CONVIVA

Q4
2021

EUROPE
Conviva's State of Streaming

This regional report includes streaming traffic measured from the following countries and territories in Q4 2021:

Northern Europe	Southern Europe	Eastern Europe	Western Europe
Aland Islands	Albania	Belarus	Austria
Denmark	Andorra	Bulgaria	Belgium
Estonia	Bosnia and Herzegovina	Czech Republic	France
Faroe Islands	Croatia	Hungary	Germany
Finland	Gibraltar	Moldova	Liechtenstein
Guernsey	Greece	Poland	Luxembourg
Iceland	Vatican City State	Romania	Monaco
Ireland	Italy	Russian Federation	Netherlands
Isle of Man	Macedonia	Slovak Republic	Switzerland
Jersey	Malta	Ukraine	
Latvia	Montenegro		
Lithuania	Portugal		
Norway	San Marino		
Svalbard and Jan Mayen	Slovenia		
Sweden	Spain		
UK	Serbia		

Introduction

During the pandemic, streaming adoption accelerated beyond expectation, skyrocketing to new heights with every passing quarter. However, as they say, all good things must come to an end. In the case of global streaming consumption, this means a stabilization as the pandemic-driven gains are maintained and a new bar is set for what normal looks like in entertainment. Global viewing time still rose 7% in Q4 2021 as compared to the previous Q4, and although Europe was up 20% year over year, we expect in coming quarters growth will continue to build slowly but steadily as the great streaming surge ebbs.

Q4 2021 highlights:

- When it came to how Europeans streamed, big screens were the clear winners with over 50% share in every region and Samsung TV enjoyed the most of that share at 20%.
- Regionally, video quality mostly improved, with one big exception—start time. Video start time was up 13% in Europe overall, while ad start time also rose substantially to 2.6 seconds as technical issues left viewers waiting for both content and ads in Q4.
- YouTube Shorts seem to be gaining traction, as shorter-form content grew more than 2% from last year on the platform best known for long-form videos.
- Despite little change from Q4 2020, European sports leagues have rebounded nicely on social media since the beginning of the pandemic.

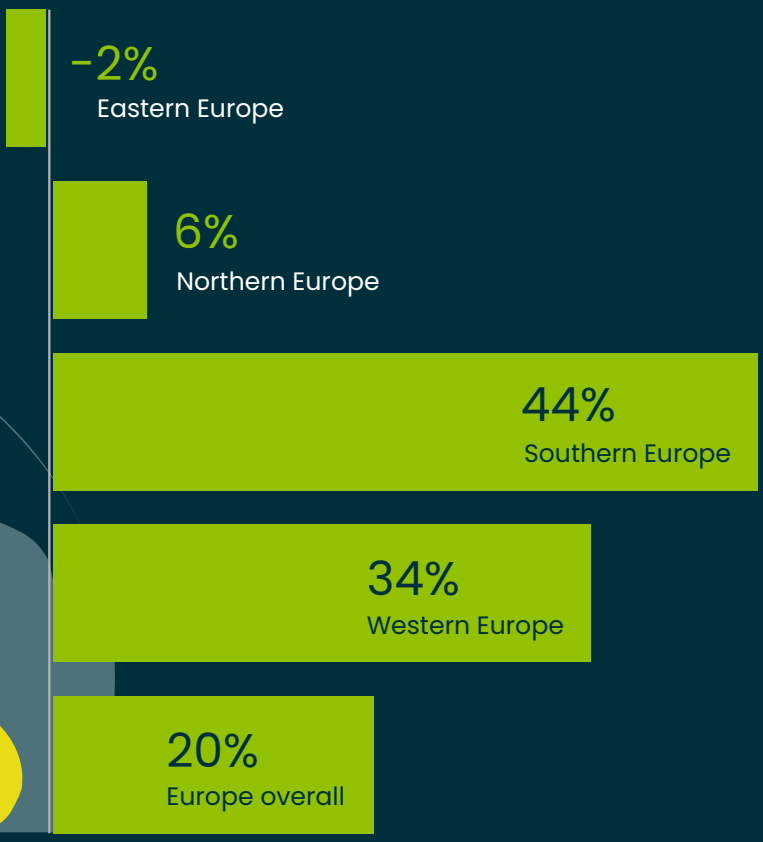
Conviva's data is primarily collected using proprietary sensor technology with a global footprint of more than 500 million unique viewers watching 200 billion streams per year across 4 billion applications streaming on devices. Embedded directly within streaming video applications, the sensor measures across content and ads to analyze nearly two trillion real-time transactions per day for its customers. In this report, the year-over-year data from Q4 2021 as compared to Q4 2020 was normalized based on Conviva's customer base.

Comfortable streaming growth in Europe

Global streaming viewing time for Q4 2021 was up 7%, driven mostly by double-digit growth in Africa, Oceania, and South America. Comparatively, Europe overall experienced a healthy 20% increase in streaming viewership, and Southern and Western Europe saw roughly double that growth with 44% and 34%, respectively. Northern Europe enjoyed a 6% increase, while Eastern Europe was the only region to see a decline, down 2%.

Growth in viewing time by region

Q4 2021 vs. Q4 2020



Devices vie for big screen scraps

When it came to how Europeans streamed, big screens were the clear winners with over 50% share in every region. Northern Europe led the way at 71% and Eastern Europe saw the lowest, but still significant 56% of viewing time watched on a big screen.

