



Q4

2020

Conviva's State of Streaming

2020, the year when streaming became ubiquitous. While many industries struggled amid the pressures of COVID-19, streaming comparatively flourished. New streaming services emerged from well-established television players, capturing the hearts and minds and dollars of entertainment-starved fans. Social media rose to the occasion in 2020 as well, as organizations waded through murky waters deploying data to stake their beachhead amidst the swells.

- **Steady Viewing Growth:** Time spent streaming grew 44% between Q4 2019 and Q4 2020, led by the smart TV category with a massive 157% year-over-year increase in viewing hours.
- **Big Screens Reign Supreme:** TV screens captured more than 75% of all viewing time in Q4 across connected TV devices, smart TVs, and gaming consoles, while smaller screens waned. This trend lends itself, in part, to increasingly house-bound and less mobile viewers amid the pandemic outbreak in 2020.
- **Growing Confidence in Streaming Ads:** Ad demand rebounded from an early 2020 pandemic-induced nadir and surged towards the end of the year with a 31% increase in ad impressions in a single quarter and overall quality improvements, despite lingering issues leading to 40% of ads resulting in missed opportunities.
- **Requested – Shorter Ads, Delivered – Longer Ads:** The discrepancy between what viewers wanted and what advertisers delivered continued to widen as ad length increased 12% in a single quarter, to 31.49 seconds on average.
- **Audiences Flock to YouTube:** Entertainment, media, brands, and sports accounts herded to YouTube, making it the lone social platform to tally an increase in audience share across all four categories.
- **Falling Social Engagement Rates:** Cross-platform engagement rate showed a significant drop as compared to the previous year with entertainment and brand accounts down 26.2% and 25.8% respectively.
- **Time – The Online Currency:** Longer videos on social media became the norm, with the biggest shift occurring with sports, entertainment, and media accounts on YouTube as average video length increased by 34-60%.
- **More is More for Instagram Engagement:** Instagram's carousel option, including more than one photo or video with a post, garnered the highest average engagements for media, sports, and entertainment and accounts took notice, increasing the share of carousels by 6-10 percentage points.
- **Tracking Pandemic Viewing Globally:** As the year came to a close, multiple regions reached new heights of 3x+ growth while North America growth dipped to new lows, dragging down the global trend.
- **International Disparity in Devices & Quality:** In Q4, viewers enjoyed improvements across all quality of experience categories in four out of six global regions with year-over-year growth in viewing time led by South America, up 257%, and Africa, up 224%, while North America and Asia were both outpaced by the global average, up just 27% and 24% respectively.

Steady Viewing Growth in a Chaotic World

Despite an ever-growing industry, overall streaming consumption has continued to rocket upwards. The time spent streaming spiked 44% between Q4 2019 and Q4 2020. This surge was spurred by smart TV, with a staggering 157% year-over-year increase in viewing hours. During the same time period, connected TV devices finished a distant runner-up but still tallied a robust uptick, up 38%, while gaming consoles netted the least progress of any device category up just 16% in total viewing hours. Growth in viewing time on smaller screens was fueled by tablets, up 47% year over year in Q4, followed by desktop at 27% and mobile phones at 19%.

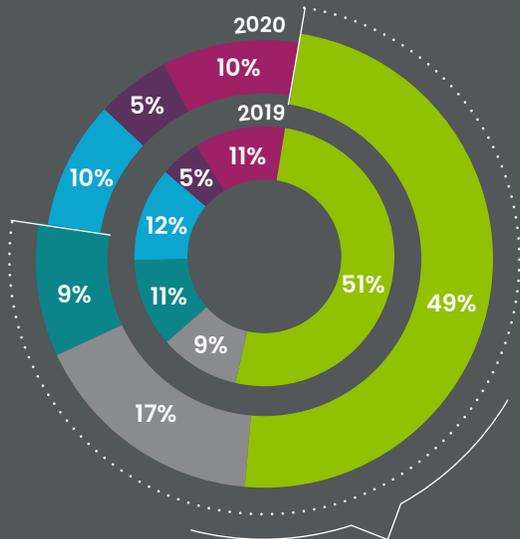
Big Screens Reign Supreme

While mobile phones and desktops dropped in share of viewing time commanded globally, and tablets basically held steady, big screens continued to reign supreme. Within the TV category, connected TV devices, headlined by Roku, Amazon Fire TV, Apple TV, and Chromecast, dominated streaming viewership with nearly 50% share of global viewing time in Q4. Despite maintaining their majority of the market, connected TV devices did uncharacteristically yield some market share for the second quarter in a row, dropping to 49.1% share from 51% share the previous Q4, as the category's 38% growth was outpaced by overall growth at 44%.

Meanwhile, as more viewers watched within their TV's native app rather than via an external device, smart TVs like Samsung, LG, and Vizio gained considerably faster than all other devices. With this exponential growth, smart TVs nearly doubled their share, up to 16.9% from 9.4% the previous Q4. Lagging behind in the big screen category, gaming consoles like Xbox and PlayStation enjoyed the smallest advance, up just 16%, and declining in share to 9.1% of global viewing time from 11.3% during the same time last Q4.

Rule the TV, Rule the World?

From a big picture perspective, Roku has long been the hegemon among streaming devices and continued to dominate with 31% share of all TV viewing in Q4. Amazon Fire TV also retained its place as the silver medalist in TV viewing time with 19% share. The bronze medalist was Samsung TV, which captured more than 10% of all time spent streaming on a TV set in Q4. Despite the November release of PlayStation 5, PlayStation and Xbox remained neck and neck with close to 6% each, while Apple TV, LG TV, and Chromecast rounded out the top five devices, each capturing more than 5% of all TV viewing. Android TV just missed the 5% threshold while Vizio TV tallied nearly 3% of TV viewing time. Among those netting less than 1% share, we note Xfinity XI STB, Humax STB, Sky Q STB, Sagemcom, Panasonic TV, Philips TV, TiVo, Huawei STB, and Sony TV.

