



Qualcomm

The State of Sound Report 2022

A global analysis of audio consumer behaviors and desires



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Executive Summary

The State of Sound report compiles key findings from extensive audio research with consumers across the world. The 2022 study had 6,000 smartphone users as participants, examining the factors that influence audio device purchases, as well as interest in present and potential usage scenarios. The report is intended to make it easier to understand the qualities that consumers seek in earbuds, headphones, speakers, and other audio equipment. The focus of this year's research is on the growth of the true wireless earbud category, growing interest in spatial audio, and the continued importance of lossless and high-res audio quality.

Sound has never been more important. Many consumers today make extensive use of their audio devices throughout the day, from commuting, to watching videos, playing games, working remotely, and listening to music. Globally, the most in-demand personal electronic devices are smartphones, smart speakers, and true wireless earbuds. As smartphone capabilities continue to become richer, consumers are increasingly looking for advanced features in their audio devices, such as lossless audio quality and spatial audio functionality.

Globally, there is now a shift to a hybrid working model as we see restrictions ease post-pandemic. Our research has found that these shifts may be happening more slowly than expected, but are still having a notable impact on audio device use for commuting and work-related calls.

Active noise cancellation remains the highest-ranked rich audio feature, joined by lossless audio as a heavily desired feature, with audio savvy listeners demanding higher-quality audio year-on-year. Gaming has also accelerated in popularity, providing an opportunity for manufacturers to add new features such as voice back-channelling, lower latency and other gaming-related benefits in next-gen audio products.

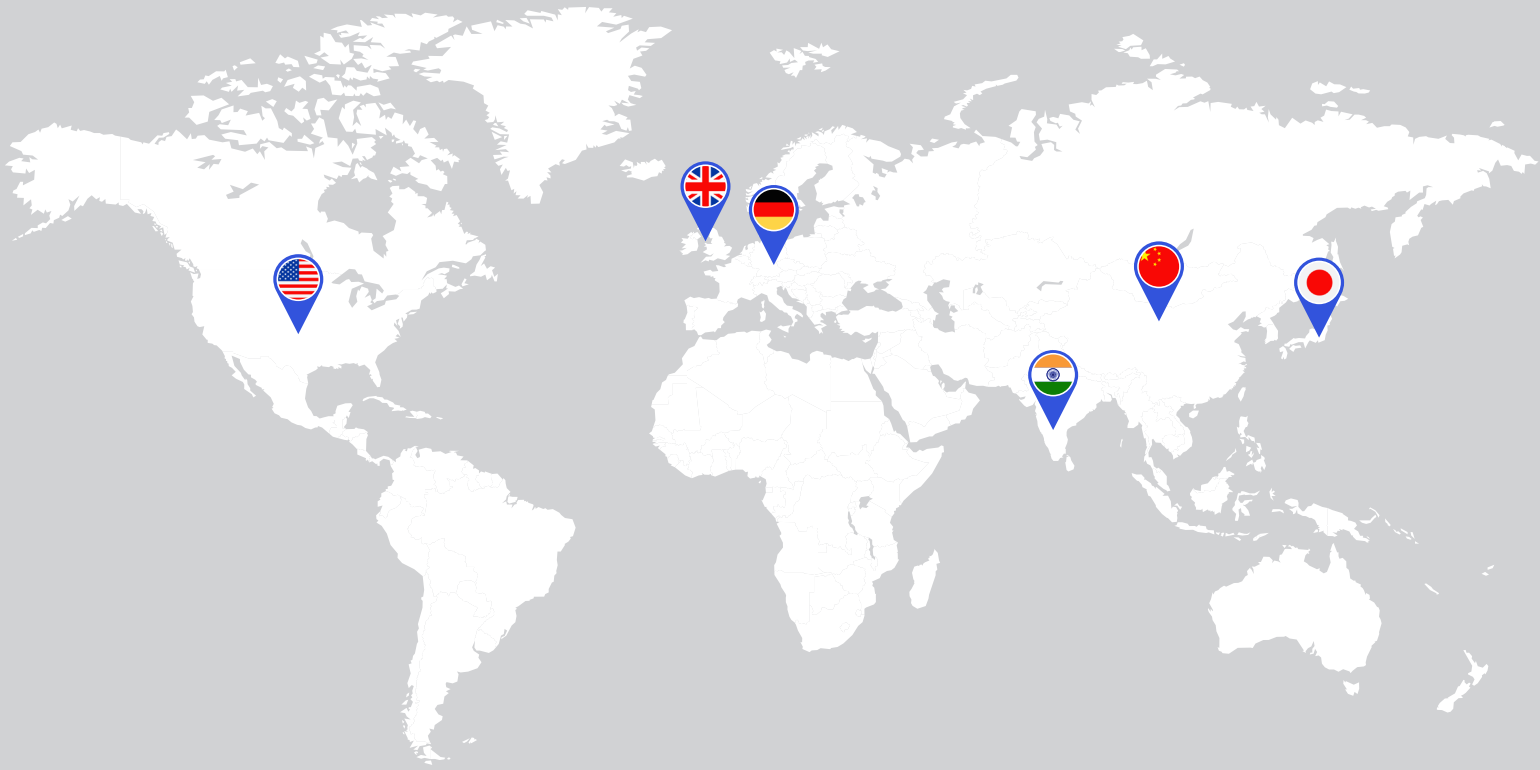
Research methodology

Locations United States, United Kingdom, Germany, China, India and Japan

Demographic Smartphone users aged 18-64 years

Sample size 1,000 per country

Research conducted July 2022



This year's report has been co-authored with SAR Insight & Consulting, the audio technology industry analysts.



Alongside results of the survey, SAR has used its vast amount of research to qualify trends that are seen in the market. This largely comes from the following service topics:

- TWS Audio & UI Technologies
- Headphones & Headsets
- Home AV Equipment
- Audio Software and IP

Key findings



Listeners are more driven by audio quality than ever

58% of respondents are seeking either high-resolution or lossless audio quality.



Spatial Audio is the next “must-have” feature

More than half of respondents claimed spatial audio will have an influence on their decision to buy their next pair of true wireless earbuds, and 41% said they would be willing to spend more for the feature.



True wireless earbuds are becoming integral to mobile gaming

Gamers are using true wireless earbuds for an average of ~2 hours a day to play on their smartphones.



Battery life is still a key driver for speakers

Battery life is the #1 purchase driver for wireless speakers, with long battery life now expected as standard for true wireless earbuds and headphones.



Consumers are ready for Bluetooth® LE Audio

A third of respondents want LE Audio features such as Broadcast audio in their next devices, as the market gets ready for the launch of the first devices with this new technology.



The evolution of audio for hybrid working

As global working habits evolve, respondents expect a change in the way their audio devices are used for work, with 20% expecting to work more from the office in the next 12 months.



What matters most: audio purchase drivers

The following section focuses on how consumers rate the significance of features for each audio product category.

The most important factor in choosing headphones during the previous six years has been sound quality. In 2022, price, sound quality, and comfort are all leading factors.

Now that true wireless earbuds and wireless headphones are used for longer periods of time and have longer battery lives, comfort is crucial to listeners' purchasing habits.

Top audio purchase drivers

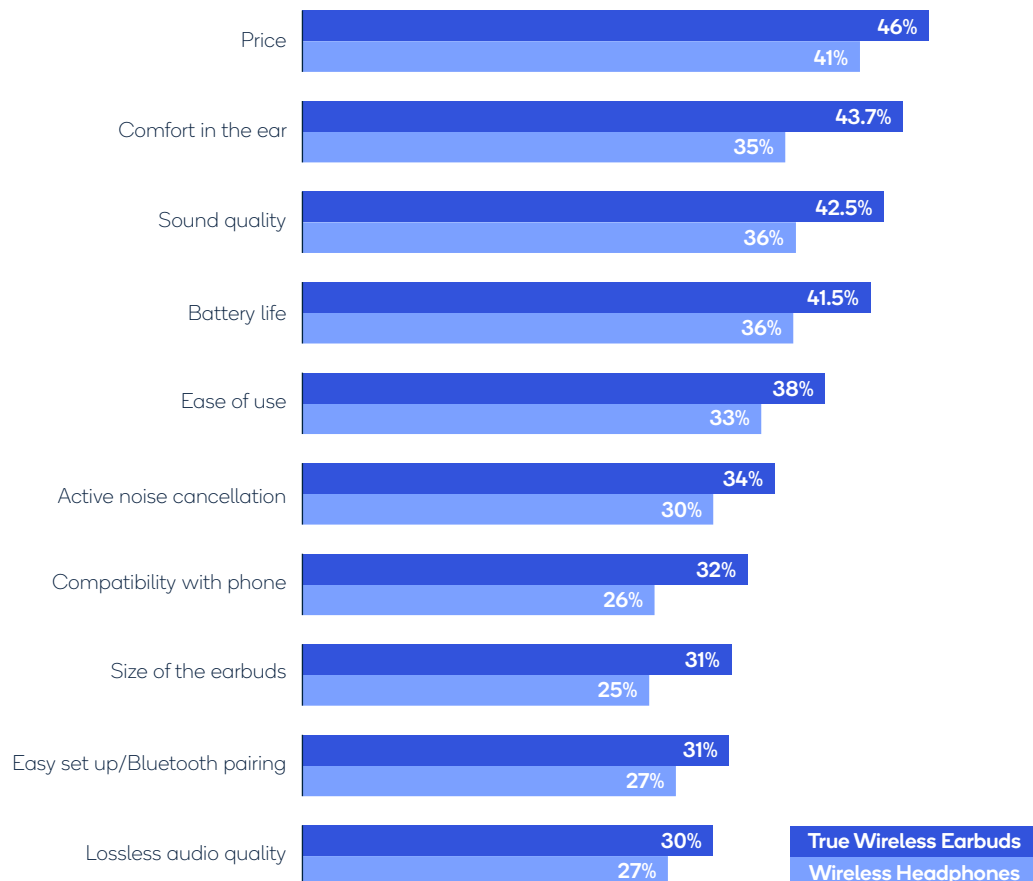
The following charts show how consumers rate the significance of features for each audio product category. Consumers are now seeking more value in their true wireless earbuds and headphones, along with year-on-year advancements in features and technology, with price, sound quality, and comfort all ranking highly.

