MARKET STUDY REPORT ON IPTV/ VOD/ OTT INDUSTRY IN APAC

September 2017

Contents

Executive Summary

IPTV stands for Internet Protocol television and any user with an IP device such as a tablet, laptop and smart phone can avail IPTV service anytime and anywhere as long as the user has access to high speed broadband internet. With increasing demand for high definition video entertainments and Video on Demand (VoD) by customers, the content network providers have witnessed necessity of advanced network development. The IPTV has thus been intensely developed by the multi-media, telecommunication, and network research players.

With the availability of broadband infrastructure and new video compression technology, IPTV provides a technological opportunity to broadcast live TV signals to any smart device and a television set through private broadband networks. Additionally, it provides a platform for telecommunication companies (telcos) looking for potential opportunity to foster its revenue beyond voice and data services.

Asia Pacific is witnessing highest growth rate of internet penetration worldwide. As IPTV services are distributed on high speed internet networks, the growth of IPTV market is directly proportional to growth in broadband penetration. Government regulations promoting digitalization in Asia Pacific countries, such as India, have further augmented the growth of broadband penetration, subsequently contributing to proliferation of IPTV services.

Increasing broadband penetration has helped improve accessibility of IPTV services in these regions, thereby adding to the addressable consumer base. Inclusion of additional services by IPTV providers such as interactive services along with pure play IPTV service, multi-screen services, have added to the revenue sources, and fortified market growth prospects in the long run.

The IPTV market is segmented on the basis of different applications such as advertising and marketing, media and entertainment, gaming, e-commerce, healthcare and medical, telecommunication & IT and others. IPTV market can also be segmented as VOD server software STBs, MW and Content protection.

Growth of the IPTV market is also driven by factors such as the rising demand for video on demand, high-definition channels and hybrid services along with IPTV services. Instead of several driving factors, the IPTV market faces several challenges especially in the developing regions such as lack of infrastructure to offer a service free of delays and jitters, and maintaining the quality of IPTV services with the offered prices.

Key Vendors are:

1. Ateme
2. Harmonic
3. Cisco
4. Minerva
5. Verimatrix
6. SAGEMCOM

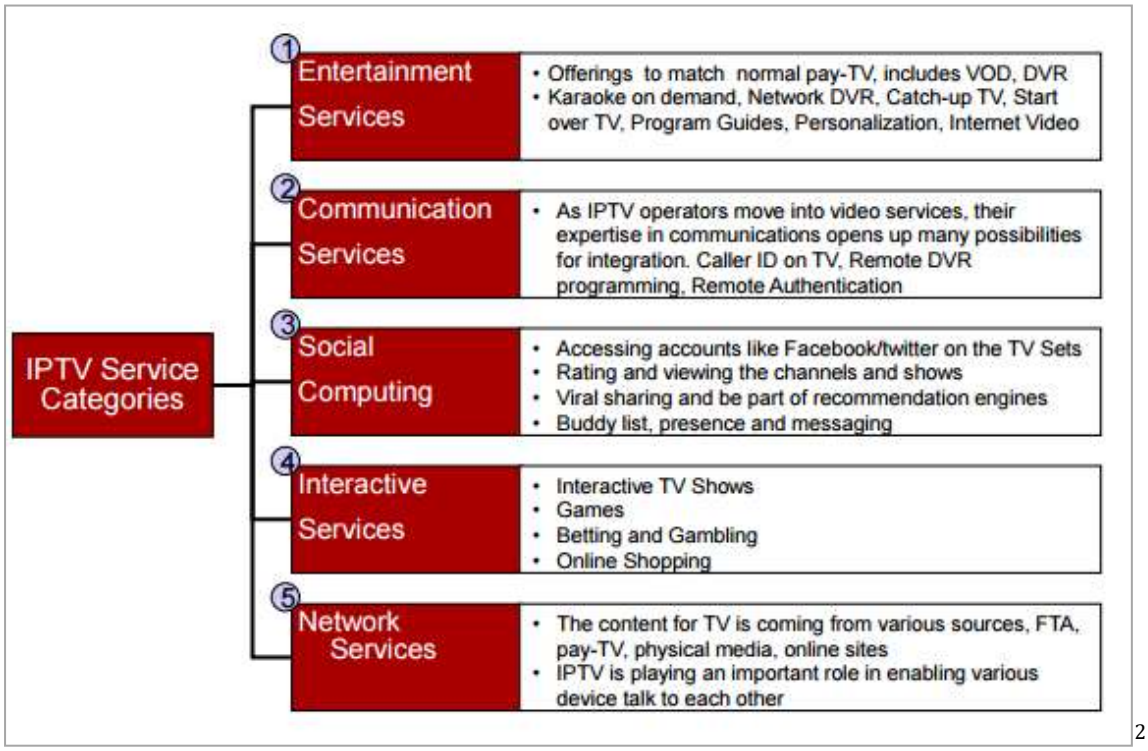
Asian region has two market segments with different amount of penetration of IPTV and VOD viz, emerging and advanced region which has different set of customer and different set of players with totally different mind-set. Because of different mind-sets it becomes very important decision for anyone who wants to enter this region.

Introduction [1]

Description – What is IPTV, VOD and OTT?

IPTV

IPTV (Internet Protocol television) is a service that provides television programming and other video content using the transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. An IPTV service, typically distributed by a service provider, delivers live TV programs or on-demand video (VoD) content. An IPTV system may be used to provide video content over a private network in an enterprise.



[2]

Types of IPTV[3]

IPTV comes in three different categories:

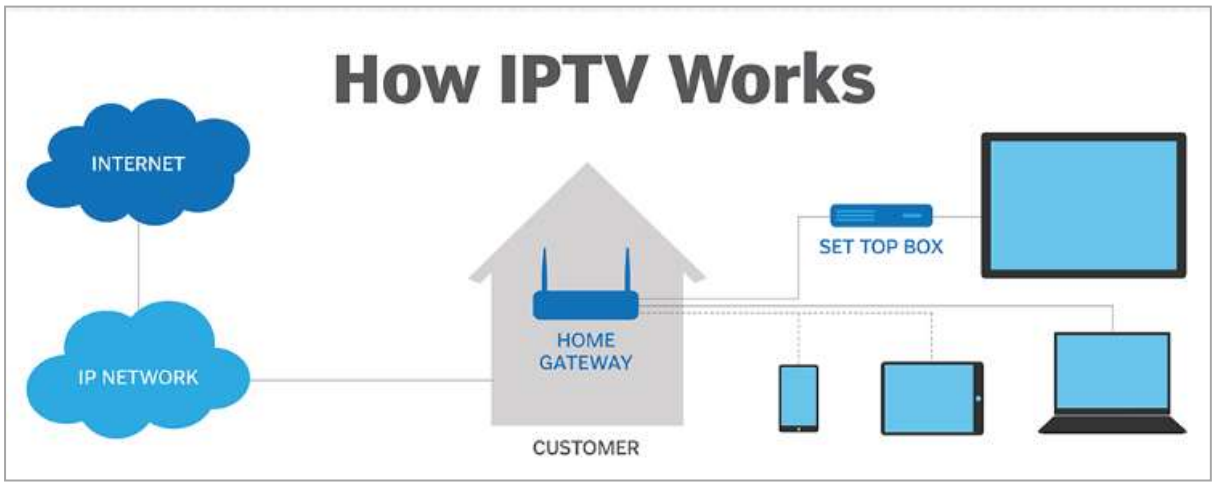
- **VOD:** The first kind - **video on demand (VOD)** with a service such as Netflix (an online movie website), one can select a TV program or movie he wants to watch from a wide range, pay his money, and watch it there and then.

[1] http://searchtelecom.techtarget.com/definition/IPTV
[2]https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwifqODChYjTAhWIN48KHVfuCVkQFggoMAI&url=http%3A%2F%2Fredseerconsulting.com%2Fsystem%2Ffiles%2FGlobal%2520Internet%2520Television%2520Market.pdf&usg=AFQjCNGkgy4-zLekcY11xpXkIykmf_PRKw&sig2=vyfRyEz4fqhNXr2F4up2qA
[3] http://www.explainthatstuff.com/how-iptv-works.html

- **Time-shifted IPTV:** When program is made online using a web-based streaming video player, this kind of service is sometimes called **time-shifted IPTV**, because the viewer is watching ordinary, scheduled broadcasts at a time that's convenient for him.
- **Live IPTV**: The third kind of IPTV involves broadcasting live TV programs across the Internet as they're being watched—so it's **live IPTV**.

How does IPTV work?[4]

An IPTV service, by contrast, sends only one program at a time. Content remains on the service provider's network, and only the program the customer selects is sent to the residence. When a viewer changes the channel, a new stream is transmitted from the provider's server directly to the viewer. Like cable TV, IPTV requires a set-top box or other customer-premises device.



IPTV primarily uses IP Multicasting with Internet Group Management Protocol (IGMP) for live television broadcasts and Real-Time Streaming Protocol (RTSP) for on-demand programs. Other common protocols include Real-Time Messaging Protocol (RTMP) and Hypertext Transfer Protocol (HTTP).

VOD

Video on Demand (VOD) is a technology that allows TV programmes, news, movies and sports events to be delivered directly to a set-top box, PC, smart IP TV, mobile phone via satellite TV, internet network or cable network on demand. VOD service providers offer a platform to the digital video subscribers for gaining access to a vast library of multimedia content that they can watch as per their convenience. VOD subscribers can pause, rewind, stop and start viewing content as per their choice, irrespective of the location.[5]

[4] http://searchtelecom.techtarget.com/definition/IPTV
[5] http://www.digitaljournal.com/pr/3130474

How does VOD works?

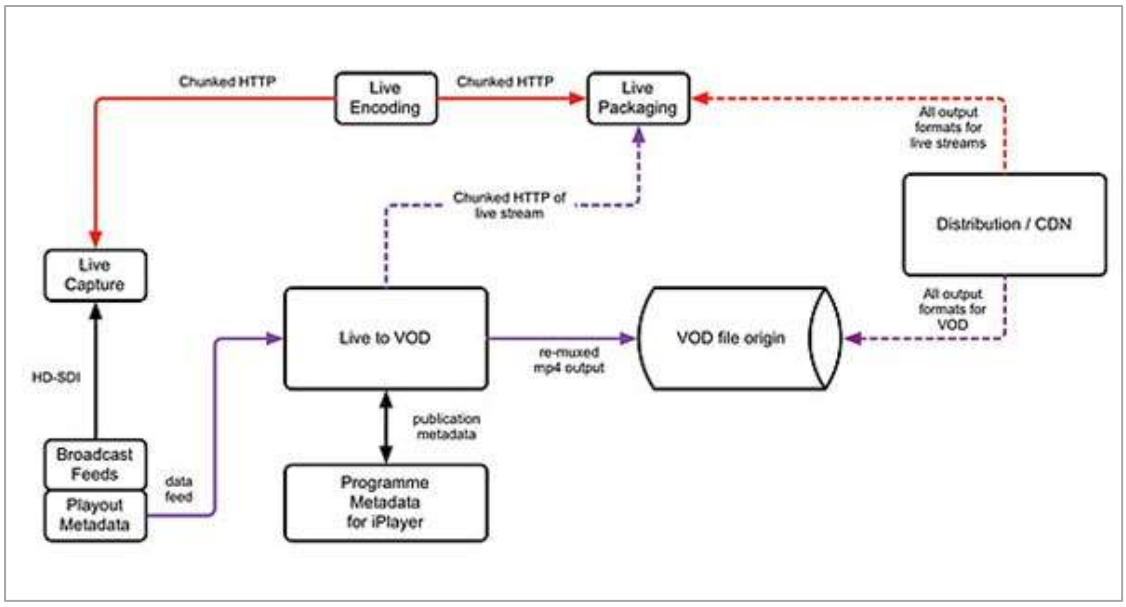
Video On Demand (VOD) is a feature of digital cable that allows us to either rent movies and programs or select from a wide selection of FREE movies. We can pause, fast-forward or rewind these programs with our remote just like we would with a DVD player or VCR and the best part is we can watch programs at any time.[6]

Online Video, also known as OTT video, is defined as a legal video service delivered over an internet or broadband connection that is not restricted to a single pay-TV or telecom operator network. [7]

AVOD: Advertising Video On Demand (AVOD) services are supported by advertising, within or around online video streams, or on a website or app. [8]

SVOD: Subscription Video On Demand (SVOD) services are supported by consumer subscription payments, either as a standalone offering or as part of a bundle with an existing pay-TV and/or broadband service. [9]

Transactional Video On Demand (TVOD) services are supported by consumer rental fees for video content. Consumer access tends to be limited to a certain number of views or for a certain number of hours after the fee is paid.[10]



[11]

OTT

OTT stands for "over-the-top," the term used for the delivery of film and TV content via the internet, without requiring users to subscribe to a traditional cable or satellite pay-TV service.[12] OTT (over-the-top) video services use the publicly accessible Internet to

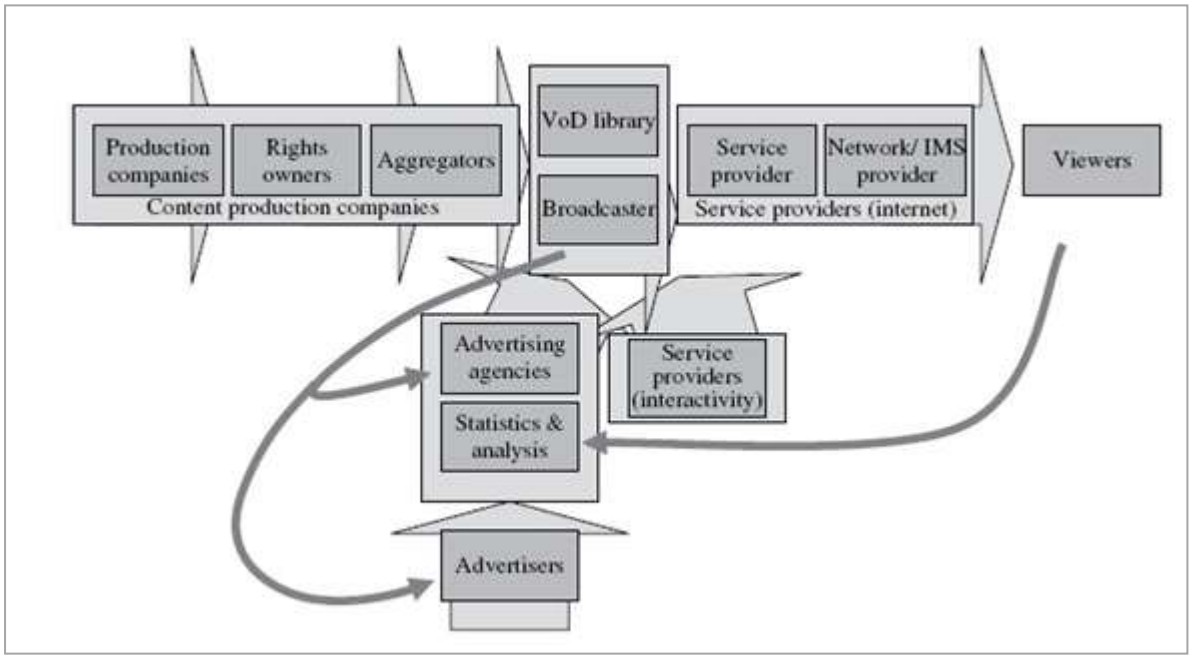
[6] http://www.volcanocommunications.com/468-what-is-vod
[7] file:///C:/Users/Omee%20Kumari/Desktop/OTT2016_KeyContent.pdf
[8] file:///C:/Users/Omee%20Kumari/Desktop/OTT2016_KeyContent.pdf
[9] file:///C:/Users/Omee%20Kumari/Desktop/OTT2016_KeyContent.pdf
[10] file:///C:/Users/Omee%20Kumari/Desktop/OTT2016_KeyContent.pdf
[11] https://library.vodkr.com/features/how-the-bbc-handles-the-live-to-vod-process/
[12] https://digiday.com/media/what-is-over-the-top-ott/

deliver video streams. Such content is not just available via set-top-boxes, but also via any devices that can access the Internet – such as phones, tablets and smart TVs with a broadband connection. Popular OTT services include Netflix and Hulu. Examples of OTT services launched by service providers are Dish Anywhere by Dish Network, and Now TV by BskyB.[13] Main difference is that IPTV delivers video content in the managed network, fully controlled by the operator, and while OTT as the name applies (over the top) is designed for video delivery over public Internet. In IPTV, multicast is used as a transport of Linear TV content, saving bandwidth in the operator network. OTT is always unicast traffic, for Linear TV and on demand content, using adaptive streaming technologies, such as HLS from Apple. Adaptive streaming allows client devices to adapt streaming profile/bandwidth to current network conditions, providing good user experience even in non-optimal network conditions.[14]

Value Chain[15]

A value chain reflects a chain of business models. The viewer pays a license fee to the broadcaster (directly in some countries, indirectly in others, not at all in some). However, to get the content from the broadcaster, there has to be an Internet provider, who provides the connectivity; and a service provider, who provides the servers from which the content is delivered.

