TUNING INTO OTT 2.0

MAKING DIGITAL VIDEO AS GOOD AS TV

Orchestrating an effective live and OTT Video Strategy
with a Platform-as-a-Service Solution

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INTRODUCTION

Over-the-top (OTT) video distribution - live streaming and on-demand- has become vital for content rights owners and distributors. What was once just an additional avenue for garnering eyeballs is now critical business for media companies. According to Frost & Sullivan, there were 1.2 billion OTT viewers in the world in 2017 and will likely grow to over 2 billion by 2021. Revenue from OTT services will increase from US $22.5 billion in 2017 to $36 billion in 2021 globally. The market landscape has grown to thousands of OTT service providers offering a variety of content across multiple regions.

Therefore snags in digital content delivery today have serious outcomes- they can hamper viewership trends, cause churn, and result in loss of revenue. Viewers are less forgiving with latency issues in live streaming, especially that of sports, as against distribution of on-demand content.

Even in countries such as the USA, UK, Germany, among others where the average broadband speeds are over 10 Mbps, several consumers complain of sub-optimal viewing experience. Despite having access to the best technologies for video compression, storage, management, and delivery, video services crumble under the pressure of large traffic.

Hence a service provider has to invest not only in content, but also in technology and infrastructure that enhances the quality of experience (QoE) for the end user in both live and on-demand streaming. Service providers need an agile and flexible approach that stitches together the 'supply chain' of video acquisition to delivery and monetization.

In this whitepaper, Frost & Sullivan elaborates upon the opportunities of OTT video distribution in viewership in revenue; the common challenges and considerations by media companies for OTT delivery; and the critical elements of an OTT ecosystem which they can explore with a platform-as-a-service to induce flexibility and scalability in their operations.

OVER THE TOP (OTT) VIEWERSHIP AND BUSINESS REACH CRITICAL MASS

YouTube has over a billion unique viewers[2]; Netflix subscriptions reached 118 million; and Amazon Prime Video increased its base to over 36 million. Even as these OTT giants boast continued traction for their services internationally, market opportunities abound for an increasing number of regional OTT service providers as well. Hundreds of OTT service providers today have more than a million viewers each. For instance, Maxdome (Germany) has grown to 14 million subscribers; Wuaki TV (Spain) and Knippr (Netherlands) each has 4 million subscribers; Hotstar (India) has over 100 million viewers; MBC Shahid (MENA) has 10 million; Chili (Europe) has 1 million subscribers, and so on[3].

Across all regions, the gap between digital and traditional TV viewership is quickly narrowing. It is expected to be almost equal by 2020 in EMEA and APAC, while in LATAM, digital will likely surpass traditional TV. 🐦 *tweet this!*

Mobile video accounts for 50%[4] of overall OTT video viewership and is projected to grow at a CAGR of 14.8% by 2021[5]. According to a survey by Netflix, in India, 44% of viewers consider OTT content as one of the top travel essentials and close to 67% of Netflix viewers binge-watch TV shows on their handheld devices while traveling[6]. However, the USA and Europe have an increasing number of OTT viewers on connected TV sets. For instance, 28% of US broadband households in 2017 used smart TV as a streaming device. 🐦

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2   https://www.youtube.com/yt/about/press/
3   Frost & Sullivan's Analysis of the Europe, MENA, and India OTT Video Services Market
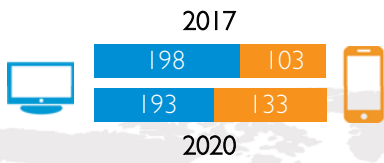4   Ooyala Global Video Index, Q3 2017
5   Cisco VNI
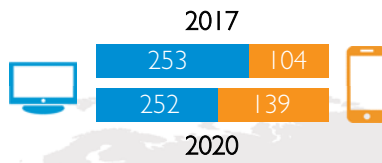6   Netflix Survey
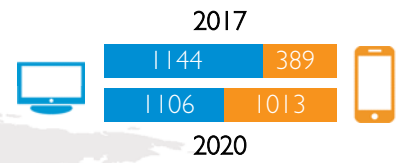
HOURS OF VIEWERSHIP (IN BILLIONS)