Since big screens dominated so heavily in Northern Europe, it's no surprise that the other three devices accounted for very little share, as desktops and tablets tied with 10% and mobile phones took 9% of share.

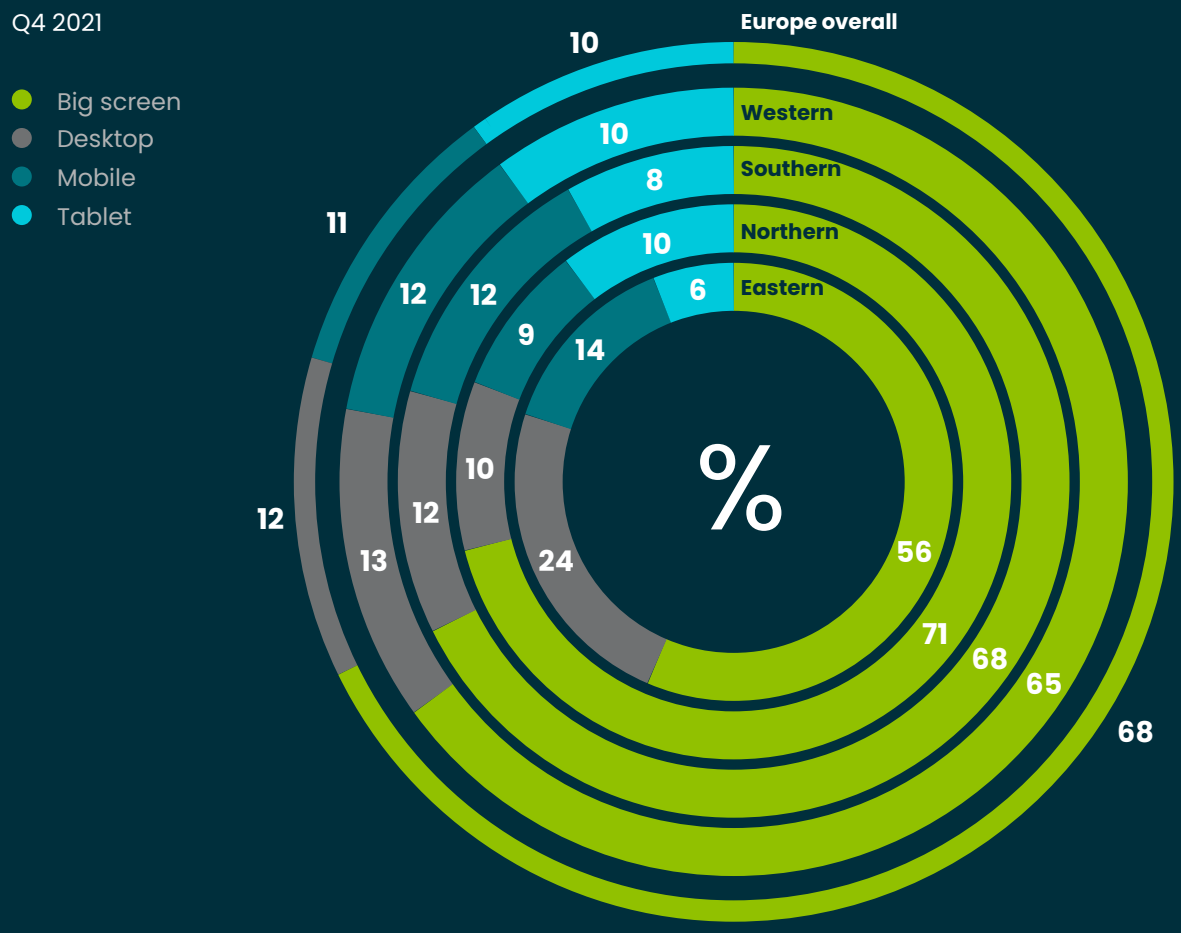
With 68%, Southern Europe had the next highest share of time spent streaming on a big screen after Northern Europe, so there was little share left for desktops, mobile phones, or tablets. Desktops and mobile phones each shared 12% of viewing time and tablets made a blip at 8%.

Western Europe also preferred big screens with 65% of share. Desktops followed far behind at 13%, mobile phones even further behind and 12%, and tablets rounded out the list at just 10%.

Finally, with the least share of big-screen viewing time, Eastern Europe's share by device was a bit more evenly distributed as desktops enjoyed 24% of share, followed by mobile phones at 14% and tablets with the least share of any region at only 6%.