Due to consumers wearing true wireless earbuds and headphones for longer periods of time throughout the day, comfort has moved up to number two.

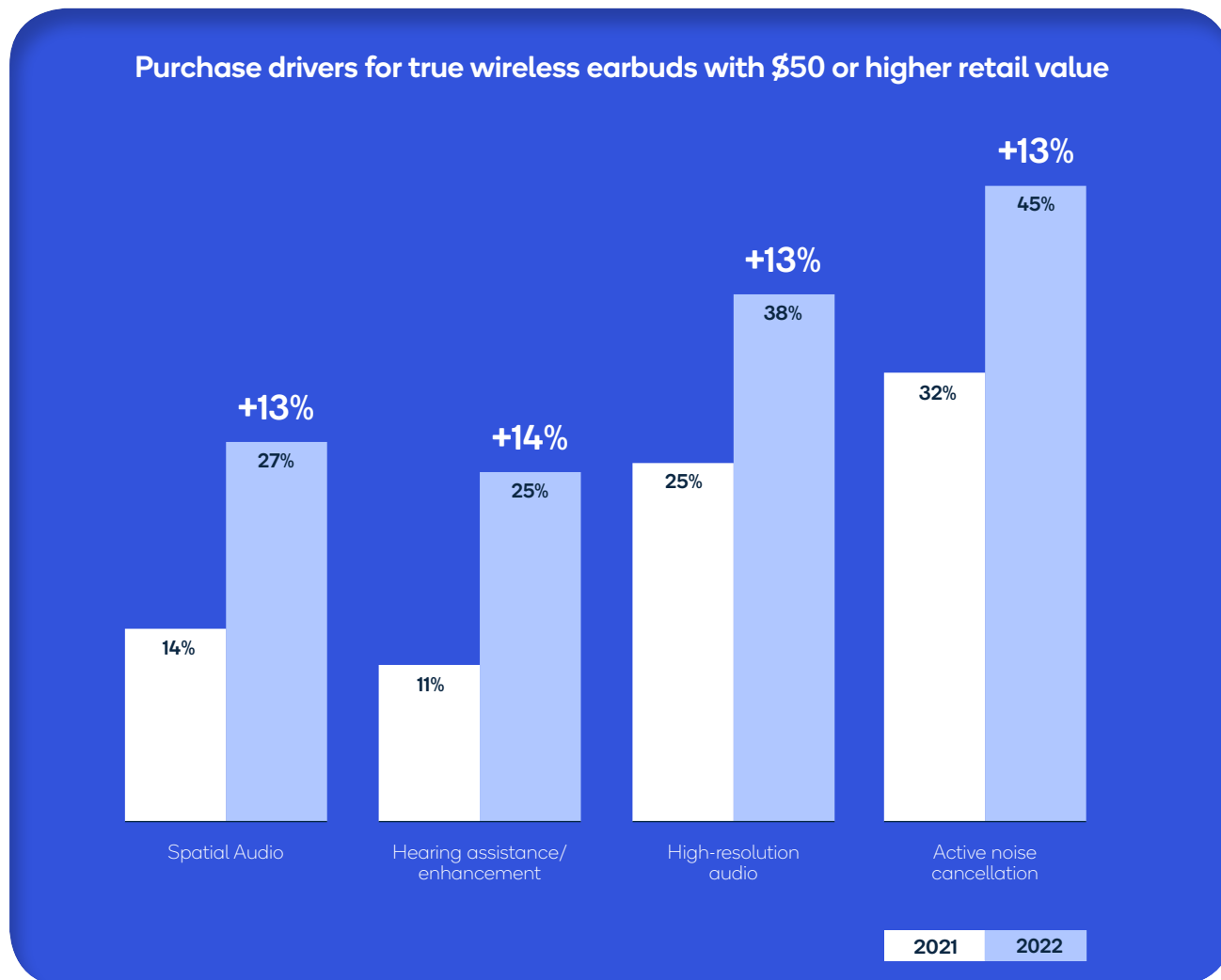
Lossless audio is becoming increasingly important each year, and sound quality remains one of the top three purchase factors.

Consumers are also looking for devices that are simple to use and work seamlessly together—“ease of use”, “easy set up”, and “seamless transfer” all being highlighted as important.

True wireless earbud and wireless headphone purchase drivers in 2022



Demand for richer features is increasing for devices over \$50



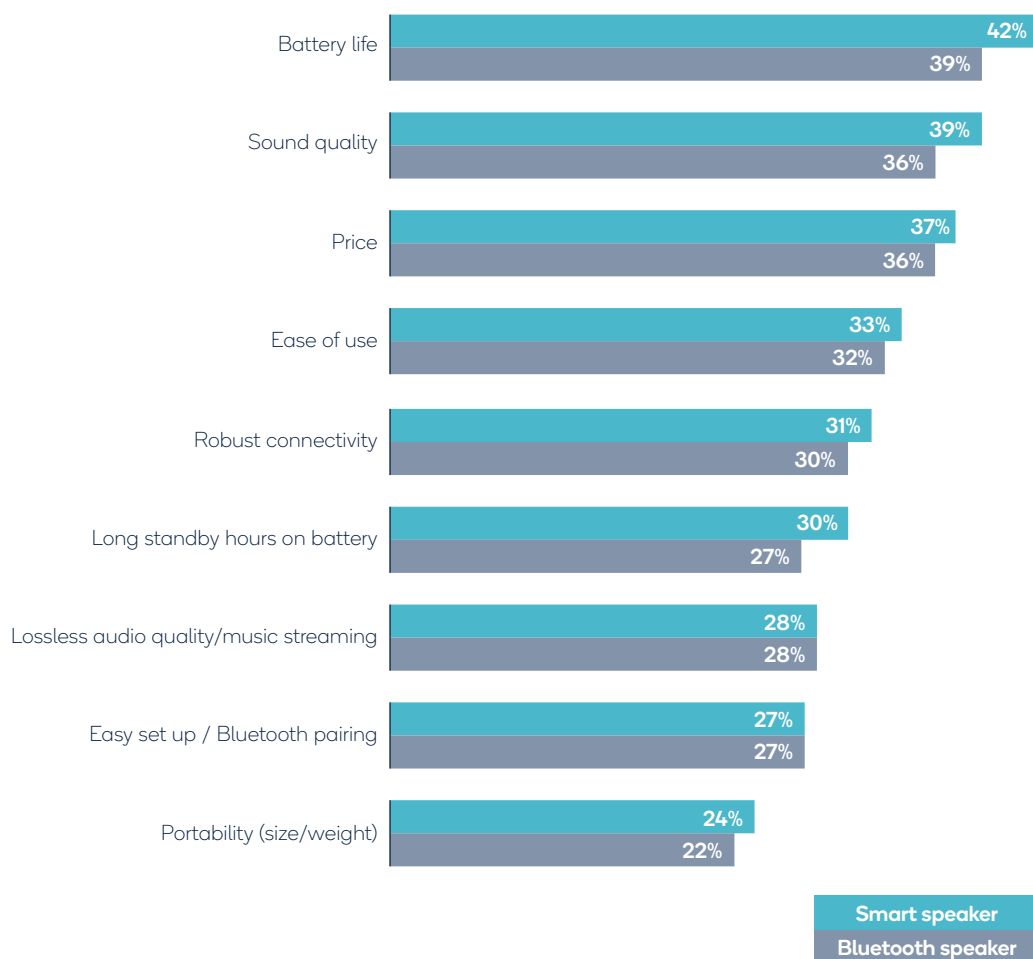
In the \$50 plus true wireless earbud category, there has been significant year-on-year shifts in key purchase drivers.

High-resolution audio, active noise cancellation, spatial audio and hearing enhancement have all seen >10% increases in demand at this price point compared to the 2021 State of Sound.

As technology and capabilities of true wireless earbuds continue to advance, and richer features become widely adopted at the mid to high-tier price points, listeners are now expecting more from their true wireless earbuds.

