

Maru's Guide to Web3

The Metaverse, Virtual Reality and Augmented Reality

maru/
The experience & insights platform

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Executive Summary

Web3 offers a new frontier for growth that all media, entertainment and technology companies should be exploring. Whether you're a digital content creator, newspaper, sports league, artist, game developer or movie studio, Web3 will present new ways to engage audiences (and monetize them).

Chief to the development of Web3 are Virtual Reality (means of access) and the Metaverse (the assumed content distribution format). The Metaverse, as it has been envisioned, will be a fully immersive 3D world where visitors can flit from one space to another, spending time with friends, visiting a virtual museum, driving a train, watching a concert or even attending a conference.

To assess consumer appetite for the coming Web3, Maru's Entertainment and Technology team conducted a comprehensive piece of thought leadership designed to assess current consumer appetites for Augmented Reality, the Metaverse, and Virtual Reality, and to pinpoint areas of substantial promise for content creators. The study was fielded in November 2022 to 1,600 U.S. adults aged 18 or older, with sample splits as follows (18-29 n=294, 30-44 n=450, 45-59 n=450, 60+ n=406).

What the 'Guide to Web3' found is that there is tremendous potential for all kinds of content creators to embrace. Over half of adults expressed interest in attending a virtual concert or festival if someone they liked was making an exclusive performance, a finding which should be of interest to record labels, live event and festival promoters, and virtual spaces currently offering such events.



Executive Summary

Sports too may see new growth via Web3. One third of all adults were interested in paying to watch a sports broadcast via virtual reality if it could give the experience of being in the stadium in a good seat and experiencing the atmosphere (if one could partner with local restaurants to deliver stadium-esque food the experience could heighten even more). The most popular sport for this experience was, to some degree, the NFL, followed by the NBA, MLB, FIFA World Cup, and NHL.

In general, consumers thought that entertainment and gaming would be the most useful concepts that the Metaverse could be applied to, with one in five saying that they thought it would have no use at all. It is interesting to note that a sizeable minority (3 in 10) said that the Metaverse would be useful for work, and while this is true, it should also be noted that there would be additional expense in adopting presentations to the virtual world, but it is also easy to see a world where meetings could be conducted virtually, saving on travel costs and making business more carbon neutral.

It is important to note that the report considers two dimensions with regards to Web3 interest and adoption. The first is age, and the second is income. A consistent finding across the study was that younger people and more affluent households have much greater interest in all aspects of Web3 than older or poorer people. As such, the initial years of the Metaverse will likely be limited to those who can afford headsets capable of high performance, which typically cost more than \$1,000.



Executive Summary

There is another solution, but it may be difficult to countenance for some Metaverse purists. Whilst the envisioned 3D Metaverse doesn't currently exist beyond concept, vast 2D worlds offering many types of content and engagement do, in the likes of Fortnite, Roblox and Minecraft. The reason these are noted is that they offer a construct for a much cheaper, and easier to access, virtual world, and one that our research tested the concept for.

When consumers were asked which technology could be used to access the Metaverse, an overwhelming majority said VR headsets, which saw around double the level of the next most popular format, computers. Once consumers were exposed to a 2D Metaverse concept and asked how they'd prefer to access the Metaverse, interest in VR fell by over half, behind that for computers, smartphones and smart TVs.

Close to two-thirds of consumers said that being able to access Metaverse content via a 2D device made the concept more interesting to them. It would therefore be prudent for companies looking to devise strategies for Web3 to include both 2D and 3D capabilities in their plans so as to maximize reach and generate optimal revenues.

What is clear is that the Metaverse and Virtual Reality offer brands across entertainment a rare opportunity to forge new revenue streams and reach consumers via immersive products. The growth of Web3 will see new partnerships between content companies and technology platforms as they look to capitalize upon consumer interest. It's an exciting time to be in content. Maru's 'Guide to Web3' outlines why it should be important to your brand.

