

Satellite Broadcasting in Converged Era



Raju Pulugurtha

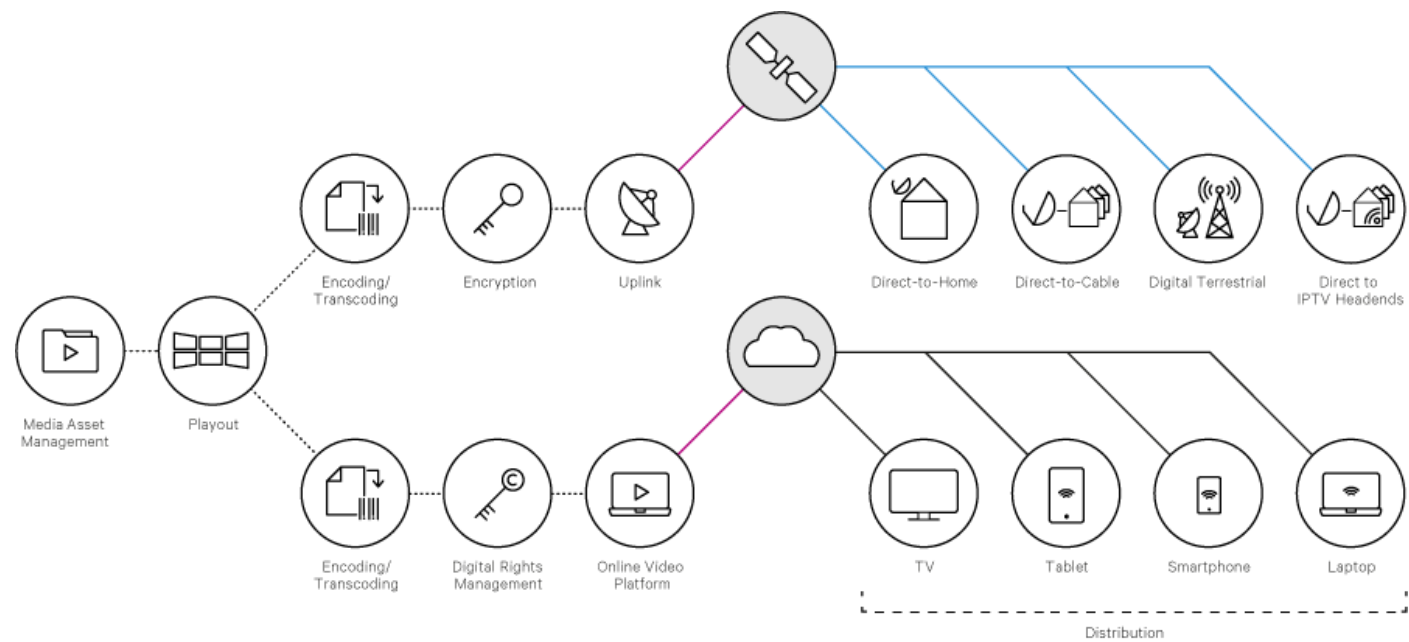
Senior Sales Director, SES, South Asia

November 21, 2018

SES Video Services A Snap Shot

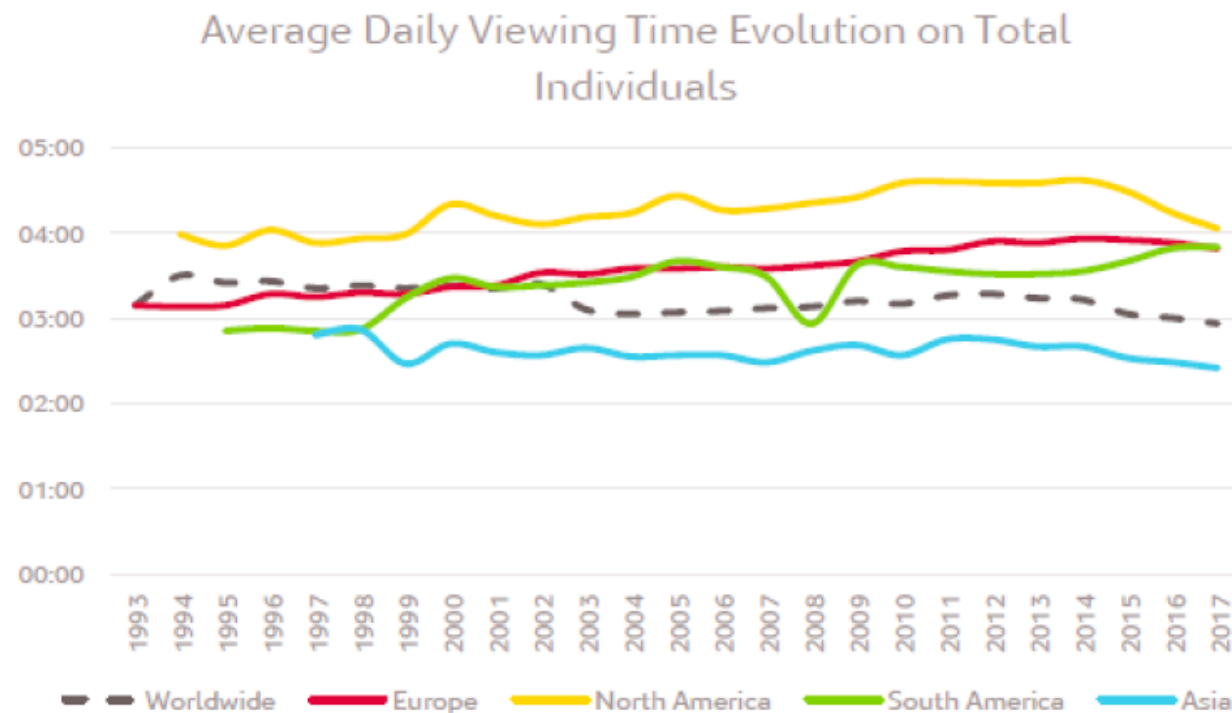
- ▲ SES is the only unique operator with 55 GEO Satellites and 16 MEO Satellites
 - Covering 99% of Globe and World population
 - Carrying 7900 TV channels
 - HD TV: 2587
 - UHD: 31
 - Serving 351 Million homes
 - With 1 Billion Viewers
 - 40+ DTH Platforms

