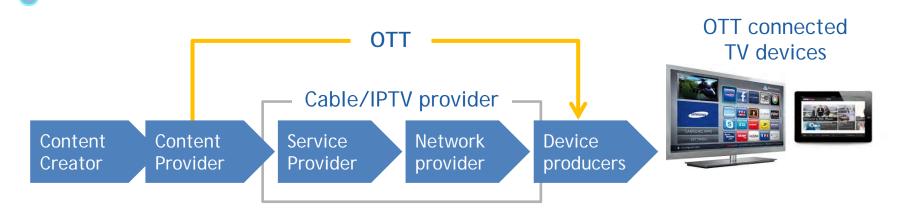
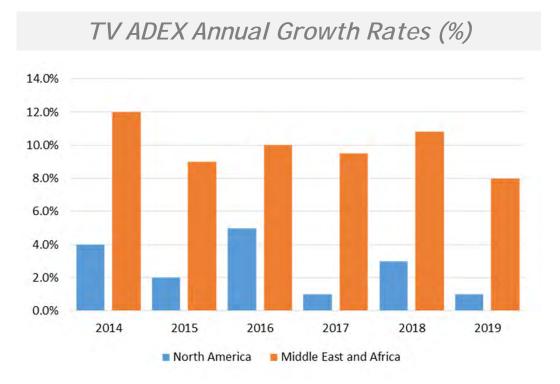


1. TV still going strong?



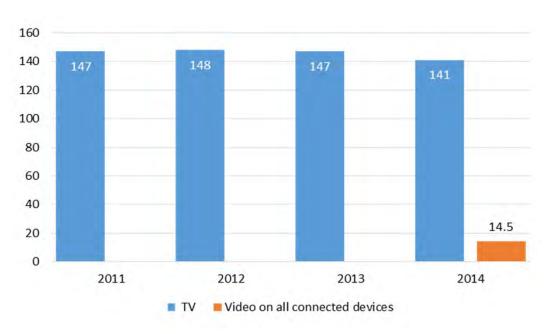


- TV still going strong? It depends...
 - OTT claims shares in 'cabled' countries
 - OTT needs good broadband, especially for (U)HDTV

Source: PwC Global Media Outlook

1. TV still going strong?

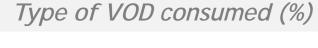
Monthly viewing time - US (hours/month)

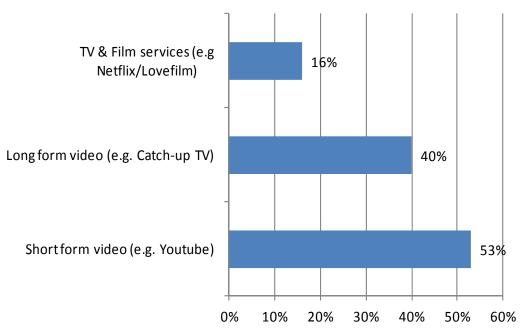


Source: Nielsen US

- 'OTT homeland' US shows viewership impact
- From 2013 to 2014:
 - OTT subscribers from 35% to 40% of TVHH
 - Time shifting from 13hr12 to 14hr20 per month