USA

2017
198 | 103
193 | 133
2020

NORTH AMERICA

2017
253 | 104
252 | 139
2020

APAC

2017
1144 | 389
1106 | 1013
2020

LATAM

2017
161 | 155
158 | 256
2020

EMEA

2017
630 | 252
592 | 514
2020
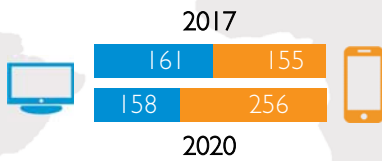
OTT Video Revenue Grows Rapidly, in Contrast to the Mature TV Industry, while comprising less than 15% of total market.

Total Revenue: OTT Video vs Traditional * Video, Global, 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020

500.0
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0

■ OTT   ■ Traditional

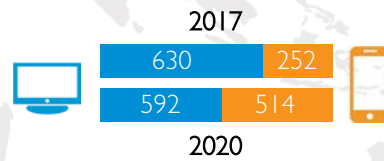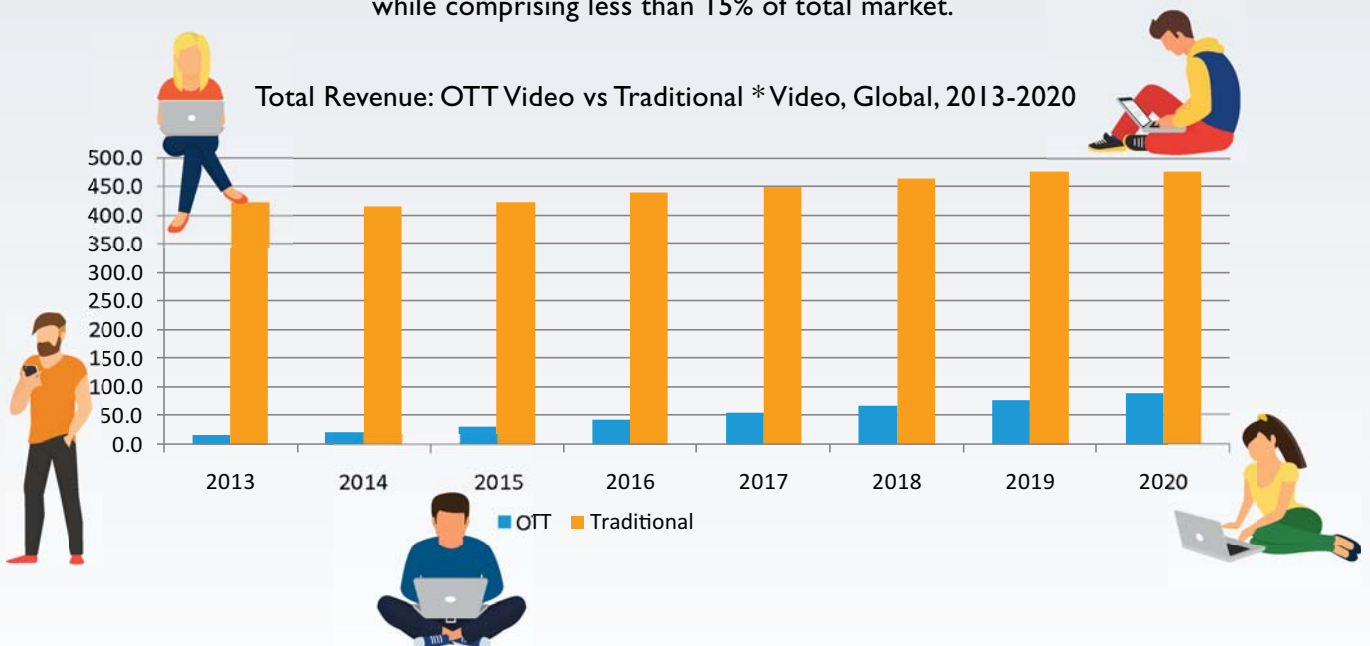As more and more consumers flock to digital platforms for their daily entertainment fix, online advertising market is on the rise as well, recording 23% YoY growth in 2017. 🐦 *tweet this!* In parallel the demand for high-quality experience and unlimited access to premium and exclusive content has driven the growth of subscription- and transaction-based monetization. The preference for a particular monetization strategy depends on several factors - such as market responsiveness, competition, content library, frequency of content publishing, and payment infrastructure.