European share by device

Q4 2021



Quality by European region

Real Time | European Region | Filters | Metrics | **Q4 2021 vs. Q4 2020**

	Minutes / Play		Video Start Failures		Video Start Time		Buffering		Bitrate	
	Q4 2021	YoY	Q4 2021	YoY	Q4 2021	YoY	Q4 2021	YoY	Q4 2021	YoY
Eastern Europe	19.78	-8%	1.12%	-6%	3.95	-1%	0.36%	-41%	3.43	14%
Northern Europe	24.94	-1%	1.52%	-5%	4.37	23%	0.18%	-41%	8.21	19%
Southern Europe	23.08	-2%	1.60%	8%	4.61	8%	0.29%	-17%	7.62	25%
Western Europe	22.13	4%	1.39%	-32%	3.89	5%	0.21%	-38%	8.22	18%
Europe overall	23.31	0%	1.47%	-14%	4.23	13%	0.22%	-35%	7.89	21%

Improvements in green

Declines in pink

Best per category in green, worst in pink

Improvements in quality with one big exception

Video quality improved year over year, with one big exception—video start time. Sometimes streaming providers will sacrifice longer start times for better buffering and bitrate, which could be the case this quarter, as every region except Eastern Europe recorded an increase in video start time, but generally improved buffering, picture quality, and video start failures. It's also likely that as more regions shift toward smart TVs, there will be longer wait times for a video to start, but better quality overall. As Eastern Europe was the exception for big-screen viewing time at just 56% compared to the other regions' nearly 70%, they were also the exception here as the only region to see a decrease in video start time, down 1%, as well as the region with the highest decrease in minutes per play and least increase in bitrate.

The other regions and Europe as a whole experienced higher video start times in exchange for considerably lower buffering and much better picture quality; notably, Northern Europe waiting 23% longer for videos to start, but buffering down a whopping 41% and bitrate up 19%. Southern Europe had a similar experience as video start time was up 8%, but also had the most improved picture quality, up 25%, and buffering was down a huge 17%. Western Europe, too, waited longer for videos to start, but only 5% longer, and still saw buffering and bitrate improve tremendously.

Every region except Southern Europe enjoyed fewer video start failures; Western Europe down significantly by 32%, followed by Eastern Europe down 6% and Northern Europe down 5%. Conversely, Western Europe was the only region to increase minutes per play, up 4%, while all other regions declined by an average of 3%, causing Europe overall to net at 0%.

As to be expected given the year over year numbers, Eastern Europe's Q4 was a little rocky as the region experienced the least minutes per play, the worst buffering rate, and the worst picture quality. When it came to video start time and video start failures, however, they enjoyed the lowest of any region, and Southern Europe took the dubious distinction of having the worst in both categories.

Northern Europe watched the most minutes per play with an impressive 24.94 minutes, almost two full minutes more than Southern Europe, the region with the next-most minutes per play. Meanwhile, Western Europe had the best picture quality at 8.22 Mbps, but Northern Europe was extremely close at 8.21 Mbps.

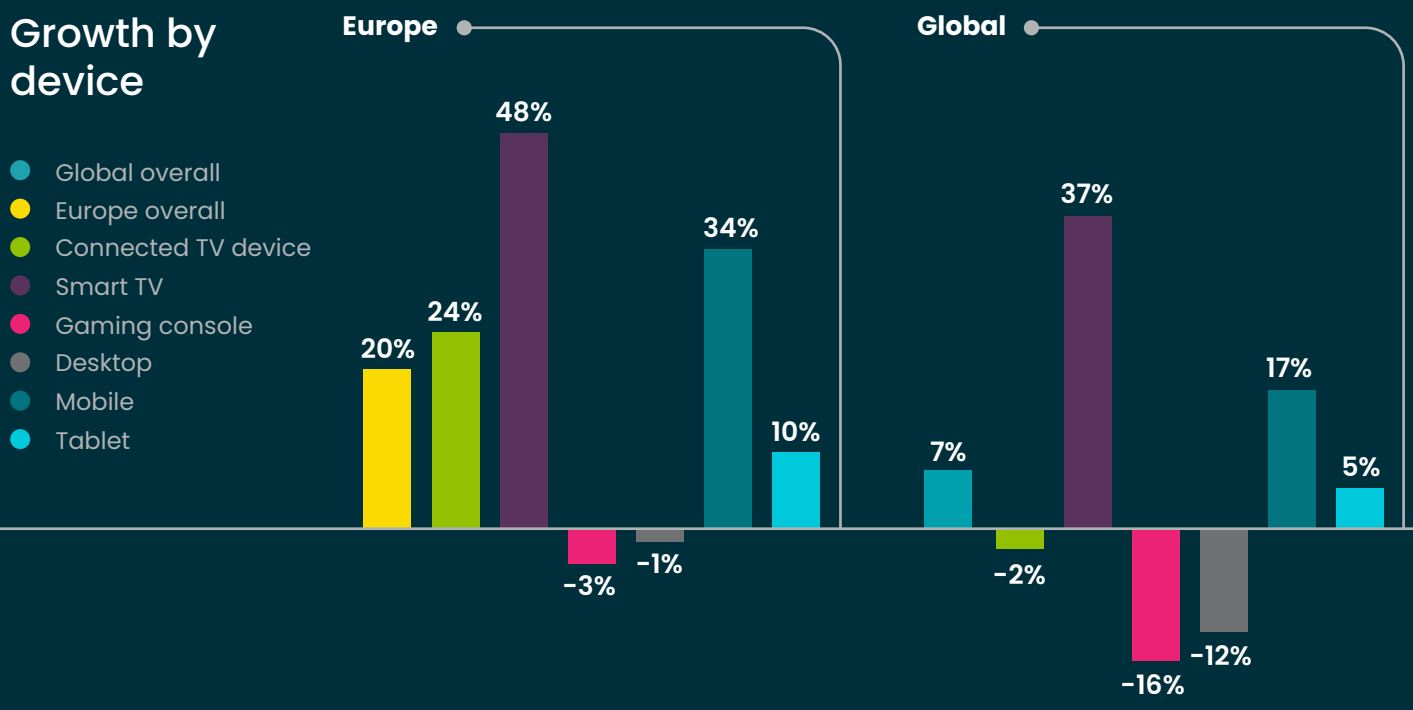
Surprising turns in device viewing time

In a stunning turn, connected TVs' viewing time fell for the first time ever, down 2%; desktops were also down significantly by 12%; and gaming consoles continued the decline that was first reported in the middle of last year, down 16%. In an industry that has been used to up and to the right growth across all categories, we've reached a saturation point as device preferences shift.