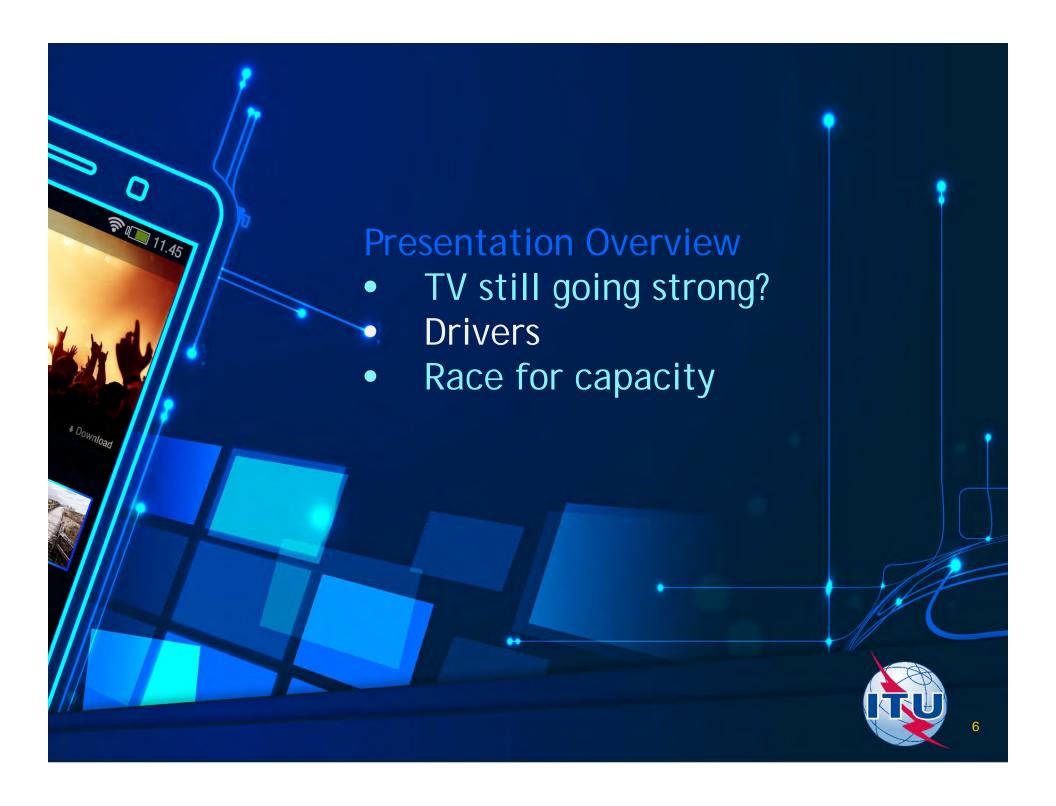
1. TV still going strong?

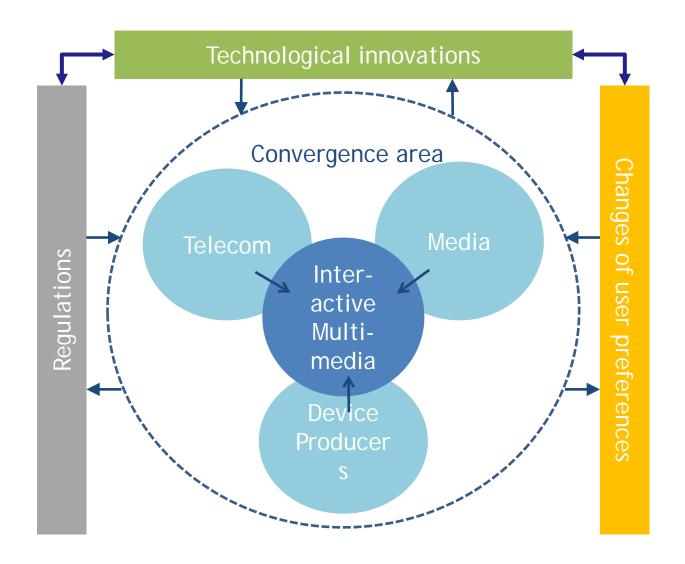




Source: Ofcom

- Most of VOD is 'catchup-TV' of mainstream TV services
- Premium content and brand management is key
- About half is short form video and is on the move/mobile

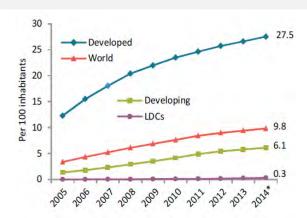




Source: Convergence Consulting Company

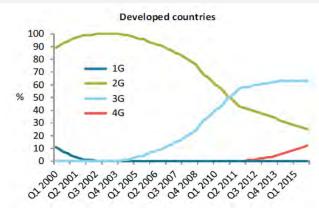
More Broadband Access (>256 Kbps)

Active Fixed Subscribers

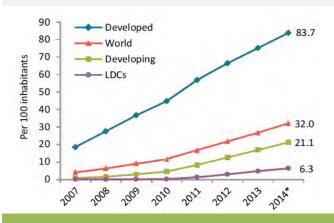


More Smart Devices

Mobile Subs by technology (%)