The challenge is that revenue growth from digital platforms while growing rapidly still comprises less than one fifth of television (advertising and pay TV). Hence investment decisions for OTT content marketing and delivery is an important, but an incremental value proposition for many traditional service providers. Most leading networks including Fox Networks, HBO, among scores of others, continue to have a different department focused on OTT content delivery especially related to rights acquisition, management, technology workflow, distribution and sales.

DEALING WITH THE CHALLENGES OF A FRAGMENTED OTT VIDEO MANDATE

Even today, several media companies struggle to chart out a holistic strategy that captures essential elements to monetize the service. The primary

challenges that a media company CIO seeks answers to while considering IT choices for OTT are:

1. Quality of Experience (QoE): Eliminate Latency and Delay

QoE on a digital platform today still hinges primarily on the viewing experience: consistent high resolution, uninterrupted streaming, and zero delays in video delivery. A lag of 2 seconds can lead to a 9% increase in customer dissatisfaction[8,9]. 🐦 *tweet this!* But even today, most content distributors have a delayed webcast of more than 30 seconds compared to satellite television. When the Super Bowl was streamed across multiple OTT platforms, delay between live feeds and online streams ranged from 40 seconds up to 2 minutes[10]. Amazon's Fire TV was 20+ seconds behind, and the NBC App on the iPad took 15+ seconds to start up. Sony's live streaming service PlayStation Vue was known to pose major problems, keeping many from being able to watch the Super Bowl.

Such user experience creates immense dissatisfaction, and it can be damaging for a genre such as live sports which thrives on audience instant gratification.

While digital viewership is still a fraction of that of TV, broadcast networks cannot dismiss it as secondary, as there are millions of dedicated digital viewers for any popular sport, and many of them are OTT paid subscribers. 63% of sports fanatics in US are skeptical of signing up for OTT live streaming while almost 34% cancel their existing subscriptions[7]. 🐦 *tweet this!*

The reason for such delays is often the media distributor's lack of control over the entire supply chain of video from ingest to delivery. Compared to satellite, contribution and distribution over IP is challenging and needs an effective integrated solution that can drive video transport from the stadium to the studio to a headend, to a streaming server and finally through a content delivery network to the end device. There are few service providers in the market who offer solutions through this entire value chain.

2. Taking Live Streaming Direct to Consumer- Ramp Up Implementation

Although adding content to an existing OTT service or distributing through YouTube is by far the quickest way to launch a digital service, it is not always a profitable proposition for media companies. As digital currency for advertising keeps growing, and subscription based business increases, media distributors find it more attractive to monetize their content on OTT platforms without revenue-sharing partnerships. Therefore every medium and large broadcasting content rights owner-- HBO, AXN, Fox Networks, BBC, among scores of others-- has an individual OTT platform through which they can reach their consumer directly.

Even though there are more software-based solutions and services today that can enable the launch of an OTT video service than before, the related complexity has deepened. In some cases, the distributor needs to combine multiple business models- advertising, subscription, and transactional; offer a hybrid multiplatform service that synchronizes television and digital delivery; and provide live as well as on demand video services on digital platforms. Such requirements can take up to 2 years to be set up, but media companies look for solutions that can be modular, yet scalable and help launch a service within three to six months. 🐦 *tweet this!*

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8   Akamai Biometric Survey
9   Netflix Survey
10 https://advanced-television.com/2018/02/06/super-bowl-proves-importance-of-satellite/

Procuring the entire set of infrastructure components across the value chain – such as ingest, transcoding, or packaging – can increase both cost and time to market significantly. On the other hand, using commercial-off-the-shelf (COTS) or plug-and-play solutions can reduce time to market but do not work in the long term when the service reaches critical mass or expands globally. Distributors need a balanced and comprehensive approach that lets them launch quickly while being scalable for a multi-channel global distribution.