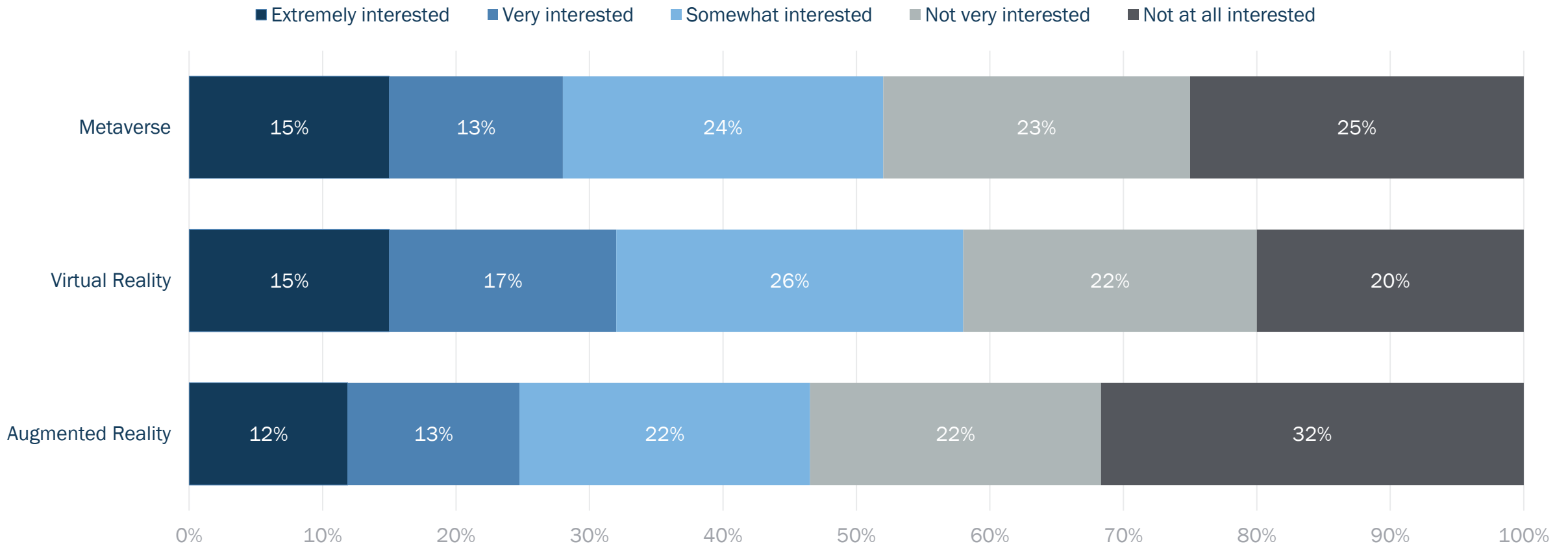


Web3 Interest

Interest in metaverse, VR and AR
among key demos

Interest is strongest overall in virtual reality, whilst augmented reality has greatest levels of strong disinterest

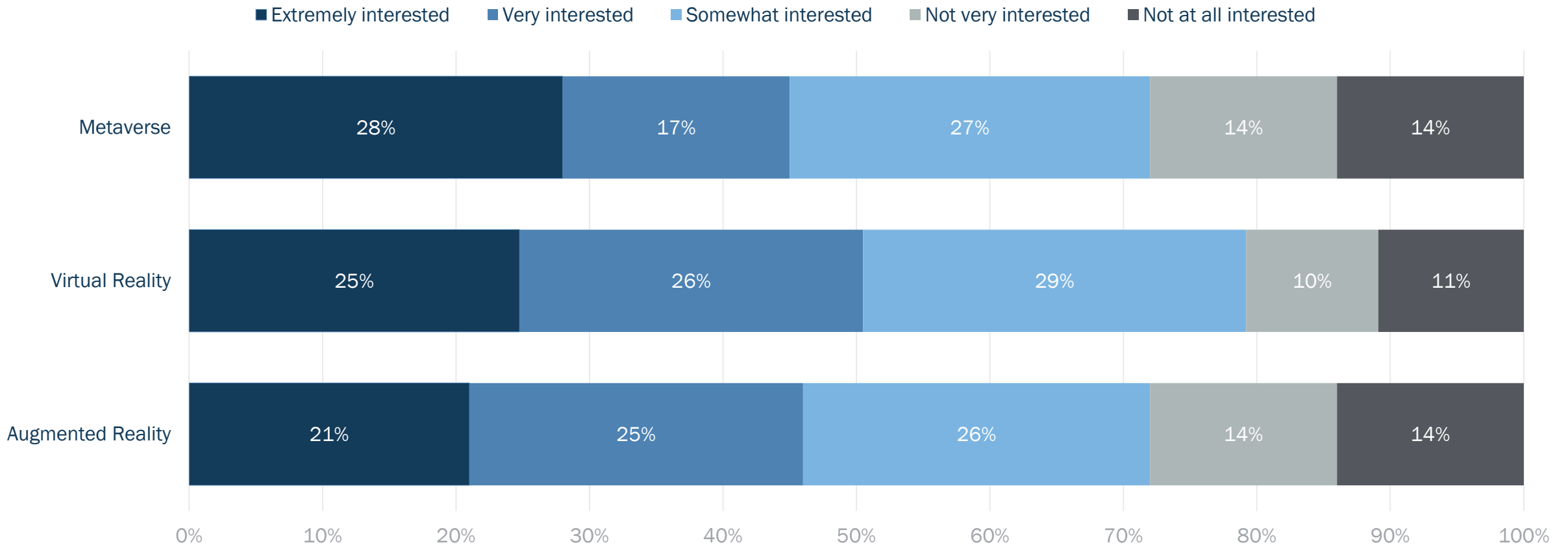
18+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Metaverse has highest levels of top box interest among 18-29s, but all Web3 technology has strong overall interest