Hot topics for speakers: increased battery life, better sound quality and price

Smart speaker and Bluetooth speaker purchase drivers in 2022



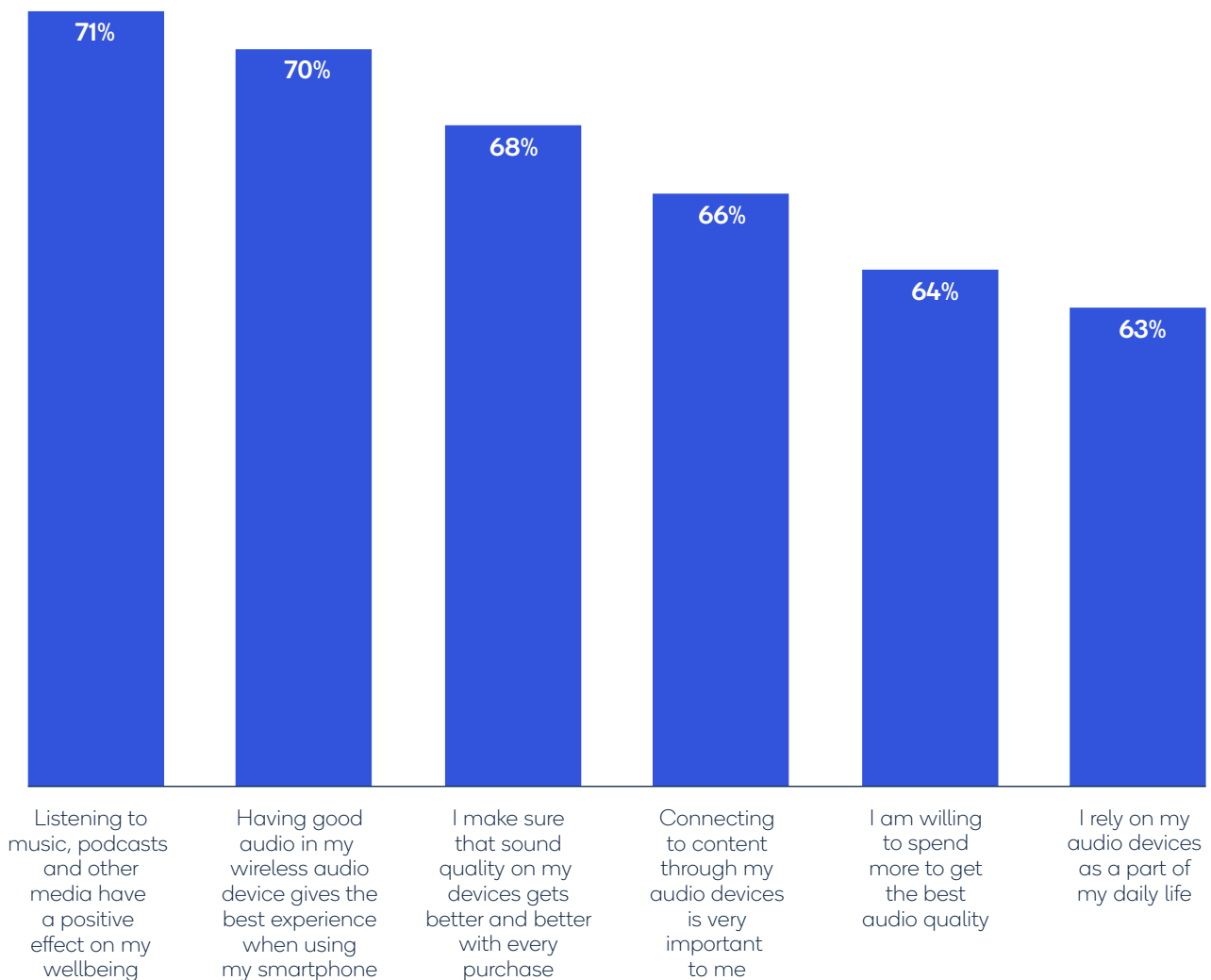
For both Bluetooth speakers and smart speakers, battery life has emerged as the top purchase driver. Consumers are seeking longer battery life as usage of battery powered portable wireless speakers expands. This trend was also shown in previous State of Sound reports for the headphones and true wireless earbuds categories—indicating that consumers are seeking an element of portability and convenience from their Bluetooth speakers.

Consumers actively seek out better audio quality and are willing to pay extra for it

Outside of purchase drivers, the report also highlights consumer sentiment towards audio. Findings show that for a second year, over 70% of consumers value audio and recognize the positive impact it has on their wellbeing.

The savviness of consumers has also increased year-on-year, with more now actively seeking out better audio quality—and are willing to pay extra for it.

Consumer sentiment toward audio use: Which of these statements do you agree with?

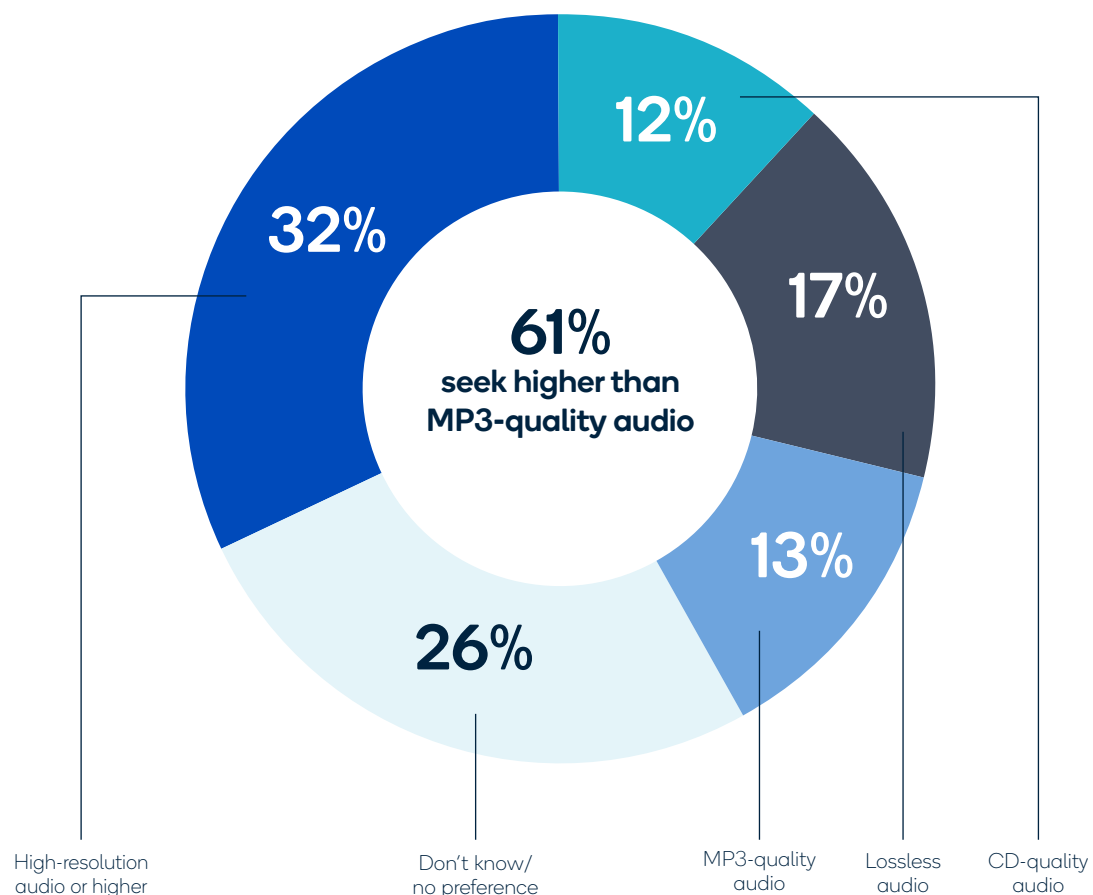


Consumers make decisions based on their knowledge of high-quality audio

For audio devices, sound quality is still one of the key factors in decision-making, and as audio technology evolves, consumer expectations are rising year-on-year.

When asked 'which of the following sound quality levels would you prioritize when shopping for your new wireless audio device?', more people than ever are seeking out lossless and CD-quality audio, with almost two thirds of respondents wanting higher than MP3 audio quality.