Advertisers pay for access to the audience that is watching the show.

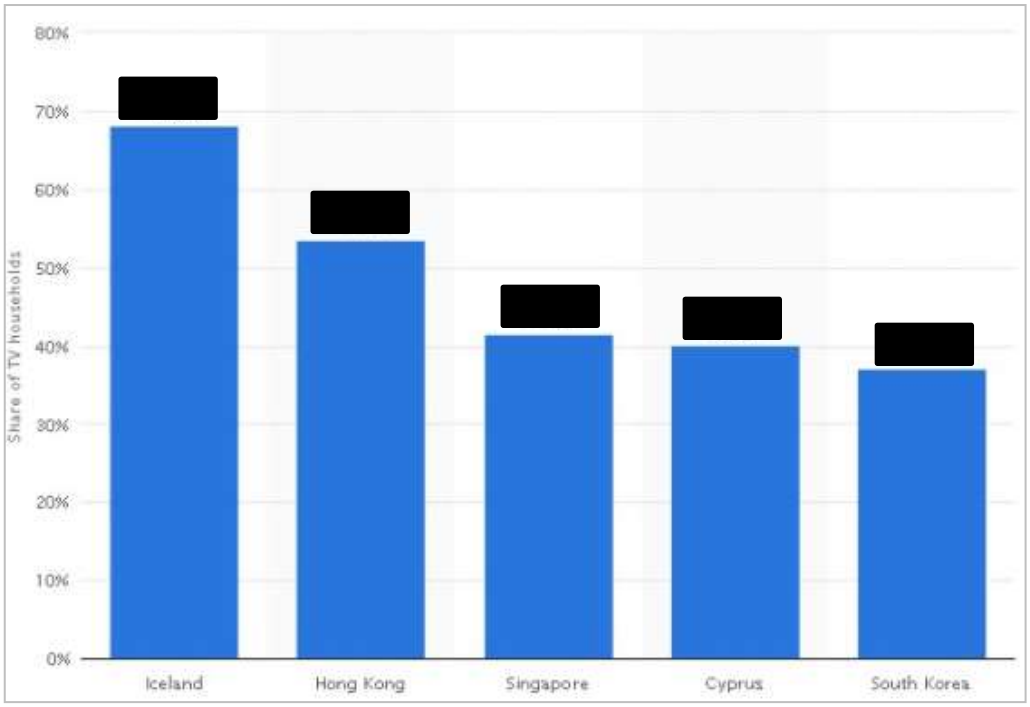


[13] https://www.quora.com/Internet-Television-Whats-the-difference-between-IPTV-and-OTT
[14] http://www.uniqcast.com/blog/blog-article.php?id=21
[15] http://trends-in-telecoms.blogspot.in/2011/06/iptv-value-chain.html

Market Overview: Global

IPTV households have been increasing worldwide, significantly leading to increase in number of TV households. The IPTV reception is projected to increase from **XX Mn in 2012 to XX Mn in 2016**. Iceland has the highest percentage of IPTV households with an expected **XX% by 2020** followed by **Hong Kong** and **Singapore** with **XX%** and **XX%** respectively.

Top Countries with IPTV Penetration Worldwide, By 2020[16]

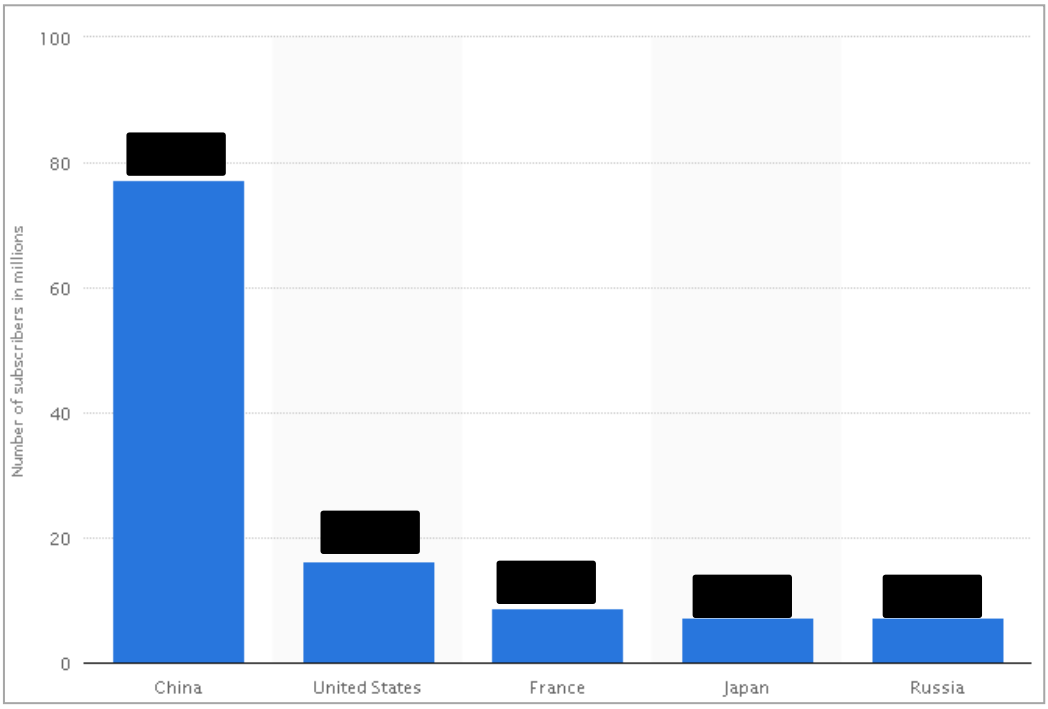


By 2020, **Iceland** followed by **Hong Kong** will have highest penetration of IPTV.

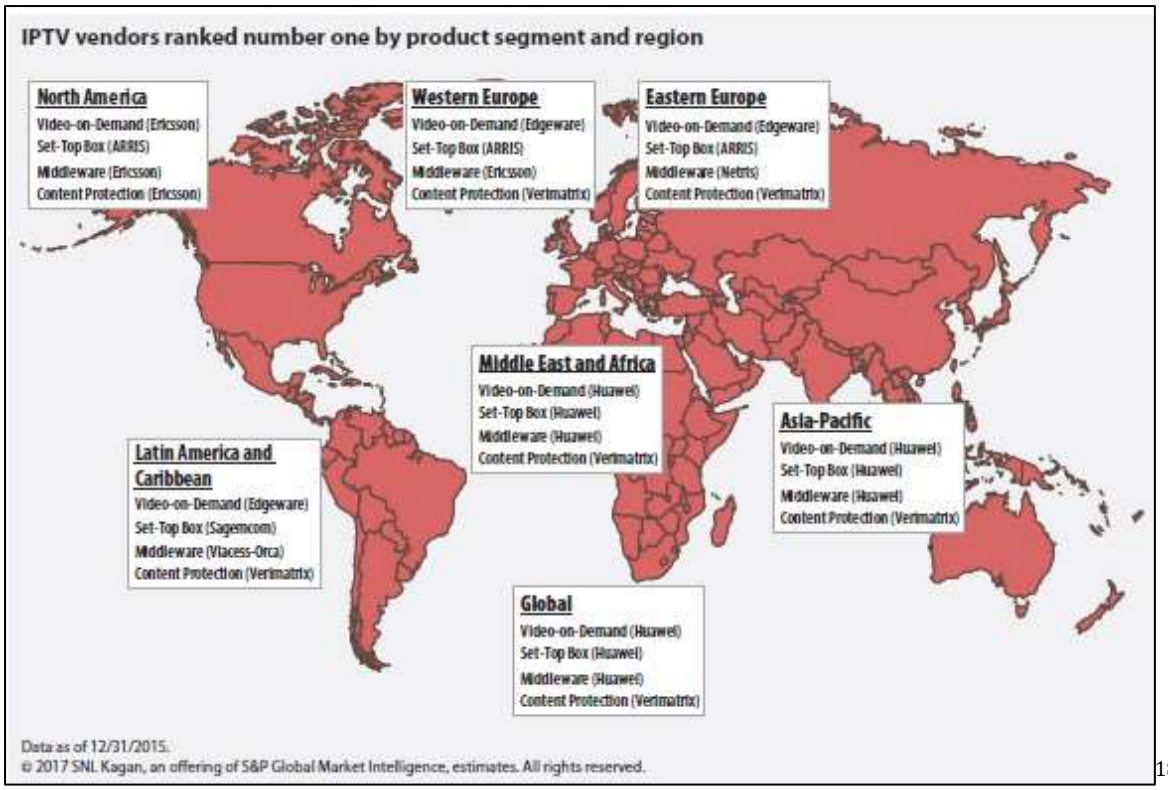
By 2020, **United States** is expected to rank second with **XX million subscriptions** and **China** with **highest** number of subscriber.

[16] https://www.statista.com/statistics/322763/iptv-penetration/

IPTV Subscribers Worldwide, By 2020[17]



Approximately, there are 32 major IPTV vendors that supply over one million active IPTV subscribers and installed STBs.



[18]

In Video-on-demand server software **top four VOD companies** reported over **XX million subscribers each. Huawei leads** the segment **globally**, increasing its lead over the rest

[17] https://www.statista.com/statistics/270597/countries-with-largest-number-of-pay-iptv-subscribers-worldwide/
[18] http://marketintelligence.spglobal.com/dotAsset/4bfd0143-45e8-4ff0-97b9-0f4403eacc2b.jpg

with XX million VOD subscribers worldwide, accounting for 30% of the global IPTV subscribers. It is followed by **ZTE and Edgeware**, which displaced **Ericsson** as the number three VOD server software supplier.[19]

Set-Top-Boxes segment remains the most crowded with 15 major vendors tracked, though consolidation reduced the number of major suppliers in this category. In 2015, **Huawei** extended its lead over 2014 with an estimated XX million STBs worldwide, mostly on the strength of its Chinese customers, China Telecom and China Unicom. **ZTE**, which also supplies IP STBs to both major Chinese operators, and **ARRIS** follow with XX million and XX million subscribers, respectively. The gap between the top three STB vendors and their competitors continues to widen, with the fourth-largest, **Sagemcom**, reaching XX million STBs. [20]

The **Middleware (MW)** segment remains very competitive, with top vendors vying for contracts with existing and new IPTV providers, resulting in frequent changes in vendor rankings. At year-end 2014, Huawei became the new global MW leader, displacing ZTE, accounting for 21.6% of the global IPTV market. As of year-end 2015, Huawei has further increased its lead, accounting for nearly 30% of global IPTV MW subs. **ZTE** and **Ericsson** (with Mediaroom assets) remain second and third, with 23.4% and 13.9% global market share, respectively. Overall, we rank 12 major MW vendors, making this the most crowded segment after STBs. The top five vendors account for XX of global IPTV MW subscribers, leaving little room for much competition from smaller vendors.[21]

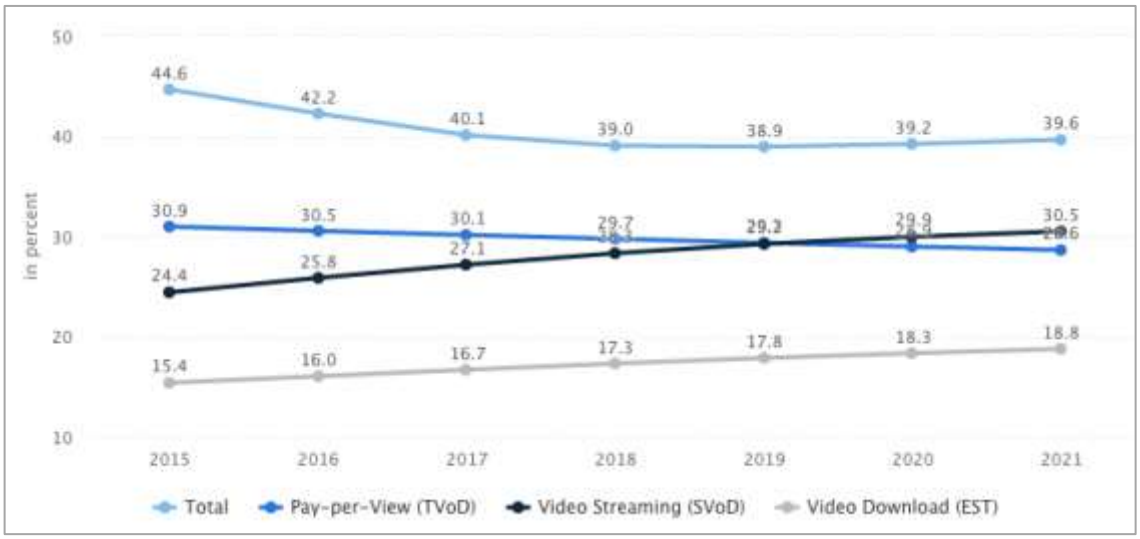
In **Content Protection**, **matrix** continues as the global leader in the CP segment with a XX share of global IPTV subscribers. Ericsson remains number two globally at XX share, because it now includes **Mediaroom** customers. **Viaccess-Orca** is number three with XX of the global IPTV CP market by subscribers. **Alticast** overtook **CoreTrust** in 2015 to become number four with both vendors partnering with major South Korean IPTV providers. Overall, the top five vendors account for just 50% of the entire global IPTV market. Verimatrix has a strong lead in content protection, primarily because it works with many different IPTV systems and has strong industry partnerships.[22]

User penetration in the VOD segment is XX, down from XX in 2015. This rate, too, is predicted to drop with VOD user penetration leveling out just below XX between 2018 and 2021. The majority of **2016 users** are **under the age of 34**. There are XX Mn users aged 16 to 24 and XX Mn users in the 25 to 34 age group. Video Streaming and Downloading Video will be seen as growing segment with considerable amount of increase in number of users. [23]

---

[19] http://marketintelligence.spglobal.com/blog/iptv-market-leader-report-top-vendors-increasing-their-lead
[20] http://marketintelligence.spglobal.com/blog/iptv-market-leader-report-top-vendors-increasing-their-lead
[21] http://marketintelligence.spglobal.com/blog/iptv-market-leader-report-top-vendors-increasing-their-lead
[22] http://marketintelligence.spglobal.com/blog/iptv-market-leader-report-top-vendors-increasing-their-lead
[23] http://www.ironpaper.com/webintel/articles/video-demand-statistics-trends/

User Penetration in VOD segment, 2015-2021[24]



The OTT market is estimated to grow from **USD XX Billion in 2015 to USD XX Billion by 2020**, at an estimated **CAGR of XX%**. The availability of high speed internet has opened up new avenues for OTT applications. The rising demand for improved automation of business processes and their execution in compliance with business and government policies are the driving forces of the OTT market.[25]

OTT growth will be widespread, including:

- 58% increase in North America to $XX billion in 2021 from $XX billion in 2015
- 211% in Latin America to $XX billion from $XX billion
- 220% in APAC to $XX billion from $XX billion
- 129% in Western Europe to $XX billion from $XX billion
- 335% in Eastern Europe to $XX billion from $XX million
- 421% In MENA to $XX billion from $XX million
- 2,023% in Sub-Sahara Africa to $XX million from $XX million[26]

Market Overview: Asian Countries

Asia Pacific region, which accounts for half of global TV households, yet has less than 20 percent of pay-TV revenues. The region's OTT video industry is developing rapidly but from a small base, with just **100 million people subscribing to online video services in 2015.** Standalone OTT services are less widely available, with 30 per cent of pay-TV service providers in advanced Asia having launched these services compared to 22 per