The Content Delivery Eco-System



1- Average Daily viewing time

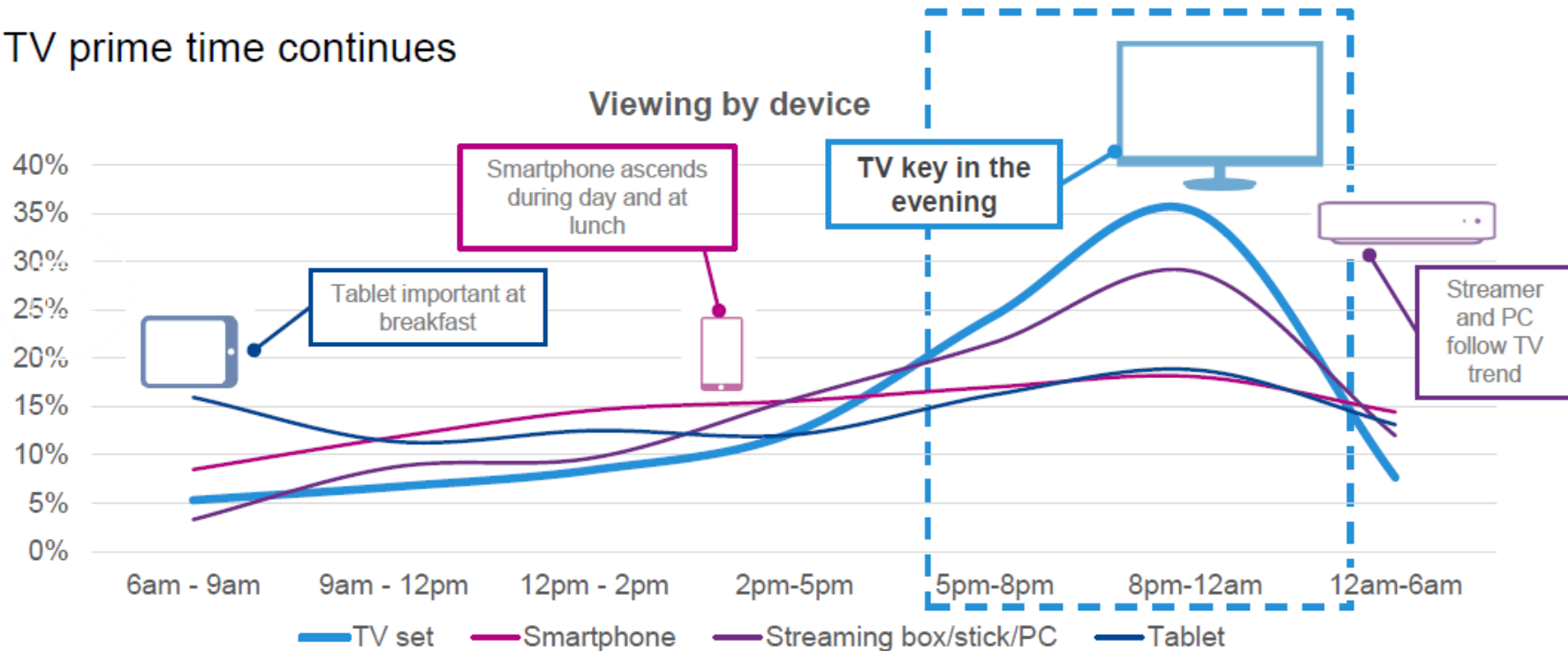
Linear Viewing stands at a 2h56 global average in 2017



2- Viewing time per device throughout the day

Content consumption expanding

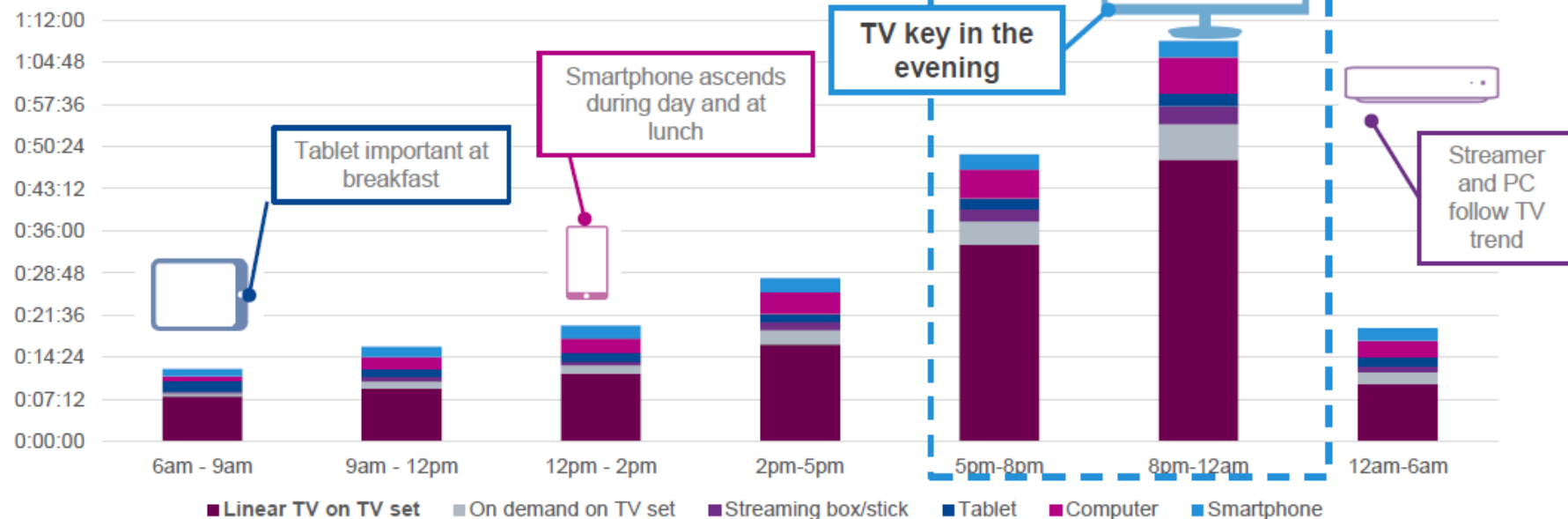
TV prime time continues



3- Viewing time per device split by linear and OTT

Linear TV continues to be the most used form of video consumption

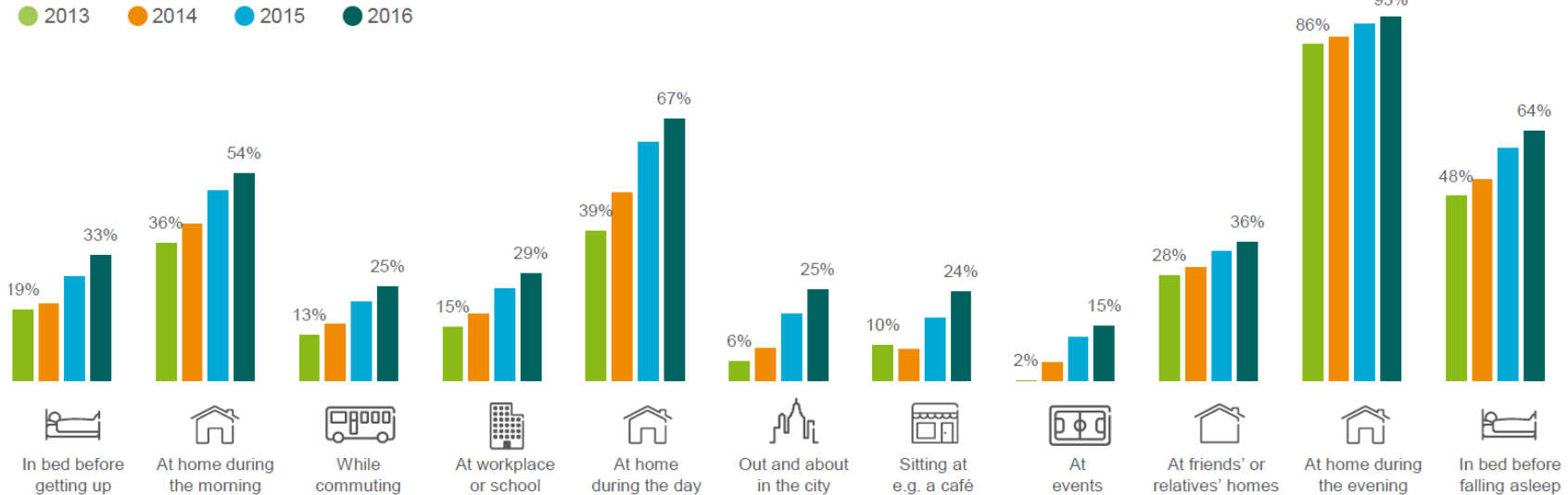
TV viewing time per device and time slot