In better news, tablets had a modest 5% growth in viewing time, and mobile phones enjoyed a 17% increase over this time last year. It was smart TVs that were the real winners, up 37% from Q4 2020, further cementing the global big screen growth trend even as viewers trade in their dongles for built-in capabilities.

Europe on par with global device growth

Europe seemed to follow the overarching global trend of embracing smart TVs over any other device as they grew 48% year over year. Mobile phones also savored notable growth, up 34%, as did connected TV devices, up 24%. Though tablets didn't experience the same type of growth, 10% is still decent, especially compared to desktops and gaming consoles, which both saw declines, down 1% and 3%, respectively.



Big screens still reign supreme

Big screens continued to dominate viewership globally, as they commanded over 50% of share in every region except Asia. In Europe, big screens earned 68% of viewership, while desktops, mobile phones, and tablets were all only one percentage point apart with slightly more than 10% each.

All told—globally mobile saw 11% share, desktops made up 8%, and tablets had only 5% share—the shift toward bigger screens is a continuing, strong trend as streaming providers focus on delivering content meant for the biggest screens possible.

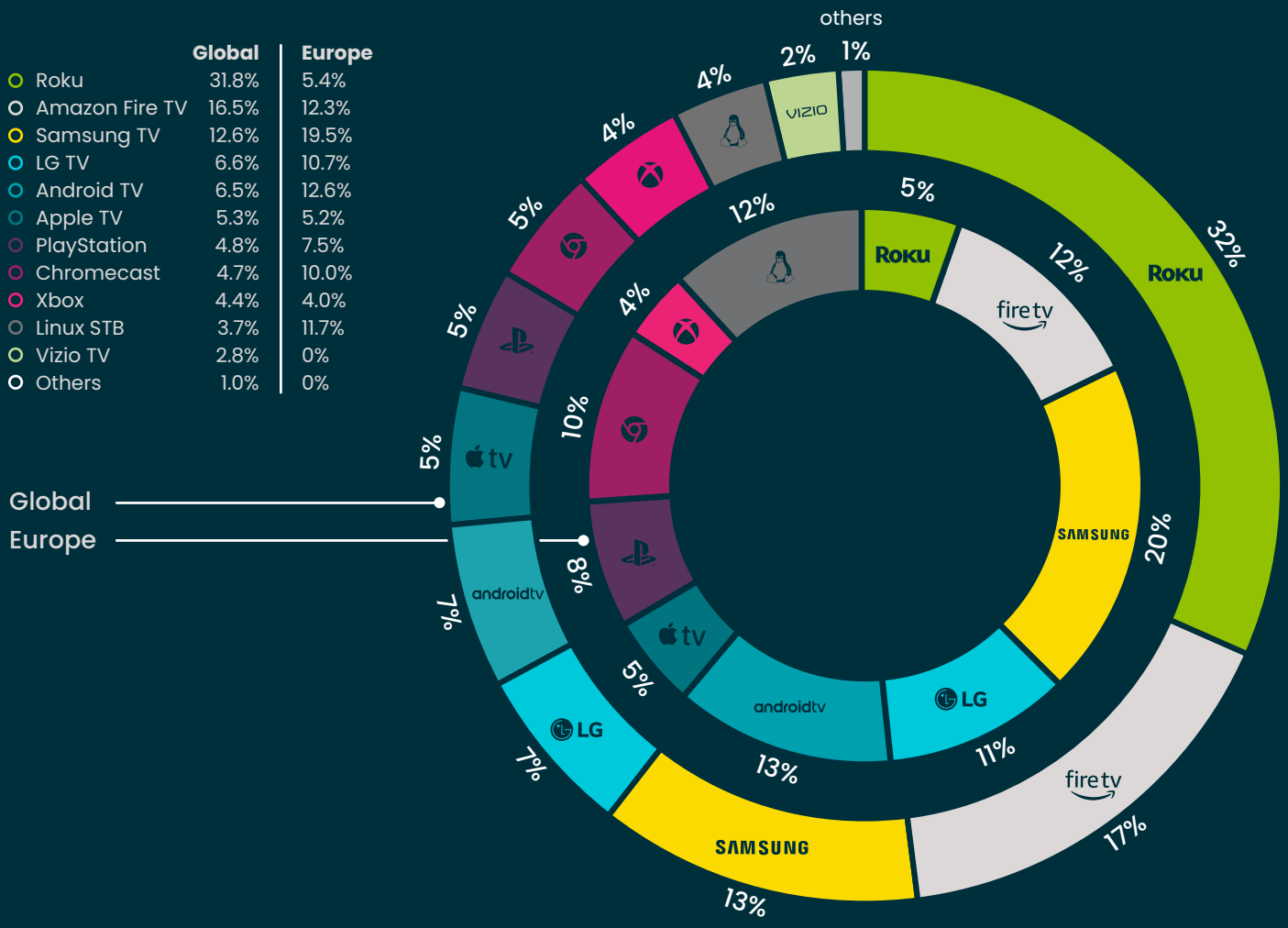
Big screen breakdown

Roku continued to hold the top spot among big screen devices globally, even gaining a small bit over last year with 31.8% of viewing time. Amazon Fire TV decreased in share by almost 3% to 16.5% share of viewing time, but still managed to maintain the second spot globally, after Roku. Samsung TV, LG TV, and Android TV rounded out the top five big screen, and each saw significant gains, as Samsung TV was up 1.8% from last year to 12.6% share, Android TV was up 1.5% to 6.5% share, and LG TV was up 1.3% to 6.6% share.

Europe was more evenly divided than its global counterparts; although Samsung TV was the clear winner at almost 20% share, Android TV and Amazon Fire TV were just 0.3% apart at 12.6% and 12.3%, respectively. LG TV at 11% and Chromecast at 10% rounded out the top five just behind Android TV and Amazon Fire TV. With 8%, PlayStation deserved an honorable mention, while Roku, Apple TV, Linux, and Xbox all had 5% or less share.

Share of viewing time by device