Sound quality attitudes globally



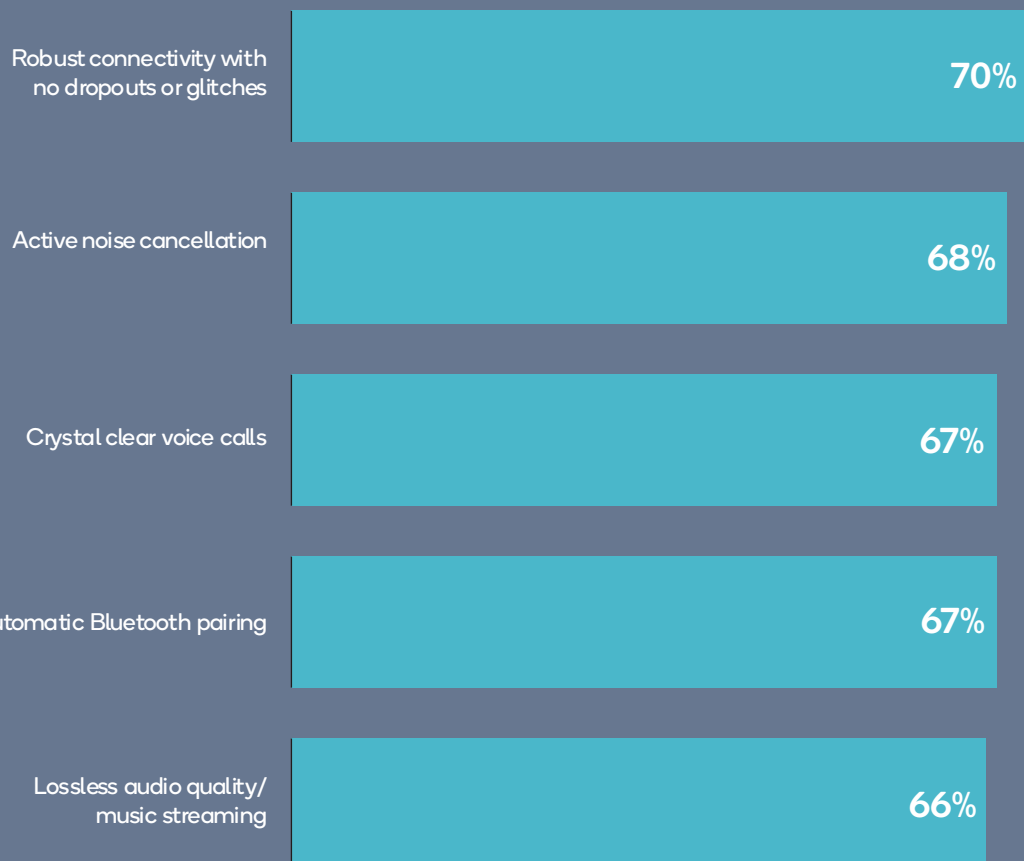
This data also indicates that listeners are becoming more aware of sound quality differentiation in their devices.

Sound quality improvement features that matter most

The findings below show which sound quality related features matter most to consumers, assuming the device meets the fundamental requirements for sound quality, battery life, ease of use, and price.

Responses indicate that consumers will seek richer, more reliable, and more seamless experiences in the future.

Percentage of true wireless earbud purchases likely to be influenced by sound quality improvement features





Feature focus: Spatial Audio

Beyond lossless audio, the next “must-have” feature for audio devices is spatial audio. Spatial audio, often known as 3D audio, allows the user to fully immerse themselves in a virtual three-dimensional space.

Most smartphones can stream spatial audio, but more content must still be produced, and new technologies must be considered if spatial audio is to be fully utilized for streaming music, films, games, and other types of content; for example – in the headphones/true wireless categories—spatial audio with head-tracking for complete surround-sound immersion.

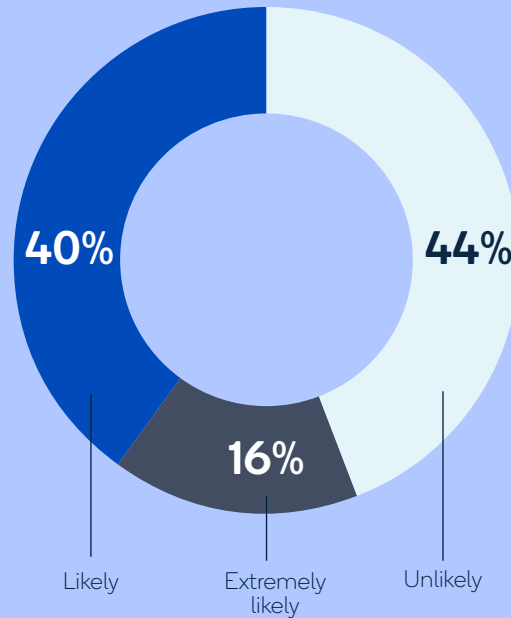
Our research indicates that consumers are becoming more knowledgeable about spatial audio, are actively seeking the feature, and would be willing to pay more for devices that support it.

High interest levels in spatial audio

41%
Would pay extra for spatial audio on their next true wireless earbuds

28%
Would pay an extra \$5 or more for spatial audio on their next true wireless earbuds

Percentage of true wireless earbud purchases likely to be influenced by support for spatial audio



More than half of respondents claimed spatial audio is likely to influence their decision to buy their next pair of true wireless earbuds, and 41% of respondents said they would be willing to spend more for the feature.

Several market segments are striving to integrate spatial audio into a variety of multimedia forms.



The **music industry** is producing content to enhance the listening experience for fans of their favorite musicians, enabling more realistic virtual concert experiences.



Spatial audio is being used by **film** producers to create more immersive soundscapes, especially for home theater systems.



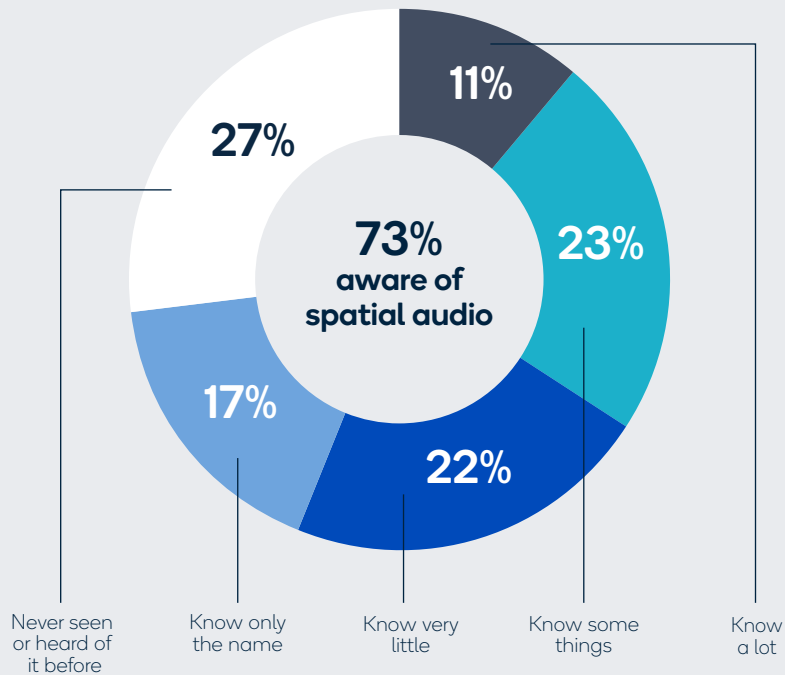
By integrating headtracking to offer spatial audio that moves with the player as they explore **virtual worlds**, gaming content providers are using spatial audio to create more immersive gameplay, especially in VR.

Familiarity with spatial audio is increasing

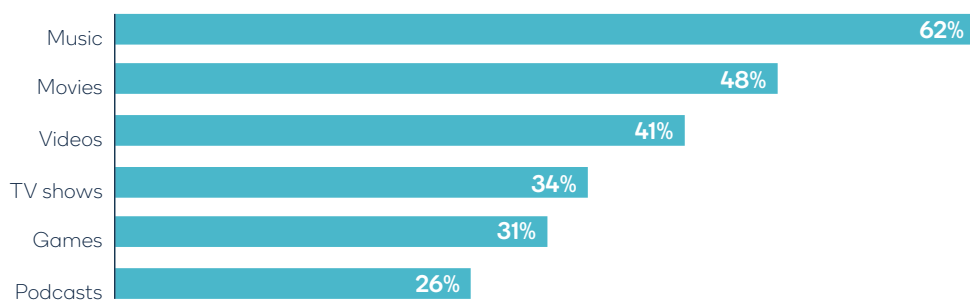
73% of respondents are aware of spatial audio, while 34% of respondents are quite familiar with the feature.

Due to its use in Bollywood films, spatial audio is particularly well-known in India.

How much do you know about Spatial audio?



Which of the following types of content would you like to listen to if your next wireless earbuds/headphones support spatial audio?



Users are interested in spatial audio for a wide range of content and use cases, from gaming, to music.

This indicates that consumers now recognise the positive impact spatial audio can have on their overall listening experience.