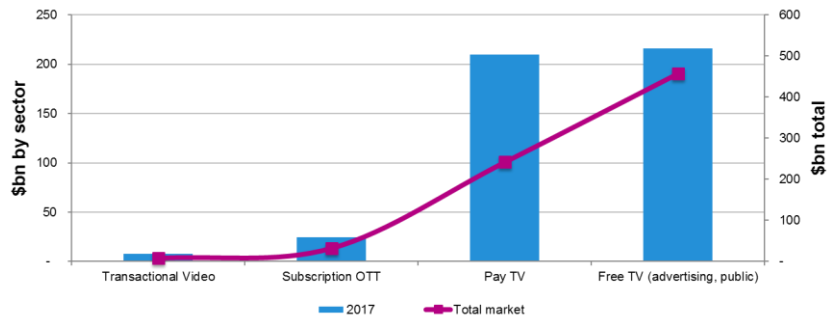
Content Viewing Habits



Percentage of consumers that on a weekly basis watch any type of TV/video content in different situations, comparison across years

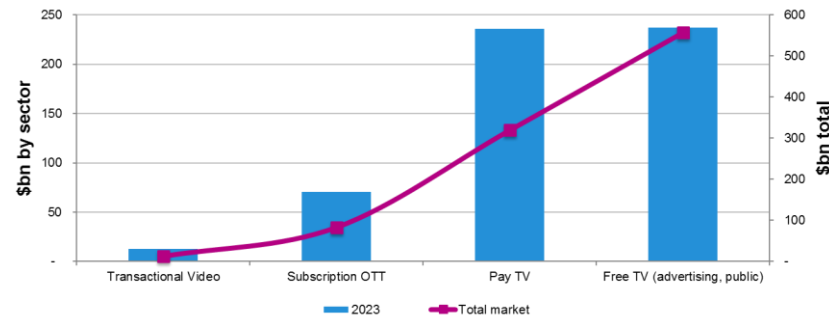


TV revenues continue growing



Linear TV's dominance continues

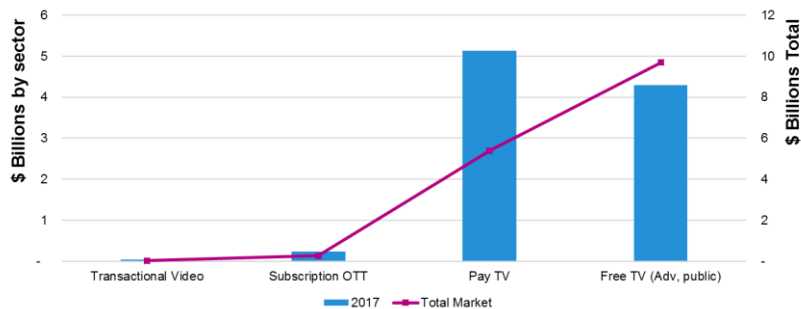
Windows beyond OTT account for
93% of TV revenue globally



Linear TV's is forecast to continue (2023)

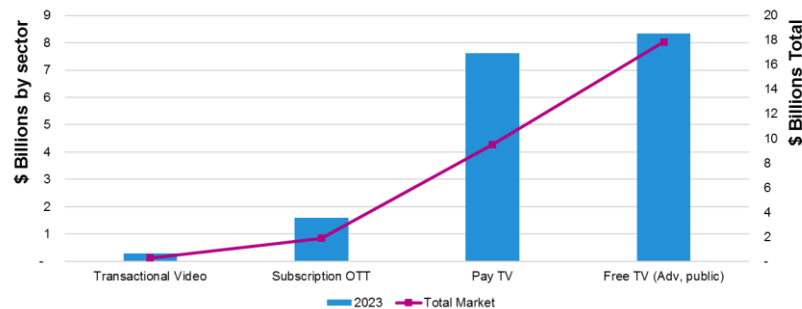
Windows beyond OTT are forecast to
account for **85% of TV revenue globally**

Linear TV's dominance continues



Windows beyond OTT account for **97% of TV revenue in India**

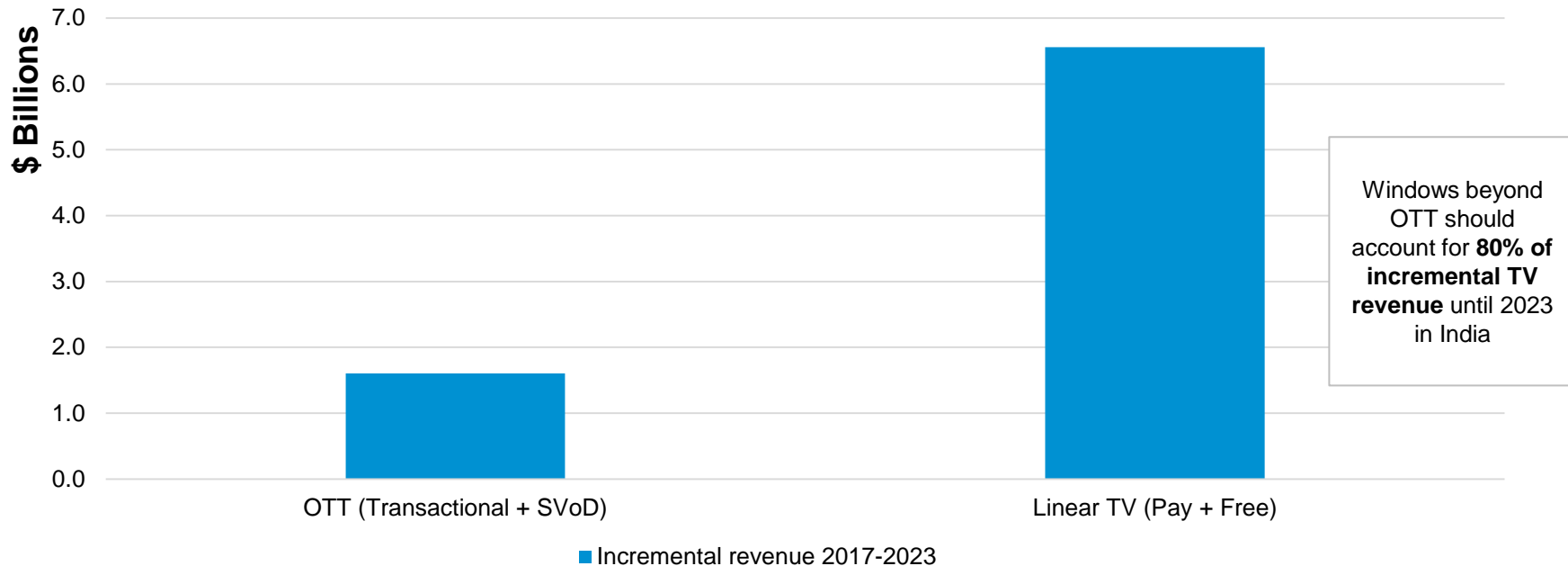
Linear TV's is forecast to continue (2023)