	Global	Europe
Roku	31.8%	5.4%
Amazon Fire TV	16.5%	12.3%
Samsung TV	12.6%	19.5%
LG TV	6.6%	10.7%
Android TV	6.5%	12.6%
Apple TV	5.3%	5.2%
PlayStation	4.8%	7.5%
Chromecast	4.7%	10.0%
Xbox	4.4%	4.0%
Linux STB	3.7%	11.7%
Vizio TV	2.8%	0%
Others	1.0%	0%



Quality by device improves, mostly

By device, quality improvements were somewhat consistent, with buffering down and bitrate up across the board, as well as video start failures down and video start times up for almost every device. As with most quality metrics, there were exceptions. Gaming consoles were the only devices to decrease video start time—and a hefty decrease at that, down 16%; desktops had no change. And tablets were the only devices to increase video start failures, up 2%. Minutes per play was the only quality metric that was more mixed. Desktops, gaming consoles, and connected TV devices were all down, 6%, 3%, and 3%, respectively, while mobile phones, tablets, and smart TVs were all up, 12%, 1%, and 1%, respectively.

In Q4, gaming consoles absolutely shined, taking the top spot in four of five categories with over 30 minutes per play, videos failing to start only 1.07% of the time, viewers waiting just 2.83 seconds for videos to start, and buffering at just 0.11%. In fact, compared to global device quality numbers, Europe's buffering rates were quite low. Mobile phones had the highest in both Europe and globally, but European mobile phones were at 0.49% versus mobile phones throughout the world at 0.80%. Conspicuously, picture quality was the only metric where gaming consoles didn't excel. That honor belonged to smart TVs, which very much did excel at 10.48 Mbps; 1.79 Mbps faster than the next-closest, which just so happened to be gaming consoles at 8.69 Mbps.

European quality by device

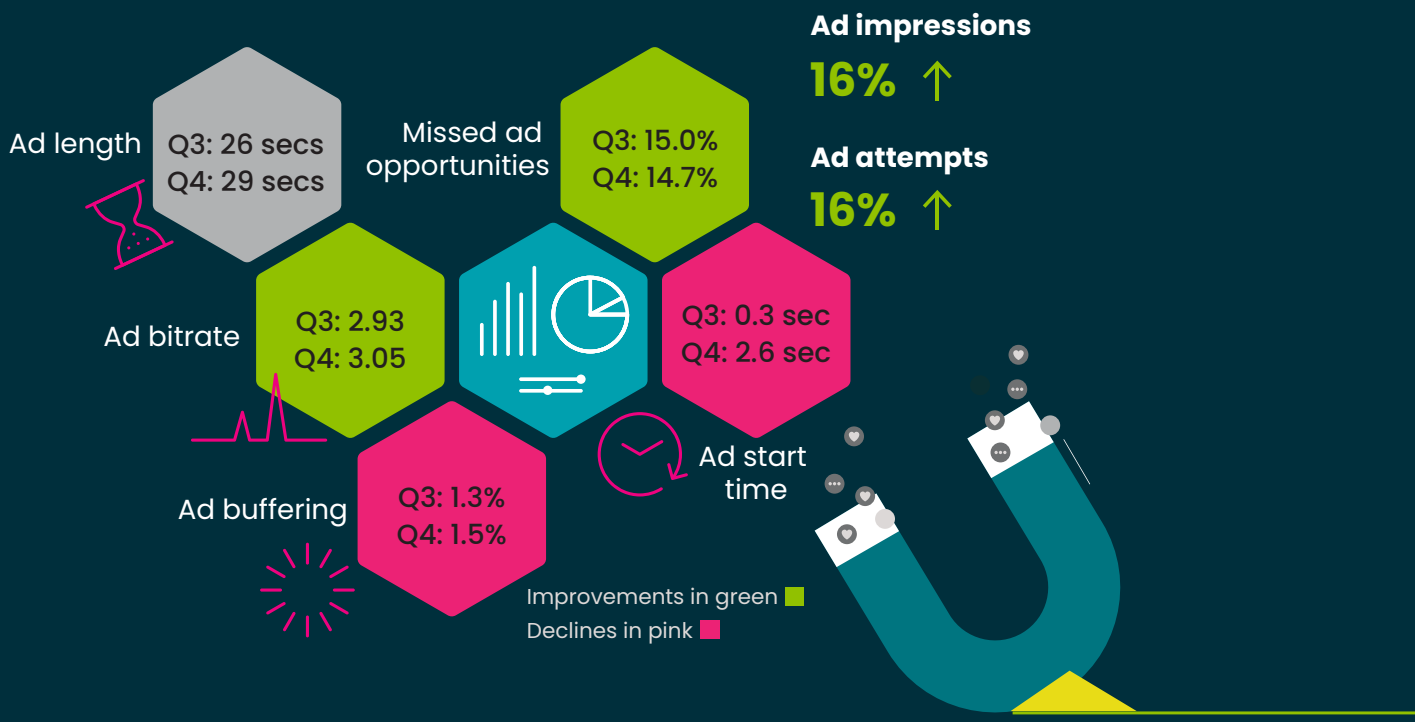
	Minutes / Play		Video start failures		Video start time		Buffering		Bitrate	
	Q4 2021	YoY	Q4 2021	YoY	Q4 2021	YoY	Q4 2021	YoY	Q4 2021	YoY
Connected TV device	29.85	-3%	1.39%	-10%	4.91	28%	0.14%	-28%	8.49	17%
Smart TV	26.62	1%	1.24%	-20%	5.38	14%	0.18%	-22%	10.48	14%
Gaming console	30.34	-3%	1.07%	-3%	2.83	-16%	0.11%	-53%	8.69	29%
Desktop	26.01	-6%	1.23%	-34%	4.17	0%	0.31%	-52%	4.18	5%
Mobile phone	11.37	12%	1.76%	-9%	3.12	4%	0.49%	-29%	4.98	11%
Tablet	18.92	1%	2.00%	2%	3.36	3%	0.28%	-21%	6.18	21%
Europe overall	23.31	0%	1.47%	-14%	4.23	13%	0.22%	-35%	7.89	20%