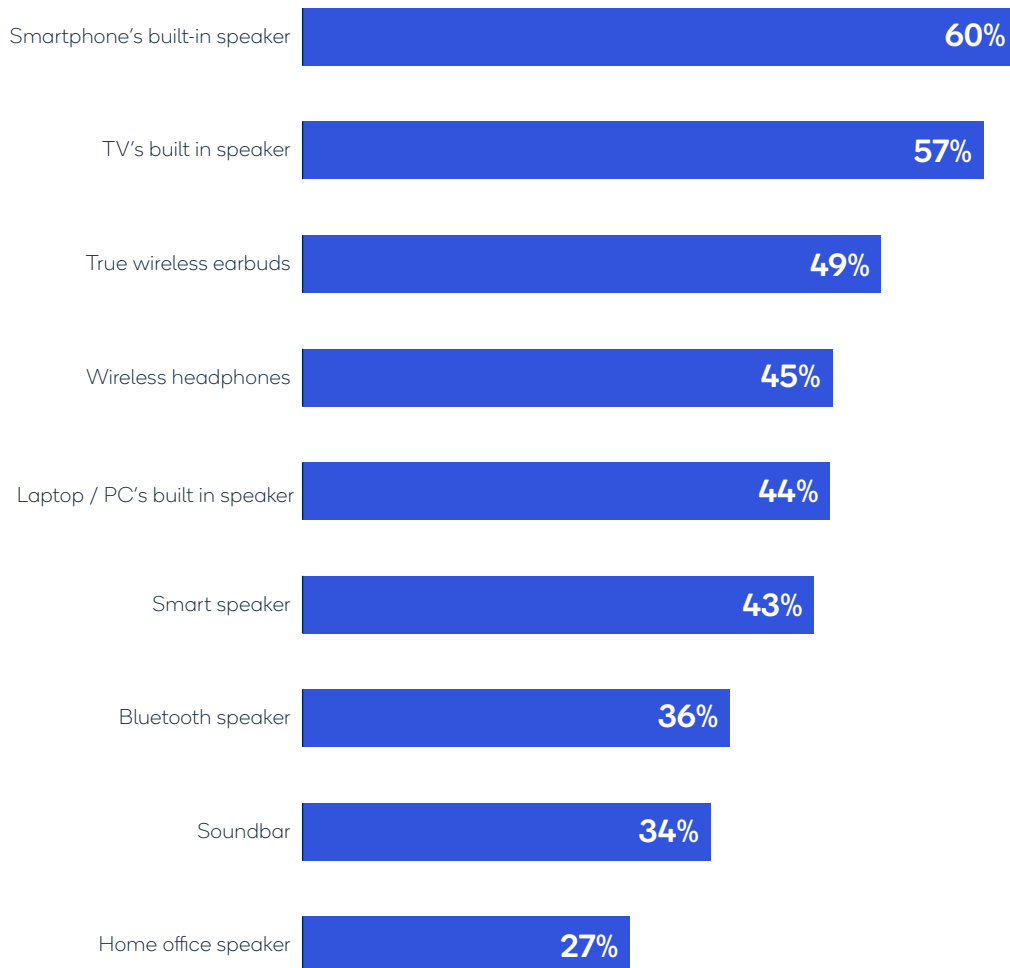
Overview of connected audio

The following findings show which wireless audio devices consumers use most frequently, and attitudes towards new technology advancements such as Bluetooth® LE Audio. Most respondents are already aware of LE Audio technology and are interested in the use case benefits it will bring.

Consumers listen to audio on a broader range of devices every day than ever before, from smartphones to soundbars.

Audio fluidity: A growing number of devices are utilized every day for audio

How frequently do you use each of the following devices each day?



Consumers now listen to audio on an even broader range of devices every day.

The number of people watching TV continues to rise. In recent years, as home working has increased, laptop speakers and conference speakers have become increasingly popular.

Consumers will use their audio devices to listen to music, podcasts, and play games for richer audio experiences. Users want their audio experience to be smooth, seamless, and high-quality across all of their devices.

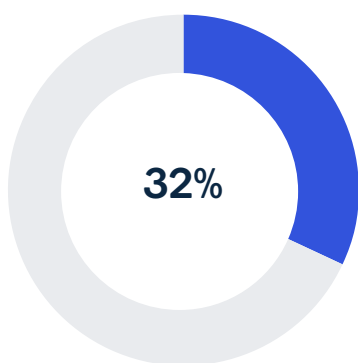
Anticipation for Bluetooth® LE Audio grows

The report shows high levels of interest and awareness in LE Audio, with 75% of respondents stating they were aware of LE Audio, and over 40% considering themselves knowledgeable. This is surprisingly high for a technology that hasn't yet become widely available and indicates significant anticipation from consumers.

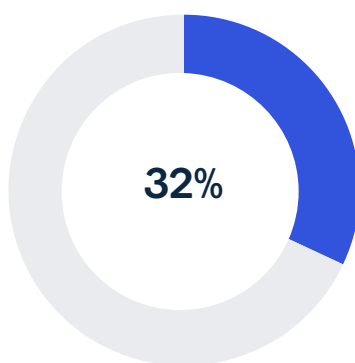
There is also significant interest in the use cases that LE Audio enables, including broadcasting to multiple devices for personal audio sharing and location-based audio sharing in airports, gyms, and other public venues.

Auracast™ — Broadcast audio

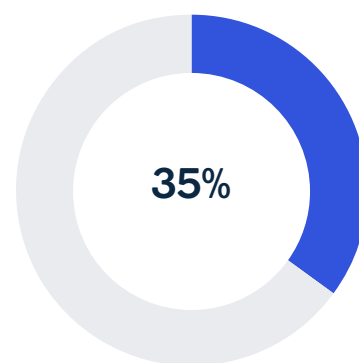
Which of the following audio sharing uses would you be interested in?



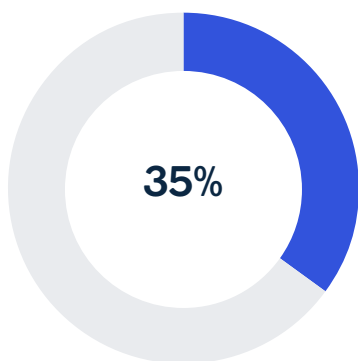
Watch TV with several earbuds, at different volumes



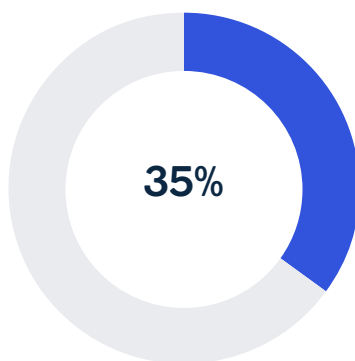
Watch the same TV program at different volumes over individual wireless earbuds/headphones



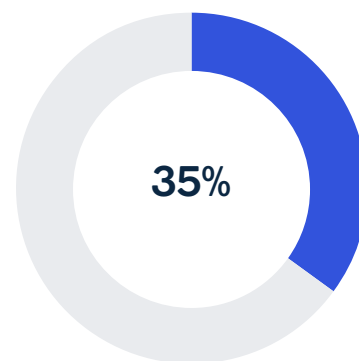
Stream audio from your smartphone to several wireless devices at the same time



Connect to one of several TV screens (e.g., in gyms or airports)



Connect my wireless earbuds/headphones to a public venue's broadcast (e.g., in gyms or airports)



Stream to multiple Bluetooth devices simultaneously

Consumers are interested in a variety of broadcast applications, such as simultaneously streaming audio from a smartphone to numerous wireless devices.



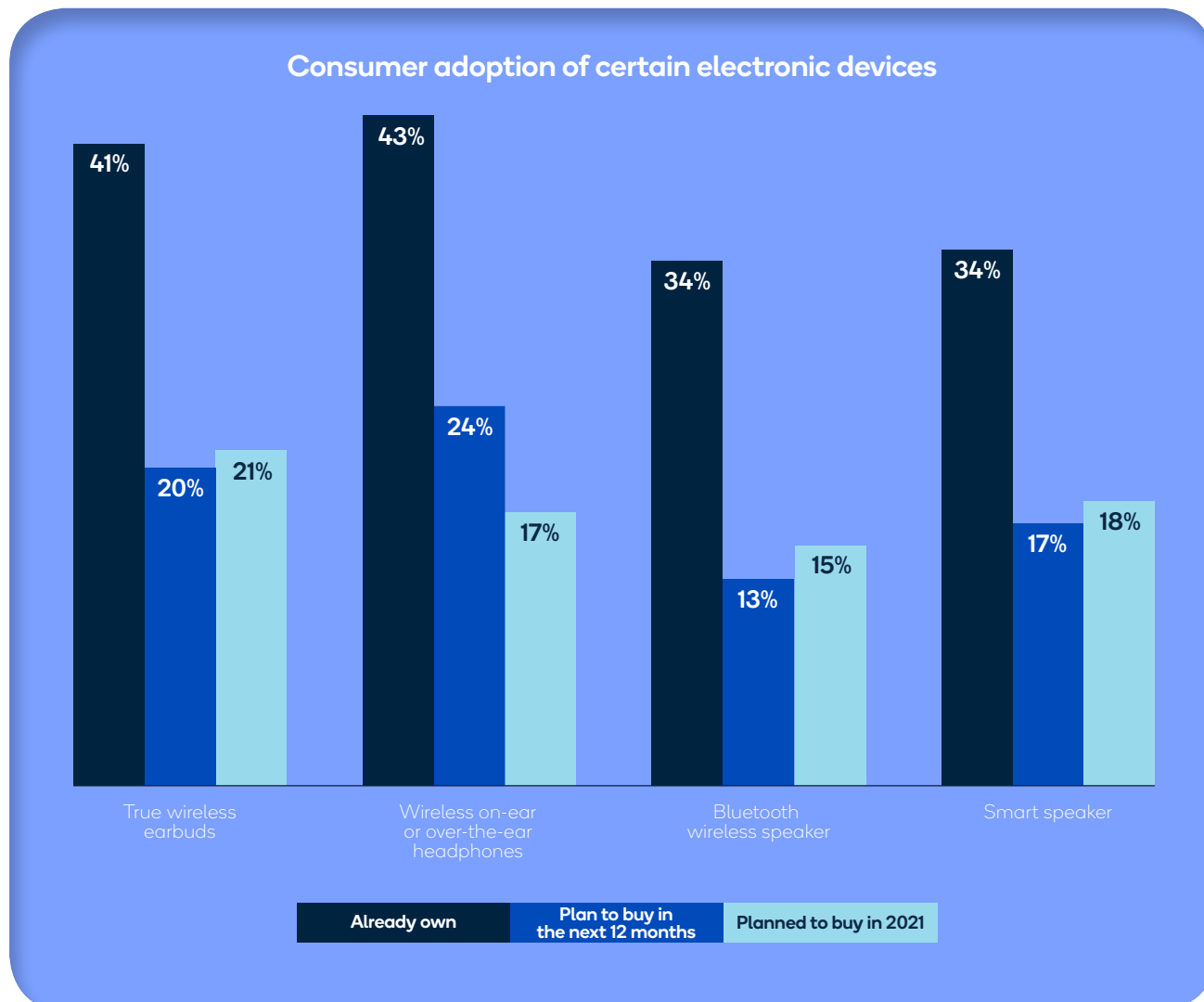
Product focus: True wireless earbuds

True wireless earbud products continue to be a high growth category in consumer audio electronics. 41% of respondents say they currently own true wireless earbuds, and 20% say they are planning to buy in the next 12 months.