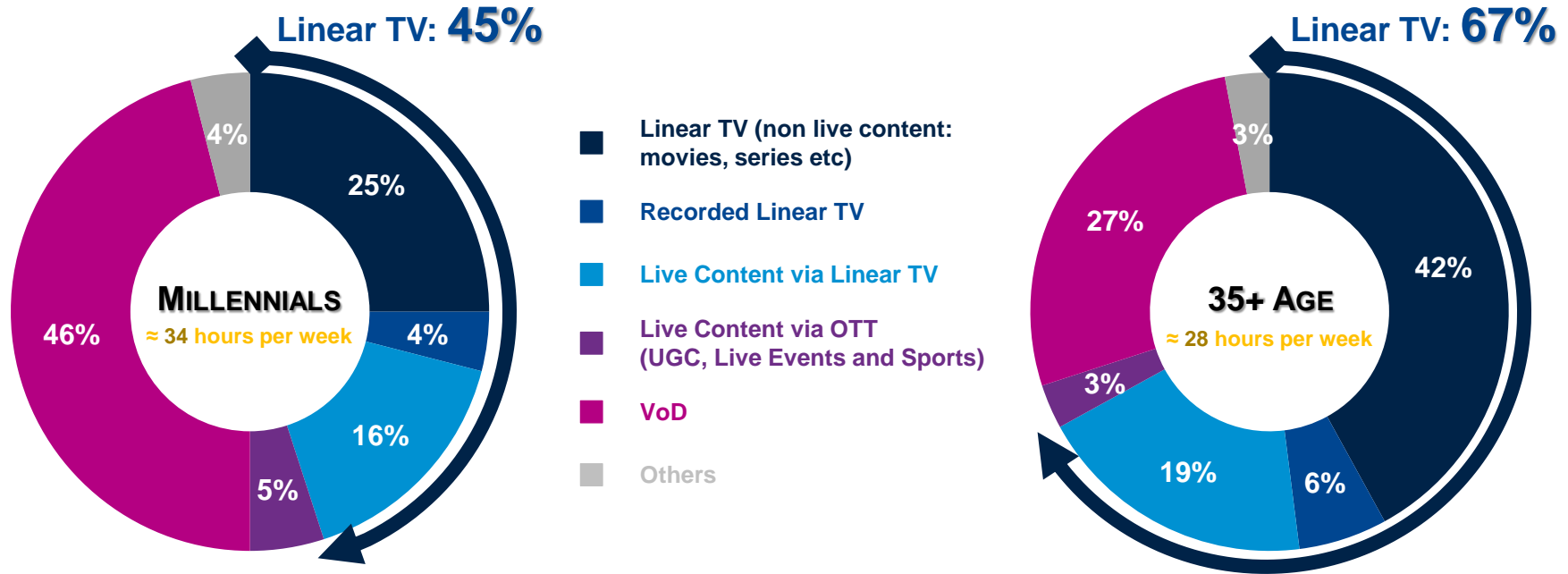
Windows beyond OTT are forecast to account for **89% of TV revenue in India**



Incremental revenue 2017-2023



Share of Content Consumption by Type and Age Group

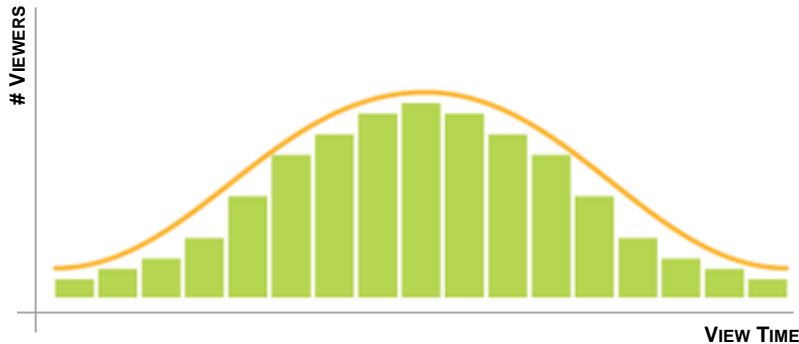


New Consumption Paradigm

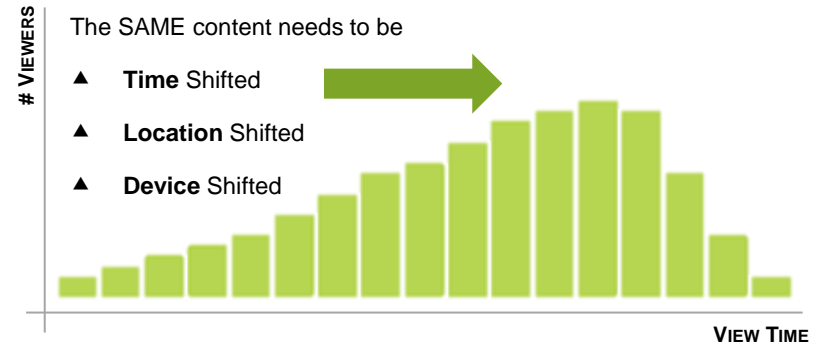
The bell curve of TV content consumption is becoming **positively skewed**