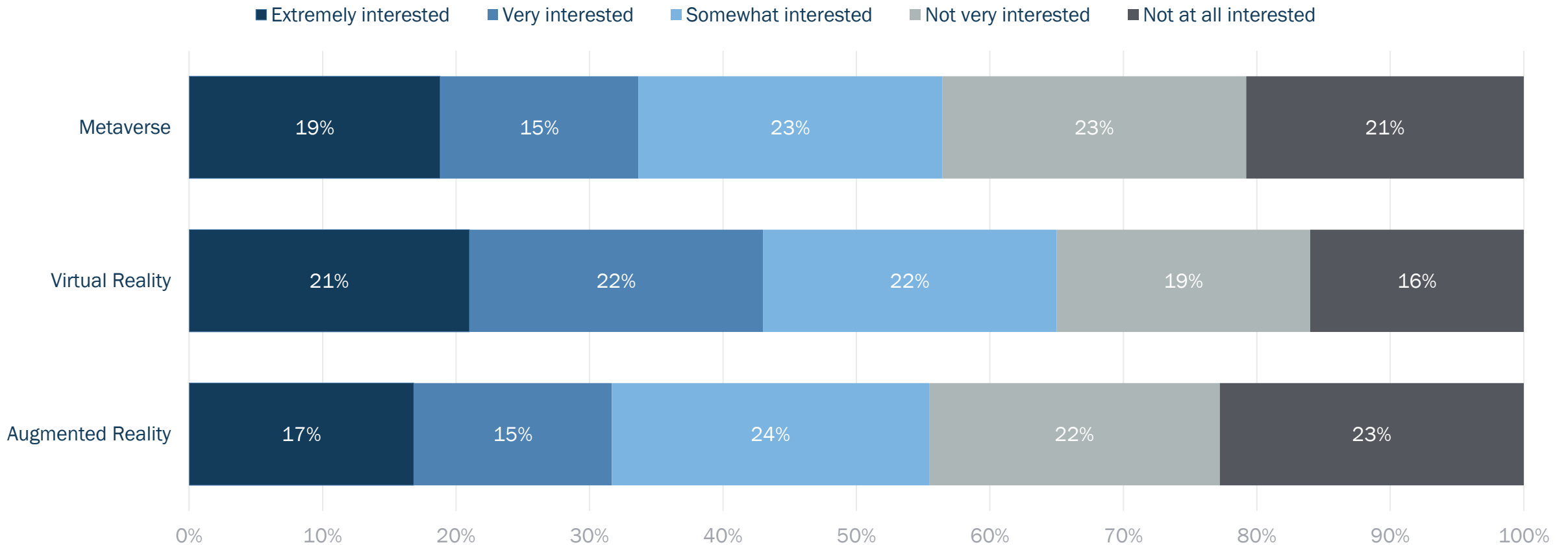
18-29



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18-29 (n=294)

VR has the greatest TB interest for 30-44s, with close to two-thirds having some level of interest in the technology

