



# Conviva's State of Streaming

#### The State of Streaming: As the Market Matures, Complexities Arise

The maturation of the streaming market is making success—and how we measure it—much more complex.

This means the streaming market requires a thoughtful approach to delivering a great experience to every user regardless of the device they are viewing. Consumers now expect nothing less than a high resolution and smooth playback experience at all times. Detection and root-cause identification of any barriers to an excellent experience is more challenging than ever due to the complexity of today's streaming technology ecosystem. Diverse mobile-connected TV devices and associated video/app tech stacks, sophisticated cloud-based media preparation, content distribution, and advertising tech stacks all can contribute to more microscopic and subtle failure modes. Additionally, experience goes beyond just the quality of the stream. It's also the ads that are served and the content published on social media. A strategic streaming TV publisher needs to consider every consumer touchpoint to content. Without a solution that allows them to measure and act upon problems occurring in real time, it's hard to execute a thoughtful strategy.

This report analyzes the state of streaming in the second quarter of 2022, including a closer look at what's happening in streaming viewership, device segments, ads and more. It's based on data primarily collected using Conviva's proprietary sensor technology, which covers a global footprint of more than 500 million unique viewers watching 200 billion streams per year across nearly four billion device applications. Embedded directly within streaming video applications, Conviva's sensor measures content and ads to analyze nearly three trillion real-time transactions per day.

This State of Streaming report compares Q2 2022 data against Q2 2021 on a carefully cleaned, normalized, and aggregated basis. Common themes that emerged in this period include:

**Bitrates are rising.** Average bitrate increased universally across all regions, screen types, and top devices. Publishers are responding to customer demand for higher quality by releasing more of their content with all of the bells and whistles such as 4K, HDR and spatial audio. This increasingly includes prestige serial content, which has historically sat out the quality arms race. These trends continue to push up bitrates, sometimes at the expense of other Quality of Experience (QoE) metrics such as video start time. To balance the competing demands of providing high quality, feature-rich content while supporting a TV-like quality of experience for all viewers (not to mention containing delivery costs), publishers are adopting ever-more-sophisticated encoding and delivery optimization strategies.

The global growth of streaming is starting to mirror device adoption trends in the smart phone market. Lower-cost Android devices are surging in popularity as the streaming device of choice for markets outside of North America. We're at a tipping point for Android vs. iPhone as Android Phone global streaming hours will likely soon surpass iPhone. Given the wide spectrum of hardware capabilities among Android devices and this segment's increasing importance to bottom lines as publishers eye international expansion, any encoding strategy must be mature enough to support this diversity. And the measurement solution must provide the granularity to diagnose when something goes wrong on an obscure device model.

**Streaming ads aren't going anywhere.** Advertising is becoming a ubiquitous presence in most streaming services. The lines between S-VOD and A-VOD are becoming increasingly blurred, with many publishers embracing hybrid monetization models and offering a broader range of packages and pricing to meet consumer demand.

#### Smart TVs continue to be the fastest-growing device segment in every region of the world. More

viewers are watching more content for longer periods of time from living-room devices. Among those devices, streaming engagement is growing faster on Smart TVs than on dedicated devices and gaming consoles. As more manufacturers are building streaming apps into their TV operating systems, customers are responding to the cost savings and convenience by forgoing or neglecting additional devices.

Against the backdrop of a maturing streaming media industry and these emerging themes, how businesses put their data to work also gets more challenging each year. It's changed the definition of what it really means to be data driven. Big-data dynamics, AI automation, global pandemic and all the other relentless trends have created a state where businesses are perpetually required to turn on a dime. Event-based, after-the-fact alerting solutions have become obsolete in favor of continuous real-time monitoring. This allows publishers to analyze the experience of a viewer's stream while their session is still active. This evolved process sessionizes streaming events, state timelines, and metadata into viewer-level sessions to more accurately reflect the viewer's real-world experience. Ultimately, it comes down to how (and how fast) we make sense of Internet-scale data to enable decisions and actions that businesses depend on.

This means you need a streaming analytics solution capable of:

- Transforming data points from trillions of events across billions of applications into immediate, actionable insights delivered quickly and perpetually
- Guaranteeing a full and accurate picture across complete experiences based on sessionized data vs. a collection of data points
- Ensuring your data is trustworthy, which means clean, enriched and standardized and that everyone in your organization and ecosystem has access and is driving insights based on the same information

Industry leaders understand that getting this right can mean the difference between adding and churning subscribers, profit and loss, and winning and losing the streaming wars.