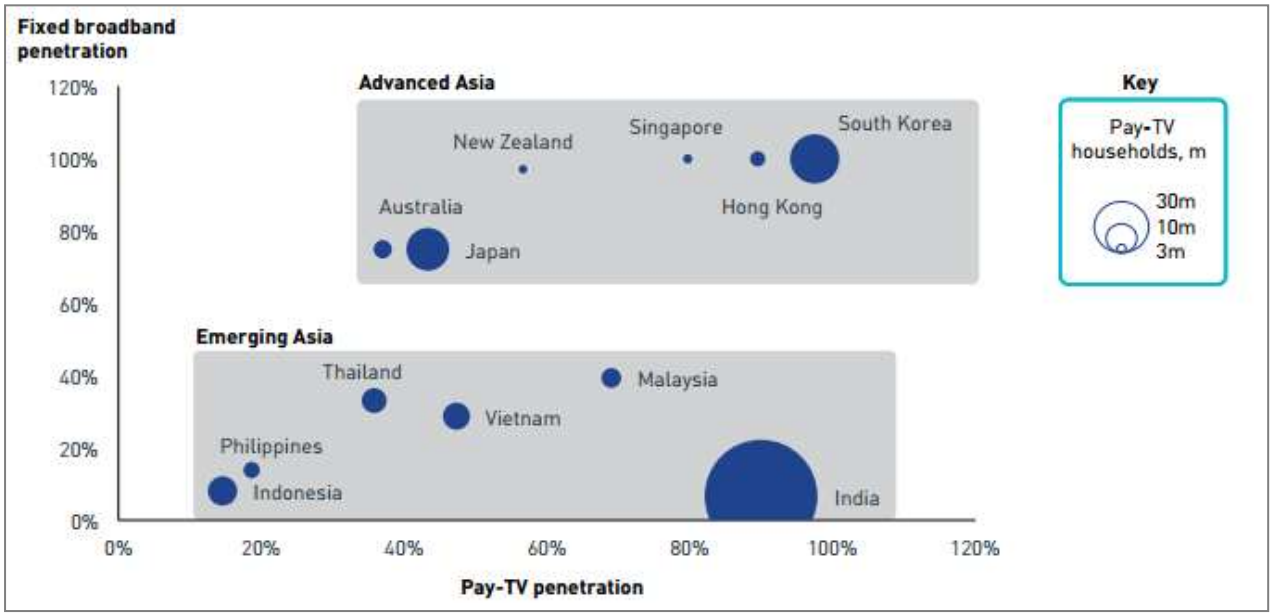
[24] http://www.ironpaper.com/webintel/articles/video-demand-statistics-trends/
[25] http://www.marketsandmarkets.com/PressReleases/over-the-top-ott.asp
[26] http://www.ooyala.com/videomind/blog/global-ott-video-revenues-more-double-648b-2021

cent in emerging Asia.[27] **By 2021, the Chinese market is expected to be worth $XX bn, and OTT will represent 80% of that.**[28]

Fuelled by falling IPTV subscription prices and expanding broadband penetration, Western Europe dominated the overall market for IPTV in terms of revenue generation in 2013, enjoying a 38% share of the total revenue that year. **Asia Pacific is estimated to be the fastest growing regional segment of global IPTV market in following years, with South Korea, India, Indonesia and China being the largest contributors**. The region of **Asia Pacific** excluding Japan is projected to register a **CAGR of 21.1%** during the forecast period of **2014 to 2020**.[29]

In general, fixed broadband penetration is higher in Advanced Asia, whilst pay-TV penetration shows a wide range in both types of market. [30]

Pay-TV and fixed broadband penetration in APCA (%), 2015



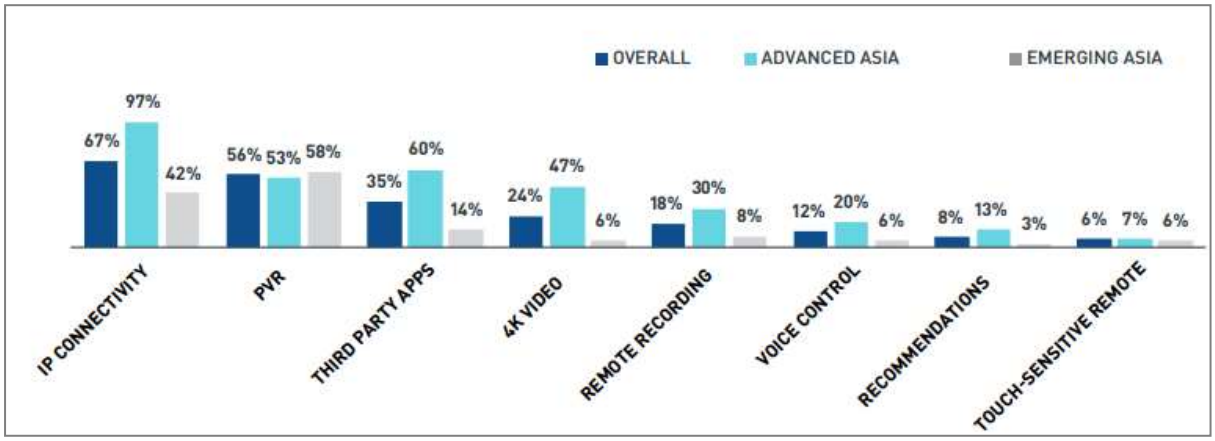
31

Japan had the **most VOD household subscriptions** of any country in the Asia-Pacific region in **2015, with XX million**. South Korea was just behind, at XX million.

India was a distant third, at XX million subscriptions. But the picture was expected to change considerably in a few years.[32]

[27] http://www.digitalmarket.asia/2016/11/the-case-for-vod-ott-in-regional-pay-tv-provider-portfolios/
[28] http://www.screendaily.com/features/afm-asia-pacific-vod-market-set-for-huge-growth/5111224.article
[29] http://www.businesswire.com/news/home/20150406005280/en/IPTV-Market-Stimulated-Increased-Broadband-Penetration-Transparency
[30] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[31] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[32] https://www.emarketer.com/Article/Subscription-Video-on-Demand-Revenues-Asia-Pacific-Set-Soar/1014024

Proportion of service providers offering features on their top of the range STB

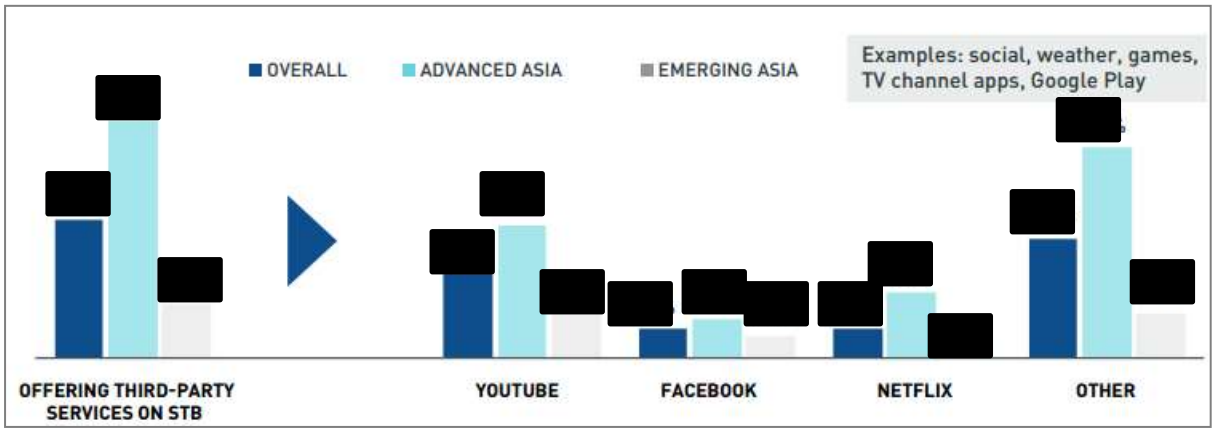


33

Within the core pay-TV offer, IP-connected set-top boxes and personal video recorders (PVR) are relatively widespread, with more than half of service providers offering these functionalities (67% and 56% respectively, while the availability of other more advanced features – such as voice control, content recommendations and touch-sensitive remotes - is limited. In Advanced Asia, almost all pay-TV service providers offer IP-connected set-top boxes, while some of the next-generation functionalities are also much more widely deployed – for example, third-party applications on set-top boxes are offered by 60% (vs. only 14% in Emerging Asia) and 4K is offered by almost 50% of service providers (vs. only 6% in Emerging Asia).[34]

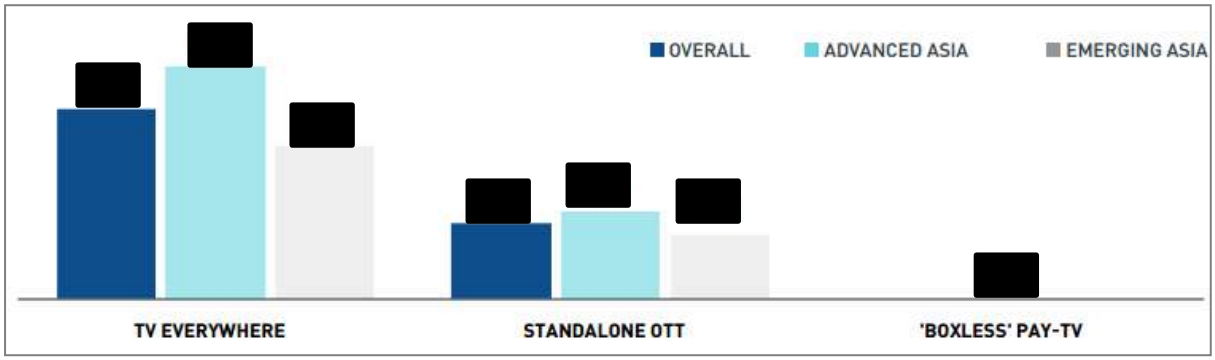
Third-party applications on set-top boxes are primarily offered by telcos (73% of telcos vs. 35% of all payTV service providers) – in most cases, content and service aggregators aiming to provide their customers with access to the most popular online services (e.g. YouTube, Netflix). It seems that pay-TV service providers are embracing the shift towards OTT video consumption – YouTube is by far the most commonly offered service (21% of service providers), but Netflix is also relatively popular (8%), particularly in Advanced Asia (17%).[35]

Proportion of service providers offering third-party services on their top of the range STB



[33] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[34] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[35] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific

Proportion of service providers offering OTT services



Within the paid OTT TV offer, TV Everywhere services are widespread, with 65% of service providers in Asia Pacific offering TV Everywhere services that allow customers to access their pay-TV on IP-connected devices. These services are more common in Advanced Asia, with 80% of service providers offering them to their customers. In Emerging Asia, availability of TV Everywhere (offered by half of pay-TV service providers) is primarily limited by lower availability and speed of broadband connections. A quarter of pay-TV service providers in Asia Pacific have launched a standalone OTT service, mainly as a defensive measure against the standalone OTT aggregators, with some service providers also trying to reach new customers outside their geographical footprint. However, no pay-TV service providers have yet launched 'boxless'12 pay-TV services, with set-top boxes still being key to any pay-TV subscription in the Asia Pacific region. [36]

As per primary research, most of the companies in emerging APAC region's project level are either "Mature" stage or "Burgeoning" stage. Most have those deployed:

- On Demand Video Services (Catch-up TV, VOD, Pause, Rewind Live TV, Start Over) and
- MultiScreen Services

Companies who have deployed Cloud DVR, nPVR video service are from Advanced Asia region.
For 90% of the companies "Quality of Service" is the top most priority followed by "Availability of Content" and "Scalability and reversibility of deployment" being the lowest. [37]

[36] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[37] Transcript

Market Segmentation

IPTV Market[38]

- The IPTV market is segmented on the basis of different applications such as advertising and marketing, media and entertainment, gaming, e-commerce, healthcare and medical, telecommunication & IT and others.
- Media & entertainment and gaming application segment together acquired major share of the total market due to decreasing prices of IPTV subscription globally.
- IPTV market segments can also be:
    - VOD server software,
    - STBs
    - MW and
    - Content protection (CP)[39]

VOD Market[40]

- Video on demand market is segmented into transactional video on demand (TVoD), subscription video on demand (SVoD), advertisement video on demand (AVoD), and hybrid (SVoD+ AVoD).
- Based on the content, video on demand market is segmented into the sports, entertainment, education & information, and TV commerce segments.
- As per our survey, most companies in APAC region offer Subcription-based VOD & Transaction-based VOD. There are very few players that offer VOD complete free of charge.

OTT Market[41]

- The market is segmented into premium and subscriptions, adware, and ecommerce.
- The premium and subscription business model segment emerged dominant with a share of nearly 48% in the overall market in 2016. The segment earns revenue from fixed fee that the customer pays to download and access their application.
- Revenue generated by the premium and subscription segment is expected to increase owing to the increase in revenue of OTT media content and cloud service applications.
- The adware business model that earns revenue from advertisements on OTT applications is also expected to contribute for the OTT market.
- The ecommerce business model earns revenue from sales of its own products and services.

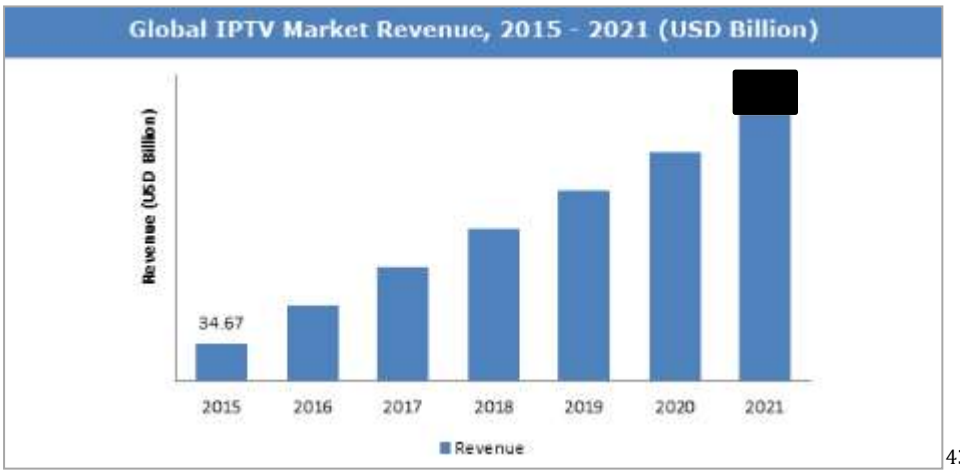
---

[38] https://globenewswire.com/news-release/2016/05/30/844294/0/en/Global-IPTV-Market-Poised-to-Surge-from-USD-34-67-Billion-in-2015-to-USD-93-59-Billion-by-2021-MarketResearchStore-Com.html
[39] http://marketintelligence.spglobal.com/blog/iptv-market-leader-report-top-vendors-increasing-their-lead
[40] http://www.crossroadstoday.com/story/34495212/video-on-demand-market-global-industry-analysis-size-share-growth-trends-and-forecast-2016-2024
[41] http://www.transparencymarketresearch.com/over-the-top-market.html

- E-services that comprise of e-learning, e-health, e-business and e-commerce was the largest application segment in terms of revenue in the OTT services market in 2016.