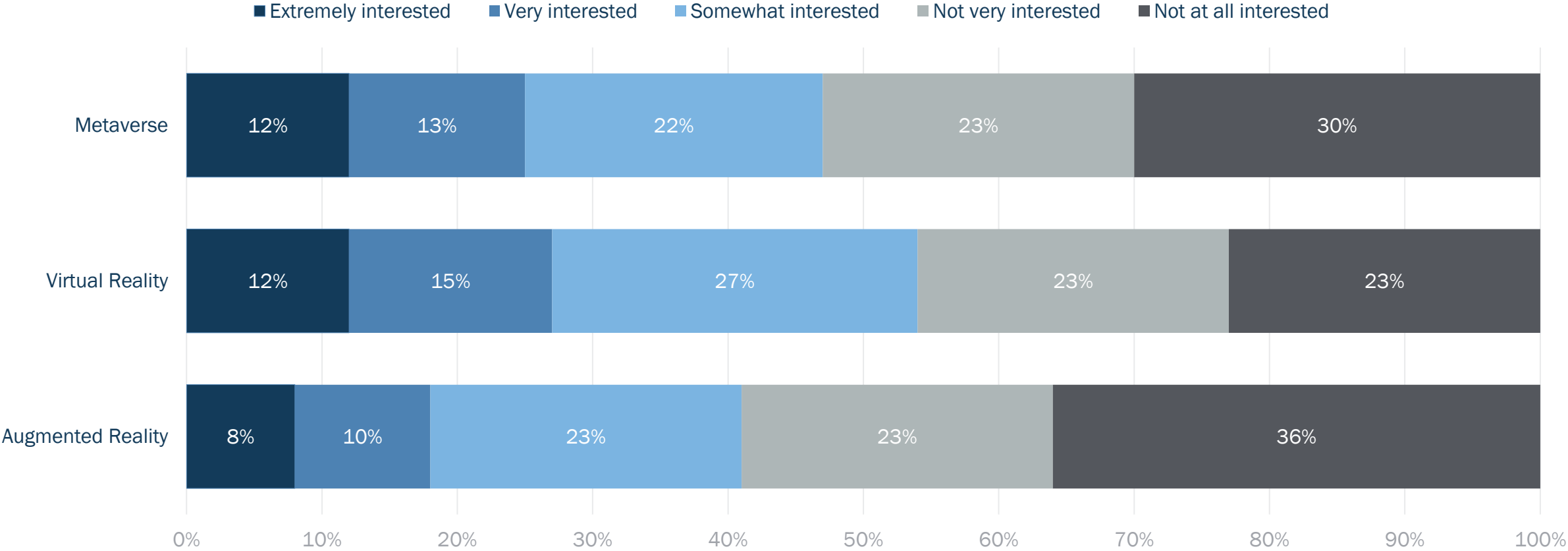
30-44



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P30-44 (n=450)

45-59s have similar interest top two box interest levels in metaverse and virtual reality but more are not interested