#### **Q2 Highlights**

It's no secret that the second quarter of 2020 was a turning point for streaming TV. Streaming accelerated to extreme heights due to global lockdowns during the early days of the pandemic. These trends have become permanent, and streaming is now a standard fixture in consumers' homes.

On the second anniversary of the quarter that changed the world, we continue to see year over year streaming viewing time increase on a global scale. All regions of the world saw increased viewing time, although not as drastically as in previous quarters. And while growth is good for the industry, other metrics show that streaming success is becoming more complicated.

#### Highlights include:

- **Streaming growth continues.** Global streaming viewing time was up 14%. Asia and LATAM charted the largest growth at 90% and 70%, respectively. Even North America, the most mature streaming marketing in the world, increased viewing by 5%, a percentage identical to the first quarter of 2022.
- **Bitrate continues to rise globally.** This phenomenon has happened at the expense of video start time (VST). Bitrate was the sole QoE metric that was up consistently across all regions, all screen types, and all top devices.
- **Big screens remain the streaming device of choice.** In fact, they capture nearly 77% of all streaming viewing hours worldwide. Smart TVs posted the highest increase in viewing hours year over year for all device types.
- Android TV viewing is surging. Android TVs are a top-five device in five of the six major streaming TV markets and saw an 81.9% increase in viewing hours year over year. Android TV CTVs have enabled the smaller OEMs to compete more effectively against Samsung and LG.
- Android Phones rival iPhone viewing. There is less than 3% difference in share of total viewing hours on mobile devices between iPhone and Android phones globally. While iPhone still leads, Android phone increased their viewing hours at a much faster rate 24.9% (Android) vs 15.9% (iPhone) year over year.
- **Roku remains the most popular device in the world.** This is due to massive North American market share, with Roku claiming a 23.1% share of all devices globally and 30.5% of all big-screen viewing.
- **Gaming consoles continue to see decline in streaming hours.** This is despite ongoing hardware advantages and consistent improvement in QoE metrics.
- Ads are here to stay. As streaming services around the world continue to announce adsupported plans, existing streaming providers increased their ad impressions by 25% and reduced missed-ad opportunities by 35%.
- Streaming publishers are leaning into social media. They continued to push for a 360 degree marketing approach as they increased content output on social media significantly compared to the previous year.

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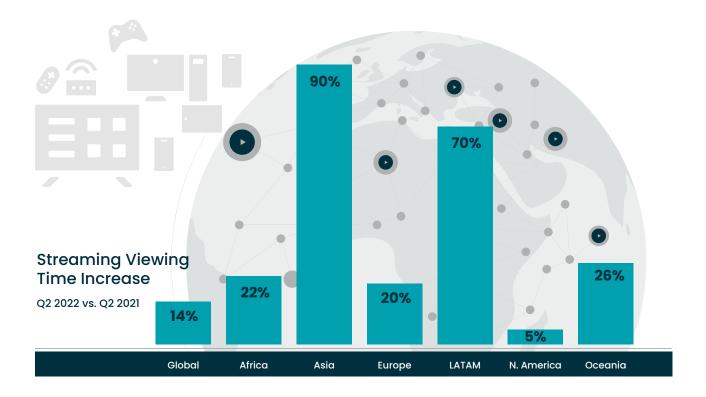
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#### **Mature Streaming Market Produces Moderate Gains**

Streaming rose 14% globally, the most year over year since the first quarter of 2021. Asia saw the largest year over year increase at 90%. LATAM saw the second biggest increase at 70%, followed by Oceania at 26% and Africa at 22%.

North America, which has seen single-digit growth for the past year, continued that trend with a modest 5% increase in streaming viewing hours. Europe was up slightly compared to last quarter at 20%.

These year over year numbers come two years after the largest increase in streaming hours globally ever recorded during the beginning of the pandemic. These consistent growth numbers in places like America and Europe show a maturing marketplace while Asia, LATAM, Africa, and Oceania provide massive growth opportunities.