Total view time per week **increased by almost 2 hours** since 2012

PAST: WITHOUT VoD AND MULTISCREEN



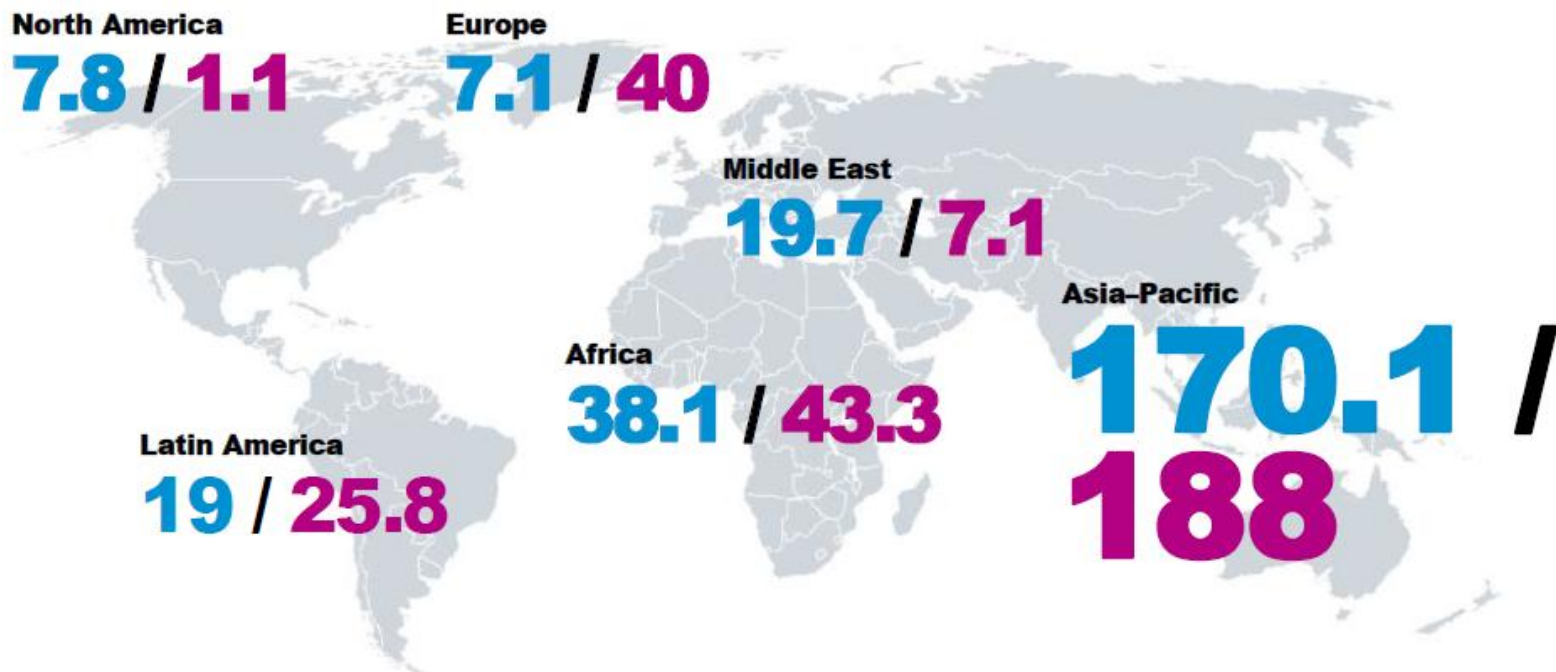
TODAY: WITH VoD AND MULTISCREEN



1- New TV Homes and homes still not digital

New TV homes in APAC and remaining analogue homes sustain growth potentials for linear TV

New homes and remaining analogue homes



1- New TV Homes and homes still not digital

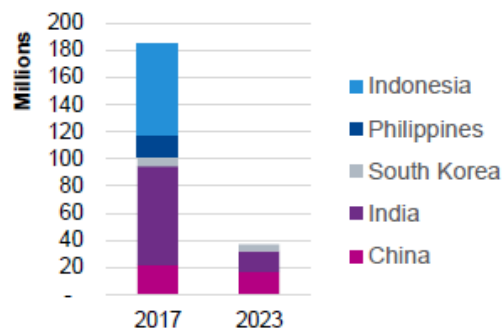
New Homes and remaining Analogue homes in Asia Pacific

New homes and remaining analogue homes fuel growth (2017)

Country	New TV Homes from 2017 to 2023 (millions)
India	85.09
China	47.42
Bangladesh	8.38
Indonesia	7.62
Pakistan	7.32
Philippines	2.43
Myanmar	2.08
Vietnam	1.81
Sri Lanka	1.28
Nepal	1.28
Japan	(0.48)

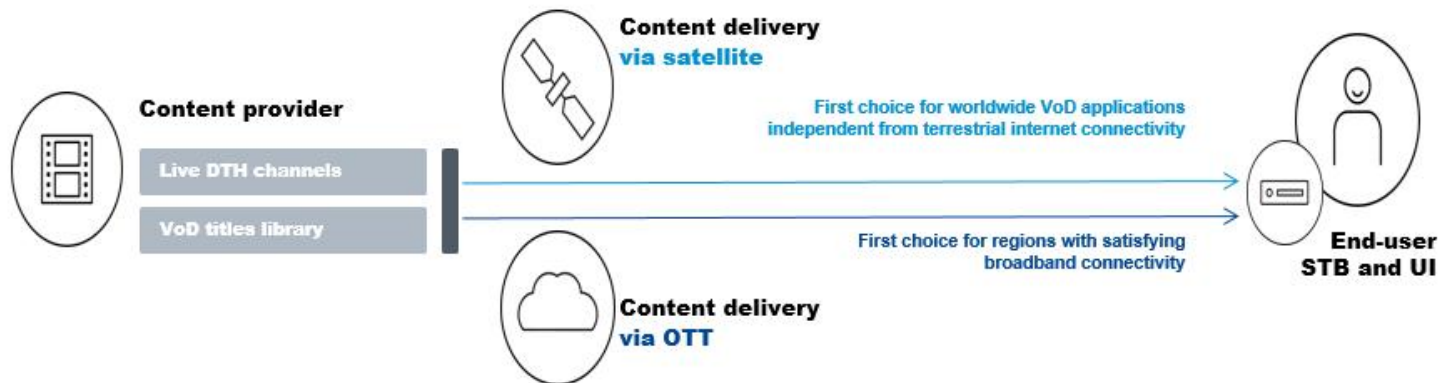


Analogue homes – major markets



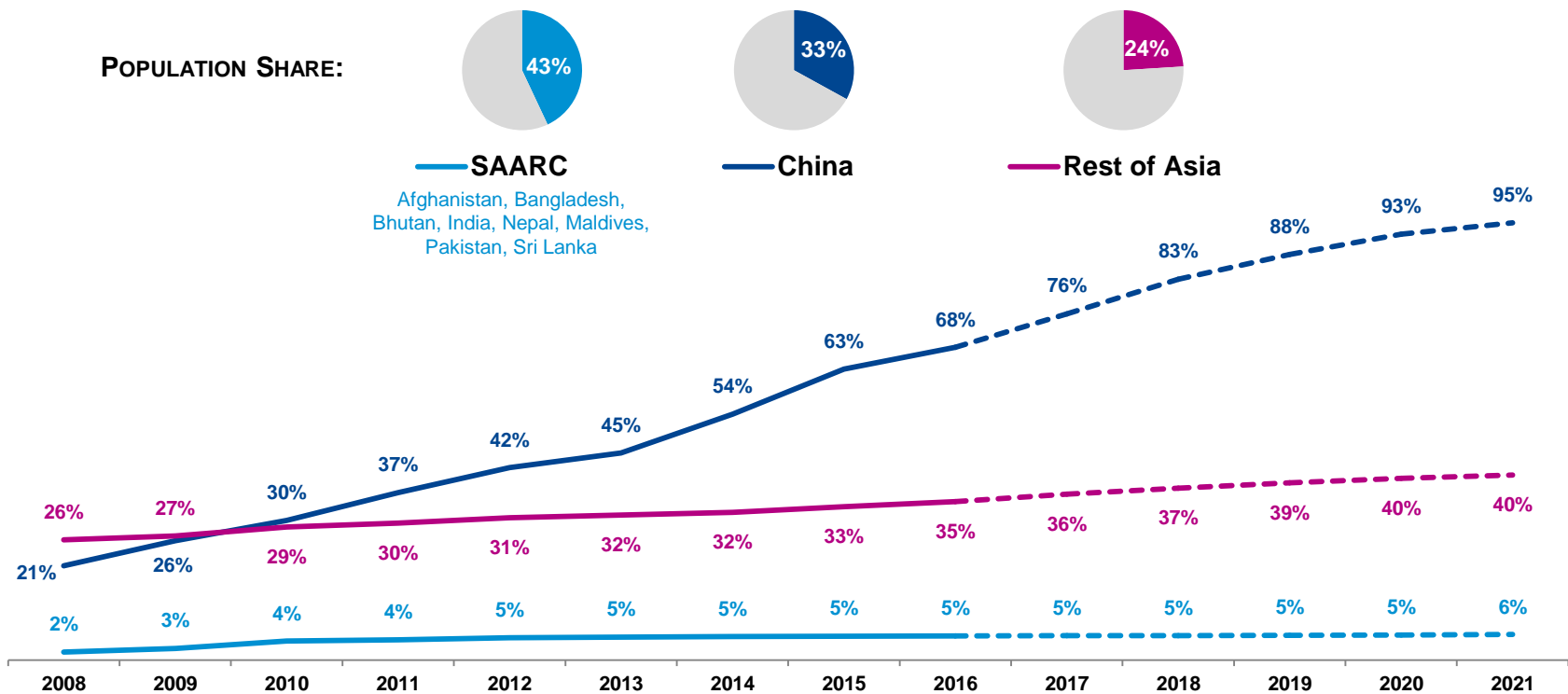
- ▲ Due to the region's size, APAC's TV market will continue to experience a mass conversion from analog to digital : Ampere forecasts 38 million remaining Analogue homes in 2023, down from 188 million in 2017