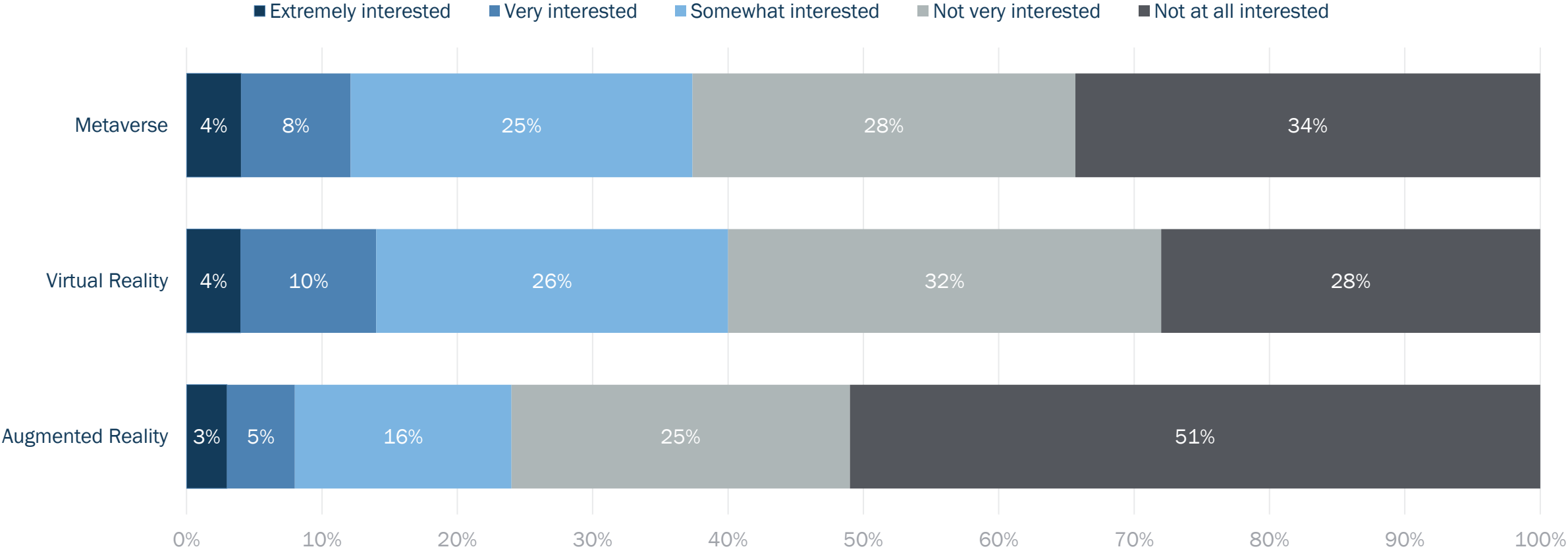
45-59



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P45-59 (n=450)

Over half of those 60 or older have no interest in augmented reality, with a third rejecting the metaverse

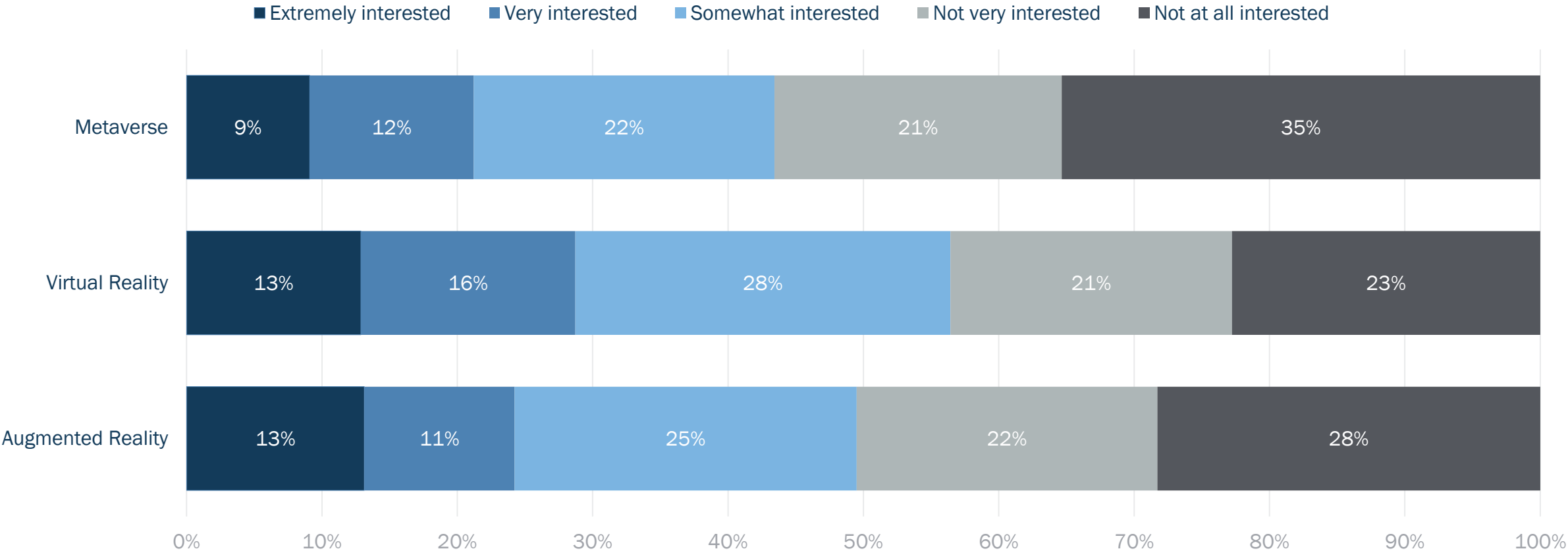
60+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P60+ (n=406)

