

# **SHAPING FUTURE VIDEO EXPERIENCES**

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# Shaping the Future Video Experiences with Unique Offering



**Enhancing** the viewer experience by upgrading to HD/UHD



**Expanding** end-to-end capabilities and video neighbourhoods globally



Innovating to deliver the best experience to any device, anywhere, anytime

#### **SES Video at a Glance**



**325 million** global households served by SES satellites (+3% YOY)



**22 UHD channels** representing a 47% increase YOY



**7,610 TV channels** broadcast globally (+4% YOY)



**44 million IPTV homes**; enabling hybrid solutions



**2,496 HDTV channels** (+6% YOY); HD penetration of 33%



>2,750 TV channels distributed globally by MX1



**EUR 0.5** average monthly distribution cost per household



>120 Video on Demand platforms supported by MX1 globally

▲ Focusing on delivering the best viewer experience to any device, anywhere



### **SES Video: Complete and Differentiated Capabilities**

#### **Service Capability**

#### Media Service Scope Distribution Infrastructure Coverage

System capabilities

Service platform capabilities

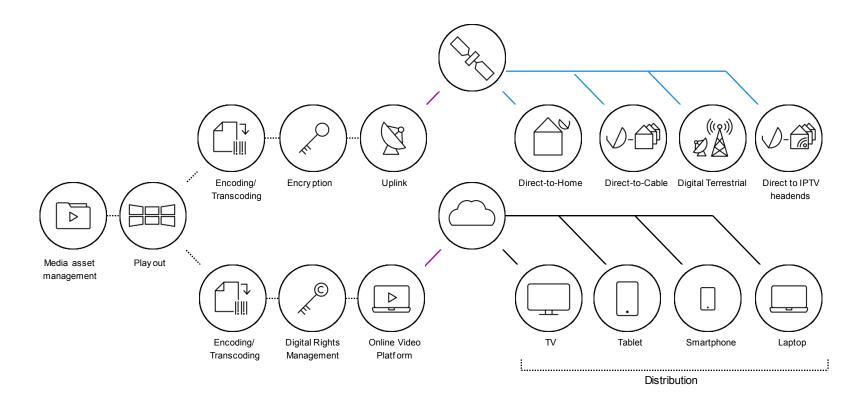
Conventional Video Services Online Video Services

Satellite capacity

Online distribution capabilities

Global Scope

All devices

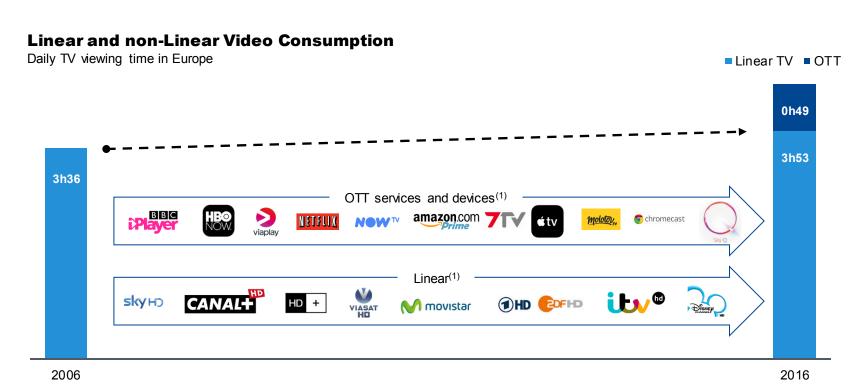


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# **Evolving and Complementary Viewing Experiences**



Mediametrie 2017 – OTT from Ampere Q1 2017 : average of UK - France – Germany

- ▲ Increasing complementarity of expanded linear and non-linear viewing experiences
- ▲ 61% of U.S and 33% of European households<sup>(2)</sup> combine Pay TV and VoD today

<sup>1)</sup> Not chronological

<sup>2)</sup> Source: Ampere Consumer, Q1 2017 - 21,000 respondents in North America and Europe. 'Pay TV' includes utility cable TV services provided through housing associations

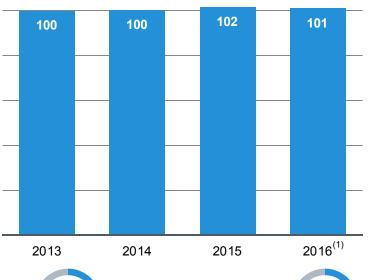




### **Enhanced Growth Outlook for European Video**

#### Robust Performance and transition to HD

Revenue evolution: 2013 = 100 (at constant FX)