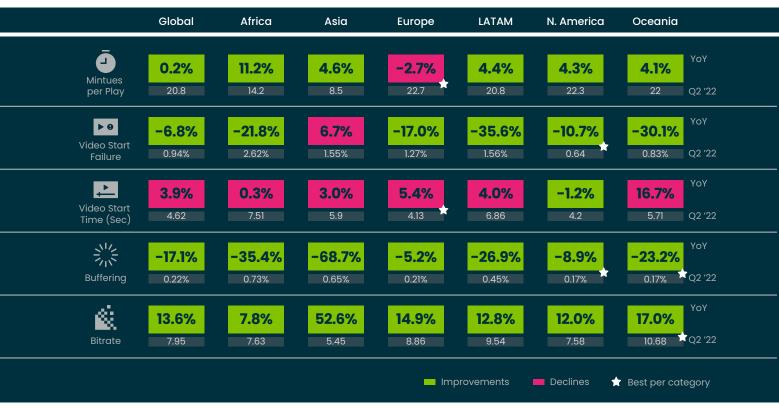
### **Global Quality Analysis**

Quality metrics were a mixed bag. While improvements were made across the board for all regions in buffering and bitrate, it was the opposite for video start time (VST).

Birate showed substantial improvements in all regions. Oceania led the category with an impressive 10.68 followed by LATAM with 9.54 and Europe at 7.58. Asia, which boasts the largest percentage of mobile streaming hours, had the lowest average bitrate at 5.45.

Bitrate's increase didn't come without a cost. On average, VST increased in all regions outside North America where it saw a decrease of -1.2% to 4.2 seconds. Europe provided the fastest video start time at 4.13 seconds, followed by North America at 4.2. Africa and LATAM viewers deal with the longest VST at 7.51 and 6.86 seconds respectively. Buffering also saw noticeable improvements across the board. North America and Oceania tied for lowest buffering rate at .17% while Asia showed the biggest improvement bringing their buffering rate down -68.7% to .65%. Africa improved the second most down -35.4% year over year but still lead all regions at .73%.

The average minutes per play globally was 20.8, bested by Europe, which posted a category best of 22.7 min/play. North America came in at 22.3, and Oceania at 22.



#### Global Quality Analysis by Region

Benchmarks and YoY change | Q2 2022 vs Q2 2021

#### **How the World Streams**

The majority of the world's streaming hours happen on big screens, but every region does it a little bit differently. Globally, Smart TVs, Connected TV devices and Gaming Consoles totaled 76.7% of all viewing hours. Mobile phones captured the third-largest share by device at 11.3% globally, followed by desktops at 7.1%, gaming consoles at 6.8%, and tablets at 4.8%.

North America tallied the largest share of big-screen viewing at 82.1% with both Smart TVs and Connected TV devices tied for market share at 37.6%. North America also boasted the highest share of viewing hours of connected TV Devices and the smallest share of desktop streaming.

LATAM ranked second in big-screen TV viewing, with Smart TVs capturing the largest share at 43.3%. Interestingly, LATAM ranked last among connected TV device viewing share when comparing all regions, with a share of 22.7%. LATAM also ranked ahead of the global average for share on mobile devices and desktop computers at 15.7% and 10.9% respectively.

Europe's biggest share of viewing occurred on connected TV devices, which charted at 32.8%. The region also streamed more on tablets than any other region, with an industry high of 9.5% share of viewing.

Oceania was the only region that had double-digit share in five different screen-type categories. Oceania was also the only region to have more than 10% of their viewing hours in game consoles at 11.3%.

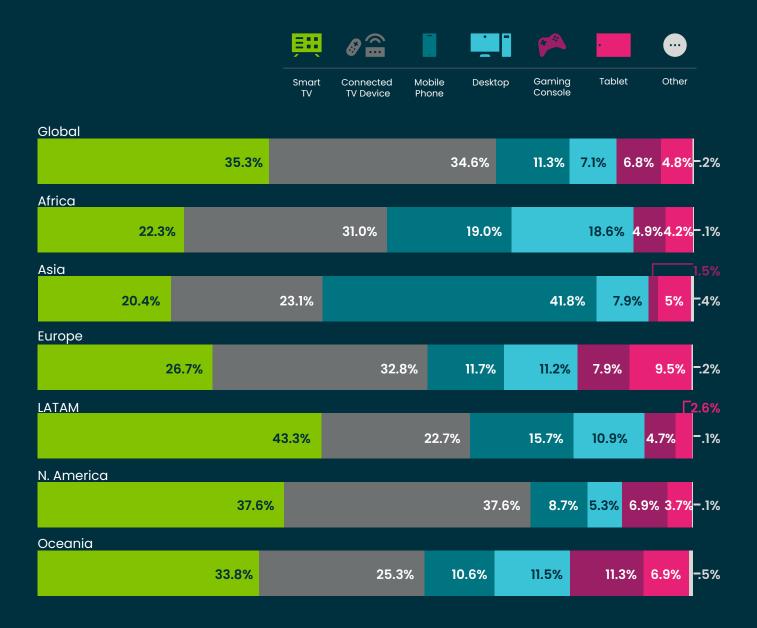
Africa had one of the most evenly distributed screen share results, with a near-equal share for mobile phones and desktop computers at 19%. Connected TV devices were the most popular device for streaming in the region at 31% share. Notably, Africa had the largest share of streaming on desktop computers at 18.6% compared to all other regions.