The metaverse is the Web3 area that sees lowest top box interest among households with an income below \$75k

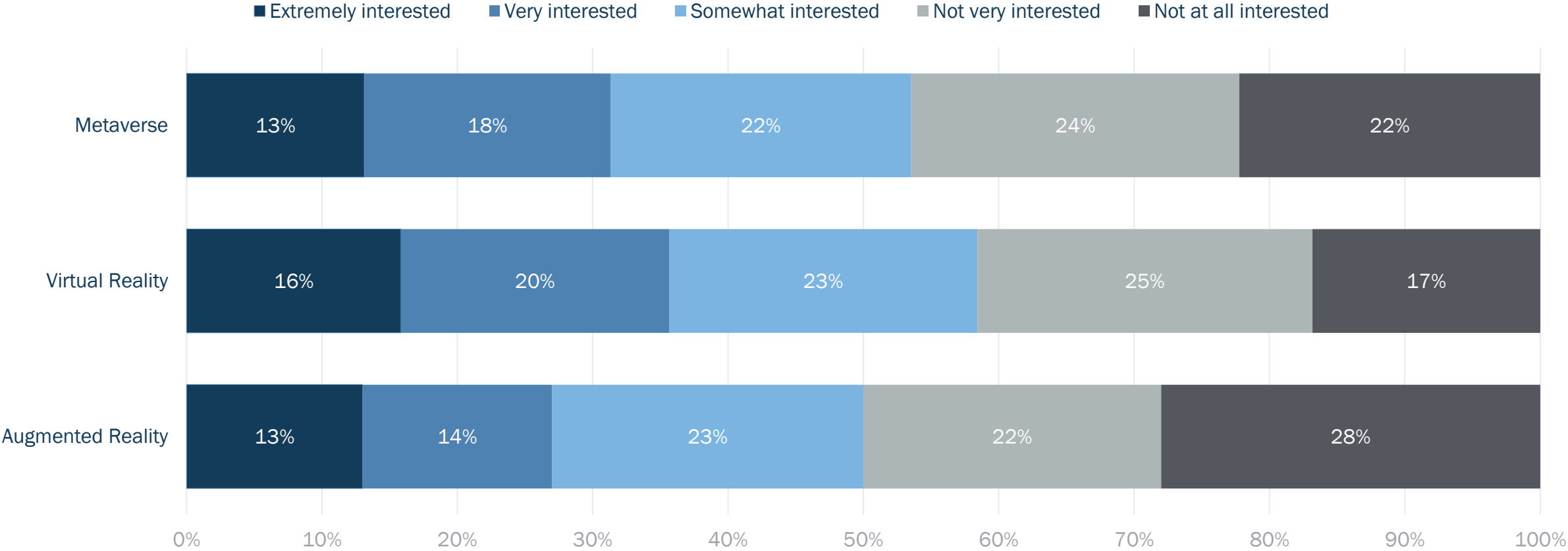
Household income under \$75k



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913)

There isn't much difference in top box interest for the different Web3 formats among mid-range households