Improvements in green, declines in pink | Best per category in green, worst in pink

Remarkable advertising delays

Let's start with the good news for streaming advertising. Ad impressions were up a decent 16%, as were ad attempts. Missed ad opportunities were down 2%, and bitrate improved 4% over last quarter. All and all, Q4 had respectable growth and quality improvements.

And now for the bad news—ad start time was up substantially to 2.6 seconds in Q4. Ad buffering was also up from 1.3% in Q3 to 1.5% in Q4. Conviva studied buffering's effect on engagement and found for viewers who didn't even make it through 5% of the content, pre-roll ads tallied an average buffering ratio of 1.59%, illustrating how poor quality causes viewers to tune out. The significant swings in ad quality point to technology issues that advertisers and publishers alike need to investigate and invest in solving, because ad issues cause content abandonment and lost revenue.

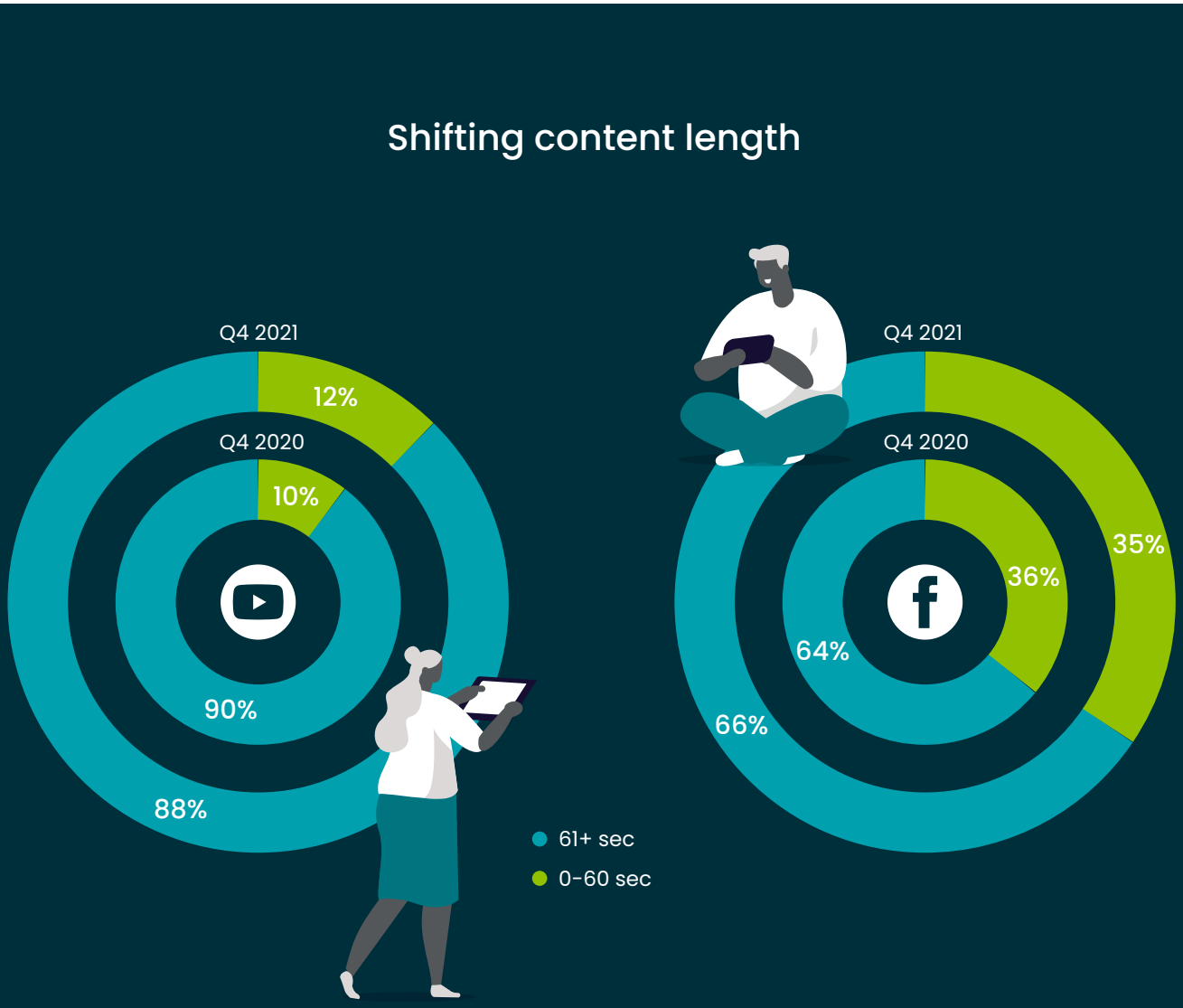


Shifting social video content length

YouTube has long been associated with longer-form social videos, but with the rollout of Shorts, a TikTok-esque vertical short-form video experience, the percentage of shorter content got bigger.

In Q4 2020, 90.3% of YouTube videos were over a minute, but in Q4 2021, this dropped to 87.9%, while videos less than a minute grew from 9.7% to 12.1% in a year. The content production landscape is changing, and you'll likely see more and more short-form content akin to TikTok on YouTube.

So where are the longer-form videos going? Facebook saw an increase of about two percentage points in content longer than a minute in Q4 2021 versus the previous Q4, showing that there's always room for longer-form content, but knowing where to post it is essential.



