

The State of OTT 2023

Technologies & Key Trends Impacting Over-The-Top Media Brands





Introduction

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<u>even out of every ten</u> Americans are over-the-top (OTT) media consumers. For a relatively new industry, that's impressive.

And in the 13+ years that GlobalLogic has been creating solutions for brands throughout the OTT ecosystem, we have seen the industry become increasingly global.

The global OTT video market - \$238 billion in 2021 - is expected to top \$476 billion by 2027. Today, the U.S. accounts for about <u>46%</u> of that global market size.

U.S. companies looking to enter or expand their presence in OTT video should be prepared to think and act globally.

They must be prepared to innovate and move fast. The basic OTT model of getting entertaining content from creators directly to devices where viewers can watch it, all while ensuring appropriate, secure payment, may seem easy enough. However, actually getting it done is vastly complex.

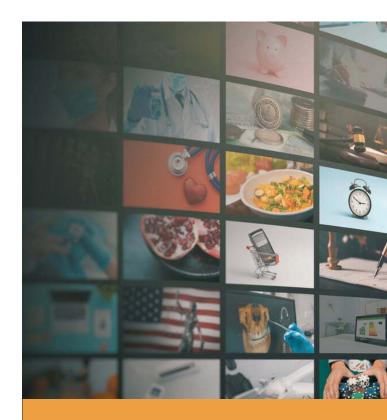
We see countless opportunities to innovate at every step.

We find these in our work with businesses from studios and broadcasters to video and audio streamers, cloud providers, data carriers, and monetization solution providers.

Rapidly changing consumer preferences and evolving technologies are opening doors for entrepreneurs with better ideas every day. Emerging technologies impacting OTT will open even more.

In this paper, we share our perspective on the industry drawn from partnerships at every stage of the OTT video lifecycle.

We'll begin with the consumer. Share your response to this live poll question. Click "Post answer" to see results from industry peers who've responded to the poll before you.



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Current OTT Priorities Among Consumers

Explore this brief snapshot of modern-day consumer priorities.

Consumer tastes change rapidly, especially in combination with evolving technology. Here, we examine a brief snapshot of current consumer priorities.

Superior User Interface and User Experience



user-friendly app interface that provides easy navigation is one of the top current priorities for OTT consumers. Even with an excellent

content library, consumers will abandon a platform if they find it difficult to navigate.

Research shows 60% of users will walk away from an app if their first experience is poor, and <u>80%</u> will uninstall due to ongoing issues.

We have consistently observed that deep experience with not only app development but also user experience (UX) and user interface (UI) optimization is required to meet and exceed customer expectations. 60%

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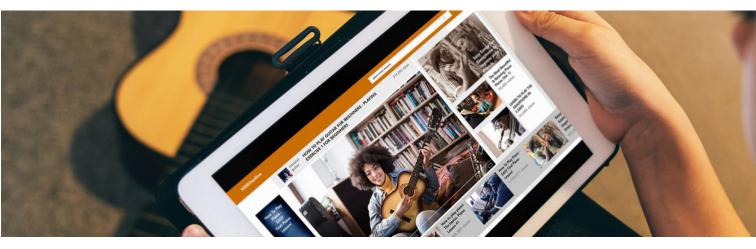
AppDynamics, 2017

Easy Onboarding and Simplified Journey

With consumers trying out new platforms frequently, it is imperative that the onboarding process be quick and easy.

For example, app owners should require only the most essential personal details and permissions in the onboarding process. They should adopt a streamlined and minimalist approach to key features and UI elements.

Similarly, more tech-savvy consumers might not want to be hand-held through the onboarding process, so giving them the option to skip such features adds value.



Previewable App Content

Another way to improve onboarding is to allow users to experience the app before asking them to sign up or taking them on a product tour.

For example, Hotstar previews popular content and lists membership benefits on the very first screen, where they also feature a prominent "free trial" button.

Similarly, Netflix lets users turn off the "Autoplay Previews" option. That means videos and movies won't begin to play trailers or video clips as the consumer is browsing. Netflix functionality allows users to turn this off on every device at once.

Multi-Device Viewership

As consumers expand their viewing habits, they are incorporating an increasing number of devices in regular use. As such, seamless delivery of content on multiple devices is mandatory.

In practical terms, this means that designing and developing OTT applications must include as a fundamental success criterion the ability to deliver a consistent experience across devices, regardless of where the user starts, continues, and ends the journey. Delivering a consistent experience across devices – regardless of where the journey starts, continues, and ends – is fundamental to success.

The Role of Videocasting

A related consequence of the use of multiple devices is that it presents the opportunity to cast video from a smaller device to a larger screen, enhancing the user experience and increasing the perceived value of the app in the eyes of consumers.

Similarly, because multi-device consumers often use mobile devices that may not have continuous high bandwidth connectivity, an important aspect of adding value to the consumer viewing experience is enabling video downloading.

This option enables the user to engage with the app and the content under a wider set of conditions.