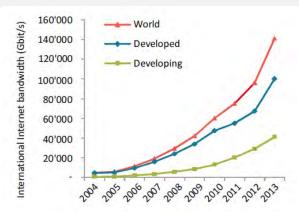


Active Mobile Subscribers



More Bandwidth

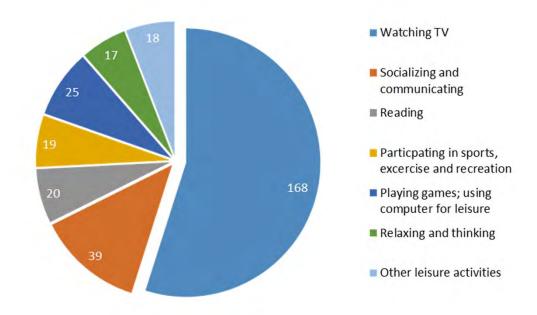
International Internet BW (Gbps)



Source: ITU

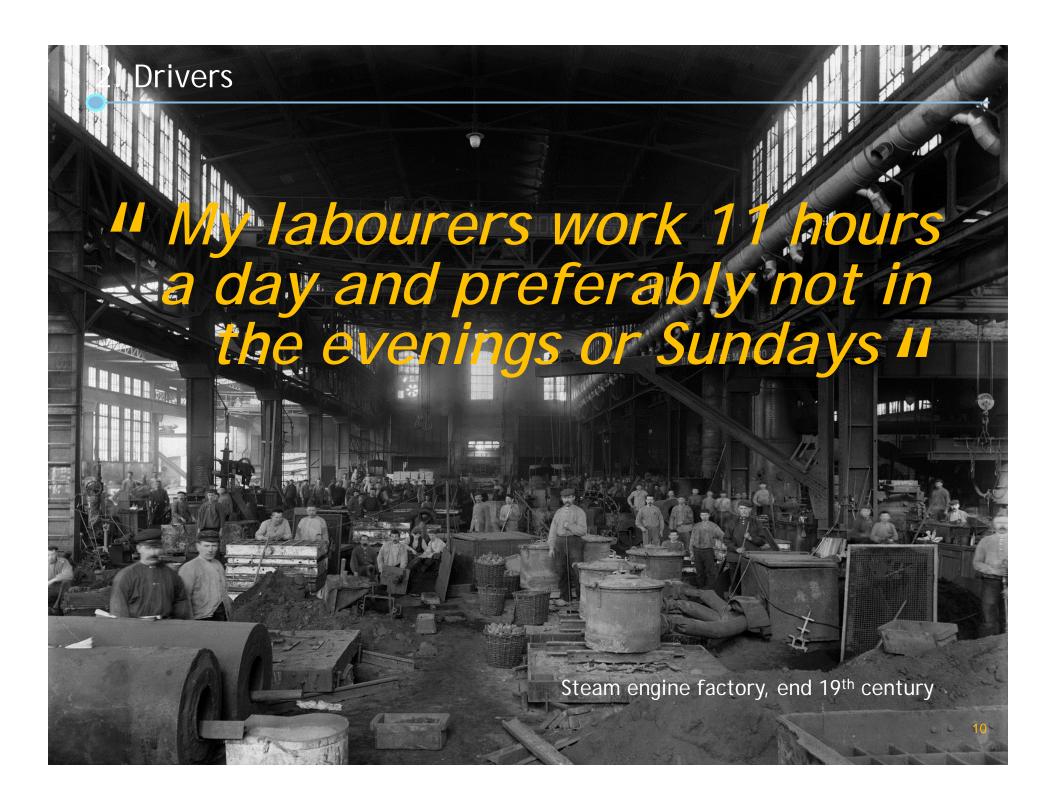
Changes of user preferences

Leisure time spent on average day (minutes)



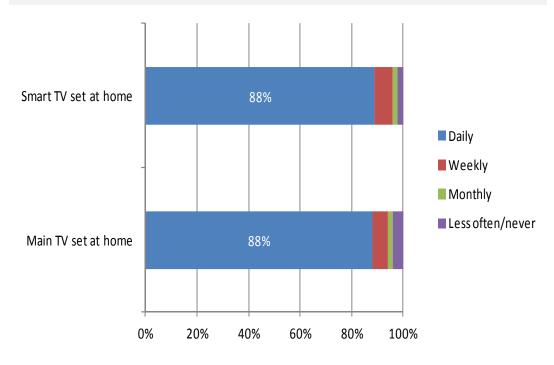
Source: American Time Use Survey

- For every additional free hour, 30 minutes goes into watching television
- All UK TV viewing = all time spent on all social networks worldwide (6.5 billion hours)
- Leisure and technology intertwined in several ways
- Change is slow and yes we get more leisure time.. Really!