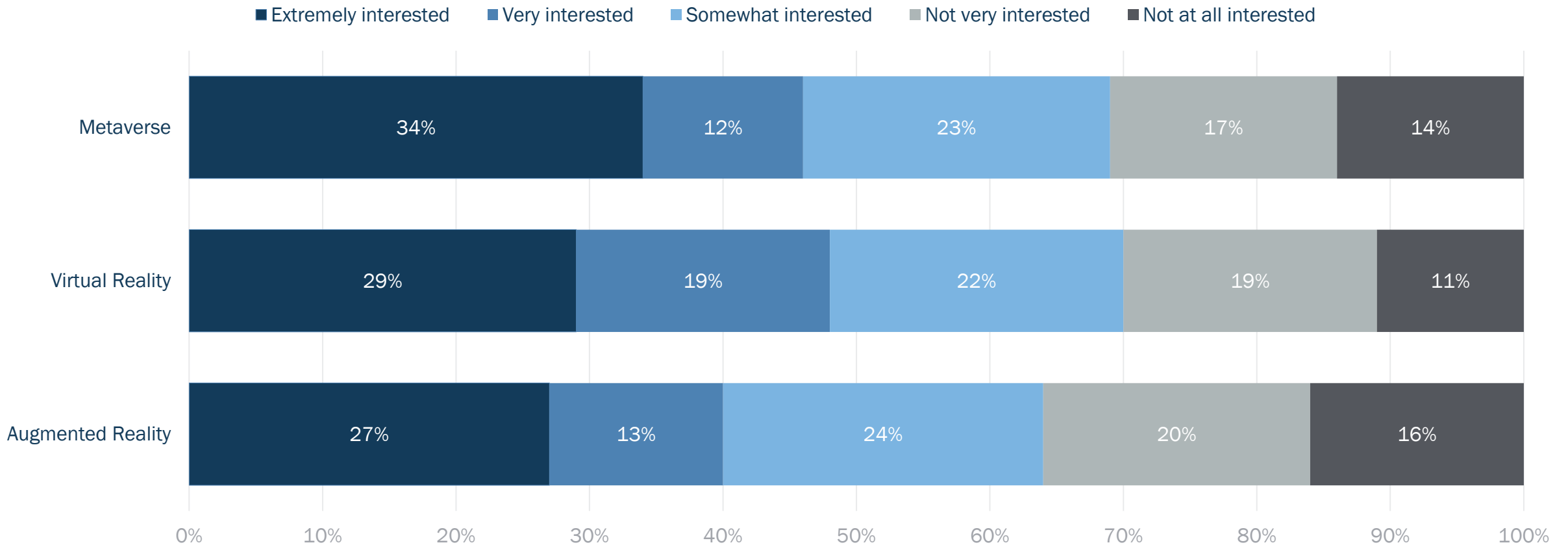
Household income \$75k-<\$150k



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: \$75k-<\$150k (n=451)

Close to half of households with an income over \$150k have T2B interest in VR or metaverse, with AR at 4 in 10

Household income >\$150k



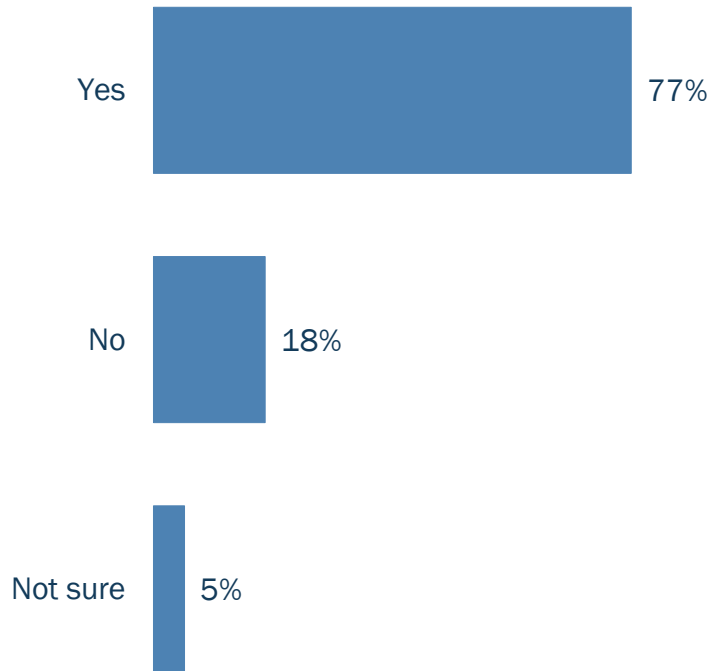
Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: \$150k+ (n=156)