VOD Via Satellite



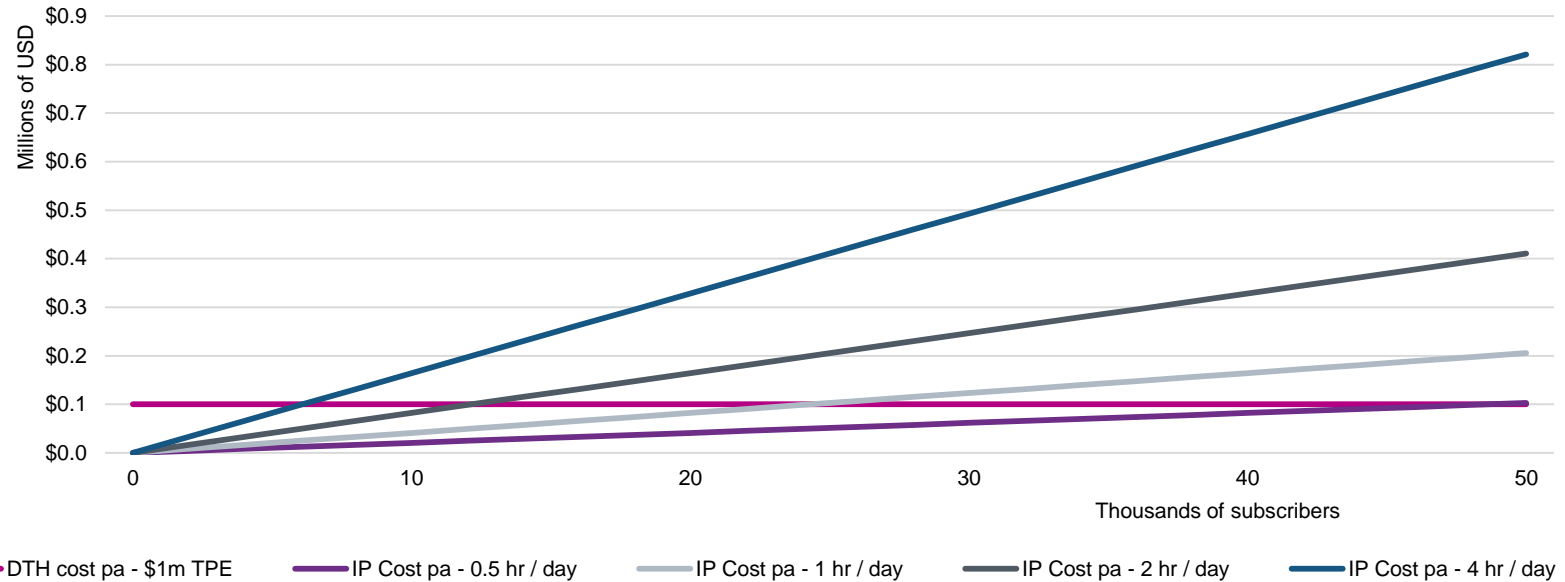
Fixed Broadband Penetration in Asia

Terrestrial Infrastructure (cable, fiber, xDSL)



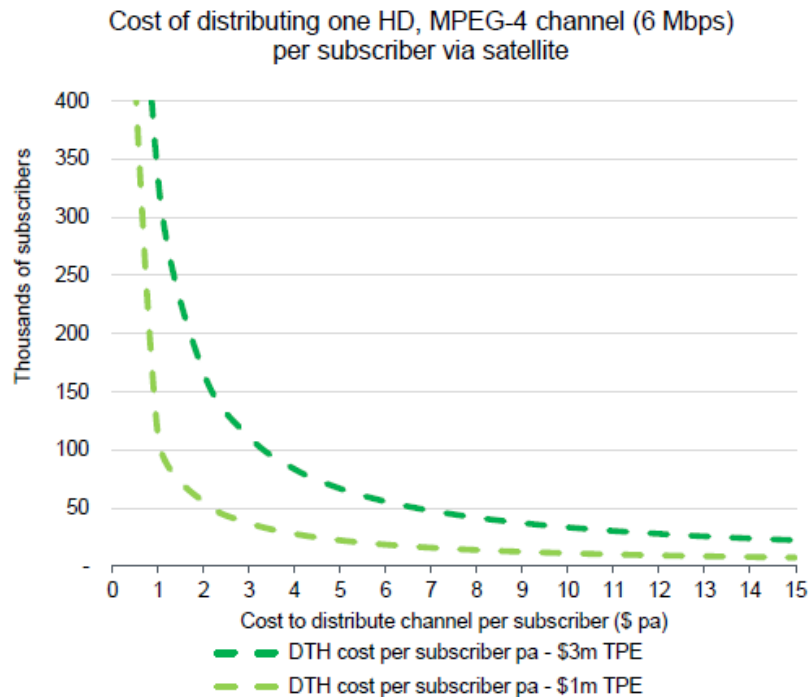
Cost of Delivering a HD channel

Comparative cost of delivering a HD channel through satellite or IP (MPEG 4, 5 Mbps) assuming CDN costs of \$0.005 / GB



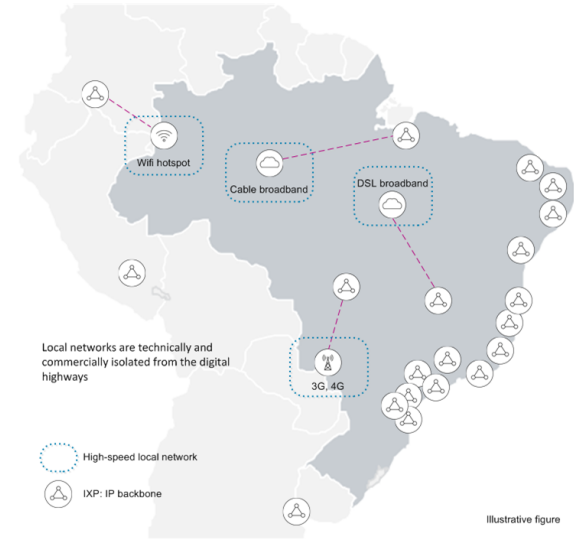
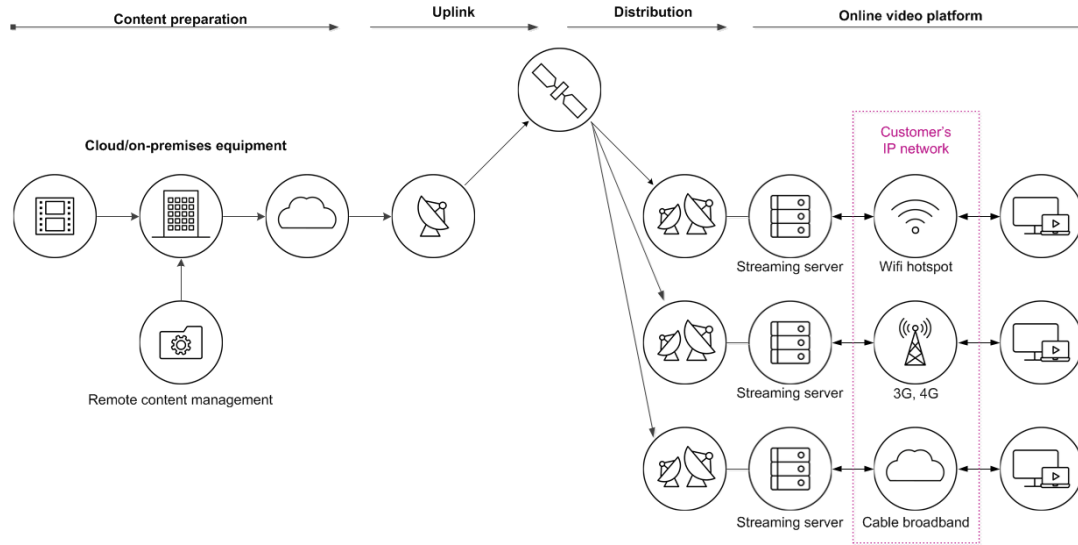
Cost structure comparison