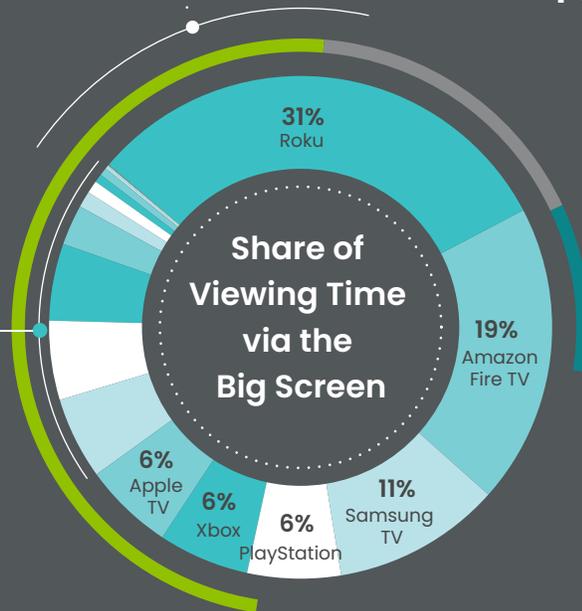


Global Share of Viewing Time by Device

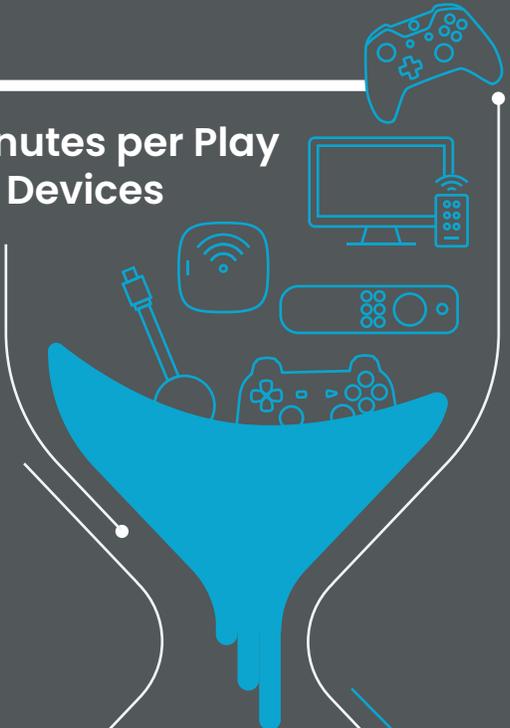
Q4 2020 vs Q4 2019

- Connected TV Device
- Smart TV
- Gaming Console
- Mobile Phones
- Tablet
- Desktop

- LG TV 5%
- Chromecast 5%
- Android TV 5%
- Vizio TV 3%
- Xfinity X1 1%
- Humax 0.8%
- Others 0.6%
- SkyQ 0.5%
- Sagemcom 0.2%
- Philips TV 0.1%
- TiVo 0.04%
- Huawei 0.04%
- Sony TV 0.03%

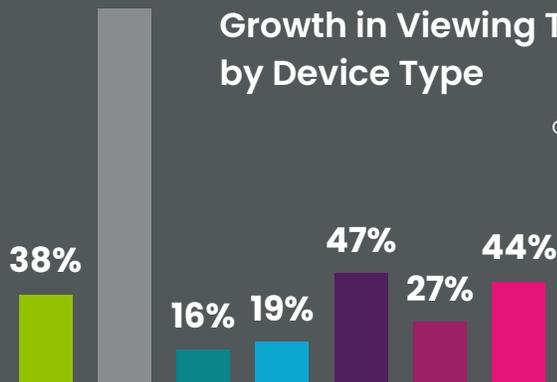


Minutes per Play TV Devices



157%

Growth in Viewing Time by Device Type



- Connected TV Device
- Smart TV
- Gaming Console
- Mobile Phones
- Tablet
- Desktop
- Grand Total

MINUTES

Big Screens, Big Engagement

Televisions encourage a certain commitment from viewers in the way smaller screens do not. While television viewers may multi-task with other devices capturing their attention simultaneously, the draw to navigate away from a program with social media, email, games, shopping, and a litany of other distractions merely a swipe away means handheld devices do not see nearly the same engagement as big screens. Among the top ten big screen devices, viewers watched for an average of 28.7 minutes each time they pressed play. Chromecast received the longest watch time at 35.5 minutes per play, followed closely by Roku at 33.3 minutes per play. At the lower end of the spectrum among big screens, Android TV captured 22.2 minutes per play with Apple TV just slightly higher at 25.7 minutes per play. In contrast, mobile phones tallied just 8.6 minutes per play, tablets 15.7 minutes per play, and desktop 15.3 minutes per play on average in Q4 2020.

Bumpy Quality for Smaller Screens

Overall streaming quality continued to improve in Q4, with 18% higher picture quality, and marginal 1% improvements in video start failures, time spent waiting for buffering, and video start times, however these gains were unevenly experienced by devices. Televisions not only ruled in share, connected TV devices, smart TVs, and gaming consoles also improved in every category for quality of the experience. Among big screens, gaming consoles netted the most progress with 26% less buffering, 12% faster start time, 3% fewer start failures, and 3% higher picture quality.