3. Scale as you Need

Many OTT services depend on commercial-off-the-shelf (COTS) solutions for various needs of video processing and delivery. However some of these solutions are limited in their ability to scale up to support delivery of video to critical mass of viewers. In turn, scaling up implies having to upgrade their workflows with additional investment in solutions they may not use optimally throughout the year.

This challenge is highly pertinent for sports, where seasonal events draw viewership which is many times more than usual traffic on sites. The inability to manage such unpredictable demand is one of the reasons that restrain several content rights owners from launching and managing a direct-to-consumer OTT service. Managing an OTT service needs scalability in geographical reach, traffic, localization, and customization.

Further, content owners need to differentiate their services from their other content partners such as broadcasters and Pay TV distributors.

Some sports franchises are attempting initiatives where they can offer a service to their fans directly. For example, in a proof of concept, Formula One provided a 360 degree video feed from two cameras during the 2017 Singapore Grand Prix, allowing fans to experience a virtual reality-like environment through the F1 App. Such extent of customization requires a flexible and end-to-end solution that is well entrenched in every aspect of the video value chain.

4. Multivendor Implementation: Ease the Pain

There are at least 12 components in the video supply chain for an OTT service- including ingest, compression, storage, management, packaging, meta data, content protection, delivery, monitoring, ad-insertion, billing management system, and analytics. Adopting a modular approach to weave together a solution set offers a strategic and operational flexibility in technology, design, and implementation, but it also implies high costs, risks, and complexity of multivendor OTT implementation.

Liaising with numerous vendors for individual components in the value chain means an OTT service provider has to deal with many supplier-partner relationships and manage the overall project responsibilities. The onus for proof of concepts, testing, and support and systems integration also rests with the service provider. Situations such as missed timelines or unattributed bugs could lead to implementation delays and inflated cost of investment.

WEAVING TOGETHER OTT ESSENTIALS WITH A END-TO-END PAAS MODEL

For successful OTT content distribution, the software and systems for each of the steps in the value chain has to be seamlessly integrated and should align with the objectives of the service provider. A OTT service provider can either choose specialized vendors that provide infrastructure solutions for one or more of these processes or outsource to a managed service vendor that can provide an end-to-end platform-as-a-service (PaaS). The table below lists some of the critical selection considerations and best practices to be followed while choosing a solution for each step in the value chain.

Step	Function	Solution Selection Considerations	Best Practices
Ingest	Content from live feeds or from a file is uploaded into the media processing system	• Mode of Video Capture • Support for multiple encoders • Cloud compatibility • Bulk video upload and FTP upload support	• Metadata indexing and organizing • Cloud-based ingestion • Ingest content at multiple data centers for added redundancy
Encoding / Transcoding	Conversion of file formats for either storage or transmission	• Multi-format , multi device support • Support for multiple bitrates • Hosting options (Cloud / On-premise)	• Bitrate optimized to pixel width • Implement Content Aware Encoding • Avoid Up scaling
Media Asset Management	Managing of media assets, metadata, and workflows	• Metadata input methods • Seamless integration with other components • Degree of system customization	• Easy search Taxonomy • Phased deployment • Automation of workflows
Content Protection & Rights Management	Protection of content through access control, authentication, secure storing and delivery	• Existing workflow support • Internal & External user support • Scalable license delivery	• Holistic digital content protection • Use combination of two or more systems to get holistic protection
Packaging & Publishing	Packaging into different formats, closed captioning, ad insertion and so on	• Multi-device & Multi-platform support • Integration with CMS systems • Live streaming support	• Use of Open standards • Video SEO to enhance content exposure
Delivery	Delivery of content through caching at CDN nodes to enable faster throughput	• Latency • Speed & Throughput • Costs	• Flexible upload • Geographical proximity • Content migration automation
UI / UX Management	Enhancement of viewer experience at the front end through various platforms	• Cross platform UI/UX design • KPI / Metrics tracking • Alerts & Recommendations capabilities	• Social media integration • Highly interactive & engaging views
Analytics	Collection of viewership data and using algorithms to understand patterns and make recommendations	• Real time dashboards • Ease of use and GUI • Efficient memory utilization • High processing speed	• Monitor behavior regularly and periodically • Go beyond views and impressions to have a 360 view of business and viewer

The merits of investing in a PaaS partnership are manifold. First and foremost, it enables an OTT service provider to not be constrained by its existing technical infrastructure because this leverages the wide range of capabilities and expertise of the solution provider. Additionally, there is increased agility in terms of strategic and operational decisions and process implementations.