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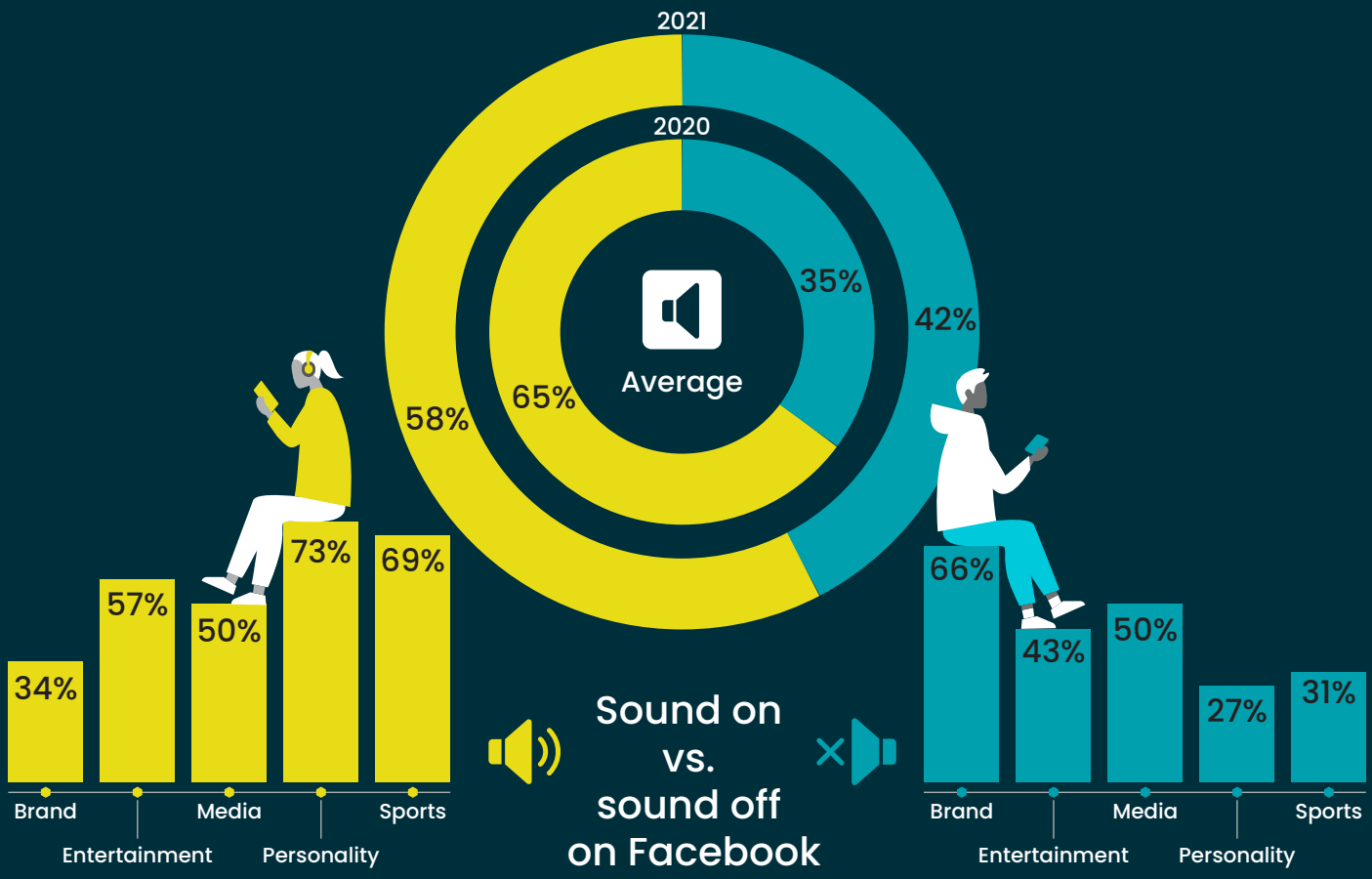
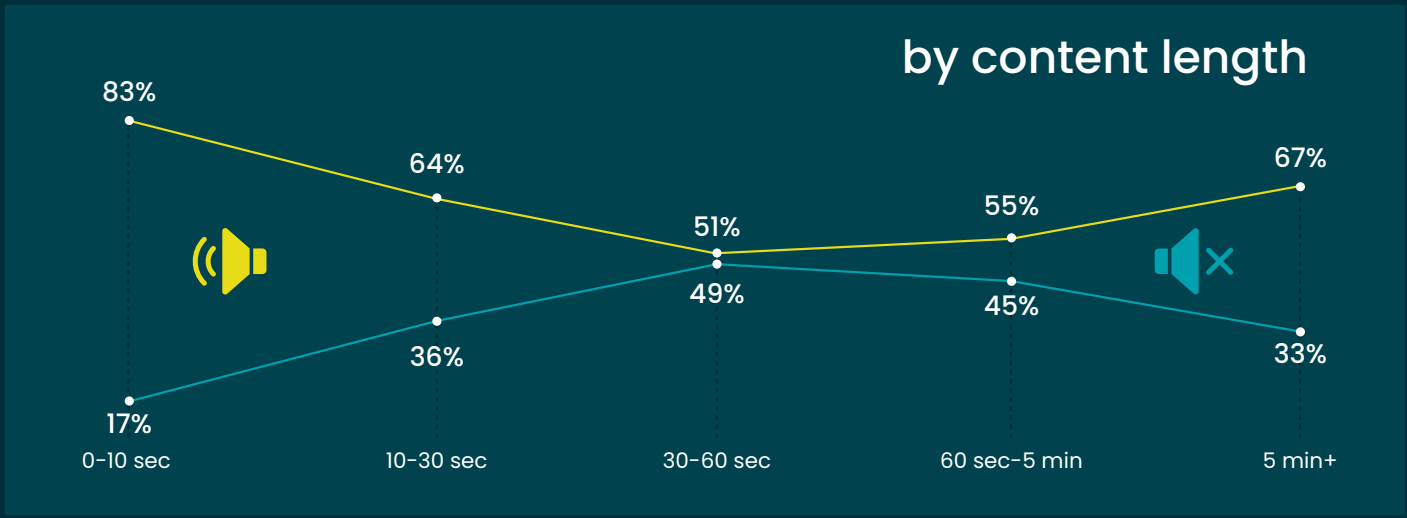
The importance of captions on social media

As video becomes more and more important on social media, businesses need to understand more than ever how people are watching. One interesting trend is that more people are listening with the sound off on Facebook than a year ago. This is important—especially for brand videos, which had the lowest sound-on percentage, followed by media at 50% and entertainment at 57%—because many people might not be getting the full value of social videos unless captions are enabled.





Welcome rebounds for sports leagues

Despite little change from Q4 2020, European sports have rebounded nicely since the beginning of the pandemic. They were the first to see growth after the sudden collapse of sports seasons at the beginning of 2020, so even a small increase is valuable. Although total posts were up 1% and videos increased 4%, engagements were down 2% overall.

Europe social sports

total posts

total videos

total engagements

Conclusion

Streaming was one of many industries that saw a boon during the pandemic, with people spending more time at home but nevertheless expecting premium content to play flawlessly, especially on their big screens. While the boon has come to an end, the industry will enjoy the gains that have been maintained.

Methodology

Data for Conviva's State of Streaming report was primarily collected from Conviva's proprietary Stream Sensor technology currently embedded in nearly four billion streaming video applications, measuring in excess of 500 million unique viewers watching 200 billion streams per year with nearly three 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 media data consists of data from over 2,863 accounts, over 1.8 million posts, and over 10 billion engagements across Facebook, Instagram, Twitter, and YouTube in Q4 2021. Social data for professional sports leagues was collected from individual leaderboard lists for each sports league that totaled 262 individual team accounts and tallied over 5.01 billion cross-platform engagements in Q4 2021.

Q4 2021

Conviva's State of Streaming

Europe

About Conviva

Conviva is the census, continuous measurement and engagement platform for streaming media. Powered by our patented Stream Sensor™ and Stream ID™, our real-time 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 our platform processes nearly three trillion streaming data events daily, supporting more than 500 million unique viewers watching 200 billion streams per year across four billion applications streaming on devices. Conviva ensures digital businesses of all sizes can stream better—every stream, every screen, every second.

Any Questions?

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