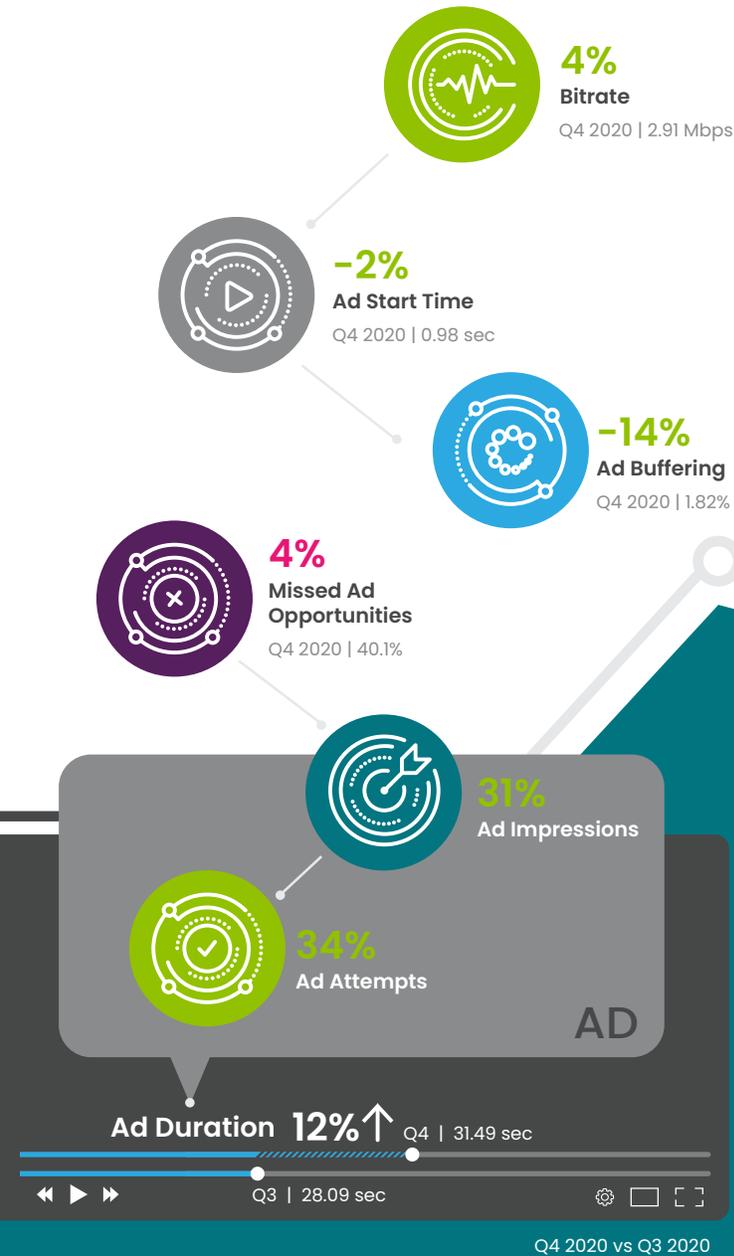
Alas, the same could not be said for handheld and desktop devices which faltered significantly in Q4. Mobile phones lagged behind other devices with the worst setbacks in buffering, up 20%, and video start failures, up 19%, were the only device to experience no improvement in picture quality, and also tallied 5% longer start times. Desktop and tablets also both declined in quality, with increases in buffering and longer start times.



	Desktop	Gaming Console	Mobile Phone	Connected TV Devices	Tablet	Smart TV	Overall
Min/Play	14% 15.3	0% 26.4	0% 8.6	1% 30.0	5% 15.7	-2% 26.6	7% 21.0
Video Start Failures	1% 0.95%	-3% 0.53%	19% 0.90%	-1% 0.41%	-24% 1.40%	-8% 0.72%	-1% 0.73%
Video Start Time	9% 4.71	-12% 4.24	5% 3.60	-8% 4.36	4% 3.87	-2% 4.79	-1% 4.23
Buffering	12% 0.65%	-26% 0.16%	20% 1.14%	-4% 0.22%	13% 0.50%	-10% 0.22%	-1% 0.36%
Bitrate	13% 2.99	3% 6.90	0% 3.52	17% 7.18	21% 5.43	18% 8.68	18% 6.56

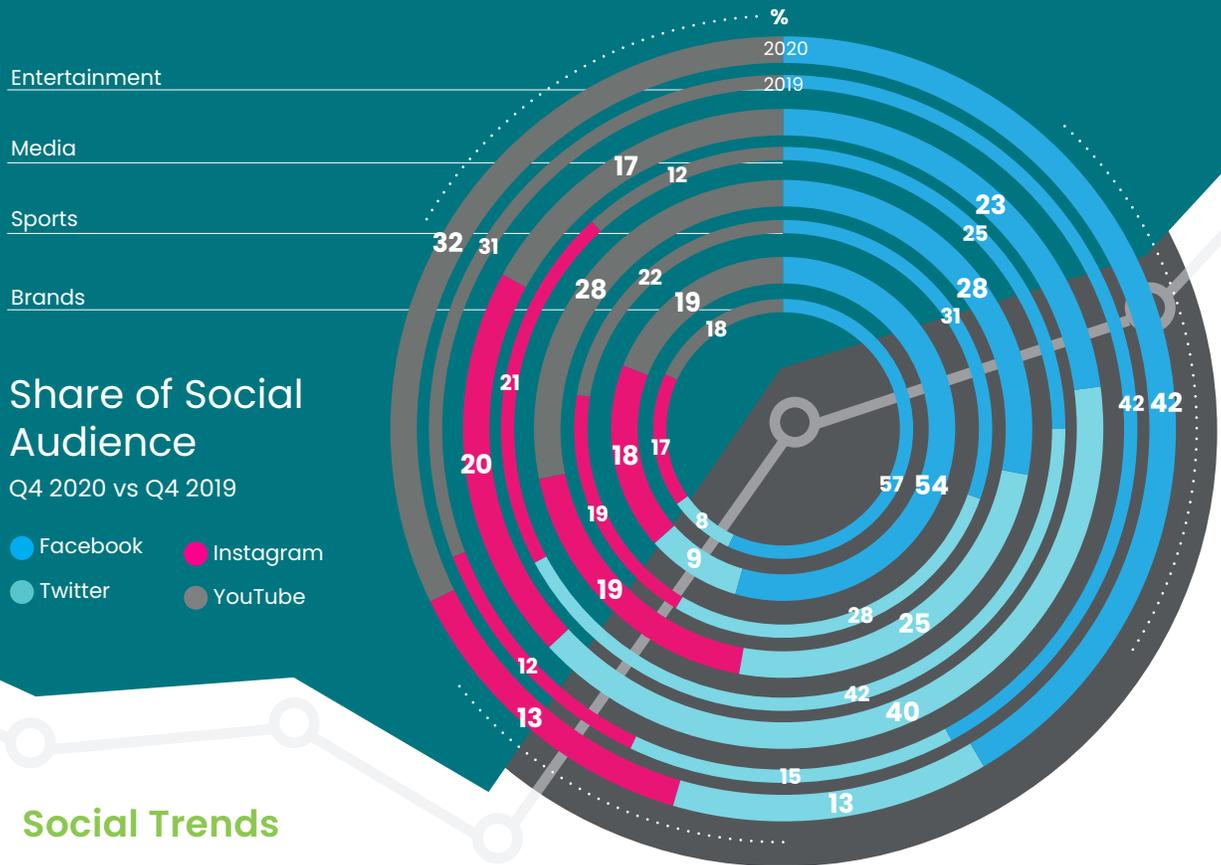
Growing Confidence in Streaming Ads

As more viewers transition to streaming, ad dollars must follow suit. After a rocky year of depressed advertising demand in the wake of COVID-19 pandemic, Q4 indicated significant improvements. Demand surged towards the end of the year with a 34% increase in ad attempts and 31% increase in ad impressions. While quality issues continue to plague advertisers in terms of meeting all available opportunities with 40% of ads not delivered as intended for a 4% increase in missed ad opportunities, the quality of ads that were delivered improved. Viewers appreciated 14% less buffering, 4% higher picture quality, and spent 2% less time waiting for ads to start in Q4 as compared to the previous quarter. Quality issues like long ad start times result in more consumers growing impatient and leaving, as previous research from Conviva has illustrated how just 5 seconds of waiting for an ad to play resulted in 19.24% of the audience abandoning the content.