Market Size

- The revenue of the Global IPTV market to grow at a CAGR of 20.32% over the period 2014-2019. By subscriber base, the Global IPTV market is expected to grow at a **CAGR of 8.95%** over the forecast period.[42]

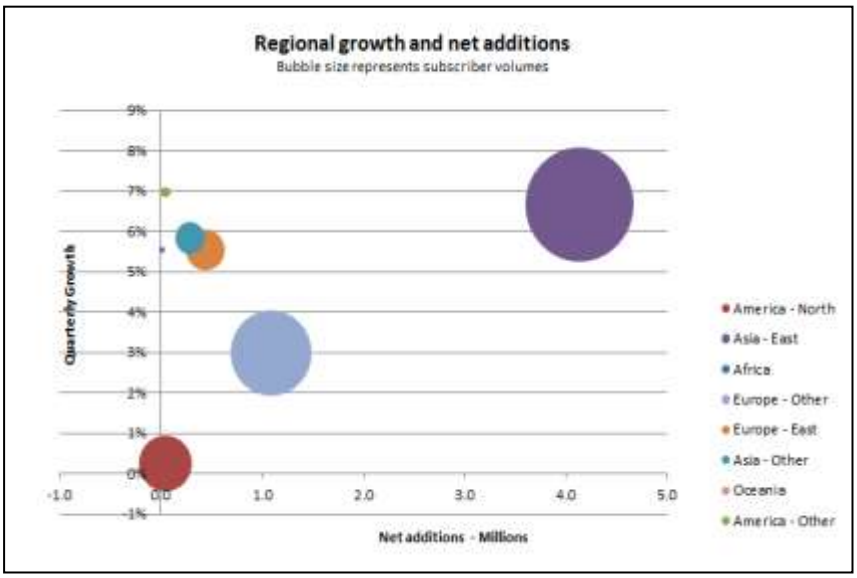


[43]

- **Global IPTV market** was valued at around **USD XX Bn** in **2015** and is expected to reach **USD XX Bn in 2021**, growing at a **CAGR** of around **XX%** between 2016 and 2021.[44]
- **Asia Pacific is analysed to be the fastest growing market for IPTV** during the forecast period. IPTV market for Asia Pacific excluding Japan is estimated to grow at a **CAGR of 21.1%** from 2014 to 2020. China, India, South Korea and Indonesia are expected to be the major contributors to the market in the near future.[45]
- Countries such as India, South Korea, Indonesia, and China are to be the key to the success of IPTV for the next few years. The growth is evident in China, who has the means to conquer the market because of the ever-growing middle-class income group and its expanding broadband infrastructure. In the next five years, it is expected that IPTV will reach its full potential for having numerous subscribers in this region.[46]

[42] https://www.slideshare.net/technavio/global-iptv-market-2015-2019
[43] http://www.marketresearchstore.com/news/global-iptv-market-245
[44] https://globenewswire.com/news-release/2016/05/30/844294/0/en/Global-IPTV-Market-Poised-to-Surge-from-USD-34-67-Billion-in-2015-to-USD-93-59-Billion-by-2021-MarketResearchStore-Com.html
[45] http://www.broadbandtvnews.com/2015/02/09/iptv-market-reach-79-38-billion-in-2020/
[46] https://www.matrixstream.com/iptv-will-boom-asia-pacific-5-years/

Regional Growth and Net Addition



- Quarterly growth rates have gone up in all regions except North America, where the change in technology focus of such large providers as AT&T had a significant impact. The revenue generated by the IPTV market is shared by the many players that compete for a higher portion of the market's revenue across the supply chain. These include network providers, software solution providers, IPTV operators, and middleware providers. With competition only intensifying, it is expected that this space will remain thus for the next few years.[47]
- The **global Video on Demand** service market was valued at **US$ XX Mn** in **2014** and is expected to expand at a **CAGR** of **XX** over the forecast period (2016-2026).[48]
- The Asia-Pacific region will become the second-largest market in the world for VOD services by 2020.[49]
- **Subscription video-on-demand (VOD) revenues in Asia-Pacific will $XX Bn by 2021**. [50]
- By 2020, Japan's VOD subscriptions would be more than double to XX Mn, by far the most households of any country in the region. But most notable is the coming rise of VOD subscriptions in China; while there were just 900,000 in 2015, there will be an estimated XX Mn by 2020, a more than 13-fold increase that will push China to second place.
- India has seen significant growth from its XX Mn in 2015 to XX Mn in 2020. South Korea, meanwhile, will see steady growth, reaching 10.2 Mn.

[47] http://www.broadbandtvnews.com/2016/05/09/worldwide-iptv-subs-reach-over-130-mi/
[48] http://www.digitaljournal.com/pr/3130474
[49] http://www.btreport.net/articles/2015/10/apac-to-become-the-no-2-vod-market-by-2020.html
[50] https://www.emarketer.com/Article/Subscription-Video-on-Demand-Revenues-Asia-Pacific-Set-Soar/1014024

Asia-Pacific Subscription for VOD

Subscription Video-on-Demand (SVOD) Households in Select Countries in Asia-Pacific, 2014, 2015 & 2020

millions

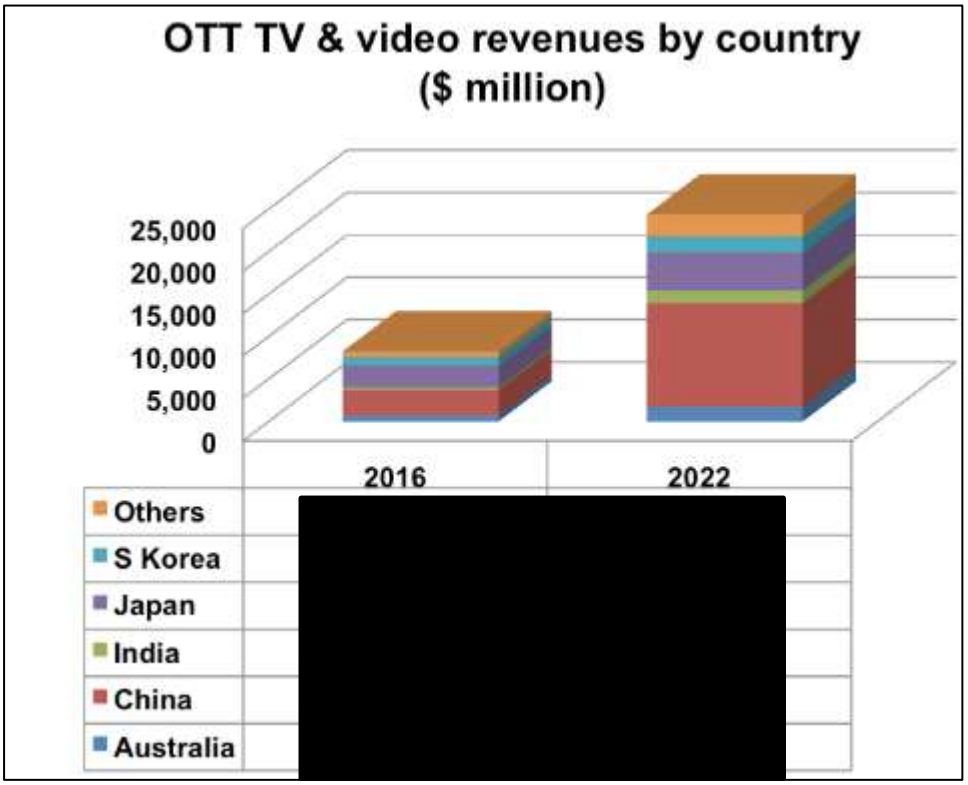
	2014	2015	2020
Japan	[redacted]		
South Korea			
India			
China			
Australia			
Indonesia			

[51]

- **Asia Pacific**, which has a **13%** share in the global VOD market, is expected to represent more than **22%** of the market by **2020**.
- The VOD market in **Asia Pacific (excluding Japan)** is expanding at a robust pace and **will reach $XX Bn by 2020**.[52]
- The **global OTT** services market was valued at **US$ XX Bn** in **2016** and is forecasted to expand at a **CAGR** of **16.4%** from 2017 to 2025, reaching a value of US$ XX Bn in 2025.
- **Asia Pacific** to showcase higher CAGR than other regional segments**- OTT services market in Asia Pacific to exhibit the highest CAGR of 16.1% between 2016 and 2023**.[53]
- In 2015, the Chinese OTT market generated $XX Bn revenue, 85% of it came from advertising while the remaining 15% is from subscriptions.[54]
- **APAC's premium OTT market** will undergo **rapid growth by 2019**: from around $85Mn in 2015 to $230Mn in Australia; from $XX Mn to $XX Mn in Indonesia; and from $XX Mn to $XX Mn in Thailand.[55]
- As per our survey, most of the companies in **emerging APAC region** offer **Subscription based VOD** service and few of them offer Transactional or Free with Subscription based VOD. [56]

[51] https://www.emarketer.com/Article/Subscription-Video-on-Demand-Revenues-Asia-Pacific-Set-Soar/1014024
[52] http://www.abu.org.my/Latest_News-@-Asia-Pacific_VOD_Market_to_Surpass_Western_Europe_by_2020.aspx
[53] http://www.transparencymarketresearch.com/over-the-top-market.html
[54] https://www.matrixstream.com/iptv-will-boom-asia-pacific-5-years/
[55] https://www.vindicia.com/company/press-releases/asia-pacific-premium-ott-market-will-experience-exponential-growth-despite-challenges
[56] Trabscript

China drives Asia's OTT growth[57]



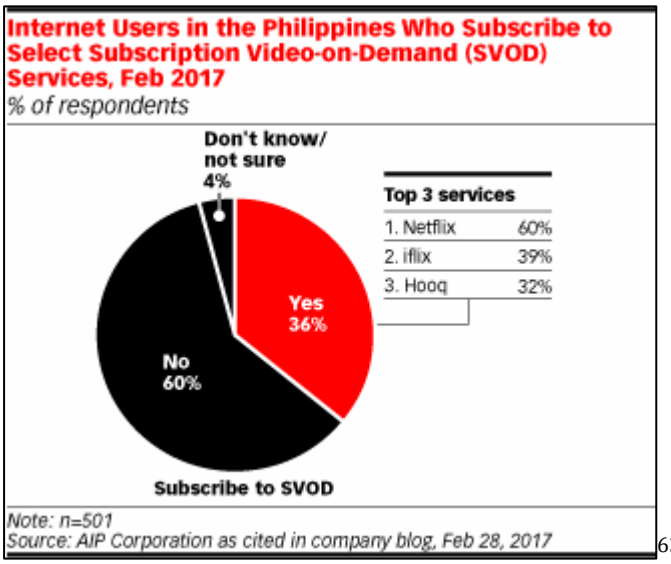
- **China** will command half of the **OTT** revenues for the 22 countries covered in the **Asia Pacific OTT TV & Video** Forecasts report by 2022; rising from just over a third of the 2016 total. China and Japan together will account for two-thirds of the region's total revenues by 2022. [58]
- **Asia Pacific SVOD** revenues will climb from $XX million in 2016 to $XX million in 2022. China will overtake Japan to become the SVOD revenue leader in 2017.[59]
- Southeast Asia is the next big destination for video streaming services. Hollywood studios are proposing major tie ups with streaming start-ups in South East Asia, which would certainly result in their audiences increasing radically. **HOOQ** was launched in January of 2015, and has been live in various markets since March 2015, such as the **Philippines**, **Thailand, Indonesia and India**. HOOQ is already the number 1 paid video OTT service in **Philippines** with over 100,000 paying subscribers. It has also been making inroads in all markets it has launched with its partnerships either with studios or with Telco's to bring the platform and huge library of regional + Hollywood content to its subscribers.[60]

[57] http://www.broadbandtvnews.com/2017/07/30/china-drives-asias-ott-growth/
[58] http://www.broadbandtvnews.com/2017/07/30/china-drives-asias-ott-growth/
[59] http://www.broadbandtvnews.com/2017/07/30/china-drives-asias-ott-growth/
[60] https://www.muvi.com/deeper-look-future-ott-video-streaming-market-asia.html

OTT Video Streaming Market in Asia

- **iflix** begun with a seeding of $XX m by PLDT, the **Philippines**' largest telco, Evolution Media Capital, an investment bank set up by Creative Artists Agency and Australian startup veteran Patrick Grove. It is available in Malaysia, the Philippines and Thailand with Indonesia, Sri Lanka and Vietnam queued up for launches. [61]
- Netflix has made its global aspirations clear. The subscription video-on-demand (SVOD) service rolled its service out to more than 130 countries in January 2016. The company has quickly gained a prominent position in the Philippines, but its success is less assured in Singapore and India, according to research from AIP Corporation.[62]

[61] https://www.muvi.com/southeast-asia-is-the-next-big-destination-for-video-streaming-services.html
[62] https://www.emarketer.com/Article/Netflix-Now-Leads-Competitors-Philippines/1015371



[63]

- **Brightcove Inc**. the leading provider of cloud services for video has launched its **Thailand's BBTV Bugaboo TV channel**, an AVOD OTT service, new service on Brightcove Video Cloud with Dynamic Delivery. This new service from the top broadcaster in Thailand enables viewers to securely stream the latest movie content, news content, live sports and a 24/7 simulcast. BBTV hosts one of the top five streaming platforms in Thailand. For Bugaboo TV, BBTV was looking to migrate to a more robust and reliable platform that would scale with the growth of its AVOD OTT service. In February 2017, Brightcove began migrating over 35,000 content titles from BBTV's old platform, completing the task within weeks in time for a March 1, 2017 launch. Since the launch, BBTV has seen an increase in monthly views from 10 million to 40 million for just one of the local drama series, a four times increase in viewership compared to the previous platform.[64]

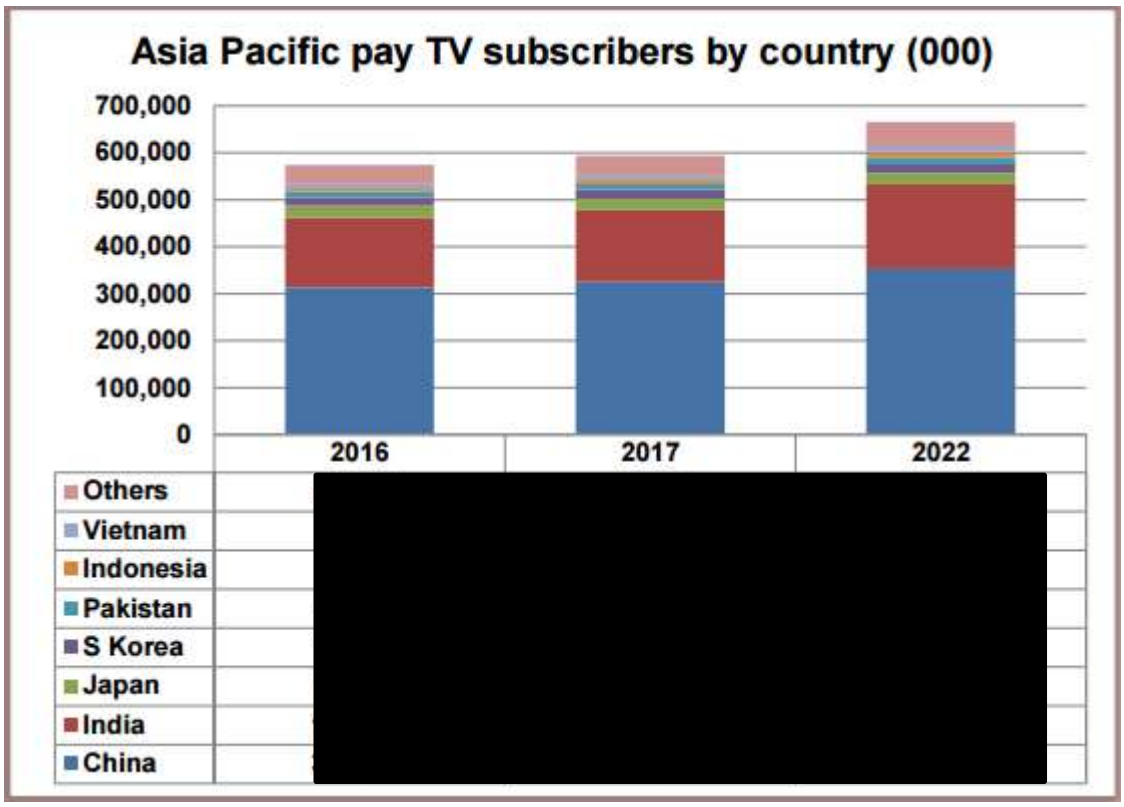
Market Trends and Future Outlook

Market Trends

China and India being top contributors among APAC countries

- China and India together will account for 80% of the region's XX million pay TV subscribers by 2022. China will add 40 million subs between 2016 and 2022, with India bringing in an extra 30 million. [65]
- Together China, India and Japan will account for more than two-thirds of the region's $40.13 billion pay TV revenues by 2022.
- Pay TV revenue will increase by $XX billion between 2016 and 2022. India will contribute $XX billion to the additional revenues, with China bringing in $XX billion more. Pay TV revenues will double in Bangladesh and Myanmar, but will fall in six other countries.

