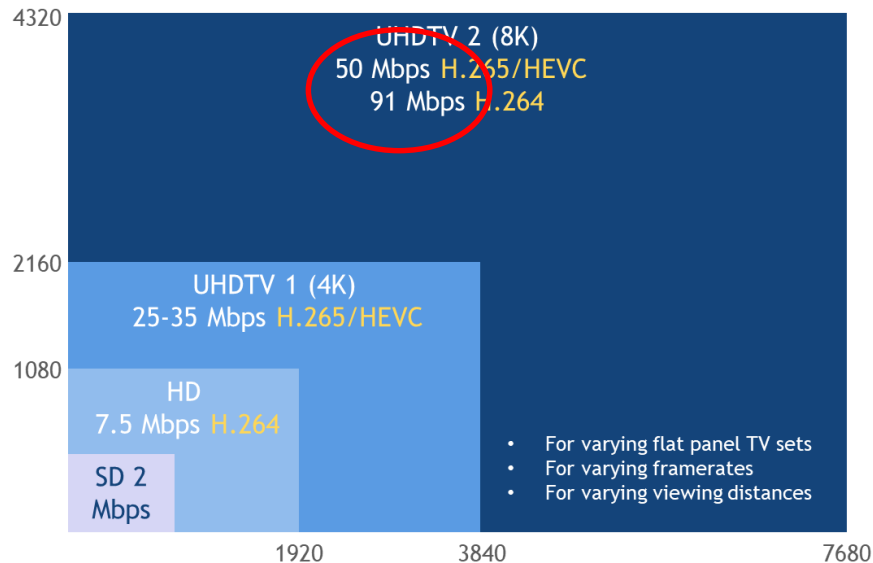


4. Regulatory trends

Net neutrality & audio-visual services



Source: T-Mobile



Source: ITU

- AV zero-rating offerings are currently attracting regulatory attention:
 - Offerings can constitute a violation of net neutrality rules
 - Rulings in US and Europe vary
- The KT/Samsung 2012 dispute may repeat itself in the future:
 - Mature production of 4k/8k content & services
 - Connected 4k/8k TV sets will accelerate broadband demand



4. Regulatory trends

Local AV content requirements



Source: European Council

- AV content requirements should be (as much as possible) technology-neutral
- Regulating non-linear services poses two challenges:
 - No natural capacity constraint
 - More viewer's control over content
- In EU regulatory cornerstone = AV Media Service Directive (AVMSD)
- AVMSD currently under review:
 - Includes now social media services
 - Advertising rules more relaxed (20% rule only between 07:00-23:00)
 - Relaxing of product placement & sponsoring rules (by self-regulation)
 - VOD SPs to provide at least 30% local content



5. *Implications*

- Industry-wide
- Service & business
- Technology
- Regulatory & standard setting



THANK YOU



5. *Implications*

Industry-wide (session 1)

Question 1: What would be the key technological and service developments that Cable TV network operators should embrace as to improve their competitive stance in the converged market place? Especially considering the rise of OTT and mobile service offerings from market players outside the traditional industries of telecommunications and broadcasting.

Question 2: In what way can NRA's and International industry bodies (like ITU, EBU and CEPT) help in addressing the challenges of the Cable TV industry? For example, in terms of regulations, licensing or standard setting.



5. *Implications*

Service & business (session 2)

Question 3: OTT delivered services are perceived by consumers to be on-par with HFC/IPTV delivered services or is there still a unique selling point to be derived from HFC/IPTV-based service delivery?

Question 4: Are integrated service offerings across multiple platforms critical in surviving in the long-run? Will linear TV remain a key element of this service offering, based on which also VOD services can be developed?

Question 5: Non-linear watching is dominant under young people. Can it be expected that they will carry their video consumption pattern into adulthood, or at that time, they would like to be entertained by professionally produced linear TV content? Or in other words, is linear TV dead or will it continue to exist? And if so, for what share of all video watching?

Question 6: OTT service providers seeking partnerships with Cable TV network operators illustrates the strength of linear TV or OTT providers merely seeking market access, by accessing the eco-system/STB of the Cable TV network operator?



5. *Implications*

Technology (session 3)

Question 7: Do Cable TV network operators need to replace their existing coaxial-based local loop with fibre given the forecasted demand for more broadband capacity, and especially considering the uptake of UHD TV?

Question 8: Is the deployment of future network concepts necessary for provisioning of competitive multi-screen/play offerings and may this entail outsourcing of network assets to third parties (with system integration skills)?

Question 9: DOCSIS 3.1 and DVB-C2 provide both efficient solutions for the transmission of high quality video. Is there a need for both or should they be integrated in all-IP based networks?



5. *Implications*

Regulatory & standard setting (session 4)

Question 10: Should NRAs be closely monitoring (potentially) unfair practices of locking-in customers in TV eco-systems, and if so, should they be pro-active in protecting consumers against these practices? Or alternatively, is the promotion of global standards sufficient?

Question 11: Are the different net-neutrality regimes and dispute resolutions hampering service innovation and network investments? Can it be expected that the forecasted future growth in IP-based video delivery, result in new net neutrality disputes?

Question 12: Are the current proposals for the AVMSD revision sufficient in helping the audiovisual industry to compete better in the converged market place? Are key elements missing or should rules be changed or removed in the AVMSD revision?

Question 13: Is a different direction or approach needed of standardisation bodies in setting standards in the areas of IBB and network operations (including DOCSIS, DVB-C2 and NGN)? Are critical standards missing or being developed too slowly?