Satellite distribution costs per subscriber decrease as the viewer's base expands



- ▲ Satellite distribution features high fixed costs that decrease asymptotically per subscriber as the subscriber number grows:
 - ▲ The same signal is distributed across a beam's footprint
 - ▲ As the number of subscribers watching a given DTH channel grows, the cost to distribute the channel per subscriber approaches \$0

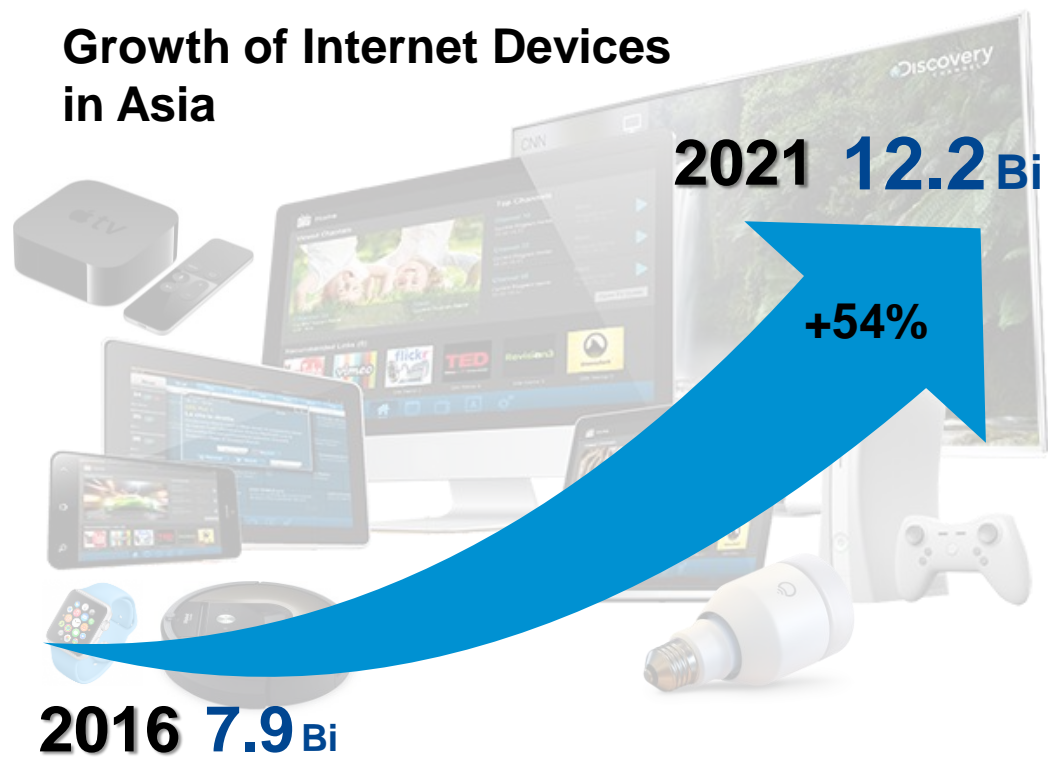
CDN in the Sky – Location Shift and Device Shift



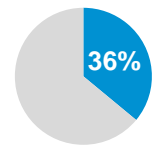
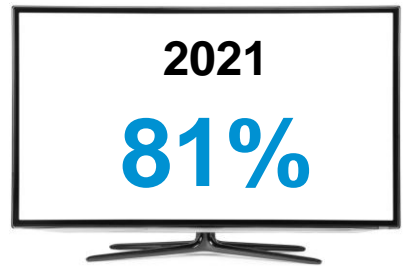
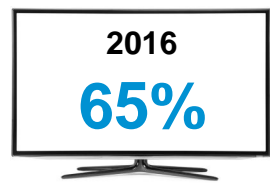
Satellite can distribute content in territories with limited connectivity to the backbones, working as a **CDN in the sky**, providing edge caching to any local network and helping to reduce network traffic.

Video Traffic Demand in Asia

Growth of Internet Devices in Asia

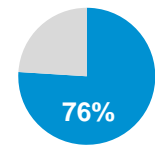


Share of video on internet traffic:



HD TV

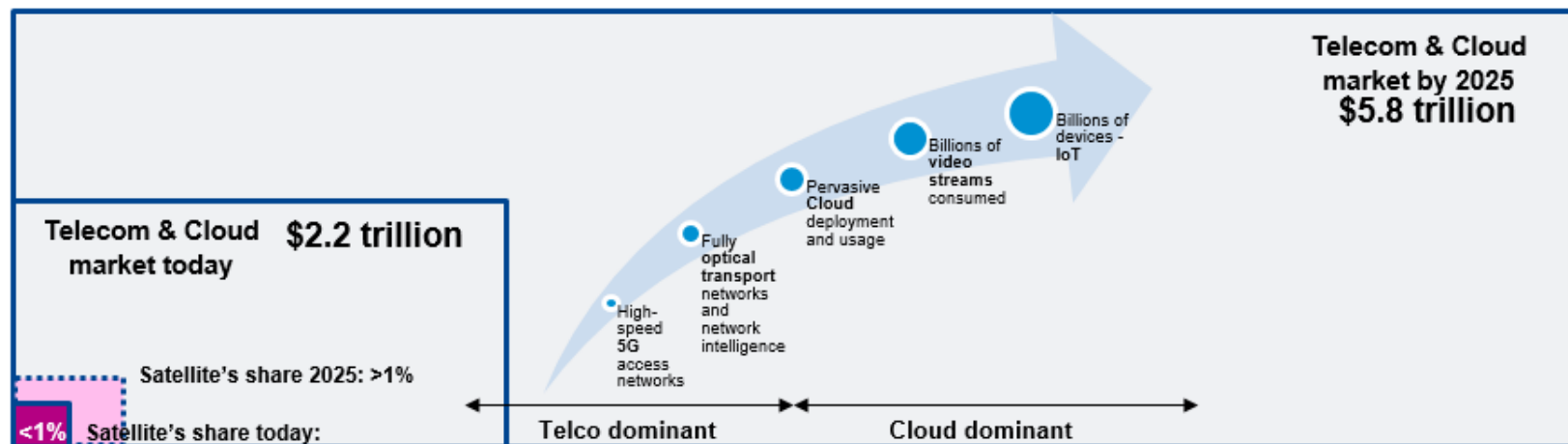
ULTRA HD



Total Internet Traffic

from **25.3** to **90**
exabytes month

Telecom & Cloud Market



▲ Cloud traffic will grow 3.7-fold from 2015 to 2020

▲ Video accounts for 92% of traffic by 2020 up from 82% in 2015 (Source: Cisco)