[63] https://www.emarketer.com/Article/Netflix-Now-Leads-Competitors-Philippines/1015371
[64] http://www.digitaltvnews.net/?p=29354
[65] https://www.digitaltvresearch.com/ugc/press/193.pdf



- IPTV operators China Telecom (plus 24.39 million) and BesTV (plus 12.19 million) will gain the most pay TV subscribers over the same period, followed by India's Dish TV (plus 5.20 million). China Telecom will gain more than $1 billion and BesTV will climb by $608 million.`
- Digital cable will supply 72 million of the 92 million pay TV subscriber additions between 2016 and 2022.[66]
- IPTV will contribute in an extra 57 million subs, with pay satellite TV up by 32 million.[67]

APAC countries getting technically advanced for Pay TV

- In Advanced Asia, 97% of **pay-TV service providers offer IP-connected set-top boxes compared to only 42% in Emerging Asia.**
- Next-generation set-top box functionalities are much more widely deployed in Advanced Asia – for example, third-party applications on set-top boxes are offered by 60% of pay-TV service providers compared to only 14% in Emerging Asia, while 4K is offered by almost 50% of service providers in Advanced Asia compared to only 6% in Emerging Asia[68]
- TV Everywhere services are wide spread across the region, with 80% of pay-TV service providers in Advanced Asia offering these services compared to 53% in Emerging Asia.[69]

[66] https://www.digitaltvresearch.com/ugc/press/193.pdf
[67] https://www.digitaltvresearch.com/ugc/press/193.pdf
[68] https://tva.onscreenasia.com/2016/10/pay-tv-innovation-landscape-asia-pacific/
[69] https://tva.onscreenasia.com/2016/10/pay-tv-innovation-landscape-asia-pacific/

- Standalone OTT services are less widely available, with 30% of pay-TV service providers in Advanced Asia having launched these services compared to 22% in Emerging Asia.[70]

Future Outlook

Varied opportunities in Advanced Asia and Emerging Asian Countries

- Over the next five years from 2016, pay-TV service providers will focus predominantly on strengthening and differentiating their core pay-TV and OTT propositions. In Advanced Asia, the focus will be on ensuring a seamless video experience across all consumer devices and making content discovery as easy as possible, with IPbased, cloud and data technologies playing an important part in enabling these next-generation features. In Emerging Asia, pay-TV service providers are expected to focus on delivering value-added services such as HD video quality and PVR functionality - and slowly transition towards hybrid set-top boxes
- Multiscreen TV Everywhere services are seen as an integral element of the next-generation TV experience, while standalone OTT services should help pay-TV service providers differentiate their offerings and attract new customers outside their existing geographical footprints.[71]

Innovation becoming important for Pay-TV players

- As growth becomes more challenging and competition intensifies, innovation is becoming even more important to the pay-TV industry, as providers look to drive future growth, remain competitive and satisfy the increasing expectations of customers and investors.
- Innovation may involve invention, but successful innovation requires other elements too, such as anticipating, testing and exploring demand, the development of viable commercial propositions, and good partnering skills
- Growing competition from existing and emerging players is perceived to be the main reason for service providers' increased focus on innovation in both Advanced and Emerging Asia[72]

[70] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[71] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[72] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific

73

- Pay-TV service providers in Asia Pacific are at varying stages in developing and diversifying their product portfolios, ranging from the most advanced portfolios, mainly offered by major pay-TV operators and telcos in the developed and more technologically advanced markets (i.e. South Korea, Singapore, Hong Kong) down to the most basic service offerings, usually offered by small-scale local pay-TV operators and, in some cases, major pay-TV operators in Emerging Asia (e.g. India).[74]

Increasing demand for customized services and VOD services as driving force

- The global IPTV Market is expected to witness hefty growth during the forecast period mainly driven by VoD services, interactive services, multi-view on multi-screens offered by Telcos along with pure-play IPTV services.[75]
- The consumption of on demand services through mobile platforms is increasing due to rising penetration of internet, and smart phones. The growing improvements in high-speed network for streaming videos have lead into increasing adoption of on demand services.[76]
- Video on demand service providers are offering unique features such as unlimited access to content and high quality videos to increase the subscriber base. Content producers such as studios, and record labels are partnering with

[73] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[74] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[75] http://www.broadbandtvnews.com/2015/02/09/iptv-market-reach-79-38-billion-in-2020/
[76] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific

video on demand services providers to release their contents through on demand services supplementing the overall growth of video on demand market.

- The adoption of regional content is growing due to a wide range of digital content offered by video on demand service providers in regional languages across the world.[77]

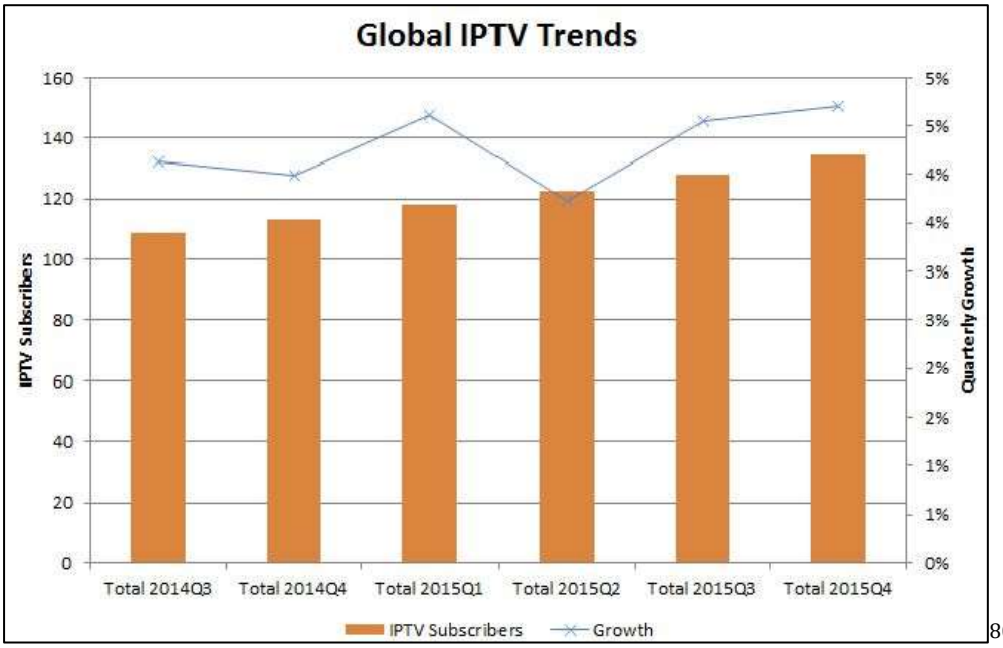
Growth Drivers

Increasing IPTV user-base worldwide

- Globally, in Q4 2015, the IPTV subscriber growth rate has recovered compared to Q3 2015 and was the highest in the last eight quarters to 31 December 2015. The total number of worldwide IPTV subscribers has now passed the 130 million mark. The net additions of six million are the highest in 24 months to end-2015. They were boosted to a large extent by the usual suspects such as China, which saw 3.7 million new IPTV subscribers sign up in Q4 2015. IPTV subscribers continue to grow faster than fixed broadband in percentage terms. Coming from a lower base as well as being a later entrant this is not unexpected.[78]
- Pay-TV revenues in the APAC region will climb to **$XX billion by 2020, an increase of some $XX million from 2014 as pay-TV household penetration increases to nearly 70%, driven in large part by the growth of IPTV**.
- Increasing pay-TV penetration in APAC will add some 142 million new subscribers, taking the region's pay-TV subscriptions to 642 million by 2020. Digital pay-TV subs will increase to 628 million by 2020 from 163 million in 2010, with digital pay-TV penetration climbing to 67% from 44% in 2014.
- As usual, China is forecast to supply the biggest raw number of pay-TV TV households, forecast to reach 323 million by 2020. India will provide 179 million.[79]

[77] http://www.crossroadstoday.com/story/34495212/video-on-demand-market-global-industry-analysis-size-share-growth-trends-and-forecast-2016-2024
[78] http://www.broadbandtvnews.com/2016/05/09/worldwide-iptv-subs-reach-over-130-mi/
[79] http://www.ooyala.com/videomind/blog/2020-vision-apac-pay-tv-revenues-pass-41b-iptv-growth-soars

Growth in IPTV Subscribers



[80]

Demand for HD channels and VOD

- IPTV market is mainly driven by increasing demand of high-definition (HD) channels and video on demand. The global IPTV market is gathering favor with consumers due to the interactive solutions that are integrated with IPTV services. This is made possible by integrating modern technologies into IPTV systems. The content network providers have witnessed necessity of advanced network development[81][82]
- Subsequently, demand for Video assurance equipment companies will also increase as the they are responsible for supporting not only all the variations of video distribution technology, but also provide a common surveillance platform to manage the entire video assurance strategy and provide the communications service provider (CSP) with a unified view of the health of their video service, regardless of technology.
- Driven by increasing demand for online content sources such as YouTube, HBO GO or the NFL Network and by the emergence of 4K HD content, their networks have seen a 3-fold growth in IP based video traffic from 2014 to 2019. [83]

Growing demand across different application sectors

- Media & entertainment and gaming segment together acquire major share of the total IPTV market due to decreasing prices of IPTV subscription globally. The

[80] http://www.broadbandtvnews.com/2016/05/09/worldwide-iptv-subs-reach-over-130-mi/
[81] http://www.businesswire.com/news/home/20151015005968/en/VoD-HD-Channels-Demand-Propels-Global-IPTV
[82] http://www.mynewsdesk.com/us/pressreleases/iptv-market-video-on-demand-high-definition-channels-and-hybrid-services-boost-the-market-growth-1503083
[83] http://www.pipelinepub.com/digital_transformation/QoE_for_video_services/2

market is dominated by Europe followed by Asia Pacific and North America, respectively.[84]

Growing demand for Cloud DVR leading to interactive services packaged along with IPTV services[85]

- In 2015, IPTV cloud direct video recorder (DVR) market was valued at USD XX million. Global cloud DVR market is expected to grow at a CAGR of more than 30% until 2020. Consumers in Europe and North America are rapidly upgrading their satellite DVRs to IPTV DVR and hybrid DVR due to which this segment's share will likely decline from 2016-2020.
- Acceptance of Satellite DVR in developing countries like China, India, Brazil will show increase in the demand coinciding with decline in market share in North America and Europe. This segment offers high-value proposition to vendors and they are likely to invest on STB hardware to provide DVR and other traditional functionalities integrated with cloud services.
- With video on demand services becoming the mainstream of IPTV use, the penetration of cloud DVR is going to increase. Also, as the DVR can store the video content received in the form of IP packets, people find it convenient to use IPTV.

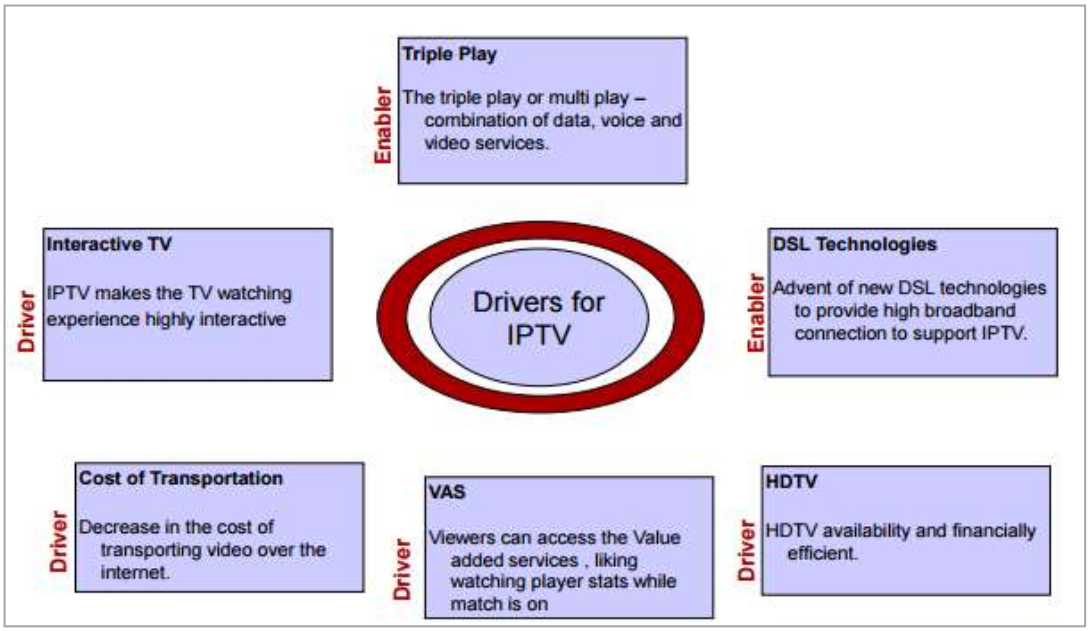
Decreasing cost of IPTV services and government initiatives to increase broadband

- In addition, initiatives taken by government to increase broadband penetration help to grow the market size during the forecast period.
- Other important factor that propels the market growth is decreasing cost of IPTV services. Entry of new start-ups in this market is projected to intensify the competition, due to which the number of services provided by competitors increases and cost of product decreases.[86]

[84] https://www.muvi.com/global-iptv-market-reach-usd-93-59-billion-2021.html
[85] http://www.businesswire.com/news/home/20160616005036/en/Growing-Demand-Hybrid-Cloud-Technology-Predicted-Drive
[86] https://globenewswire.com/news-release/2016/05/30/844294/0/en/Global-IPTV-Market-Poised-to-Surge-from-USD-34-67-Billion-in-2015-to-USD-93-59-Billion-by-2021-MarketResearchStore-Com.html

Integration with Social Media platforms

- Additionally, vertical integration by social media platforms to offer their own VoD services, and rise & success of content-on-demand services are further contributing towards the market growth globally.[87]



Restraints

Changing Business Model

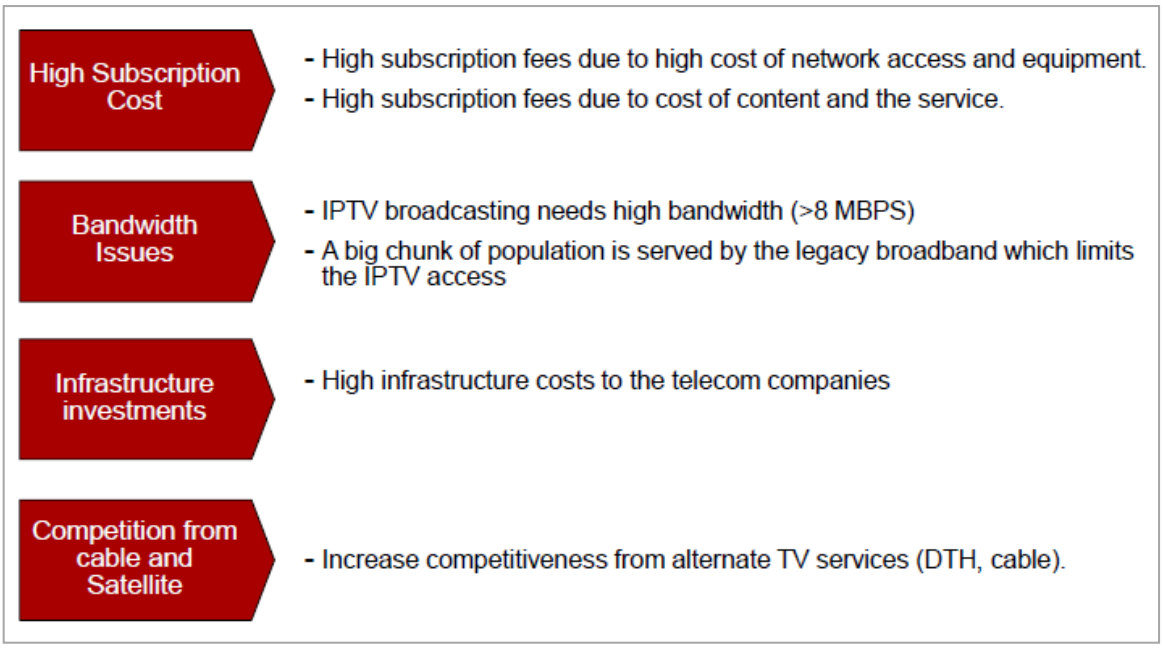
- The traditional vertically-integrated payTV business model is becoming more challenging, as consumers gain access to a far greater diversity of services. As, many pay-TV providers have made significant headway in migrating to more advanced technology platforms, embracing the shift from hardware to software-defined platforms and networks, deploying hybrid, heterogeneous networks, and adopting virtualised solutions and advanced data analytics. Seamless connectivity between devices, unified service creation and management, customer-centricity and agile development are increasingly common across the industry. [88]

Lack of infrastructure in developing regions

- Pay-TV executives in Asia Pacific suggest that dependency on content suppliers, limited funding for innovation projects, limited business scale and risk avoidance are still important barriers to innovation across the industry.[89]
- Due to lack of network infrastructure satellite is the primary pay-TV distribution platform in Emerging Asia (used by around 60% of service providers), while in Advanced Asia cable and IPTV platforms tend to dominate (used by 40% and 37% service providers, respectively leading to high variation in pay-TV distribution technology across markets. [90]

---

[87] http://www.digitaljournal.com/pr/3130474
[88] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[89] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific
[90] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific



[91]

- As per our survey, few challenges mentioned by companies are: [92]
  - QoS & Latency
  - Project management and cost effectiveness
  - Simplifying the video delivery and focus on the marketing it to the end customer. Basically focus on selling the video. They have their in-house R&D department
  - More localize resources from vendors.
  - Its lot of time consuming when there are changes in product. Develop of product, innovation is important. At current stage we need to have agility. Other challenges being, in terms of technology without buffering it used to be a challenge but now it's not. It's also important how we adapt market trends and products changes.
  - User Experience, limitations on hardware, integration with older internal systems
  - Faster delivery of the content is the main challenge we face for almost all the projects.