Consumers use their true wireless earbuds for a wide range of use cases, including music listening, gaming, and voice calls—typically spending more than an hour a day on each individual activity.

The most requested advanced features include active noise cancellation, lossless audio, context awareness, and spatial audio.

Today's widespread use of wireless audio devices and the high demand for innovation

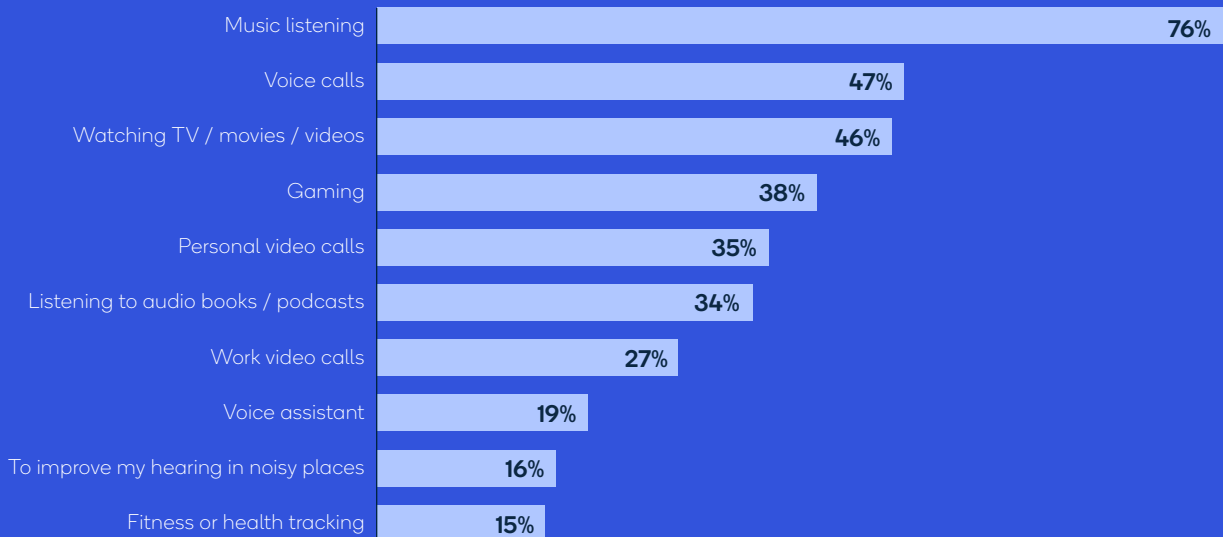


Despite their high market penetration, the true wireless earbuds market is still experiencing growth. 41% of respondents said they currently own a pair, up from 35% in 2021. 20% of respondents indicate that they plan to purchase true wireless earbuds in the upcoming 12 months.

It's interesting to note that more respondents (24%) claim they intend to purchase an on-ear or over-the-ear wireless headset. The number of people who own different types of headphones for use in various contexts — such as at work, listening to music, and playing games — has continued to increase every year for the last 6 years.

The most common uses for true wireless earbuds

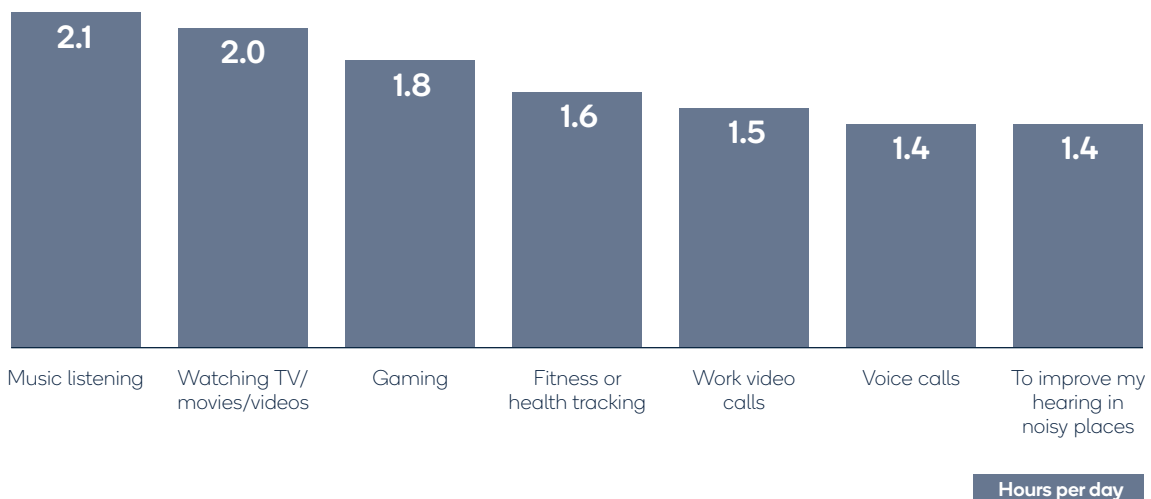
Which of the following do you use your current true wireless earbuds for?



The top four uses for true wireless earbuds have not changed in the last three years of the survey: music listening, voice calls, watching TV / movies, and gaming.

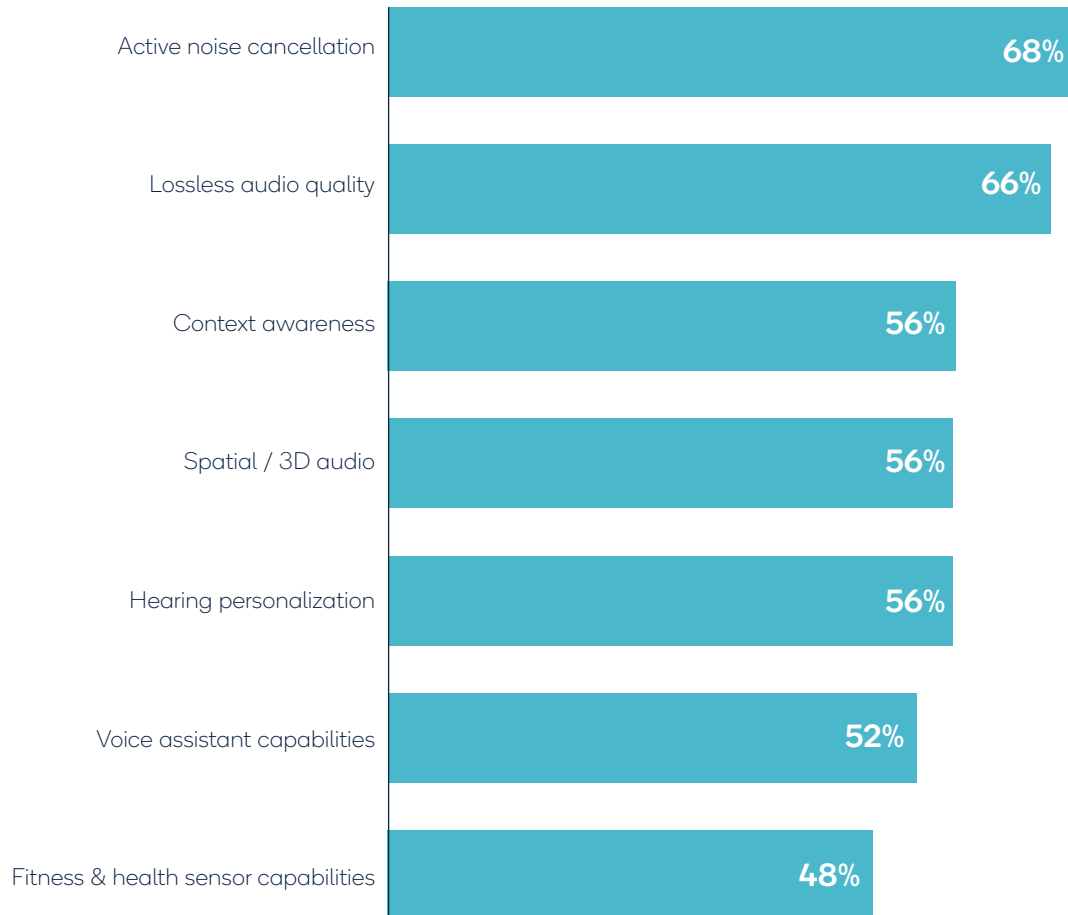
This is, in some ways, in contrast to how much time is generally spent on these activities. Users often play video games for about an hour and listen to music for over two hours each day. Voice calls take less time overall, as they are more frequent, but shorter activities.

In a typical day, how much time do you use your true wireless earbuds for each of the following activities?