The global telecom market is being transformed by ubiquitous networks, advanced networking technologies

Raju Pulugurtha

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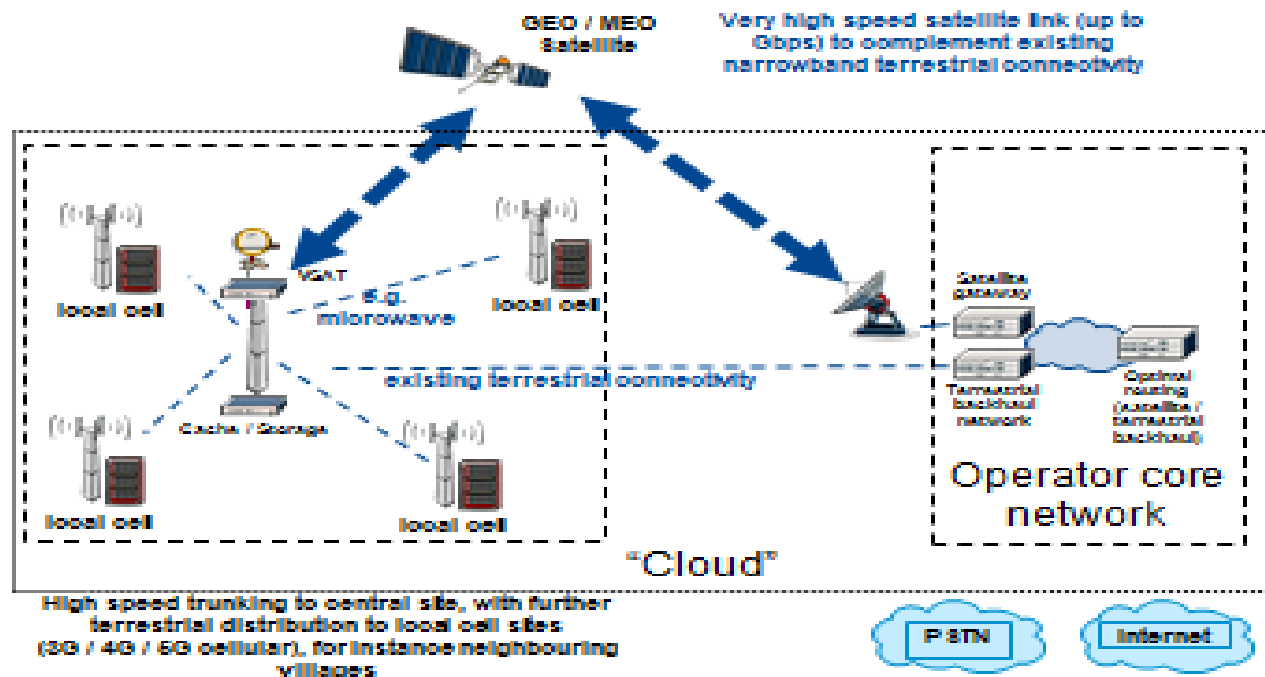


Connect with us



Integration of satellite networks within 5G

Trunking and Head-end Feed



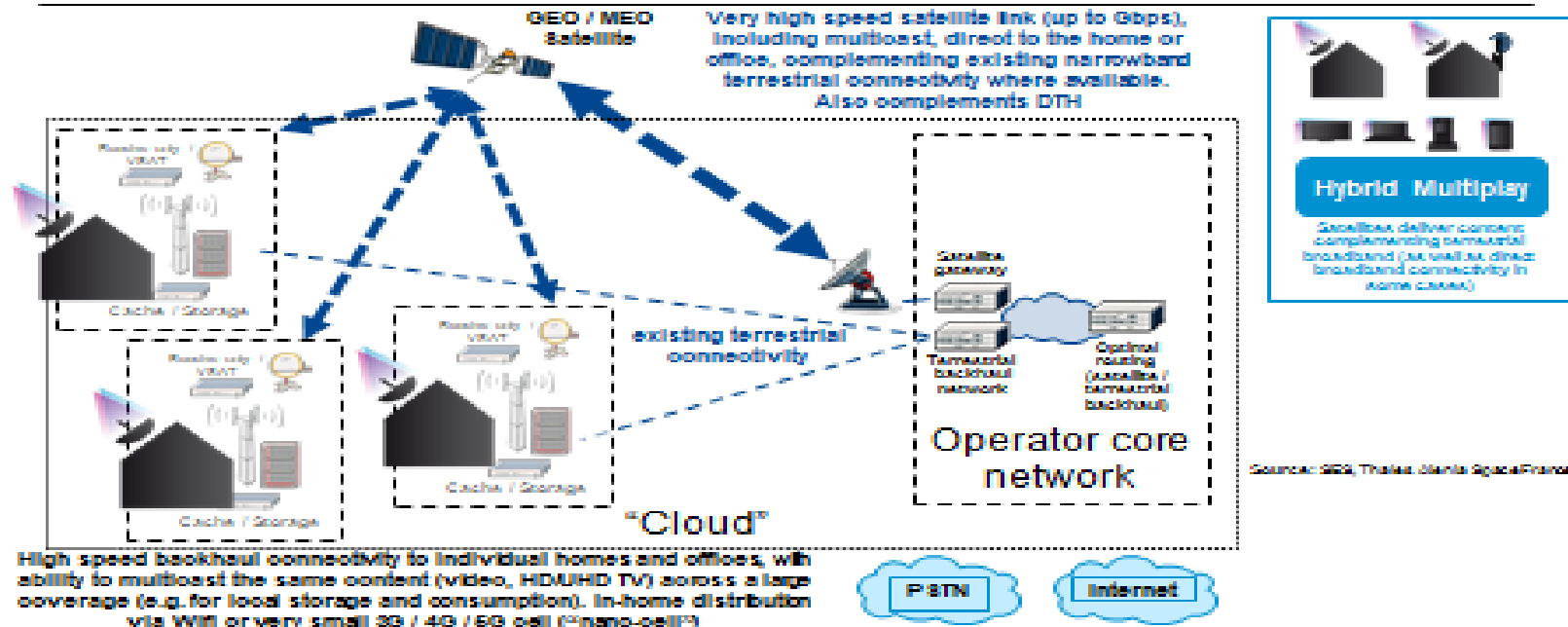
Trunking and Head-End Feed

Satellite provides a very high speed direct connectivity option to remote / hard-to-reach locations.

Source: SES, Thales, Alcatel SpaceFrance

Satellite allows to rapidly and cost-effectively increase capacity in underserved regions

Integration of satellite networks within 5G Hybrid Multiplay



Source: SES, Thales, Orange SpaceFrance

Satellite coverage allows homogeneous service offering – anywhere.
Multicast and caching/storage enable bandwidth savings and improved quality of service