Major Players in APAC

- From 2016-2022, the top 10 operators in Asia will account for two-thirds of subscribers over the next five years. Seven operators had more than XX million subscribers by end-2015 - and this number will climb to 12 operators by 2021.[93]

[91]https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwifqODChYjTAhWIN48KHVfuCVkQFggoMAI&url=http%3A%2F%2Fredseerconsulting.com%2Fsystem%2Ffiles%2FGlobal%2520Internet%2520Television%2520Market.pdf&usg=AFQjCNGkgy4-zLekcY11xpXkIykmf_PRKw&sig2=vyfRyEz4fqhNXr2F4up2qA
[92] Transcript
[93]https://www.digitaltvresearch.com/ugc/Asia%20Pacific%20Pay%20TV%20Operator%20Forecasts%202016%20TOC_toc_151.pdf

- China and India dominate the operator rankings by subscribers. The proportion for the top 10 operators will fall from 54% in 2015 to 49% in 2021. However, the dominance of China and India is diminished when the operators are ranked in revenue terms [subscriptions and PPV only].
- Two operators (both from China) will add more than $XX million in revenues. However, 16 operators will lose revenues, with Foxtel (down by $147 million) declining by the most. India and Indonesia has highest number of Pay TV operators.

Top five Asia Pacific pay TV operators by subscribers (000)				
Operator	2015	Operator	Country	2021
China Radio & TV	[redacted]	China Radio & TV	China	[redacted]
China Telecom	[redacted]	China Telecom	China	[redacted]
BesTV (China)	[redacted]	BesTV (China)	China	[redacted]
Den Networks (India)	[redacted]	Hathway (India)	India	[redacted]
Dish TV (India)	[redacted]	Den Networks (India)	India	[redacted]
Source: Digital TV Research. Note: paying subscribers only				

[94]

Countries and operators:

Country	No of ops	Operators
Australia	1	Foxtel
China	4	China Radio & TV Network; China Telecom; BesTV; China Unicom
Hong Kong	2	Now TV; i-cable
India	11	Dish TV; Hathway; Siti; Tata Sky; Videocon d2h; In Digital; Airtel Digital; Sun Direct; Den Networks; Reliance; MTNL
Indonesia	10	Indovision; Transvision; Top TV; Okevision; Linknet; Orange TV; Big TV; K Vision; Telkom; NexMedia
Japan	3	NTT; J:Com; SkyPerfecTV
Malaysia	2	Astro; TM
Nepal	1	Dish Media
New Zealand	2	Sky; Vodafone
Pakistan	1	PTCL
Philippines	2	Cignal; SkyCable
Singapore	2	StarHub; Mio
S Korea	8	KT Olleh/Skylife; CJ Hellovision; B TV; LG U+; T Broad; D'Live; CMB; Hyundai HCN
Sri Lanka	2	Dialog; Peo
Taiwan	4	CHT; Taiwan Broadband; TWM; CNS
Thailand	2	TOT; Truevisions
Vietnam	8	SCTV; VTVCab; VNPT; K+; HTV-TMS; Viettel; AVG; FPT

[94] http://www.broadbandtvnews.com/2016/08/17/asias-top-operators-to-gain-pay-tv-market-share/

Key Pay-TV & Broadband Companies[95]

Country	Pay TV & Broadband operator
China	Shanghai Oriental Pearl Media (BesTV)
	Wasu
	Oriental Cable 203
	Shenzhen Topway
	Beijing Gehua
	China Cable Network
	China Telecom
	China Unicom
	China Mobile
Australia	Foxtel
	Fetch TV
	Telstra
	Singtel Optus
Hong Kong	i-Cable
	PCCW/HKT
	TVB Network Vision (TVBNV)
	Hong Kong Broadband Network (HKBN)
India	Hathway Cable & Datacom
	DEN Networks Limited
	IndusInd Media & Communications (InCable)
	Siti Cable Network
	You Broadband India Private Limited
	Ortel Communications
	Digicable Network (India) Private Limited (incl. Fastway Transmission Pvt. Ltd.)
	Asianet Satellite Communications
	Dish TV India
	Tata Sky
	Sun Direct TV (P) Ltd
	Reliance Digital TV
	Bharti Telemedia (Airtel Digital TV)
	Videocon d2h
	DD Freedish
	NXT Digital
Indonesia	MNC Sky Vision
	LinkNet
	Big TV
	Transvision
	Telkom
	IndiHome
	MNC Play Media
Japan	J:Com
	Sky Perfect JSat

[95] http://www.media-partners-asia.com/files/mpa/6/AP16_PreviewContent_v2.pdf

	Nippon Telegraph and Telephone Corp. (NTT)
	KDDI
Malaysia	Astro Malaysia Holdings
	Telekom Malaysia (TM)
New Zealand	Sky Network TV
	Spark
	Chorus
Singapore	StarHub
	Singtel
	M1
	MyRepublic
Sri Lanka	Dialog TV
	Sri Lanka Telecom
Thailand	TrueVisions (True Corp.)
	TOT IPTV
	CTH
	TrueOnline (True Corp.)
	Jasmine

If we divide the APAC region into 4 categories of pay TV providers: [96]

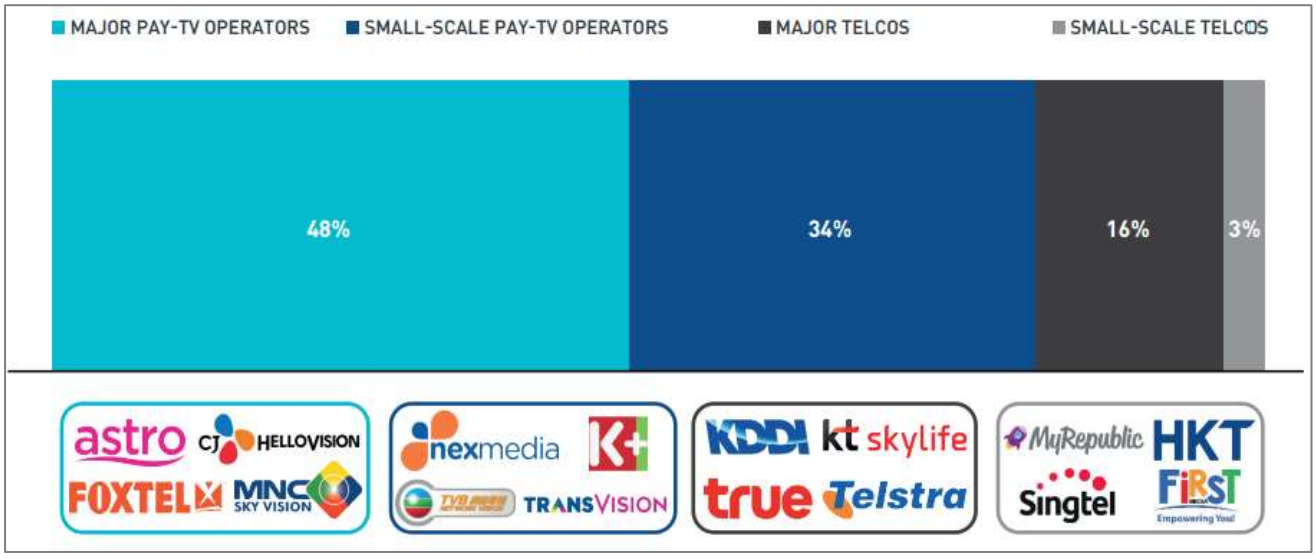
- Major pay-TV operators
- Major telcos
- Small-scale pay-TV operators
- Small-scale telcos

Then,

Major and small-scale pay TV operators account for the majority of the market (48% and 34% respectively.

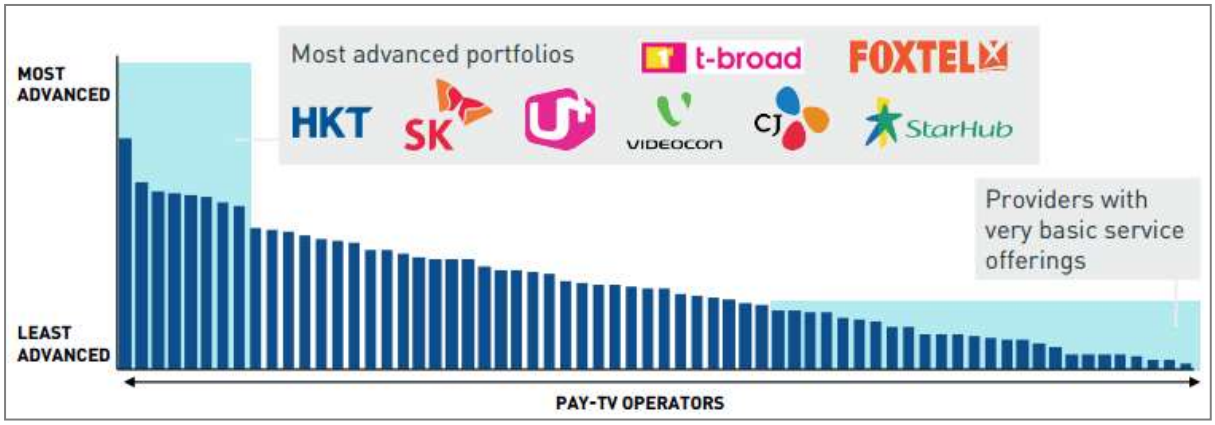
[96] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific

Market share by category of pay-TV service provider



The overall picture is slightly distorted by the pay-TV market structure in India, where 10 major pay TV operators (e.g. Dish TV, Tata Sky, VideoCon) and a long tail of small-scale cable operators, taken together, account for around 150 million pay-TV households. In other territories, telcos account for a slightly larger proportion of the pay-TV market.

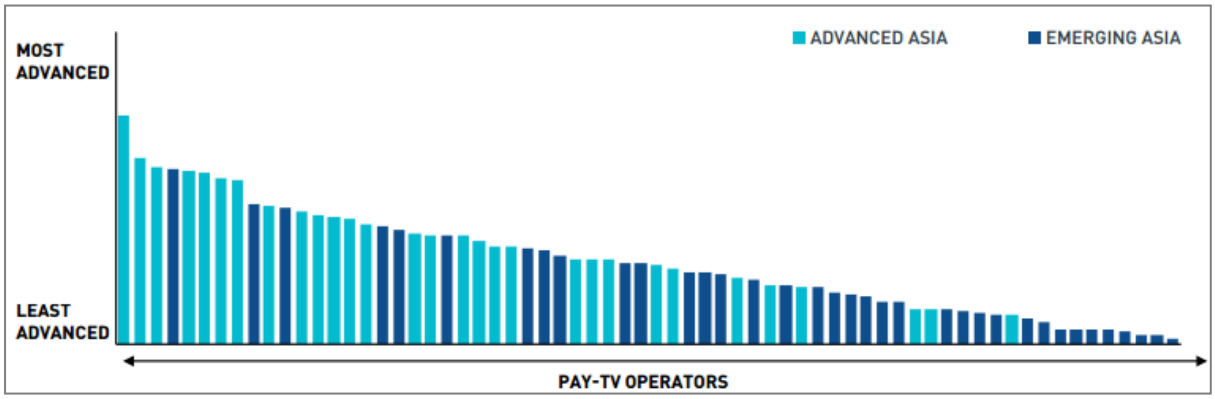
Portfolio rankings by innovation score



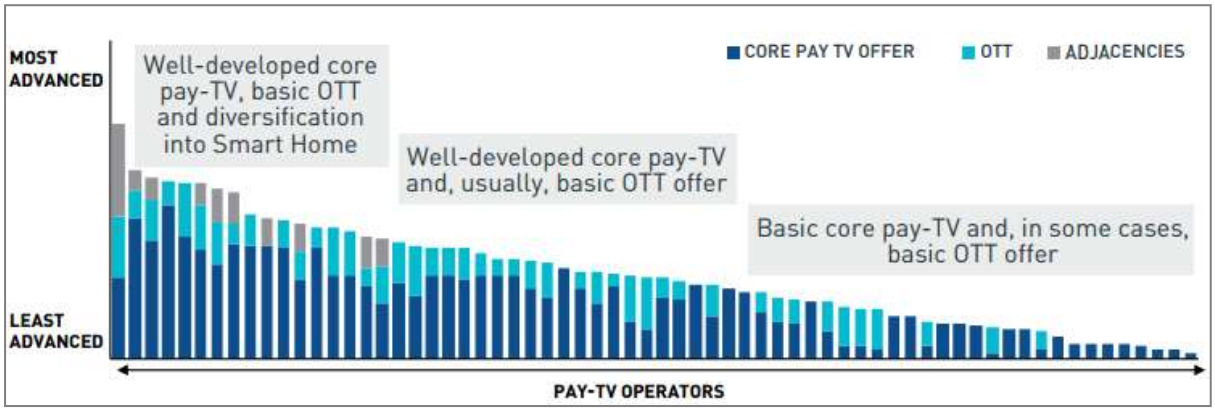
Most operators are evolving their core pay-TV offer and moving into OTT services, by offering standalone OTT and TV Everywhere services. Adjacency diversification is less common, usually pursued by well-funded innovation leaders in Advanced Asia that offer telco services and have developed advanced core pay-TV and OTT offerings. This can be explained by different economic incentives facing these service providers. Advanced service providers in mature markets have to look for new ways to grow their business, while service providers in developing markets still expect substantial growth in their core-pay-TV and OTT businesses, in which case, it is difficult to justify investment in new, adjacent areas.[97]

[97] https://dtv.nagra.com/pay-tv-innovation-landscape-asia-pacific

Portfolio rankings by innovation score – Advanced vs. Emerging Asia



Portfolio rankings by innovation score – component parts



As per our survey, 80% of the companies in APAC region prefer developing in-house solution and rest prefer in-house as well as a complete eco-system with top of the class vendors for each layer / service – CDN. In-house is preferred among all the other services as quality and efficiency of the process.

Also, selection of vendors is either through running consultations, RFIs and RFPs based on incoming offerings and tradeshows or running POCs with your usual and new vendors. Both are have equal amount of percentage for Asian companies.