Most importantly, in a PaaS strategy, the service provider can focus on its core activities, such as content creation and distribution, customer acquisition, and monetization without being concerned about the lack of in-house technical expertise. Additionally, content distributors have the benefit of developing an OTT service which is scalable, cost-efficient, and can Go-To-Market (GTM) within a short timeframe while being dynamic and agile.

A PaaS vendor also usually has a partnership with downstream vendors such as telecom operators and software service providers , which an OTT distributor can leverage to achieve economies of scale and bring down operational costs. Engaging in an OPEX model helps ensure usage-based spends rather than massive infrastructural investments that go obsolete after a few years. Some managed service providers offer the option of engaging in a risk-reward commercial relationship that can ensure aligned vision and superior performance standards.
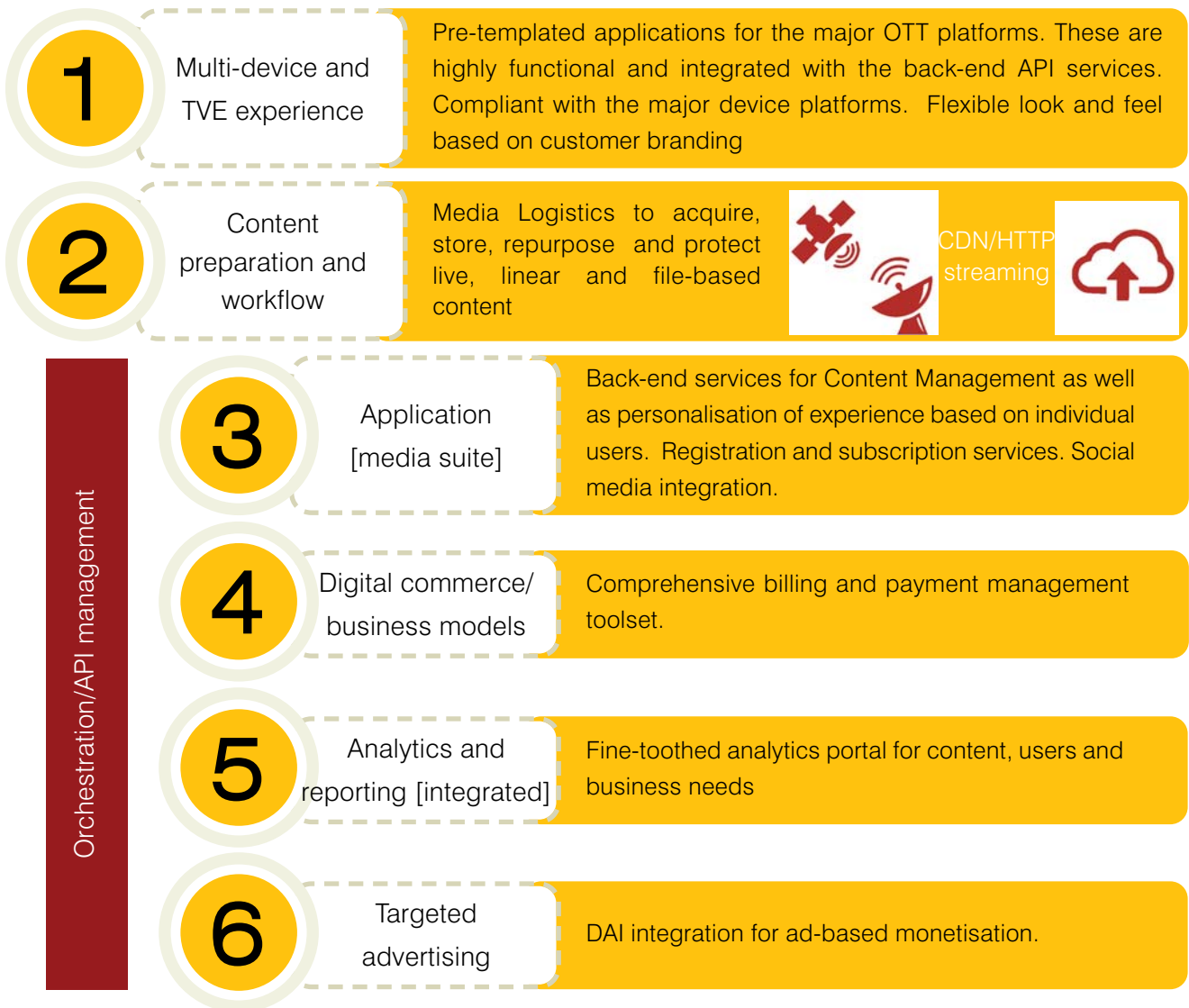
TATA COMMUNICATIONS LIMITED: SOLUTION BRIEF