Asia, most notably, was the only region where the majority of streaming did not occur on big-screen devices. Mobile phones, tablets, and desktops accounted for 54.7% of all streaming hours in the region, which included an industry high of 41.8% of streaming hours on mobile devices. Asia also accounted for an industry low of 20.4% of streaming hours from Smart TVs.



#### Global and Regional Share of Viewing Time by Device

Q2 2022 vs. Q2 2021

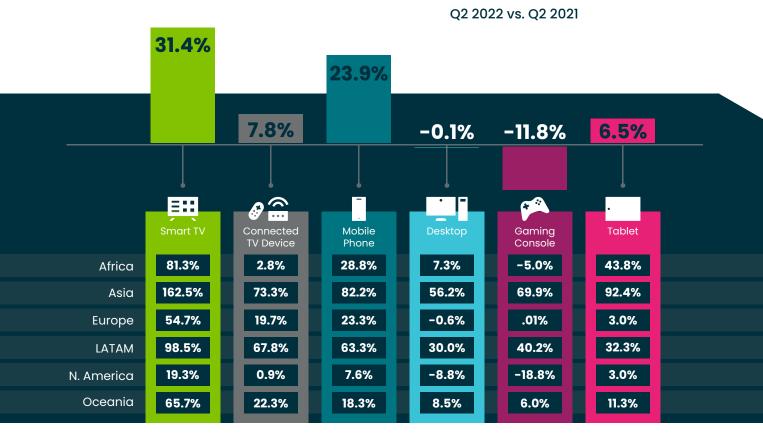


#### **Smart TVs Continue Their Global Takeover**

Smart TVs continued to be the fastest-growing screen type for all regions of the world for the eighth quarter in a row, up 31.4% globally year over year. Asia, which has long been a mobile-first region for streaming, is on the brink of losing that designation as Smart TV's increased their viewing time by over 162% in the past year.

Following not far behind Smart TVs were mobile phones, up the second-most globally year over year at 23.9%, driven by strong growth in Asia and LATAM. Connected TV devices grew 7.8%, driven by strong growth in Asia and LATAM and moderate growth in Oceania and Europe. Interestingly, Africa, which garnered the highest share of viewing from connected TV devices, only saw 2.8% growth in that area as many Africans substantially increased their time spent streaming on Smart TVs, mobile phones, and tablets.

Tablets charted moderate growth globally with a 6.5% increase year over year led by Africa, Asia, and LATAM. Desktops and gaming consoles both saw declines globally as North America shifted away from devices that require more steps to stream. North America wasn't alone in its shift away from gaming consoles. Africa and Europe both spent less time using those devices to stream compared to a year ago with declines at -5%. Ultimately, consumers are opting for devices that provide increased convenience when streaming and OEMs are capitalizing by providing more TVs with built-in streaming capabilities at low price points.



#### Global YoY Change in Viewing Time by Screen Type



#### It's All About the Bits, Device Quality Analysis

When analyzing screen-type QoE, Smart TVs led the pack. Smart TVs saw the largest increase in bitrate for all screen types at 15.1% and provided the highest-quality streaming experience with an average bitrate of 9.76. This increase has been driven by publishers responding to customer demand for higher quality by releasing more of their content with all the bells and whistles, such as 4K, HDR, and spatial audio. In some cases, these increases in bitrate have outpaced the performance of the hardware and led to degradation in other experience metrics such as video start failures, start time and buffering. These degradations increase the risk of a poor streaming experience to anyone who experiences them.

Big screens, which includes gaming consoles, CTV devices and longest-average minutes per play, with each hovering in the high 20s. Tablets, gaming consoles, and desktop saw unanimous increases in all QoE metrics while mobile phones and connected TV devices saw improvements in VSF, buffering, and bitrate. Increases in VST was the most consistent problem seen across most screens.