90% of emerging APAC companies has deployed their project as "Mixed" Business Model and other with "Capex". The technical feature which is high relevance to 60% of the companies is security, advertising insertion, scalability, and bandwidth/server savings with 2% being focussed on **Security** and 20% on **Advertising**.[98]

Research Findings on Players

IPTV, VOD and OTT industry is diverse industry with various players involved at all levels. With our findings and research we have segmented these players under following headings:

1. Broadcasters/Telco/Cable Operator
2. Ecosystem partners
3. System Integrators
4. Potential Technology Partner

All players falling under these heads are dependent on each other and are handicap without each other's collaboration and integration. For first heading we have segregated all the major players on the basis of region as follows:

[98] Trabscript

Broadcasters/Telco/Cable Operator – Major Players

I. **Singapore**

1. **StarHub Go**
   Major Function - Its on-demand streaming service, called StarHub Go, allow customers to stream content for a monthly fee, with no lock-in contracts. Customers also do not have to pay set-top box rental charges, which range from $6 to $13 a month.
   Subscribers Base - Mobile: 2.31 million Customers
   Pay TV: 498K households
   Broadband: 473K Customers
   Enterprise Fixed: $400m
   StarHub currently has 507,000 pay-tv as of 2016-17 financial year
   Useful Links -
   https://www.telegeography.com/products/commsupdate/articles/2015/08/13/starhub-launches-new-ott-service-starhub-go/
   http://www.theedgemarkets.com.sg/article/how-singapore%E2%80%99s-telcos-are-responding-disruption-innovation
   http://ir.starhub.com/_Resource/_Module/gZSLLgdlcU638zpQWaYGmQ/StarHub-AR-2016/mobile/index.html#p=6
   https://www.fool.sg/2016/11/29/starhub-ltds-pay-tv-subscriber-base-has-fallen-7-in-15-months-who-is-eating-its-lunch/

2. **Singtel**
   Major Function – Singtel is one of the largest listed Singapore companies on the Singapore Exchange by market capitalisation. The Group has a vast network of offices throughout Asia Pacific, Europe and the USA, and employs more than 23,000 staff worldwide. Together, the Group serves over 600 million mobile customers around world.
   Subscribers Base - 412,000 pay-tv subscribers
   Useful Links - http://www.capacitymedia.com/Article/3604697/Singtel-launches-Hooq-OTT-movie-and-TV-services.html

   https://www.telegeography.com/products/commsupdate/articles/2016/08/11/singtel-group-net-profit-stalls-in-q2/

   http://www.straitstimes.com/lifestyle/entertainment/tv-cuts-the-cord
3. **PCCW Media Group - Viu (OTT)**
   Major Function - Viu now offers Singapore fans a freemium service with multi-screen access to the widest range of the latest popular Korean dramas and variety shows, as well as other premium Asian content from the region. To provide a better experience for Singapore viewers, English and Chinese subtitles will be provided as fast as 8 hours after its initial telecast in Korea for selected titles.

Subscribers Base - PCCW Media's first attempt in digital video market was the multiscreen proposition of Now TV. Now TV is the first internet protocol television (IPTV) pay TV operator in Hong Kong and it claims to be the largest pay TV service in Hong Kong with nearly 1.3 million subscribers as of June 2015
Useful Links - http://www.mediabusinessasia.com/news_article.php?id=1754
https://technology.ihs.com/552003/pccw-media-launches-a-new-streaming-service-viu-ott

4. **MyRepublic**
   Major Function - MyRepublic provides ultra-fast internet service to over 50,000 homes and businesses in Singapore. In 2014, we started offering fibre broadband services in New Zealand and we're rearing up to do so in Australia and other NBN-ready nations too. We look to bring out the amazing potential of fibre NBNs, to empower everyone with amazing connectivity, and to bring you the very best of the web.
   Subscribers Base - MyRepublic started 2015 with 30,000 broadband subscribers in Singapore and claimed to have acquired over 90,000 subscribers across three markets; Singapore (50,000), New Zealand, and Australia, where it maintains a presence
   Useful Links- https://www.dealstreetasia.com/stories/31301-31301/

II. Malaysia

1. **Astro IPTV**
   Major Function- Astro plans to offer the so-called over-the-top video service, or OTT, that includes streaming live sports, movies and television series to Filipino customers, the company said in a statement. OTT service typically delivers content via the Internet without cable or satellite devices. The agreement with Globe Telecom, a Philippine mobile telecom company, will also allow both parties to collaborate on content creation that will be distributed over Astro's Tribe OTT service and other platforms across the region
   Subscribers Base - Astro B.yond IP-TV customers among the current 1.4 million homes in Malaysia as of May 1, 2013
   Useful Links- http://en.acnnewswire.com/press-release/english/33148/astro-partners-starhub-to-offer-go-shop-in-singapore
   http://asia.nikkei.com/Business/AC/Partnering-Globe-Telecom-in-Philippines-foray
   http://www.digitaltvnews.net/?s=Astro%20Malaysia&sentence=1
   http://www.enterpriseitnews.com.my/astro-goes-after-13-million-byond-iptv-subscribers-over-maxis-fibre/
2. **PCCW Media Group - Viu (OTT)**
   Same as above

III. Indonesia

1. **Telkom**
   Major Function- Telkom Indonesia is a dominant and largest provider of fixed line services due to owning most of Indonesia's copper network. Telkom also runs telephone exchanges, trunk network and local loop connections for its fixed-line telephones. Currently Telkom is responsible for approximately 8.3 million telephone lines in Indonesia
   Subscribers Base – In the mobile space, the unit's wireless arm Telkomsel reported a total user base of 173.92 million at end-2016, up 13.9% y-o-y, while mobile broadband users of 'Telkomsel Flash' surged 37.1% on an annualised basis from 43.8 million to 60.0 million. The parent is supporting the mobile drive (and indeed fixed broadband expansion)
   Useful Links- http://www.thedrum.com/news/2017/04/12/indonesia-s-largest-telco-telkom-unblocks-netflix-after-new-partnership
   http://www.huawei.com/en/news/2017/4/IndiHome-Video-Call-Service
   https://www.thefastmode.com/technology-solutions/9071-pt-telkom-partners-smartcast-to-launch-mediahub-to-support-pay-tv-operators-in-indonesia
   https://www.telegeography.com/products/commsupdate/articles/2017/03/08/telkom-indonesia-fy-2016-net-income-climbs-25-on-strong-datainternet-growth/
2. **CatchPlay group**
   Subscribers Base – Telkom Indonesia is the leading telecom group in Indonesia with over 150 million subscribers, with its number of IPTV and fiber broadband users growing rapidly at a rate of 2 million per year.
   Useful Links- http://www.hollywoodreporter.com/news/catchplay-launches-streaming-service-indonesia-898931
   http://en.prnasia.com/story/145340-0.shtml
3. **Indosat**
   Subscribers Base – Indosat Ooredoo closed out March 2016 with a total of 69.8 million mobile subscribers, up 4.9% on an annualised basis, of whom some 29.2 million (or 42.3% of the total) were connected to data services using a smartphone. Indosat Ooredoo confirmed that the growing customer base drove its y-o-y data revenue growth to 45.5%
   Useful Links -
   https://www.telegeography.com/products/commsupdate/articles/2016/06/02/indosat-ooredoo-plans-2016-19-data-push/
4. **MyRepublic**
   Same as above

IV. Philippines

1. **Rohde & Schwarz**
   Subscribers Base – The number of people subscribing to mobile broadband service will grow from 3 billion worldwide in 2015 to more than 4 billion by the end of 2019

Useful Links - https://cybersecurity.rohde-schwarz.com/en/ipoque-releases-rs-net-reporter-2-versatile-analytics-platform-delivering-actionable-business

2. **TV5 & BNM**
   Useful Links - http://www.abu.org.my/Latest_News-@-TV5_BNM_bring_OTT_TV_to_Philippines.aspx

3. **PCCW Media Group - Viu (OTT)**
   Same as above

4. **Cignal**
   Major Function- DTH satellite provider using Broadcast Satellite Technology, broadcast premium TV content to both households and establishments nationwide.
   Subscribers Base – CignalTV saw subscribers hit 1.18 million in 2015, up almost 40% year-on-year
   Useful Links -
   https://cignal.tv/article/72/about-us
   http://www.digitaltvnews.net/?p=27893
   http://business.inquirer.net/205199/cignaltv-subscribers-hit-1-18m

5. **ABS-CBN**

   PLDT has forged key alliances with Internet TV firm Roku, Inc., global Internet television network Netflix, e-commerce giant Amazon, and ABS-CBN Corporation's over-the-top (OTT) content platform iWant TV.[99]

   According to research by Kantar Media, ABS-CBN had an average audience share of 45% in the January to December period, which is 11 points higher than GMA Network, Inc.'s 34% and 38 points higher than TV5 Network, Inc.'s 7% in 2016.[100] ABS-CBN's claim is based on data from multinational audience measurement provider Kantar Media, which used a nationwide panel size of 2,610 urban and rural homes, representing 100 percent of the total Philippine TV viewing population. ABS-CBN topped the list of most watched TV programs for 2016 and produced 16 out of the top 20 regularly airing programs from January to December 2016.[101]

V. India

1. **BSNL**
   Major Function- Triple play service featuring telephone, broadband internet and TV
   Subscribers Base – 0.87Bn

[99] http://2016.mb.com.ph/2016/09/27/partnership-up-for-content-platform-for-iwant-tv/
[100] http://www.bworldonline.com/content.php?section=Corporate&title=abs-cbn-claims-nationwide-tv-ratings-leadership-in-2016&id=138592
[101] http://www.philstar.com/business/2017/01/05/1659612/abs-cbn-claims-tv-leadership-2016

Useful Links -http://growthpraxis.com/iptv-in-india-only-luxury/
http://trak.in/tags/business/2016/06/23/indian-mobile-subscriber-stats-apr-2016-bsnl-idea/

2. **MTNL**
   Major Function- Triple play services including telephone, broadband internet TV is provided, Video on Demand, Other value added services
   Subscribers Base – MTNL added 10,696 users to take its base to 36.34 lakh
   Useful links - http://growthpraxis.com/iptv-in-india-only-luxury/
   http://economictimes.indiatimes.com/news/economy/policy/telephone-subscriber-base-increased-to-105-18-crore-in-february-trai/articleshow/51995027.cms

3. **Bharti-Airtel**
   Subscribers Base – 252Mn
   Useful links - http://growthpraxis.com/iptv-in-india-only-luxury/
   http://trak.in/tags/business/2016/06/23/indian-mobile-subscriber-stats-apr-2016-bsnl-idea/

4. **Reliance**
   Subscribers Base – 102Mn
   Useful links - http://growthpraxis.com/iptv-in-india-only-luxury/
   http://trak.in/tags/business/2016/06/23/indian-mobile-subscriber-stats-apr-2016-bsnl-idea/

5. **Tata Sky**
   Subscribers Base – 0.59Bn
   Useful links - http://trak.in/tags/business/2016/06/23/indian-mobile-subscriber-stats-apr-2016-bsnl-idea/

VI. Australia

1. **Telstra**
   Subscribers Base – 17.4Mn
   Useful links - https://www.marketresearch.com/Paul-Budde-Communication-Pty-Ltd-v1533/Australia-Digital-Media-IPTV-Major-7685346/
   https://www.budde.com.au/Research/Australia-Mobile-Communications-Subscriber-Statistics
   http://www.mediabusinessasia.com/news_article.php?id=1534
   https://exchange.telstra.com.au/telstra-ventures-invests-in-leading-chinese-communications-api-provider-cloopen/

2. **Optus**
   Subscribers Base – 8.4 Mn
   Useful links - https://www.budde.com.au/Research/Australia-Mobile-Communications-Subscriber-Statistics

3. **TPG**
   Subscribers Base – 853K
   Useful links -
   https://www.telegeography.com/products/commsupdate/articles/2016/03/22/iinet-acquisition-boosts-tpgs-financial-results-for-h1-2016/

VII. Taiwan

1. Chunghwa Telecom
2. Honest Technology Inc.
3. Kbro (Cable Operator)
4. Poying, Inc.
5. FarEasTone

VIII. Hong Kong

1. PCCW/HKT
2. TVB Network Vision (TVBNV)
3. Hong Kong Broadband Network (HKBN)

IX. Korea

1. Korea Telecom
2. SK Telecom
3. LG U+

X. Vietnam

1. Vietnam Television
2. VNPT
3. FPT Group
4. NTT Communications Vietnam

Ecosystem partners – Major Players

They can be defined as "middle man" who helps broadcasters and system integrators in proper delivery, packaging of content etc. and can be segmented into various categories viz., encoders, service platform, DRM (digital right management), external storage, OTT partners etc.

Among all ecosystem partners listed, following are the ecosystem partners who have shown wide range of activities in APAC region:

1. Ateme
2. ARRIS Group Inc
3. Verimatrix

ARRIS Group Inc which falls under encoders and STB category, have partnered with Docomo, Ruckus and have launched new products this year. Verimatrix has extended partnership with Chunghwa, integrated with Samsung etc. in this year.

System Integrators

A system integrator is a company that implements a project for a customer using technologies from an ecosystem. Major players in this category are:

1. Tata Communication
2. ARRIS Group Inc
3. Ideal Systems
4. NCS
5. Globcast

Though Golden Duck Group which deals into various broadcasting services, multi-screen OTT, multi-channel audio etc, wasn't involved into any major activity recently, has conducted major projects in past.

Potential Technology Partner

Under this category major players are:

1. Akamai Technologies
2. Viacom18
3. Volicon
4. Telairity

Akamai Technologies, who has collaborated with the ARRIS group for IP video delivery, partnered with Kaltura, acquired Soasta etc, has shown major chunk of activities recently. Viacom18, which has wide presence across various parts of the globe, didn't show any major activity recently.

ARM is technically very advanced company with strong R&D team though have shown very less activity in our industry.

What are the routes to market?

A client, who wants to enter the APAC region and have an existing partner in the region, can best approach them for collaboration and service. Existing collaborators are best to integrate with as they are familiar with the requirements.

Initially collaborating with major Ecosystem partner would suffice the further partnerships. They would define who are the customers, technology partners and broadcasters.

Market Interview

Methodology

We had prepared and excel sheet with list of following:

- Major broadcasters, cable operators and telcos
- Ecosystem Partners
- System Integrators
- Potential Technology Partners

From listed broadcasters, cable operators and telcos we had identified people who have either worked for OTT projects or have been part of any IPTV or OTT project in their company.

Once list was prepared and finalised we followed the following steps:

- Adding them on LinkedIn – sending them tempatized message – follow up 1 and 2 with them – scheduling the call
- Finding out email i.d- sending them tempatized email - follow up 1 and 2 with them – scheduling the call
- Finding out contact number – briefing about the project - follow up 1 and 2 with them in case of non-availability

Interviewees

Name	Company	Region	LinkedIn Link	Email ID	Date of Interview
Lam Agoc Thuy	VNPT-Media Corp	Vietnam	www.linkedin.com/in/thuyln/	thuyln@gmail.com	17-Aug-17
Clarence Khoo	StarHub	Singapore	www.linkedin.com/in/clarencekhoo/	clarence.singapore@gmail.com	21-Aug-17
Nicholas Ng	StarHub	Singapore	www.linkedin.com/in/nicholas-ng-718b773/?ppe=1	NicholasNg@singtel.com	21-Aug-17
Jerry Leow	Mediacorp Pte Ltd	Singapore	www.linkedin.com/in/jerry-leow-488a0b86/	leow.jerry@gmail.com	30-Aug-17
Noble Binoy	PCCW	Singapore	www.linkedin.com/in/noblebinoy	noblebinoy888@hotmail.com	31-Aug-17
Tuan Nguyen Khac Anh	FPT Group	Vietnam	vn.linkedin.com/pub/tuan-nguyen-khac-anh/42/760/988	tuannka@gmail.com	4-Sep-17
Chie Yu	SKY Cable Corporation	Philippines	www.linkedin.com/in/chieyu/	chieyu@gmail.com	4-Sep-17
Becca Ramirez	ABS-CBN	Philippines	www.linkedin.com/in/becca-ramirez-8185298b	becca_ramirez@yahoo.com	6-Sep-17

Insights

- As per primary research, most of the companies in emerging APAC region's project level are either "Mature" stage or "Burgeoning" stage. Most have those deployed:
    - On Demand Video Services (Catch-up TV, VOD, Pause, Rewind Live TV, Start Over) and
    - MultiScreen Services
- Companies who have deployed Cloud DVR, nPVR video service are from Advanced Asia region.
- For 90% of the companies "Quality of Service" is the top most priority followed by "Availability of Content" and "Scalability and reversibility of deployment" being the lowest.
- As per our survey, most companies in APAC region offer Subscription-based VOD & Transaction-based VOD. There are very few players that offer VOD complete free of charge.
- As per our survey, 80% of the companies in APAC region prefer developing in-house solution and rest prefer in-house as well as a complete eco-system with top of the class vendors for each layer / service – CDN. In-house is preferred among all the other services as quality and efficiency of the process.
  Also, selection of vendors is either through running consultations, RFIs and RFPs based on incoming offerings and tradeshows or running POCs with your usual and new vendors. Both are have equal amount of percentage for Asian companies.
- 90% of emerging APAC companies has deployed their project as "Mixed" Business Model and other with "Capex". The technical feature which is high relevance to 60% of the companies is security, advertising insertion, scalability, and bandwidth/server savings with 2% being focussed on **Security** and 20% on **Advertising**.
- As per our survey, few challenges mentioned by companies are:
    - QoS & Latency
    - Project management and cost effectiveness
    - Simplifying the video delivery and focus on the marketing it to the end customer. Basically focus on selling the video. They have their in-house R&D department
    - More localize resources from vendors.
    - Its lot of time consuming when there are changes in product. Develop of product, innovation is important. At current stage we need to have agility. Other challenges being, in terms of technology without buffering it used to be a challenge but now it's not. It's also important how we adapt market trends and products changes.
    - User Experience, limitations on hardware, integration with older internal systems
    - Faster delivery of the content is the main challenge we face for almost all the projects.