As a managed service provider, Tata Communications Limited has fused its core capability in video delivery with hosted data center services, building a media ecosystem which ingests, stores, manages, and repackages content. As one of the large infrastructure players in the OTT ecosystem, Tata Communications combines its strength in the infrastructure space with a pre-formed, pre-integrated set of software packages and delivers its customers an OTT PaaS offering. It leverages over 500,000 km of subsea and terrestrial fibre backbone to deliver low latency and high redundancy to the world's global media hotspots.

Its fully managed cloud-based OTT platform supports multi-device multi-platform delivery of all formats of content, be it VOD or live, without the high-stakes risk. Its customers get the benefit of faster time to market while being globally scalable enabling the distributor to build new revenue streams and monetize content using different business models.

1 Multi-device and TVE experience

Pre-templated applications for the major OTT platforms. These are highly functional and integrated with the back-end API services. Compliant with the major device platforms. Flexible look and feel based on customer branding

2 Content preparation and workflow

Media Logistics to acquire, store, repurpose and protect live, linear and file-based content

CDN/HTTP streaming

Orchestration/API management

3 Application [media suite]

Back-end services for Content Management as well as personalisation of experience based on individual users. Registration and subscription services. Social media integration.

4 Digital commerce/ business models

Comprehensive billing and payment management toolset.

5 Analytics and reporting [integrated]

Fine-toothed analytics portal for content, users and business needs

6 Targeted advertising

DAI integration for ad-based monetisation.

In particular, for live events, the Live OTT service from Tata Communications synchronizes feeds in real time with absolutely no delay, irrespective of the location or device. Consequently, the fully managed, cloud-based live VDN solution enhances user engagement by making it possible to add a companion screen that enables the audience to share opinions or place bets or watch another screen.

Furthermore, the company has partnered with software service providers for its software suite that enables content to be distributed and monetized with a whole suite of apps needed to launch a branded OTT service. This partnership

also allows Tata communications to leverage its depth of its software development expertise and apply it to customers in different sets of use cases. With its own in-house network and data centers, the company is able to offer end-to-end dedicated service 24×7×365 and a flexible pricing model that fits business needs. On top of the twice-as-large expertise—in getting the logistics of the video on time, in the right format and at the right place, alongside a software stack that makes it easy for its customers to monetize content through subscription, pay-per-view or subscription models—this arrangement offers the added advantage of securing a single service relationship for all processes in the value chain.

CALL TO ACTION

Frost & Sullivan has put together a list of questions that can help a service provider evaluate its OTT distribution strategy. If you answer 'yes' to any of the questions below, you need to consider a highly scalable, quick to launch and market, as well as zero-failure managed service provider.

	Yes	No
Do you have plans of launching an OTT service or expanding your current service in the near future for more than half a million viewers?	☐	☐
Are you looking for a ready to launch platform for your OTT channel?	☐	☐
Is your current OTT delivery model needs to scale to cater to growing global demand?	☐	☐
Does your organization lack in-house technological expertise?	☐	☐
Do you offer live streaming of sports or events?	☐	☐
Do you have other infrastructure needs around digital channels – Cloud storage, Playout, Workflow management etc.?	☐	☐

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