#### **To Each Their Own Devices**

When it comes to total global streaming hours, there is no device that comes close to Roku. Its massive North American market share firmly placed it at the top of the global device leaderboard. However, it isn't a top-five device in any other market.

Amazon Fire captured the second spot on the global device leaderboard at 12.1% with a top-five device ranking in Europe, North America, and Asia. Samsung TV captured the third-most streaming hours globally with a 10.4% share of hours viewed. The Smart TV has wide global penetration, taking a top-five spot in all regions except Asia. Samsung TV was also the only device to be the number-one device in more than one region. While only at about half the viewing hours of Samsung, LG TV, in the 6th place globally, was a top 5 device in 3 major markets.

For most regions, living room devices dominate the rankings of engagement share—except for in Asia. Android Phone ranked #1 by a wide margin in Asia, whereas no phone is higher than #4 for any other region. However, it wasn't just Android phones that found success in Asia. Android, as an operating system for mobile devices, STBs, and Connected TVs, has more than 50% of the viewing hours recorded in Asia in Q2 of 2022. Further, more than 20% of the viewing share in Africa and 25% of LATAM was from Android devices. Android TVs were also the top device in Oceania at 13.9%.

It wasn't just Android that found success globally. Apple devices captured 3 of the top 10 spots with iPhones in 5th at 5.8%, Apple TV in 9th at 3.6% and Apple iPad in 10th at 3.3%.

Linux set-top boxes, which include a variety of Linux-based connected TV devices, were the numberone device in Africa at a 18.3% share in the region followed by PCs at a 14.6% share. Their usage of PCs for streaming was more than any other region in the world.

LATAM's top devices firmly plant them ahead of all other regions in Smart TV streaming viewing share. Their top 3 devices Samsung TV, Android TV, and LG TV totaled nearly 45% of all streaming hours in the region.

Interestingly, no region shared the same top 5 devices. For publishers, these differences in devices reflects the complexity of optimizing for new markets as they look to expand and grow subscribers in new territories. For device manufactures and platforms like Roku, these differences represent at best exciting opportunities or at worst, costly missed opportunities.



Top Devices Sha	Smart		hected Device	Mobile Phone		Desktop	, ,	Gam	ning Tablet	Other	
Global											
ØÂ	Ø 🔒	Ē	興		興			Ø 🔒			
Roкu	firetv	SAMSUNG	androidtv	ć	🕒 LG	<u>~~</u>	РС	<b>ć</b> tv	ć		
23.1	12.1	10.4	5.9	5.8	5.5	5.3	4.7	3.6	3.3	20.3	%

### Top 5 Devices Share by Region

Afric	a	
1.	Linux STB	18.3%
2.	PC	14.6%
3.	Android TV	11.5%
4.	Samsung TV	10.1%
5.	Android Phone	9.4%

Asia		
1.	Android Phone	33.9%
2.	Android TV	22.2%
3.	Amazon Fire TV	8.9%
4.	Apple iPhone	6.8%
5.	PC	6.0%

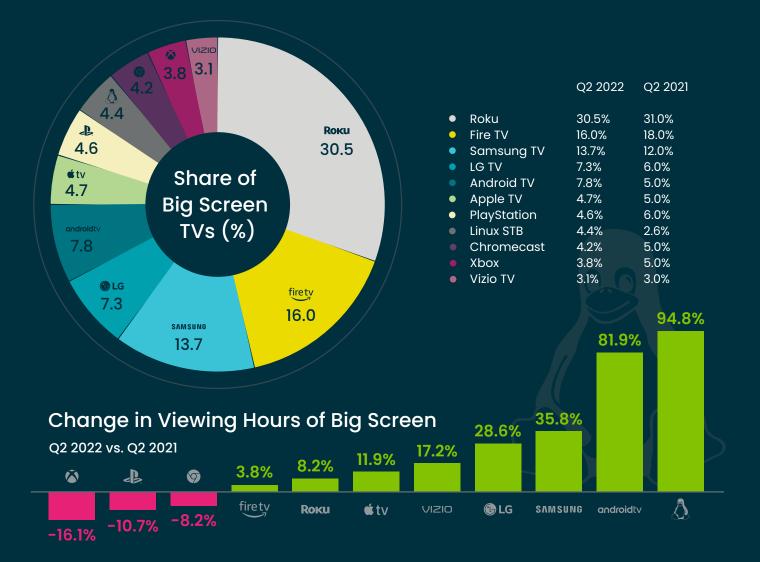
LAT	АМ	<b>F</b>
1.	Samsung TV	17.9%
2.	Android TV	13.6%
3.	LG TV	13.3%
4.	Android Phone	12.2%
5.	PC	9.4%