The advanced features driving true wireless earbuds forward

Likely impact of advanced features on true wireless earbud purchase



Active noise cancellation (ANC) remains the most requested feature, with many consumers now also seeking lossless audio support in their wireless earbuds. This, combined with demand for features like spatial audio and hearing personalization, demonstrates continued desire for richer features.

Additionally, there is growing demand for enhanced sensor capabilities and fitness & health tracking, which have risen year-on-year.



Trending scenarios for sound

There are many overarching scenarios driving the audio market forward. From this year's respondents, the top trending scenarios include hybrid working, gaming, and active noise cancellation (ANC).

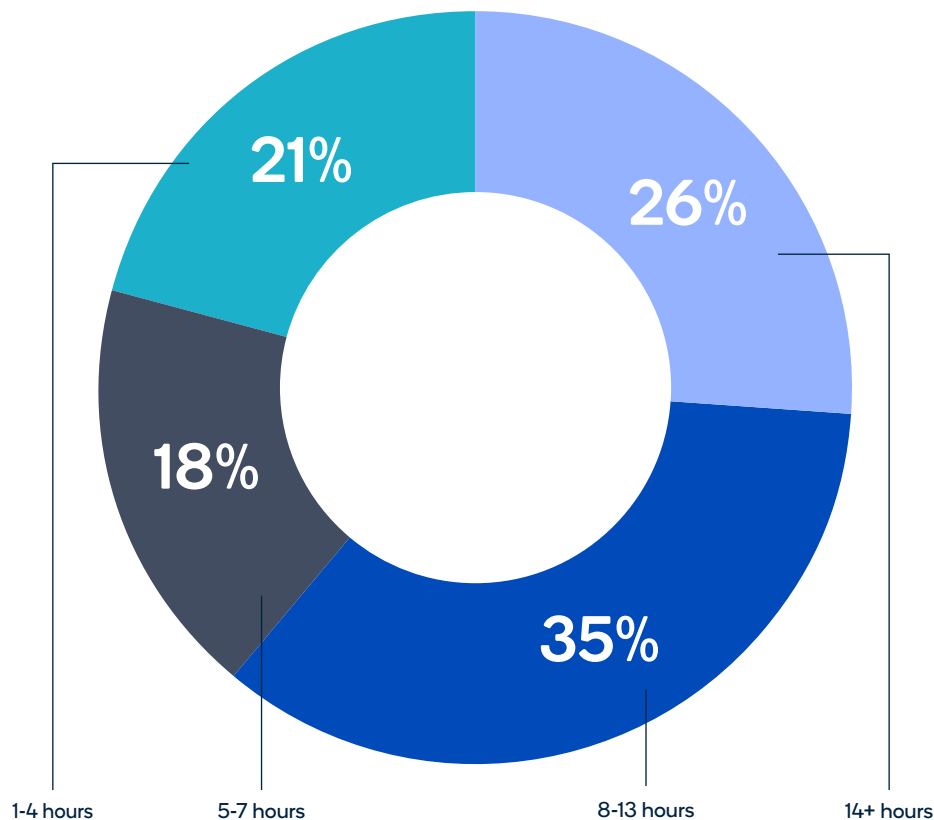
Most respondents want their true wireless earbuds to last at least 5 hours before needing to be recharged. Hybrid working is increasing, with more time being spent in offices in many countries. Across all respondents, almost 40% are now gaming on their smartphone daily, on average for 2 hours a day. 68% said support for ANC would influence their next true wireless earbud purchase, but respondents also indicated that there is room to improve the overall ANC experience.

The significance of battery life for consumers

70% of respondents want their true wireless earbuds to last at least 5 hours before needing to be recharged, and 26% want them to last up to 14 hours.

Most devices scheduled for delivery in 2022 promise a battery life of 4 to 10 hours¹ per charge. Manufacturers need to balance battery life expectations with the demand for more richly featured devices.

How many hours would you expect your true wireless earbuds to last before returning them to the charging case?



¹ Source: SAR TWS Product DATABASE

*All percentages, consumer behaviors and attitudes stated in this report are based only on the responses of the individuals who participated in our survey.

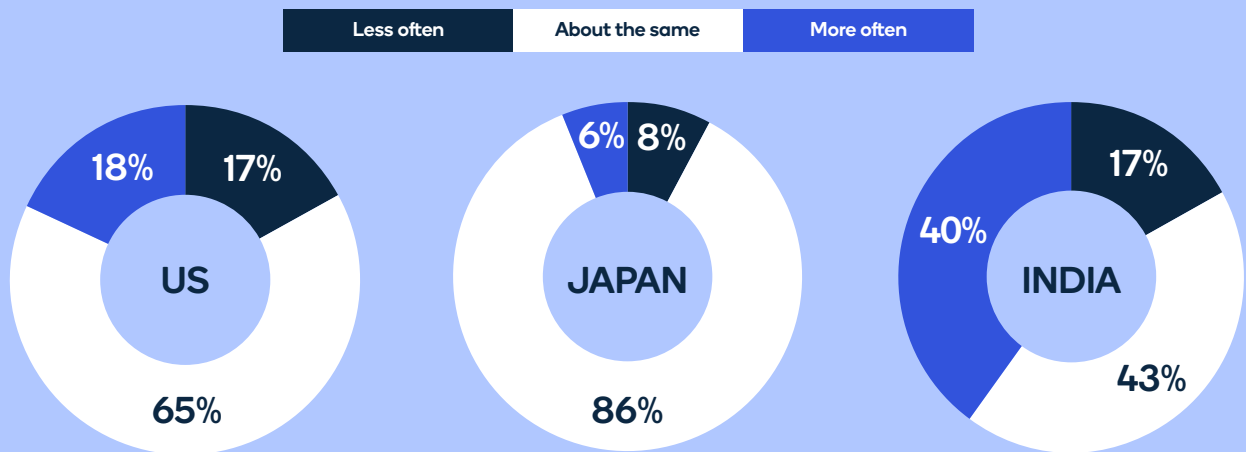
Evolving working patterns are driving behavior shifts

As we move to a post-pandemic world, the global shift back to in-office work is beginning, albeit slowly. Most respondents in the US, UK, Germany, and China still work from home, but 20% of them anticipate doing more office work over the next 12 months. Nearly 90% of respondents in Japan anticipate continuing to work from home, with 40% of respondents in India expecting more remote working than the previous 12 months.

The number of respondents expecting to make voice and video calls for work match this trend, with a slight decrease in the amount of work video calls they will need to make in 2022 vs. the height of the pandemic. However, this is counterbalanced by a heightened need to use audio devices during commuting and office work.

As the new hybrid approach to working continues, manufacturers, particularly in the enterprise category, will need to ensure their devices can support robust and high-quality voice and video calls, at work, at home and on the go.

Compared to the last 12 months, how often would you expect to work remotely?

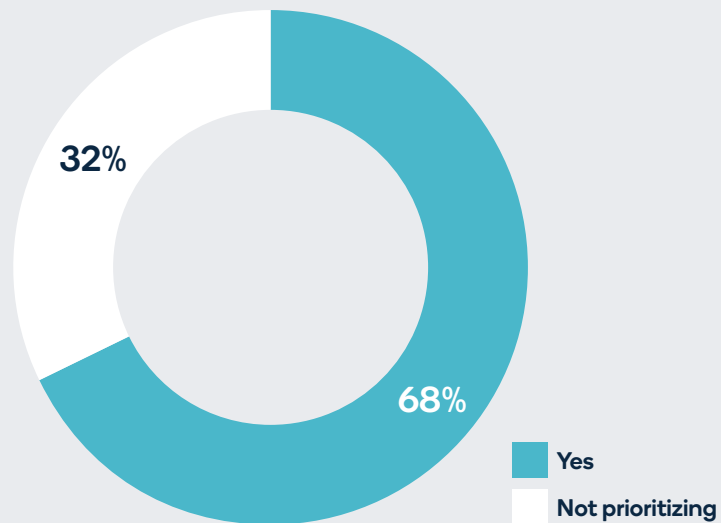


How much of the time do you use your current true wireless earbuds for work video calls?

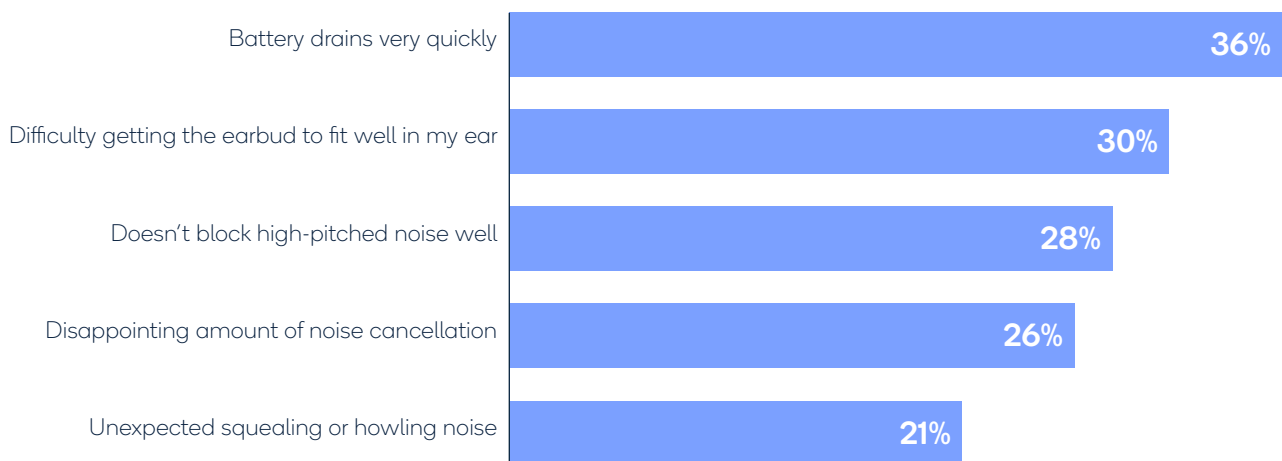


ANC continues to be a must-have feature for many, improvements are still needed for some

Would active noise cancellation influence the selection of your next true wireless earbud purchase?