Automating QA can deliver up to

80%

savings in effort depending on project state and details.

AppDynamics, 2017

Requirements for Defect Reduction

As the number of consumer devices grows, the varieties of screen resolution and corresponding operating systems grows, as well.

Giving consumers the ability to move seamlessly between devices requires streamers and content creators to test new devices constantly, increasing both the time and costs of deployments and subsequent releases.

We are seeing an increasing number of businesses seeking ways to bring automation to bear in order to go to market faster, cheaper and with more reliability.

One approach is to leverage testing-as-aservice solutions, which provide an automated, technology-enabled testing service that reduces time to market and costs while maintaining quality.



Intuitive User Experiences in Content

With booming growth in the content available on OTT platforms, OTT players seek to differentiate their brand by focusing on ensuring an easy, user-friendly experience for their customers.

The faster and more easily users can access the content they want, the more likely they are to be loyal to the provider. Factors that contribute to increased loyalty include a clear segregation of content types, together with content suggestions that are personalized per user. Providing a variety of content categories such as live content and video on demand (VOD) content also adds value, as does defining clear navigation paths by which to browse content, such as by creating clear sections for premium short-form content.

And, given the global nature of OTT, clear categorization by language is of growing importance.



Key Trends In OTT Technology Today



More than 80% of the TV shows people watch on Netflix are discovered through the platform's recommendation system.



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uch of the technology in play, despite being in early adoption stages in other industries, is relatively well-established in OTT.

Learn about some of the key trends here.

Expanded Use of AI and ML

There is an inflection point arising in OTT. Leveraging data to fuel the insights that artificial intelligence (AI) and machine learning (ML) generate to personalize and monetize content is now essential. Even casual OTT users expect a personalized experience from their interactions.

The Advent of Al-Powered Recommendation Engine

Building a robust recommendation engine is imperative to creating a personalized user experience.

Netflix uses ML and Al algorithms to help go beyond viewers' preconceived notions and find the content they are likely to enjoy but may not have chosen to view.

Increasingly Personalized Upsell and Retention Packages

OTT consumers actively seek personalized services at every stage. Personalization should not be limited to content recommendations but include the entire app user journey.

For example, when users switch between multiple devices while accessing the platform, providers must acquire and analyze the data around that activity to notify the users about upselling and renewal offers.

Growing Use of Cloud Hosting Solutions by Streamers



ecently, we have seen widespread adoption of cloud and cloud-native technologies — especially as leveraged by DevOps — take a higher profile role in content distribution and cost optimization.

This reflects the increased demand placed on businesses that transport OTT data, as more people switch from cable to OTT and the quality of the content (such as video moving from 4K to 8K) increases.

The aggregate effect is to make the network a potential weak spot. Add in the required increases in computational power to handle requests, and broadcasters face great challenges in building scalable video streaming infrastructure.

Cloud-based streaming infrastructure offers broadcasters service continuity and provides a higher quality experience for viewers.

We are seeing many brands — including some of our customers — shifting to OTT cloud video streaming solutions that offer greater flexibility and efficiency at a more affordable price.

Cloud-based OTT hosting is emerging as an affordable option.



Evolutions in Advertising Technology





mong the more marked changes we see across the industry is the spread of a hyper-personalized user experience enabled by

increasingly sophisticated analyses of user behavior.

For example, GlobalLogic implemented an Alpowered analytics platform for a client based on a user behavior prediction of 10+ million subscribers.

Such leading-edge analytics systems enable businesses to get the most useful insights and maximum value from their data. Ad tech does not rely solely on internally available data.

GlobalLogic built a custom data analytics pipeline to integrate with external and internal analytics systems to increase our client's revenue.

It takes a significant amount of data and analysis to provide useful insights.

For example, we assisted one client in **developing a big data recommendation**

GlobalLogic implemented an AI-powered analytics platform based on the userbehavior prediction of

10+ million

engine capable of processing 350 million events daily with a data import time of just fifteen minutes.

Another pivotal evolution in ad technology is in monetization strategies.

Industry giants like Disney and Warner Bros. are moving beyond exclusively subscription video-on-demand (SVOD) and testing the waters with advertising-based video-ondemand (AVOD) options.

For OTT businesses to thrive, they must develop low- and no-cost options for subscribers and rely on advertising revenues to fuel profitability.

Ad-supported streaming content — which includes AVOD, free ad-supported streaming TV (FAST), and owned-and-operated apps has become a necessary and massive opportunity.

Another client sought to develop a real-time advertising exchange. GlobalLogic developed a robust platform capable of processing more than 150 billion advertising requests daily.

We provide complete technical ownership of support of the exchange and implement both feature enhancements on the back-end and the corresponding front-end changes. Real-time bidding became important for another of our clients. In that case, we developed the core components of an advertising solution that enables campaigns across OTT, linear TV, and omnichannel.

The solution works across data management, ad cloud services, an ad mediation server, and ad insights, supporting tailored workflows, device browser targeting, and forecasting tracks.