N. Ai	merica	
1.	Roku	32.6%
2.	Amazon Fire TV	14.5%
3.	Samsung TV	9.0%
4.	Apple iPhone	5.9%
5.	LG TV	4.2%

Euro	ope	₩ <sup>4</sup> ₩
1.	Samsung TV	13.0%
2.	Amazon Fire TV	9.1%
3.	Android TV	8.7%
4.	Linux STB	9.0%
5.	LG TV	7.1%

Oce	ania	
1.	Android TV	13.9%
2.	Chromecast	12.0%
3.	Samsung TV	11.8%
4.	Apple iPhone	6.7%
5.	Apple TV	6.1%

#### **Big Screen Device Divide: It's Getting More Competitive**



How did big-screen market share change over the previous second quarter on a global scale? Roku continued to hold the top spot among big screen devices globally, holding nearly steady at 30.5% of viewing time, down only .5% compared to the previous year.

Amazon Fire TV decreased by 2% to 16% but managed to maintain the second spot globally, after Roku. Samsung TV, LG TV, and Android TV rounded out the top-five big screens. Each saw noticeable gains, as Samsung TV was up 1.% from last year to 13.7% share, Android TV was up a noteworthy 2.8% to 7.8% share, and LG TV was up 1.3% to 7.3% share.

Android TV saw the most significant gain in market share of the contenders thanks to an increase of 81.9% in viewing hours compared to the previous year. The only other big screen to see similar percentage improvement in viewing hours was Linux STB, which captured a 4.4% share of streaming hours, up from 2.6% a year ago. Chromecast, Xbox, and PlayStation all saw a decrease in share and a decrease in hours viewed compared to the previous year.

### Big Screens, Bitrates, and Buffering, Oh My

Like most quarters, the second quarter of 2022 showered some improvements and declines when it came to quality. Every device saw improvements in bitrate compared to the previous quarter. However, most big screen devices did so while sacrificing gains in VST.

PlayStation and Roku were the only big-screen devices to improve in both VST, down -10.7% and -12% respectively, and bitrate, up 4.6% and 12.9%. Improvements in Video Start Failure and buffering were varied, as roughly half of big screen devices improved while half saw an increase in VSFs and buffering.

Chromecast once again led all devices in average minutes per play at 34.5 minutes. Chromecast was the only device to break the 30-minute mark, on average, with Roku devices coming in second at 28.8 minutes per play on average.

Roku had the lowest percentage of VSF at .31% followed by Xboxes, PlayStations and LG TV at.51%, .52% and .52%, respectively. Android TVs were the only big-screen device to record a VSF average over 1% at 1.51%. As the Android TV market share increases, it will become incredibly important for streaming publishers to improve this metric. Apple TV had the fastest VST at 2.89 seconds followed by Roku at 3.09 seconds. LG TV, which charted the highest-average bitrate for big-screen devices at 11.39, also had the longest average VST at 7.33 seconds.

	firety	androidtv	€tv	9	🕒 LG		Rоки	SAMSUNG		٨	
Mintues per Play	0.8%	-3.8%	-1.2%	-0.7%	0%	-2.5%	2.7%	2.7%	7.2%	1.4%	ΥοΥ
• p ,	26.4	20.8	24.4	34.5	27.6	26.6	28.8	27.1	27.1	26.3	Q2 '22
▶ 9 VSF	17.6%	7.2%	15.3%	-7.2%	-28.7%	-34.1%	-14.5%	9.6%	4.0%	-18.1%	ΥοΥ
	0.9%	1.5%	0.8%	0.7%	0.5%	0.5%	0.3%	0.6%	1.0%	0.5%	Q2 ′22
VST (Sec)	7.8%	19.3%	4.2%	15.2%	23.7%	-10.7%	-12.0%	17.1%	18.9%	13.6%	ΥοΥ
	5.3	5.3	2.9	6.5	7.3	3.5	3.1	5.8	5.7	4.8	Q2 ′22
Buffering	-11.8%	-6.7%	-12.6%	2.3%	45.2%	-31.7%	-14.9%	32.3%	-42.1%	35.8%	
	0.2%	0.3%	0.1%	0.3%	0.3%	0.9%	0.1%	0.2%	0.1%	0.1%	Q2 ′22
Bitrate	11.2%	17.9%	9.2%	30.6%	8.8%	4.6%	12.9%	12.3%	5.1%	7.9%	ΥοΥ
	8.4	10.1	9.7	8.3	11.4	8.6	7.9	10.3	8.0	8.3	Q2 ′22
Big Screen Device											
						eriend	<b>ce</b> ବ	2 2022	*	Declines Best per d	category