Which of the following problems have you experienced while using active noise cancellation?



68% of respondents said that support for active noise cancellation (ANC) would influence their next true wireless earbud purchase.

Year-on-year, ANC has been a top purchase driver, and clearly, device manufacturers have seen a similar trend. As a result, various true wireless earbuds with ANC have entered the market, with ANC capabilities currently offered in a range of price points from high-end to under \$50 models¹. Some respondents reported issues with battery life, comfort, and quality of the noise cancellation, showing that the market still has room to improve, particularly at lower price points.

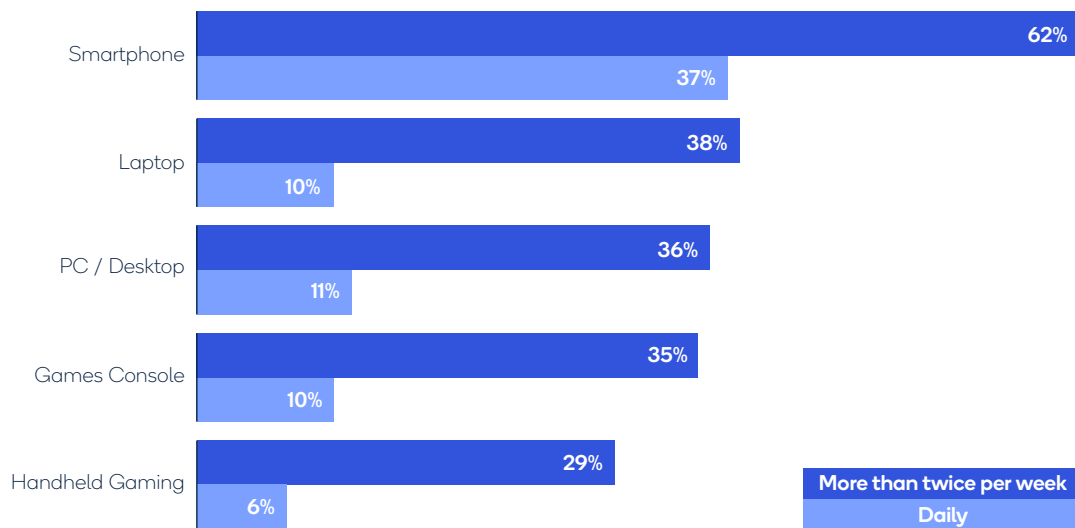
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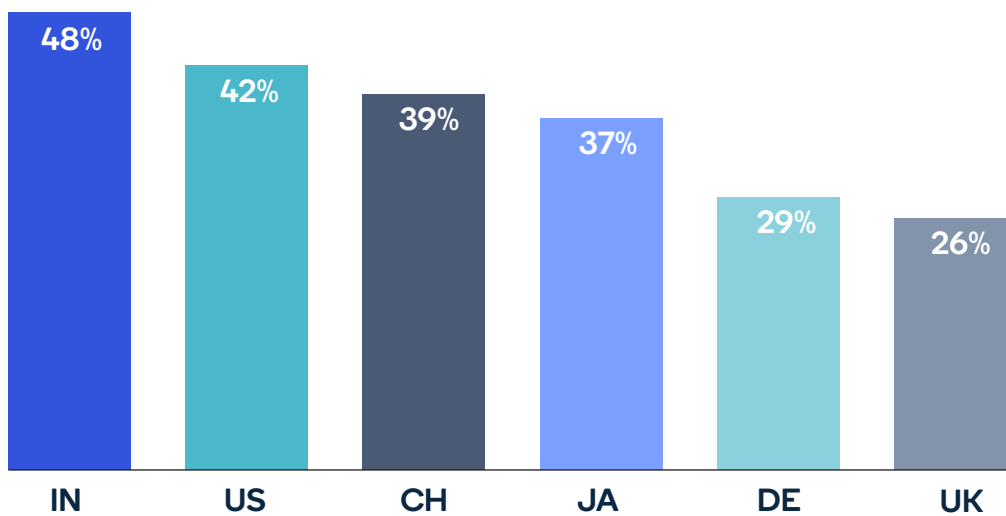
Importance of sound for gaming

Smartphones are the most popular devices for gaming, and true wireless earbuds are used for an average of two hours every day for mobile gaming.

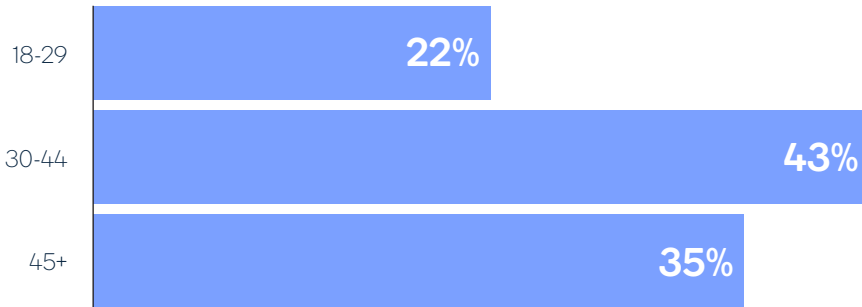
How often do you play games on each of the following devices?



Daily smartphone gaming

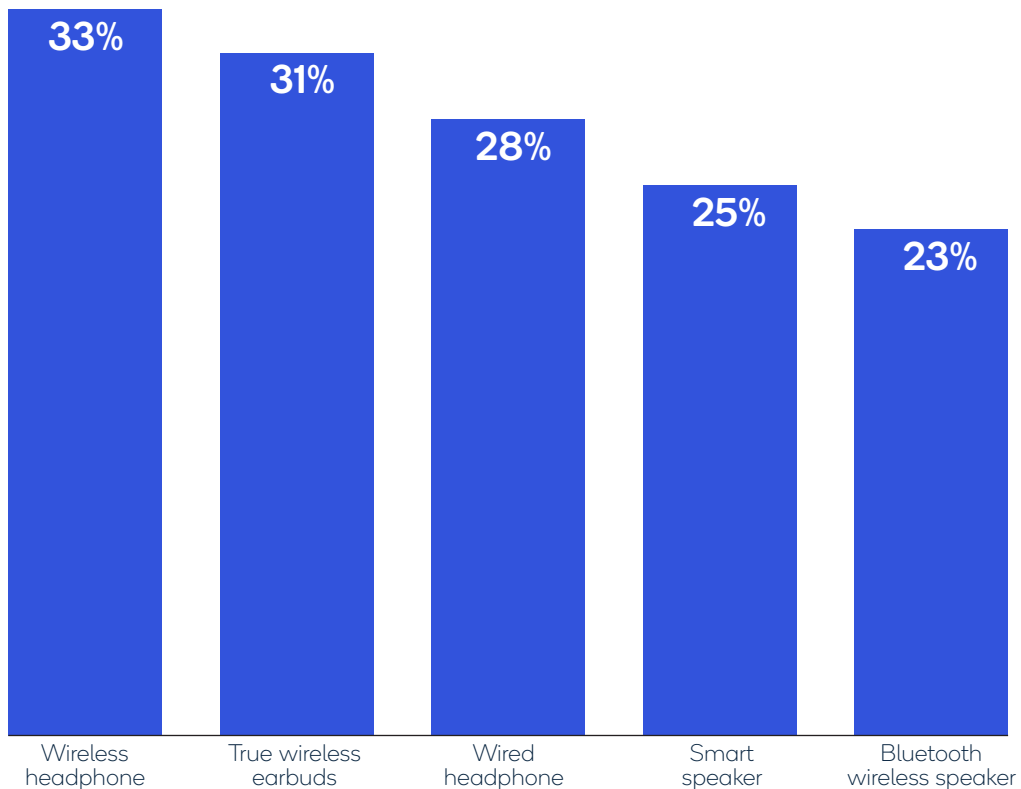


Daily smartphone gamers by age (Global average)



Nearly half of those surveyed said that having a voice back-channel for in-game voice chat would affect their decision to buy their next pair of true wireless earbuds or stereo headset. 79% listed lower audio lag for gaming as a likely purchase driver for their next true wireless earbuds, and one-third also said their gaming experience would be enhanced by spatial audio features.

Which of the following audio accessories do you use when playing games on your smartphone?



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Snapdragon Sound™ brings together the very best audio, connectivity and mobile innovations from Qualcomm to deliver high-resolution music, crystal-clear voice calls, and lag-free gaming—all with rock-solid connectivity and extended battery life. This is how sound should sound.

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