Ad-Supported Streaming Content in Action

We've seen this play out in various ways within our client base.

For example, one client sought a platform that would constitute a single source of truth for their data.

We built an advertising platform they can use globally to gain complete visibility into ongoing advertising campaigns to meet this need.

The platform connects to 47 APIs, works with 750 employees, and processes 5 terabytes of data daily.

Increasing Advertising Revenue





he growing OTT media market attracts advertising opportunities, and OTT advertising investments are rising. More brands are investing in

OTT advertising by the day.

Critically, these ads will be more targeted and personalized (based on detailed analytics) than previously possible in the OTT framework. GlobalLogic helped a leading US streaming service achieve a 10% improvement in advertising sales.

Experts predict that OTT ad revenue will reach \$119 billion by 2023.



Search

Video On Demand

Checkmate Action/Thriller

Action | Comedy | Thriller | Family | Drama Attorney Medica Guita Action/Thrille Music/Even Prep Ocean ambling The Pills -**C'**> Drama/Comedy HOMI 2 З 5 4 6

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MUTE

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PRE-CH

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TTX/MIX

Key Trends Impacting OTT's Future

The Impact of 5G



hile OTT has already achieved significant market penetration in the U.S., around 3 in 10 potential OTT consumers have not yet

adopted OTT.

Among that group, some have not switched to OTT because they know or suspect they do not have access to the bandwidth that streaming video over the internet requires.

Apps launched by GlobalLogic have engaged

subscribers



As 5G spreads — particularly to areas of the U.S. where physical infrastructure for high-speed connectivity, such as fiber, is not yet available — OTT will come within reach.

The characteristics that make 5G highly anticipated make it well-suited for OTT.

The high bandwidth that 4K and 8K content require is well within 5G specs, and the superior stability of 5G connectivity is ideal for continuous and seamless video streaming.

Even the low latency of 5G helps improve the user experience of interacting with apps.

The Rising Importance of Globalization



he current OTT market already reflects a slightly greater revenue base outside the U.S. than in.

OTT growth globally is likely to increase as connectivity driven by 5G has a greater market impact in developing markets where connectivity is limited. We have already seen the effects of globalization within our customer base.

To cite just one example, there is increased complexity in testing apps when you must incorporate multiple distinct versions of devices targeted at specific geographies and account for the prevalence of some devices only in specific geographies. For example, an iPhone sold in the U.S. market is distinct from the same generation iPhone sold in the European market.

From a content perspective, global versus domestic distribution rights require functionality both server-side and client-side, as well as support for both from infrastructure, to ensure you do not run afoul of distribution restrictions by geography. We expect that new entrants to the OTT market will likely follow the lead of giants such as Netflix by first operating exclusively in the U.S. However, that will not prove a sustainable model for long-term growth.

OTT is an irreversibly and increasingly global market.

Complexity increases significantly in app testing when you incorporate multiple distinct versions of devices targeted at specific geographies.

Growth of Streaming Audio

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udio streaming is gaining momentum. The global music streaming market size was valued at \$29.45 billion in 2021 and is

expected to expand at a compound annual growth rate (CAGR) of 14.7% from 2022 to 2030.

Music streaming apps are becoming more accessible, and audiences have an increasing variety of platform options. GlobalLogic developed OTT applications on various platforms for one of the largest US radio companies with a base exceeding **40 million registered users** and **260 million app downloads**.

GlobalLogic develops OTT applications on various platforms for one of the largest U.S. radio companies, with a user base exceeding 40 million registered users and 260 million app downloads.

In addition to music streaming, audio capabilities will grow in such forms as voice recognition features and smart speakers in OTT applications.



Conclusion

OTT is a fast-growing and rapidly innovating industry that offers an abundance of opportunities for innovative businesses. Even in a relatively early ramp-up phase, there are established and proven business models and success stories to validate the industry's viability.

The field is not yet so crowded that new entrants face overwhelming obstacles, and even established players have tremendous expansion potential.

We have seen OTT businesses take a variety of paths to success.

In addition to having a clear vision of the mark they wish to make, the most important criterion for success is choosing the right partner.



A partner must have exceptional technical expertise in creating OTT technologies and solutions with a robust global launch platform.

They need OTT experience that spans from content creation to content consumption and should be able to demonstrate a track record of custom, end-to-end platform development. Above all, look for a profound understanding of the ways they can help you achieve success.

To learn more or to speak with one of our own experts, please reach out to info@globallogic.com.

680+ OTT-dedicated engineers
200+ OTT applications launched
1400+ applications certified
20+ active OTT clients

We offer more than 20 years of experience in software product development and engineering services.

GlobalLogic helps some of the world's leading media streaming and VOD companies create world-class media experiences, accelerate new product development, and capture new revenue streams.

Over 680 OTT-dedicated engineers from GlobalLogic have contributed to 200+ OTT applications launched and 1400+ applications certified for 20+ active OTT clients.

Explore available services, find case studies, and meet members of our expert team at GlobalLogic.com.

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