Requested – Shorter Ads, Delivered – Longer Ads

The divergence between what viewers wanted and what advertisers delivered in Q4 continued to widen when it came to the length of ads. Ad length increased 12% in a single quarter, to 31.49 seconds on average. While the 30-second ad has long been the standard, viewers had high hopes for the promise of 15-second ads on streaming. Instead, we witness the industry moving the opposite direction, with more ads running a full minute or more. Advertisers ignore viewer preferences at their own peril, as the longer the ad, the more viewers will abandon the commercial and subsequent content. As competition mounts and viewer attention wanes, the goal to reduce fatigue and frequency will result in increasingly scarce inventory with which to ensure maximum engagement and monetization of every consumer touchpoint.



Share of Social Audience

Q4 2020 vs Q4 2019

- Facebook
- Instagram
- Twitter
- YouTube

Social Trends

As the endless 2020 drew to a merciful close, social media managers everywhere rejoiced. An eventful year ended after a chaotic United States election cycle and an exhausted public. 2020 was the catalyst for numerous transformations in social media consumption as shown in Conviva's previous State of Streaming reports, where it was found that [YouTube viewing on connected TVs skyrocketed in Q2](#) and [national and local news consumption reached new heights](#) as the pandemic lingered, social justice protests swept the nation, and the election kicked in to high gear. Comparing Q4 2020 to Q4 2019, numerous changes persisted that will set the stage for an active 2021.

Audiences Flock to YouTube

The reliance on social media as a primary news and entertainment source for many worldwide has triggered dramatic shifts in where brands are building and growing their respective audiences. In analyzing four key categories, entertainment, media, brands, and sports accounts, YouTube was the only platform rewarded with an increase in audience (as a percentage of total social audience) for all four categories. Media and sports accounts earned the largest increases in YouTube following with increases of 5% and 5.4% percentage points in share respectively. Meanwhile, brands and entertainment accounts scored more modest gains at 1.3% and 1.5% percentage points in share compared to Q4 2019.

Facebook was the most dominant platform in terms of audience, but this hegemony varied across categories. Sports followers were the most evenly split among all social networks, charting similarly sized audiences on YouTube, Twitter, and Facebook with 25–28% share on each platform. Entertainment and brands ensnared the largest percentage of their followers on Facebook ranging from 42% and 54% share, while media accounts leveraged Twitter for 40% of their audience.

Time – The Online Currency

Today's main online currency is time. And publishers are always pursuing additional ways to transact and capture more time. Now more than ever, social publishers are finding themselves competing with streaming networks, online gaming, and traditional TV for this time. Fueled by the pandemic, social publishers are producing more longer form and series-based content for social media in an effort to retain online viewership and supplement other potential streaming efforts.

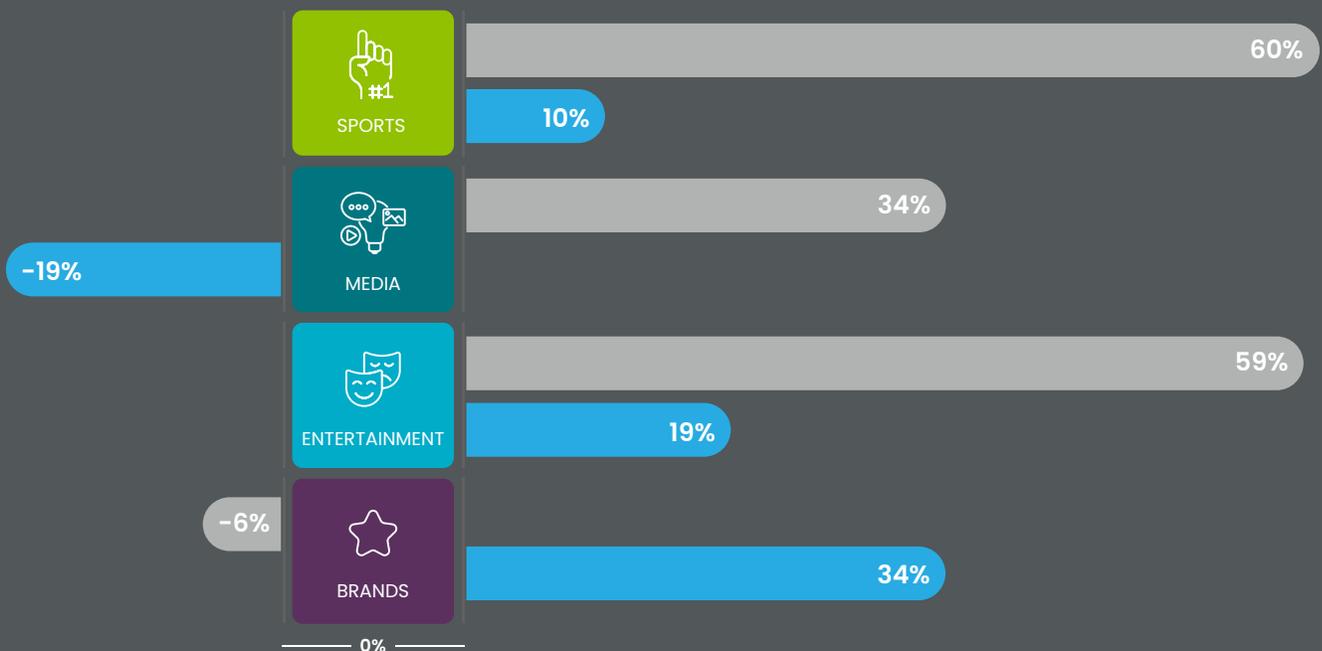
2020 ushered in a sea change in drastically more longer form entertainment on Facebook and YouTube for many accounts compared to 2019. Nearly all categories posted longer videos on average than the previous year, with the exception of media accounts on Facebook and brand accounts on YouTube. The largest shift happened with sports, entertainment, and media accounts on YouTube where their average video length increased by 60%, 59%, and 34% respectively. Media accounts, conversely, adapted to the rapid pace of news by posting shorter videos on Facebook but longer form videos on YouTube for future viewing. While brands decreased video length on YouTube, the category lengthened videos on Facebook by the largest margin at 34%.