Changes of user preferences

Frequency of Watching Linear TV

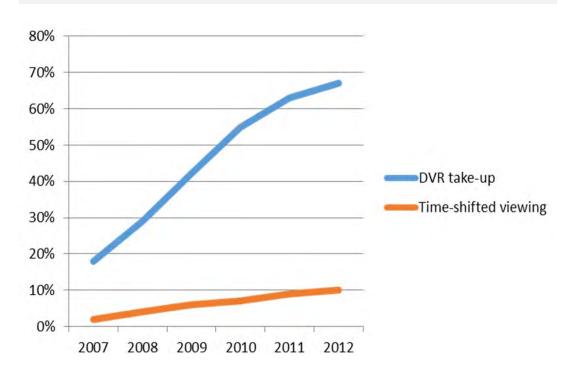


- User preferences are lagging behind technology
- Most cited reasons for using VOD services is to catch-up TV broadcasts
- Connected sets on the rise and standardization of apps will result in more VOD

Source: Ofcom

Changes of user preferences

Number of DVRs and Time Shifting

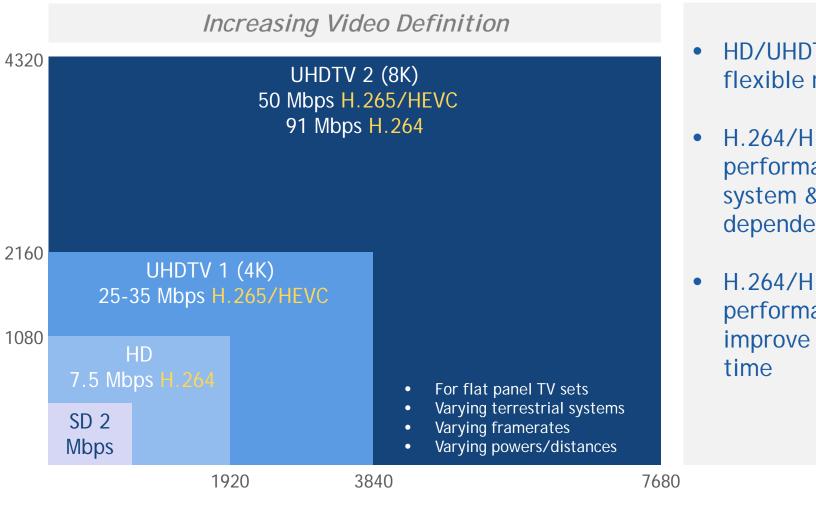


- User preferences are lagging behind technology
- Broadband and OTT is accelerating time shifting
- Households get smaller and content 'can' be tailored at home

Source: BARB

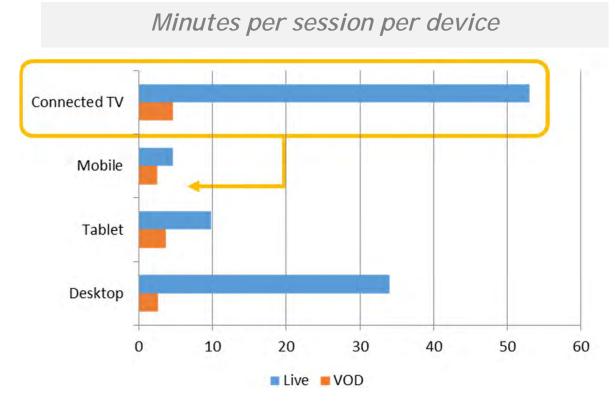


3. Race for capacity



- HD/UHDTV are flexible notions
- H.264/H.265 performance are system & content dependent
- H.264/H.265 performance to improve over

3. Race for capacity



Source: OOYALA

- Globally busy hour will be 3.3 x higher than average hour by 2018
- Live not restricted at home and mobile to follow
- Live on mobile is likely to be premium content
- Video (= Live + VOD) on mobile will be very spiky
- How to allocate spectrum efficiently?