**156 million** European households +2% CAGR since 2012, including 30 million IPTV



>15% CAGR HD penetration increase since 2013, to 740 HD channels in Q1 '17



**0-12 years** typical contract length



~8 years of remaining contract length among our top 5 customers



**Stable** ARPUT in total Europe even higher on premium positions (19.2°E/28.2°E), with limited upcoming renewals



Limited CapEX requirements before 2023

1) 2016: Same scope excludes RR Media contribution – MPEG-4 and HD TV are based on Q1 '17 channel count

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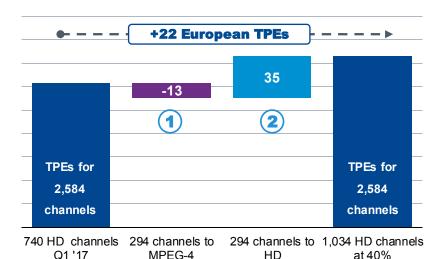


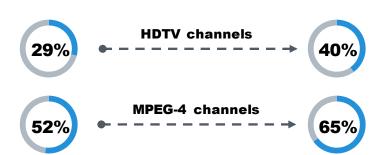
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# **Enhance Video Experience: HD Penetration in Europe**

#### **Europe at 40% HD penetration**

TPEs incremental need assuming flat channel count(1)







200 broadcast clients all at different stage:

- 1 Upgraded infrastructure and switch to MPEG-4
- Over time clients enhance experience and upgrade to HD



~15-40 TPEs of incremental bandwidth consumed when:

- ▲ 40-45% of total channels in HD; and
- ▲ 60-70% of channels in MPEG-4
- ▲ Represents up to 10% of SES's current satellite capacity in Europe



Future upside from **UHD acceleration** offsets risk from MPEG-2 switch-off: simulcast and/or OTT

▲ 30 UHD channels bandwidth requirement equivalent to 220 SD MPEG-4 channels

1) Illustrative analysis based on Q1 2017 channel count. Implies following channels/TPE (36 MHz equivalent): SD MPEG2 = 11; SD MPEG4 = 22; HD MPEG4 = 6; UHD HEVC=3



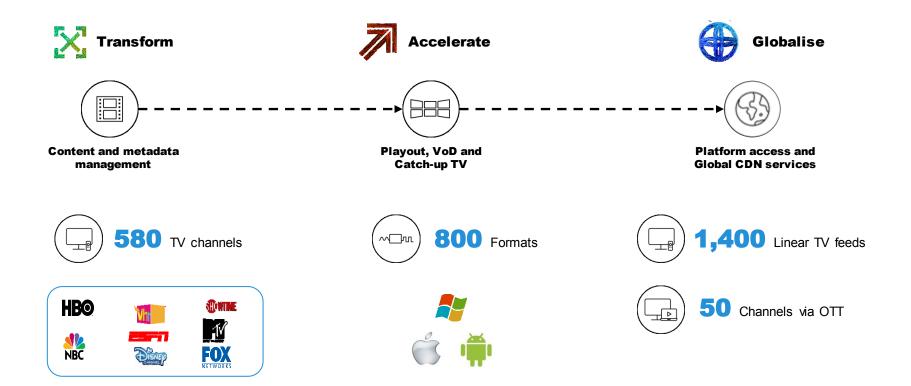






# Expand Video Offering and Build Major Presence in the U.S.

- ▲ Value chain expansion to match end-to-end requirements
- ▲ MX1 fully-managed service to VUBIQUITY using MX1 360 platform
- Multi-year agreement for optimised delivery over satellite, fibre and the internet



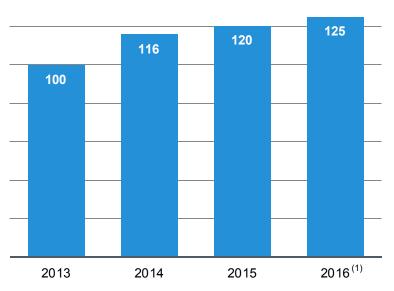


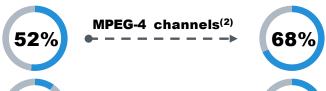


### **Expanding in Emerging Markets**

#### **Growing reach and revenue**

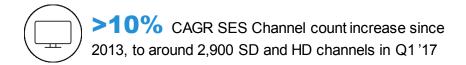
Revenue evolution: 2013 = 100 (at constant FX)

















<sup>1) 2016</sup> at same scope (excluding RR Media contribution)