Changing Video Length

Q4 2020 vs Q4 2019

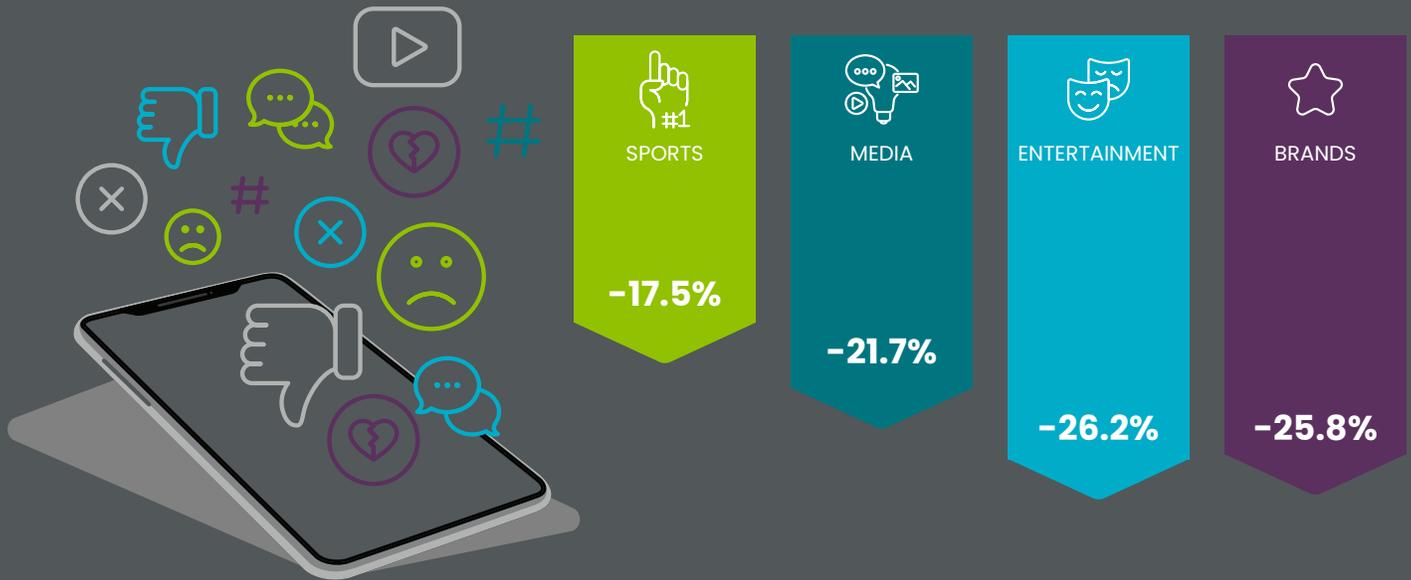


YouTube Facebook



Falling Engagement Rate

Cross-Platform Change | Q4 2020 vs Q4 2019



Falling Social Engagement Rates

If your social media accounts performed below average in Q4 2020, you were not alone. A review of cross-platform engagement rate for all categories revealed that there was a considerable dip in engagement rate for the quarter as compared to the previous year. Entertainment and brand accounts suffered the largest decreases, down 26.2% and 25.8% while media and sports accounts were slightly less affected but were still impacted by declines of 21.7% and 17.5% respectively year over year.

Several factors may ultimately have contributed to the lack of engagement, but likely culprits include the oversaturation of months-long grim pandemic news, United States election coverage, and general fatigue caused by one of the more eventful years in human history. Additionally, social networks were bombarded by political ad spend that would have usually been occupied by more typical brand and entertainment spending. Many accounts chose to remain on the sidelines rather than join the fray where they would be forced to compete with inflated ad prices induced by high election spending.

More is More for Instagram Engagement

One prominent social trend in 2020 was the rise in publishers on Instagram that leveraged the carousel feature to include more than one photo or video with a post. Media and sports accounts moving to this format resulted in a 10% climb in their share of posts utilizing the carousel function while entertainment netted 6% additional share. And with good reason, according to an analysis of average engagements per content type, as carousel posts attracted the highest average engagements for these three categories. Interestingly, brand accounts, the only category to decrease their use of carousel posts year over year, uploaded images as the highest performing content type on Instagram rather than carousels. Posts with a single video on Instagram accounted for the lowest average engagements for all post types in all categories. Video posts were also utilized less by all categories when comparing Q4 2019 to Q4 2020.

The end of 2020 was a crowded and chaotic time to be online but one trend remained infallible: applying analytics to guide your social strategy was a winning tactic. There is no substitute for hard data when it comes to the complex uncertainty of today's digital media landscape. Social publishers who relied heavily on analytics solutions to guide them through 2020 will gain more competitive advantages for it in 2021.