#### It's High Noon for the Android vs. Apple Showdown

In previous quarters, the iPhone has been the primary device for mobile streaming. That might not be the case later this year. With the iPhone and Android phones capturing very similar market share, 35.8% vs 33.2%, the Android phone is seeing the fastest growth. Android phones outpaced iPhone in year over year growth in viewing hours by 9%.

For QoE, the iPhone will remain the premier mobile streaming device. It currently bests Android phones in every QoE category, including minutes per play. But as streaming publishers expand into newer, less mature streaming markets outside North America, it will be increasingly important to optimize streaming experience for a fragmented Android mobile device market.

Mobile Device Change in Viewing Hours

Apple Android iPhone Phone

24.9%

#### Global Mobile Device Share of Viewing Hours | Q2 2022 vs. Q2 2021

<b></b>		1	100% scale				
35.8%		33.2%	Android Phone	20.8%	Apple iPad	6.1%	<b>2</b> .5%
	Apple iPhone 🔳 And	Iroid Phone 🔳 Apple iPo	ad 🔳 Android Tablet 🔳 🖉	Amazon Fire Tal	olet 🔳 Other		1.7%

#### Mobile Device Quality of Experience

🗾 Improvements 📕 Declines 忙 Best per category

1.7%

Amazon

Fire Tablet

8.8%

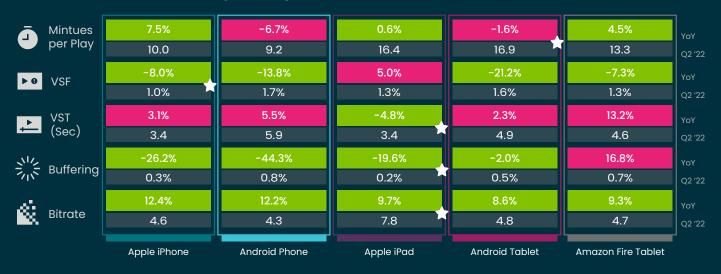
Android

Tablet

5.7%

Apple iPad 13.9%

Other



#### **Live Streaming Optimizes for Experience**

_						Share —				
		<b>%</b> .8% ase	<b>79%</b> 13.5% Increase							
0	Global		lity by		ntont .	Type		— • Li	ve 🎴 On [	Demand
(									5.1	
	Minute	s/Play	Video Start	Failures	Video Sto	art lime	Buffe	ering	Bitro	ate
Live	0.2%	28.8	-0.5%	0.9%	-3.5%	3.1	-18.4%	0.2%	15.6%	6.1
	YoY	Q2 2022	ΥοΥ	Q2 2022	YoY	Q2 2022	YoY	Q2 2022	YoY	Q2 2022
Or Demana	0.00/	19.4	-32.8%	1.2%	5.0%	4.9	-11.2%	0.2%	13.3%	8.4
									Improve	ments

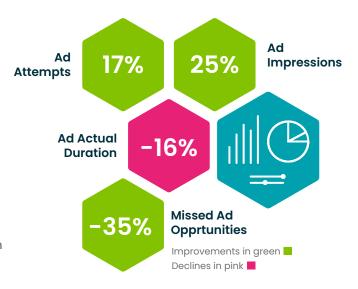
Video on demand content dominates streaming. Nearly four-fifths of all content streamed can be considered VOD. This isn't a surprise, and it isn't news. The on-demand aspect has been a driving factor for streaming for some time now.

However, as streaming services fight to differentiate themselves and capture new subscribers, there will be an increased focus on live content moving forward. Live streaming content more closely represents what viewers are accustomed to with linear TV, and their expectations are similar. VST for live content is significantly faster than VOD content. Whereas streaming providers may sacrifice VST for other forms of quality, we see the opposite for live content. The increasing drives towards low latency live streaming also limits the options publishers have to increase VST in order to optimize other experience metrics.