<sup>2)</sup> Based on Q1 2017 channel count

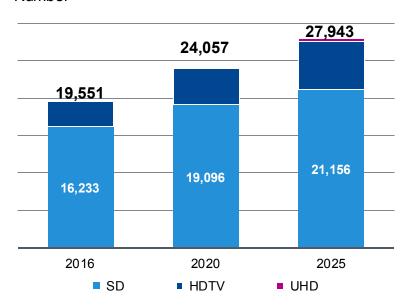




### **Emerging Markets Expansion Drivers**

#### International channel count

Number



#### **Expanding SES International platforms**

Developing Pay TV and FTA platforms



Middle East and North Africa operated with Yahlive



**+4%** CAGR<sup>(1)</sup> channel count from 2016 to 2025, to reach more than 27,000 channels



Reach increasing in fast growing markets



~8% CAGR<sup>(1)</sup> HD channel from 2016 to 2026 to reach more than 6,000 channels



**SES's** unique track-record to grow and develop new video neighbourhoods

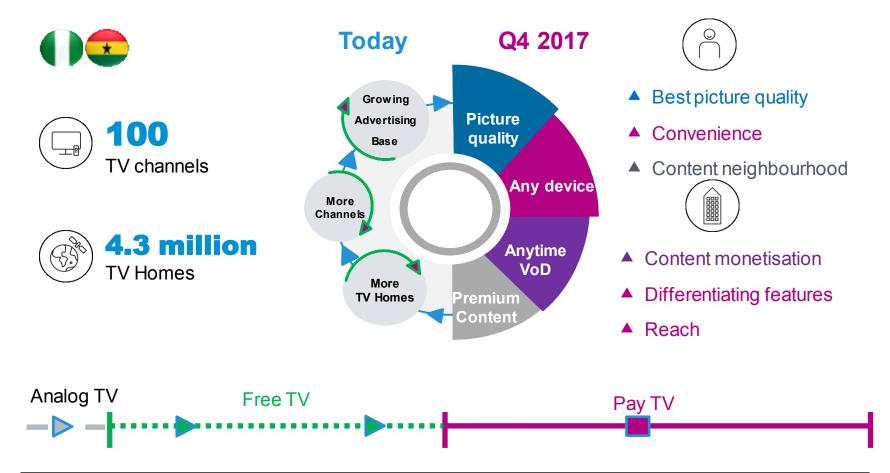
1) Source: NSR forecast C and Ku band only





# **Expanding and Stimulating Emerging Ecosystems**

- ▲ Building full ecosystems by partnering with local players since end of 2014
- Expanding reach and driving digitalisation and platform evolution







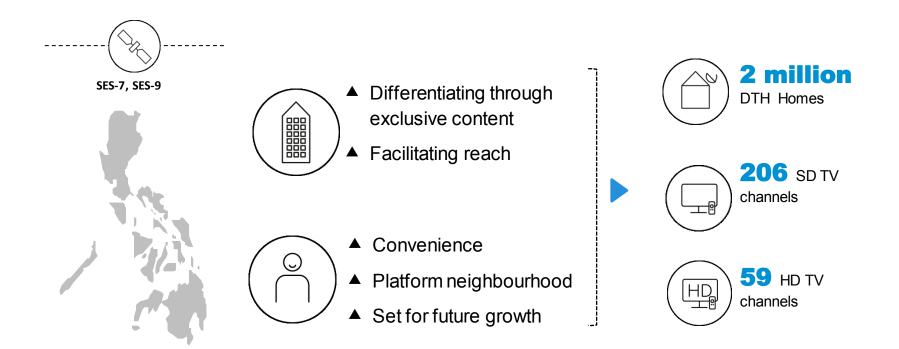
# **Expanding Video Offer in Growing Neighbourhoods**

- ▲ In less than 10 years SES has developed a **leading Pay TV position** in Philippines
- ▲ Involves the three major operators







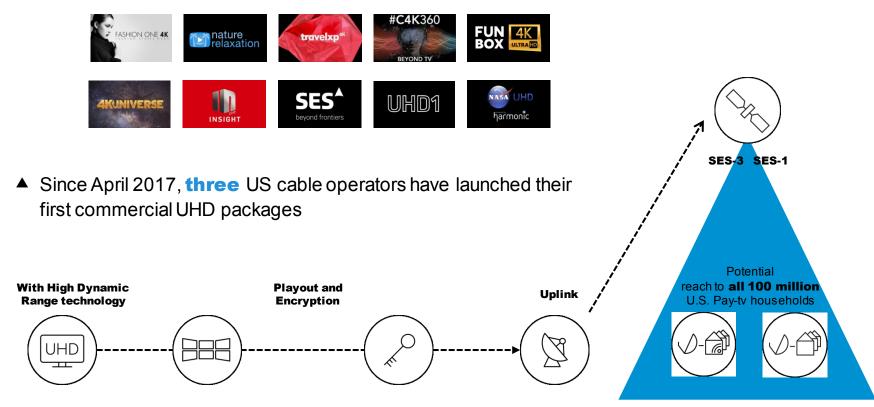






# Innovating the UHD Experience in North America

- ▲ Engaging programmers and manufacturers to build a **new backbone distribution** platform
- ▲ End-to-end ecosystem for 25+ MVPDs<sup>(1)</sup>, including Verizon and Frontier
- World's largest linear UHD bouquet with 10 channels:



1) Multi Channel Video Program Distributors



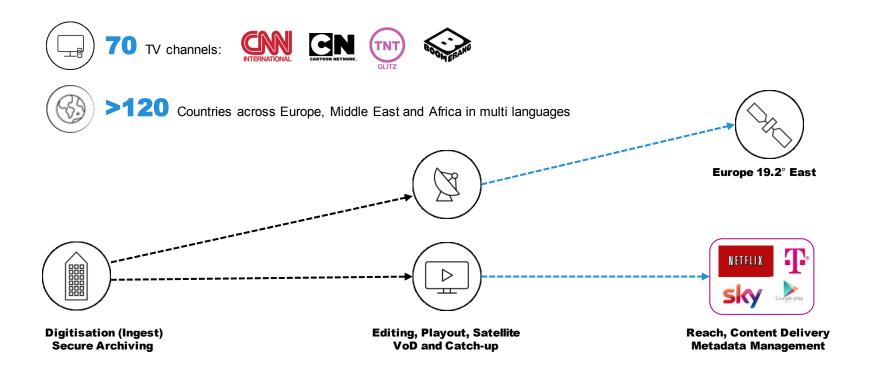


### Innovating to Deliver Best Experience to Any Device, Anytime

- End 2016, MX1 tailored a solution for the supply of backend services and VoD platforms
- Expanded existing satellite contracts, SES now provides a complete end-to-end solution to Turner



TUPNEP to focus on core business: content and end customer management:



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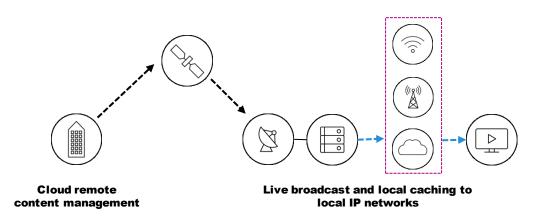


#### Innovating to Deliver the Best of Both Worlds

- ▲ **Network offloading** via satellite and local caching, MX1 cloud services, uplink & space by SES
- ▲ End-to-end solution for IP-based networks, **combining Linear and Non-Linear** Video

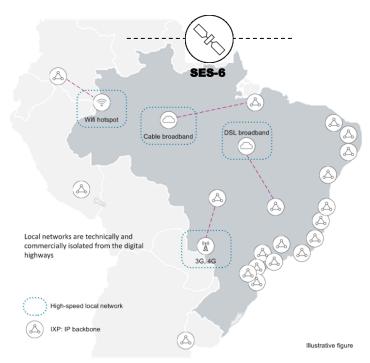


Pilot successfully performed in late 2016



#### **Enabling innovative business models**

- ▲ A customisable, replicable white-label solution
- ▲ Easy deployment and integration
- Pay-as-you-grow business model







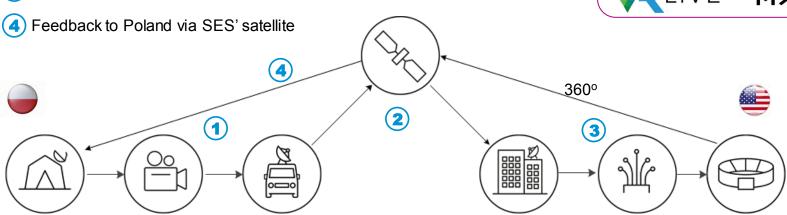
### Innovating to Shape Virtual Reality Experience

#### **NFL Super Bowl VR demonstration**

- ▲ MX1 delivered unique demonstration of satellite live broadcast transmission and VR integration to >110 million Super Bowl viewers (February 2017)
- ▲ Most advanced and highest-quality workflow for 360° VR broadcast, strong end-user experience

#### Intercontinental project coordination

- 1 Production and uplink trucks and at US Army Base in Kazan, Poland
- 2 Full satellite transmission from Poland to USA, utilising SES' fleet
- 3 Sport event world feed provision via satellite (SES-4)





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