Definition of Accounts

Brands – Consumer brands, services, and products

Entertainment – Television shows, channels, streaming or cable networks, online entertainment content hubs

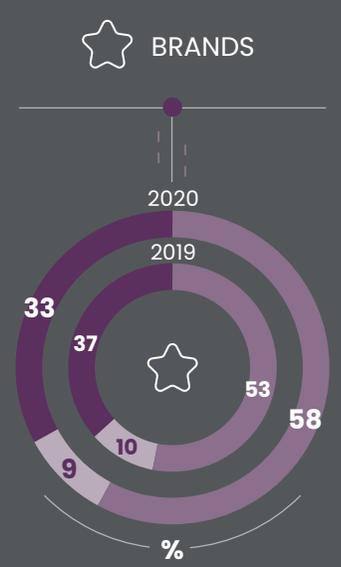
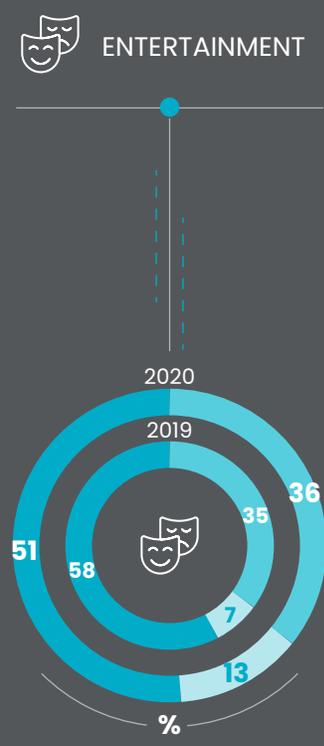
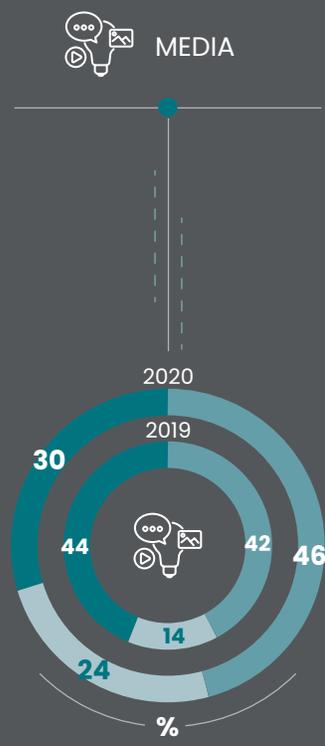
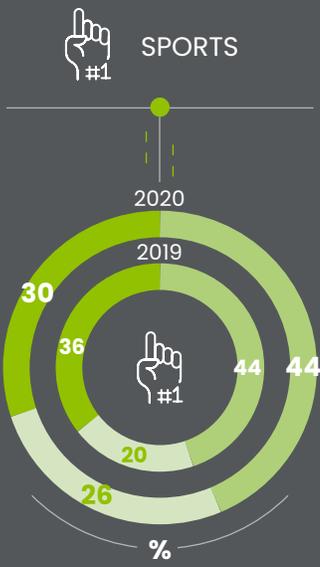
Media – Publishers in the business of producing content for informational purposes across any content category

Sports – Professional sports teams and leagues, minor league or amateur sports teams and leagues, college sports teams, sports venues, and accounts associated with a professional sports team like charitable organizations of professional teams

Average Engagements on Instagram by Post Type

Q4 2020

● Single Video ● Single Image ● Carousel



Share of Engagements on Instagram by Post Type

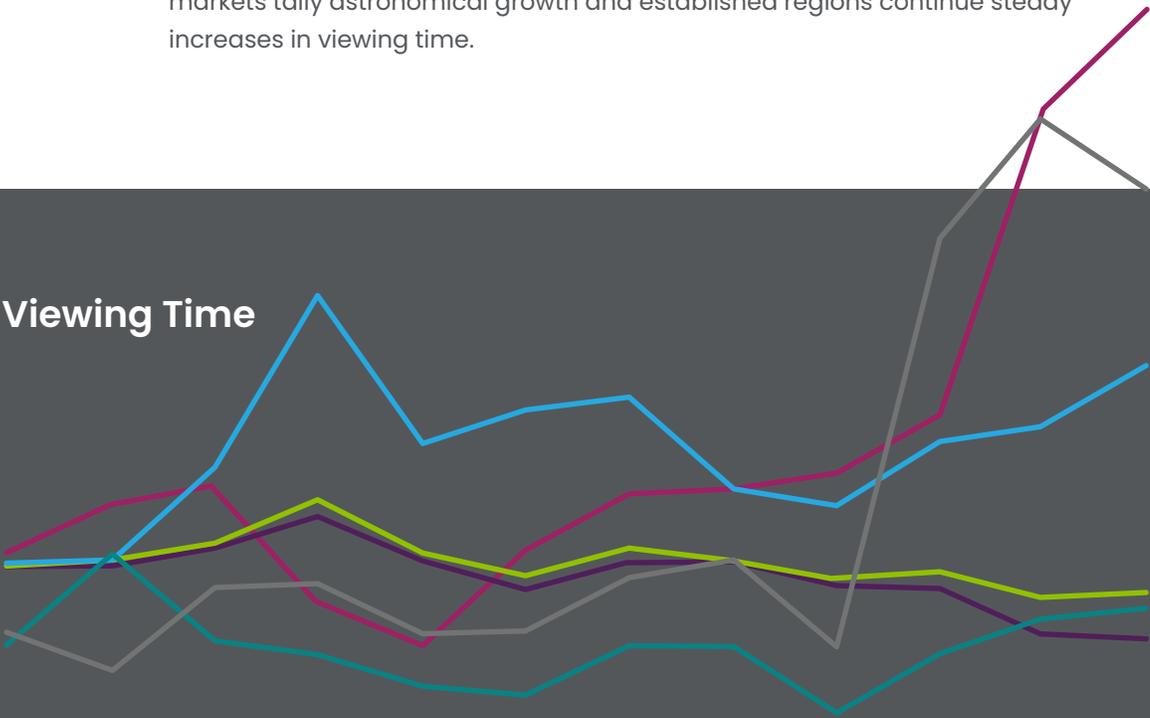
Q4 2020 vs Q4 2019

Tracking Pandemic Viewing

2020 was a year marked by volatility and the streaming industry was not exempted. In Q4 multiple regions reached new heights while growth in North America reached new lows, dragging down the global trend. As the year came to a close, South America and Africa led the world in growth of viewing time with 3x+ growth in November and December. Europe and Asia ended the year trending up as well, although the regions did not pass their pinnacles from earlier in the year. North America was the only region where growth trended down over the course of Q4, with December the worst month of 2020 for growth in the region, up only 19% from the previous December. The global transition to streaming is far from complete as less saturated markets tally astronomical growth and established regions continue steady increases in viewing time.