Viewers expect different experiences from these two very different types of content. This requires streaming publishers to leverage two different strategies to maximize the customer experience. Live content needs to be delivered fast with as little buffering as possible, and VOD content needs to look like a HD movie.

## Streaming Ads are Here to Stay

With nearly every major streaming service announcing an ad-supported option over the past year, it's no surprise to see existing streamers serving more ads than ever before. Compared to the first quarter of 2022, there were 25% more ad impressions recorded this quarter. Advertisers are also opting for shorter ads. We recorded a 16% decrease in ad duration between the first and second quarters of 2022.



#### **Streaming Videos are Social Videos**

Streaming video publishers are producing more content than ever and not just on streaming platforms. Video publishing is up on every major social platform compared to the previous year. Instagram, with its new focus on video content, saw the largest percentage growth in videos published. Streaming publishers also enjoyed continued and dramatic audience growth on YouTube compared to the previous year. The social strategies of streaming platforms are increasingly becoming more video focused, with an emphasis placed on unique supporting video crafted just for social channels that isn't cut directly from an episode.

			Total posts	Total videos	Engagements per Video	Audience Growth			
		Cross Platform	-8%	29%	16%	54%			
		Facebook	13%	7%	-24%	71%			
		Instagram	46%	61%	25%	26%			
•		Twitter	-19%	24%	-11%	46%			
<b>Q</b> ==	=	YouTube	N/A	29%	-23%	30%			
		TikTok	N/A	4%	7%	32%			
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18					Conviva's State of Streaming Copyright © 2022 Conviva. All rig				

#### Conclusion

While streaming continues to rise to new heights globally, publishers need to prepare themselves for the complex challenges that lie ahead. Increasing device fragmentation and rising consumer quality expectations combined with a rapidly approaching ad-supported streaming future require a thoughtful approach that includes content, ads, social, and experience.

This includes providing the best experience when it's most important. For longform VOD content watched from the couch, that means improving bitrate. For live content, that means decreasing VST and buffering to provide a similar experience to linear TV. For mobile devices, where bitrate is less important, publishers may want to think about optimizing VST and buffering. As streaming ads become a way of life, optimizing their performance should be a top priority. Outside of streaming, publishers must provide higher-quality adjacent content on social to complete streaming offerings in order to retain customers and reduce churn. These challenges are not new, but they are getting more complex.

#### Methodology

The quarterly State of Streaming series is the largest cross-platform comparison of streaming data measuring ongoing, real-time, sessionized streaming data at Internet-scale.

Data analyzed for the Q2 2022 State of Streaming report was primarily collected from Conviva's unique proprietary sensor technology. Currently embedded in 3.3 billion streaming video applications, it measures in excess of 500 million unique viewers watching 180 billion streams per year and nearly 2 trillion real-time transactions per day across more than 180 countries. The Internet-scale census-measurement is deployed from a full-stack censor that is not sampled, but validated, cleaned, enriched, standardized and sessionized. Continuous, real-time monitoring sessionizes streaming events, state timelines and meta data into viewer-led sessions. This more accurately reflects viewers' real-world experiences.

The social media data, collected from the Streaming Publishers leaderboard list within Conviva Social Insights, consists of data from 100 accounts, over 7,500 million posts, and over 30 million engagements across Facebook, Instagram, Twitter, TikTok and YouTube between Q2 2021 and Q2 2022.

Year-over-year comparisons were normalized at the customer level for accurate representations of industry growth.

#### **Any Questions?**

To learn more, visit www.conviva.com or contact Conviva at pr@conviva.com

**Q2** 2022

#### **About Conviva**

Conviva helps streaming businesses act within seconds of observation to grow their business ahead of the competition. Conviva's leading global streaming analytics platform provides comprehensive, continuous, census-level measurement through realtime, server side sessionization at scale. Using just a single sensor and a single pipeline, its 60+ patent platform enables marketers, advertisers, tech ops, engineering, and customer care teams to acquire, engage, monetize, and retain their audiences. Conviva is dedicated to supporting brands like DAZN, Disney+, Hulu, Paramount+, Peacock, Sky, Sling TV, TED, and WarnerMedia as they unlock the incredible opportunity in streaming media. Today the Conviva platform processes nearly 3 trillion streaming data events daily, supporting more than 500 million unique viewers watching 200 billion streams per year across 4 billion applications streaming on devices.



Conviva's State of Streaming Q2 2022