Appendix

Transcripts

Transcript 1

Interviewee: XX

Company: VNPT-Media Corp

LinkedIn Link: XX

Email Address: XX

Contact Number: XX (Mobile)

1. How would you define the current state of your OTT/IPTV deployment? (Project level: Burgeoning / **mature** / industrial)
    a. Have you already implemented: On Demand Video Services (**Catch-up TV**, **VOD, Pause**, **Rewind Live TV, Start Over**...), MultiScreen Services, Cloud DVR, nPVR video services…
    b. If VOD: have you implemented Subscription VOD, Transactional VOD or Free VOD?

    We provide both.

2. Rate from 1 to 5 the following priorities
    a. Availability of content / Performance 2
    b. Quality of streaming 1
    c. Scalability and reversibility of deployment 3
    d. Economies of scale on complex deployments – CDN and NPVR 4
    e. Other - Please fill-in 5

3. Your current solution is developed
    a. In-house
    b. One supplier/Integrator
    c. A complete eco-system with top of the class vendors for each layer / service
    d. None of the above, please explain

4. Process of sourcing : how do you select your vendors
    a. Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
    b. Running POCs with your usual and new vendors
    c. Recommendation of SIs you work with usually
    d. Other

5. What was the business model of the last project your organization deployed ?
    a. **Capex**
    b. Opex
    c. Mixed
    d. Other, please explain
6. Are there any other key technical features of high relevance to you (such as security,advertising insertion, scalability, bandwidth/server savings ….) ? **DRM, Adversising insertion, Live Streaming**
7. What are the main challenges that you face when trying to implement new OTT or IPTV services? **QoS & Latency**

Transcript 2

Interviewee: XX

Company: StarHub

LinkedIn Link: XX

Email Address: XX

1. How would you define the current state of your OTT/IPTV deployment? (Project level: **Burgeoning** / mature / industrial)
    a) Have you already implemented: On Demand Video Services (**Catch-up TV, VOD, Pause, Rewind Live TV, Start Over...)**, **MultiScreen Services**, Cloud DVR, nPVR video services…
    b) If VOD: have you implemented **Subscription VOD, Transactional VOD** or Free VOD?

2. Can you disclose some of the products used in your deployment?
   These are very open ended questions and not easy to answer like that. StarHub is using Ooyala as backend, and Accedo as app development vendor, Akamai as CDN. These are public info.

3. Which layer of the stack do you see as very important? Which one would you like to improve?
   All parts of the stack are important and have to come together else u can't have a working system. But more than not, OTT players will need to pay special attention to UI and UX and not just grab off the shelf solutions. They need to understand their target segment and design the whole solution based on such a stereotypical image of their target customer.

4. Rate from 1 to 5 the following priorities
    a) Availability of content / Performance 3

b) Quality of streaming 1
c) Scalability and reversibility of deployment 2
d) Economies of scale on complex deployments – CDN and NPVR 4
e) Other 5

5. Your current solution is developed
   a) In-house
   b) One supplier/Integrator
   c) A complete eco-system with top of the class vendors for each layer / service
   d) None of the above, please explain

6. Process of sourcing : how do you select your vendors
   a) Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
   b) Running POCs with your usual and new vendors
   c) Recommendation of SIs you work with usually
   d) Other

7. What was the business model of the last project your organization deployed ?
   a) Capex
   b) Opex
   c) Mixed
   d) Other, please explain
8. Are there any other key technical features of high relevance to you (such as **security, advertising insertion, scalability, bandwidth/server savings** ….) ?

9. What are the main challenges you would like to alleviate regarding your OTT/IPTV projects

   Project management, cost effectiveness,

Transcript 3

Interviewee: XX

Company: StarHub

LinkedIn Link: XX

Email Address: XX

1. How would you define the current state of your OTT/IPTV deployment? (Project level: Burgeoning / **mature** / industrial)

a) Have you already implemented: On Demand Video Services (**Catch-up TV, VOD, Pause, Rewind Live TV, Start Over...), MultiScreen Services,** Cloud DVR, nPVR video services…
b) If VOD: have you implemented **Subscription VOD, Transactional VOD or Free VOD**?

2. Rate from 1 to 5 the following priorities
   c) Availability of content / Performance 1
   d) Quality of streaming 2
   e) Scalability and reversibility of deployment 3
   f) Economies of scale on complex deployments – CDN and NPVR 4
   g) Other 5

3. Your current solution is developed
   h) In-house
   i) One supplier/Integrator
   j) A complete eco-system with top of the class vendors for each layer / service
   k) None of the above, please explain

4. Process of sourcing : how do you select your vendors
   l) Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
   m) Running POCs with your usual and new vendors
   n) Recommendation of SIs you work with usually
   o) Other

5. What was the business model of the last project your organization deployed ?
   p) Capex
   q) Opex
   r) Mixed
   s) Other, please explain
6. Are there any other key technical features of high relevance to you (such as **security, advertising insertion, scalability, bandwidth/server savings** ….) ?

7. What are the main challenges you would like to alleviate regarding your OTT/IPTV projects

Simplify the video delivery and focus on the marketing it to the end customer. Basically focus on selling the video. They have their in-house R&D department.

Transcript 4

Interviewee: XX

Company: Mediacorp Pte Ltd

LinkedIn Link: XX

Email Address: XX

1. How would you define the current state of your OTT/IPTV deployment? (Project level: Burgeoning / mature / industrial) to many opportunities
    a. Have you already implemented: On Demand Video Services (**Catch-up TV, VOD, Pause, Rewind Live TV, Start Over...), MultiScreen Services,** Cloud DVR, nPVR video services…
    b. If VOD: have you implemented **Subscription VOD, Transactional VOD or Free VOD**?

Jerry - Price points and acceptance level of people in emerging countries is very important. They have to be very particular about data charges, bandwidth.

2. Rate from 1 to 5 the following priorities
    a. Availability of content / Performance 2
    b. Quality of streaming 3
    c. Scalability and reversibility of deployment 3
    d. Economies of scale on complex deployments – CDN and NPVR 2
    e. Other 5

3. Your current solution is developed
    a. In-house
    b. One supplier/Integrator
    c. A complete eco-system with top of the class vendors for each layer / service
    d. None of the above, please explain

Jerry - Hybrid where by some part are developed in-house some are developed by other party solutions. Most solution are hosted in the cloud.

4. Process of sourcing : how do you select your vendors
    a. Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
    b. Running POCs with your usual and new vendors
    c. Recommendation of SIs you work with usually
    d. Other

Jerry – We usually do it with tender – we first run RFIs and RFPs based on incoming offerings and tradeshows to any new solutions while we run proper tender to select the vendor.

5. What was the business model of the last project your organization deployed?
    a. Capex
    b. Opex
    c. Mixed
    d. Other, please explain
6. Are there any other key technical features of high relevance to you (such as security, **advertising** insertion, scalability, bandwidth/server savings ….)?

7. What are the main challenges you would like to alleviate regarding your OTT/IPTV projects

Jerry – More localize resources from vendors are important so more solution from local vendors who have presence in the region.

Transcript 5

Interviewee: XX

Company: PCCW

LinkedIn Link: XX

Email Address: XX

Contact Number: XX (Mobile)

1. How would you define the current state of your OTT/IPTV deployment? (Project level: **Burgeoning** / mature / industrial) its evolving.
    a. Have you already implemented: On Demand Video Services (**Catch-up TV, VOD, Pause, Rewind Live TV, Start Over**...), **MultiScreen Services, Cloud DVR, nPVR video services**…
    b. If VOD: have you implemented **Subscription VOD**, Transactional VOD or **Free VOD?**
    Advertisement

    PCCW has two products one being Viu TV and second being Viu. I am working for Viu. Viu is stand-alone product and its OTT product whose revenue is generated by advertisements mostly with monthly subscription. It's present in Hong Kong, Indonesia, Thailand and Malaysia. Catch up TV, Pause, rewind Live TV, Start Over, Multi screen services, Cloud DVR, nPVR are mostly present in Hong Kong.

2. Rate from 1 to 5 the following priorities.
    a. Availability of content / Performance **1**

b. Quality of streaming **1**
c. Scalability and reversibility of deployment **3**
d. Economies of scale on complex deployments – CDN and NPVR **1**
e. Other – **taking down pirated and illegal streaming is also other priorities**

3. Your current solution is developed
   a. In-house -
   b. One supplier/Integrator
   c. A complete eco-system with top of the class vendors for each layer / service – CDN
   d. None of the above, please explain

4. Process of sourcing : how do you select your vendors
   a. Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
   b. Running POCs with your usual and new vendors
   c. Recommendation of SIs you work with usually
   d. Other

5. What was the business model of the last project your organization deployed?
   a. Capex
   b. Opex
   c. Mixed
   d. Other, please explain
6. Are there any other key technical features of high relevance to you (such as **security, advertising insertion, scalability, bandwidth/server savings** ….) ?

7. What are the main challenges you would like to alleviate regarding your OTT/IPTV projects
   Its lot of time consuming when there are changes in product. Develop of product, innovation is important. At current stage we need to have agility. Other challenges being, in terms of technology without buffering it used to be a challenge but now it's not. It's also important how we adapt market trends and products changes.

Transcript 6

Interviewee: XX

Company: FPT Group

LinkedIn Link: XX

Email Address: XX

1. How would you define the current state of your OTT/IPTV deployment? (Project level: Burgeoning / **mature** / industrial)

a. Have you already implemented: On Demand Video Services (Catch-up TV, VOD, Pause, Rewind Live TV, Start Over...), MultiScreen Services, Cloud DVR, nPVR video services…
   A: Yes, we had ODVS and Multiscreen services.
b. If VOD: have you implemented Subscription VOD, Transactional VOD or Free VOD?
   A: We have all of them.

2. Rate from 1 to 5 the following priorities
   a. Availability of content / Performance 2
   b. Quality of streaming 1
   c. Scalability and reversibility of deployment 4
   d. Economies of scale on complex deployments – CDN and NPVR 3
   e. Other - Please fill-in 5
      A: from 1 to 5 should be B A D C E (UI/UX).

3. Your current solution is developed
   a. In-house
   b. One supplier/Integrator
   c. A complete eco-system with top of the class vendors for each layer / service
   d. None of the above, please explain
      A: we do in-house and development by ourselves.

4. Process of sourcing : how do you select your vendors
   a. Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
   b. Running POCs with your usual and new vendors
   c. Recommendation of SIs you work with usually
   d. Other
      A: If you mean for content, we do research for hot content from local and overseas to decide to bring it to our service.

5. What was the business model of the last project your organization deployed?
   a. Capex
   b. Opex
   c. Mixed
   d. Other, please explain
      A: it's C, we mixed both of Capex and Opex depend on the status of service.
6. Are there any other key technical features of high relevance to you (such as security,advertising insertion, scalability, bandwidth/server savings ….) ?
7. What are the main challenges that you face when trying to implement new OTT or IPTV services?

Transcript 7

Interviewee: XX

Company: SKY Cable Corporation

LinkedIn Link: XX

Email Address: XX

Contact Number: XX (Home)

1. How would you define the current state of your OTT/IPTV deployment ? (Project level: Burgeoning / mature / industrial)
   a. Have you already implemented: On Demand Video Services (Catch-up TV, VOD, Pause, Rewind Live TV, Start Over...), MultiScreen Services, Cloud DVR, nPVR video services…

   Yes we currently have Livestreaming, Catch-Up, VOD, and Multiscreen services – all on SKY On Demand (www.skyondemand.com.ph)

   b. If VOD: have you implemented Subscription VOD, Transactional VOD or Free VOD?

   We have all three, it really depends on the deal we have with the content provider.

2. Rate from 1 to 5 the following priorities
   a. Availability of content / Performance - 3
   b. Quality of streaming - 1
   c. Scalability and reversibility of deployment - 4
   d. Economies of scale on complex deployments – CDN and NPVR - 5
   e. Other (Budget) - 2

3. Your current solution is developed
   a. In-house
   b. One supplier/Integrator
   c. **A complete eco-system with top of the class vendors for each layer / service - We work with Accenture at the moment, but we do have other vendors for other parts of the service.**
   d. None of the above, please explain

4. Process of sourcing : how do you select your vendors
   a. **Running consultations, RFIs and RFPs based on incoming offerings and tradeshows**
   b. Running POCs with your usual and new vendors
   c. Recommendation of SIs you work with usually
   d. Other

5. What was the business model of the last project your organization deployed ?
   a. Capex
   b. Opex

c. **Mixed – Dev work and systems charged to Capex, Project Management and Content population etc was charged to Opex**
d. Other, please explain

6. Are there any other key technical features of high relevance to you (such as security,advertising insertion, scalability, bandwidth/server savings ….) ?
Security, can adapt to existing systems that we have

7. What are the main challenges you would like to alleviate regarding your OTT/IPTV projects
User Experience, Limitations on hardware, Integration with older internal systems

Transcript 8

Interviewee: XX

Company: ABS-CBN

LinkedIn Link: XX

Email Address: XX

Contact Number: XX (Home)

1. How would you define the current state of your OTT/IPTV deployment? (Project level: Burgeoning / **mature** / industrial) its evolving. **It's been more than half a year**
   a. Have you already implemented: On Demand Video Services (**Catch-up TV, VOD**, **Pause, Rewind Live TV, Start Over**...), **MultiScreen Services, Cloud DVR, nPVR video services**…
   b. If VOD: have you implemented **Subscription VOD**, Transactional VOD or Free VOD?

2. Rate from 1 to 5 the following priorities.
   a) Availability of content / Performance 2
   b) Quality of streaming 1
   c) Scalability and reversibility of deployment 4
   d) Economies of scale on complex deployments – CDN and NPVR 3
   e) Other - piracy

3. Your current solution is developed
   a) In-house -
   b) One supplier/Integrator
   c) A complete eco-system with top of the class vendors for each layer / service – CDN
   d) None of the above, please explain

4. Which layer of the stack do you see as very important? Which one would you like to improve?
   - **The availability of content is most important**

5. Process of sourcing : how do you select your vendors
   a) Running consultations, RFIs and RFPs based on incoming offerings and tradeshows
   b) Running POCs with your usual and new vendors
   c) Recommendation of SIs you work with usually
   d) Other

6. What was the business model of the last project your organization deployed ?
   a) Capex
   b) Opex
   c) Mixed
   d) Other, please explain

7. Can you disclose some of the products used in your deployment?
   - **I don't handle the development department; hence don't have any idea regarding this.**

8. Are there any other key technical features of high relevance to you (such as **security**, advertising insertion, scalability, bandwidth/server savings ….) ?

9. What are the main challenges you would like to alleviate regarding your OTT/IPTV projects
   - **Faster delivery of the content is the main challenge we face for almost all the projects.**