Growth in Viewing Time

2019 vs 2020



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Global	53%	56%	61%	81%	58%	49%	59%	56%	45%	50%	38%	40%
Africa	23%	6%	42%	45%	22%	24%	46%	55%	17%	199%	254%	223%
Asia	17%	57%	19%	12%	-1%	-5%	16%	17%	-12%	11%	28%	34%
Europe	55%	55%	96%	174%	107%	122%	128%	88%	79%	108%	114%	143%
N. America	56%	55%	60%	73%	55%	43%	53%	54%	46%	43%	23%	19%
S. America	59%	80%	89%	38%	17%	58%	84%	87%	94%	120%	256%	301%

Global Goals

With improvements in awareness and technology, most of the world has continued the trend of quality improvement which results in increased consumer confidence, further adoption of streaming, and longer viewing times on streaming platforms. In Q4, viewers enjoyed improvements across all quality of experience categories in four out of six global regions.

Africa made large inroads in picture quality, leading all regions in improvement, up 157% year over year. Africa also moved in the right direction with the most improvement in buffering, down 51%, but the region still lagged significantly behind other locales at 2.13% buffering rate in Q4. Despite these significant changes, the region is plagued by video start failures which increased by 49% and are the highest of any geo at 4.88%. South America enjoyed the highest margin of quality improvement in video start failures, down 47% year over year, in addition to 48% improvement in buffering, 8% higher picture quality, and 5% shorter start times.

While Europe didn't take the top spot in progress for any single metric as compared to the large improvements by more nascent streaming regions, European viewers still enjoyed quite significant strides. The region enjoyed 69% higher picture quality, 26% fewer start failures, 25% less buffering, and 1% faster start times. Also improving across the board, Oceania was middle of the road in quality improvements, with 29% fewer start failures, 22% less buffering, 19% higher picture quality, and 4% faster start times. North America tallied modest improvements with picture quality and start failures both improved 15%, in addition to 8% less buffering and 1% faster start times.

Asia was the lone region to decline in quality across multiple metrics, most significantly with 43% worse buffering. Start times also lengthened, up 5%, and 4% more videos failed in Q4 2020 as compared to Q4 2019.

Quality by Region

Real Time

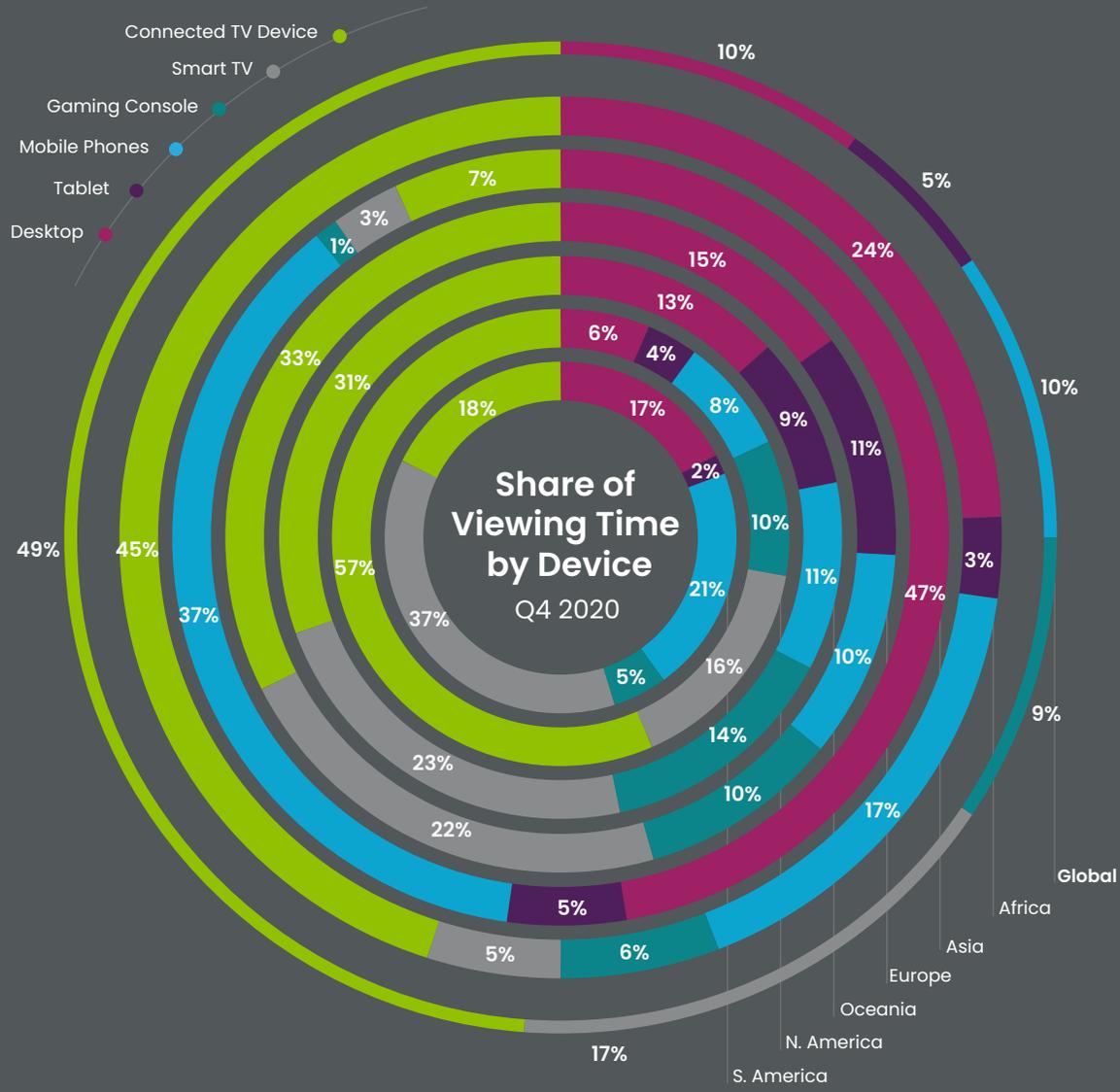
Global Region

Filters

Metrics

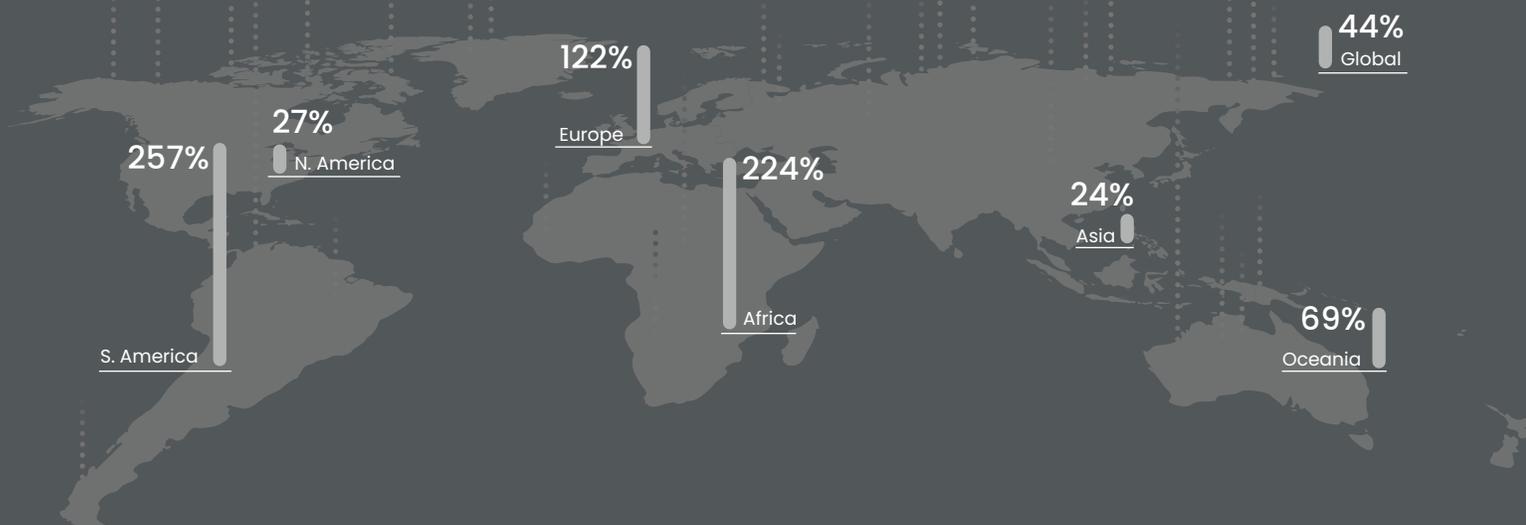
Q4 2020 vs Q4 2019

	Minutes / Play		Video Start Failures		Video Start Time		Buffering		Bitrate	
Africa	9.2	133%	4.88 %	49%	7.15 sec	-1%	2.13 %	-51%	6.27 Mbps	157%
Asia	10.4	-12%	0.78 %	4%	2.67 sec	5%	1.34 %	43%	2.11 Mbps	24%
Europe	23.4	11%	1.40 %	-26%	3.74 sec	-1%	0.34 %	-25%	6.59 Mbps	69%
N. America	22.3	7%	0.44 %	-15%	4.44 sec	-1%	0.28 %	-8%	6.83 Mbps	15%
Oceania	19.7	10%	1.34 %	-29%	4.79 sec	-4%	0.42 %	-22%	8.27 Mbps	19%
S. America	19.1	53%	2.53 %	-47%	6.30 sec	-5%	0.7 %	-48%	6.15 Mbps	8%
		YoY		YoY		YoY		YoY		YoY



Growth in Viewing Time by Region

Q4 2020 vs Q4 2019



International Disparity in Devices

Streaming again posted dramatic global gains in many regions with overall time spent streaming up 44% in Q4 2020 as compared to the previous Q4. By region, growth was led by South America which tallied exceptional year-over-year growth of 257%, and Africa, up 224%. Europe also posted impressive gains to cap off a booming year in the region as the time spent streaming more than doubled, up 122% in Q4. North America and Asia were both outpaced by the global average, up just 27% and 24% respectively.

By device, television's dominance is obvious on a global scale, as the big screen captured more than 75% of all viewing hours. But how viewers choose to connect their TVs varies by region. Connected TV devices were the top choice for viewers in North America at 57%, Africa at 45%, Europe at 33%, and Oceania at 31% share of viewing time in Q4. In South America, streamers chose to watch natively through their smart TVs which captured 37% share of viewing in the region. Asia was the only region where viewers were far more likely to forgo the big screen, as desktop dominated in watch time at 47% share of time spent in Q4.

Closing Thoughts

While many wish 2020 to be a year soon forgotten, it will likely be remembered a pivotal year for streaming. The industry delivered with flourishing new services, astronomical peaks of growth, blockbusters released direct to streaming, and the rising profile of social media platforms. But for the industry to thrive, these positive trends must continue while we leave behind the anxiety-inducing news cycle that negatively impacted advertising and social media behaviors, the streaming burnout as consumers look for activities outside the home in a post-pandemic world, and the dearth of ad dollars coupled with persistent quality issues that resulted in 40% of streaming ads as missed opportunities.

Methodology

Data for Conviva's State of Streaming report was primarily collected from Conviva's proprietary sensor technology currently embedded in 3.3 billion streaming video applications, measuring in excess of 500 million unique viewers watching 180 billion streams per year with 1.8 trillion real-time transactions per day across more than 180 countries. Year-over-year comparisons were normalized at the customer level for accurate representations of industry growth. The social data consists of data from over 1200 accounts, over 3 million posts, 778 thousand videos, 84 billion video views, and over 10 billion engagements across Facebook, Twitter, Instagram, and YouTube.

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About Conviva

Conviva is the intelligence cloud for streaming media. Our cloud platform provides AI-powered insights, software, services, and an extensive ecosystem of partners to support mission critical aspects of your streaming business from audience engagement and monetization to quality of experience and churn prevention. We help digital businesses of all sizes around the world stream their best - including CBS, CCTV, DAZN, Disney+, Hulu, Sky, Sling TV, TED, Univision, and WarnerMedia - with solutions spanning quality of experience, advertising, content, and social media. With a global footprint of more than 500 million unique viewers watching 180 billion streams per year across 3.3 billion applications streaming on devices, Conviva delivers amazing streaming experiences with unmatched scale across every stream, every screen, every second.

Any Questions?

Visit www.conviva.com or contact Conviva at pr@conviva.com.