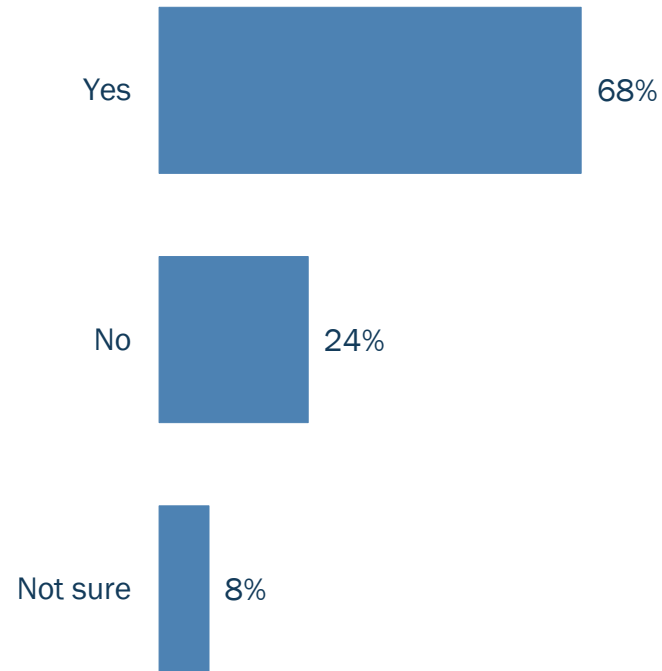
The Metaverse

Most people have heard of the term metaverse, with most also aware of the detailed definition of what is possible

Heard of the “metaverse”



Heard of definition

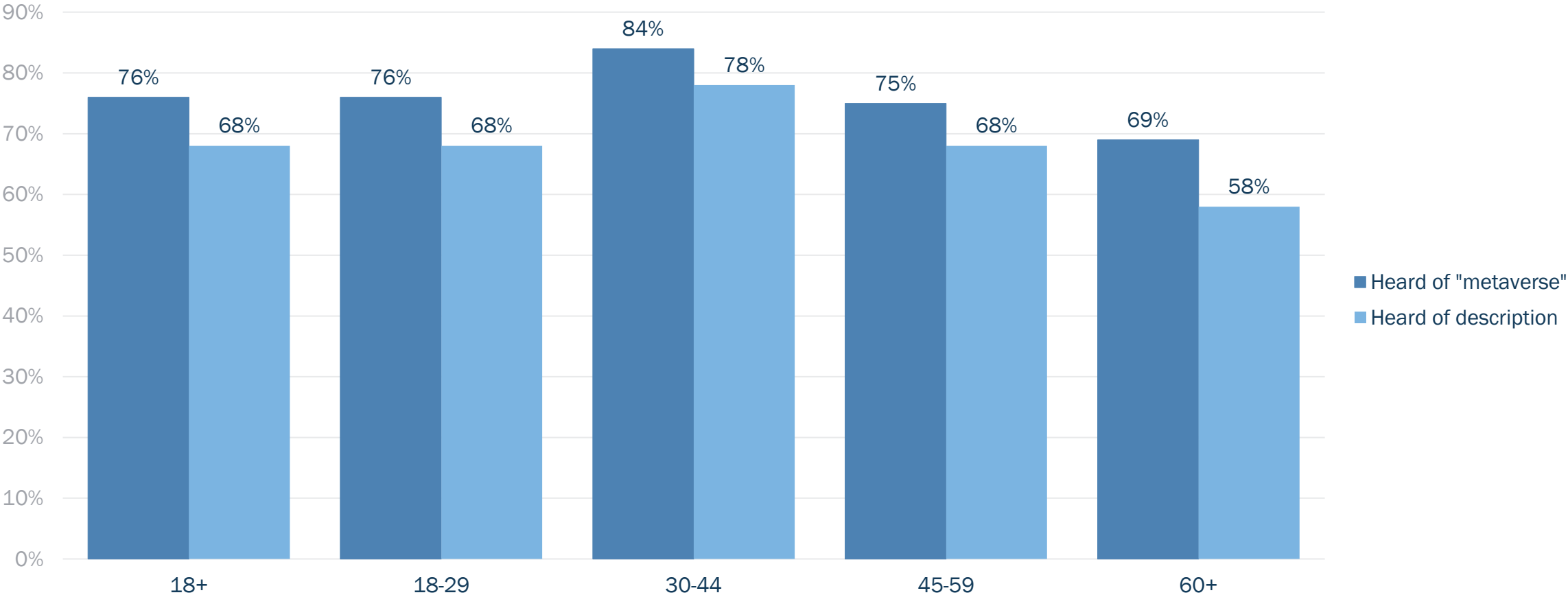


Metaverse definition:

In broad terms, the metaverse is a collection of virtual worlds hosted online. Many hope that ultimately it will be possible to visit each virtual world with one profile or avatar, in contrast to today’s online world where a user has distinct logins for each service they use and can’t import information from competing platforms. In the metaverse, anything is technically possible, from appearing as an animal or monster to watching a concert held in a virtual world or climbing a mountain. Based on this definition, had you heard of the metaverse before today?

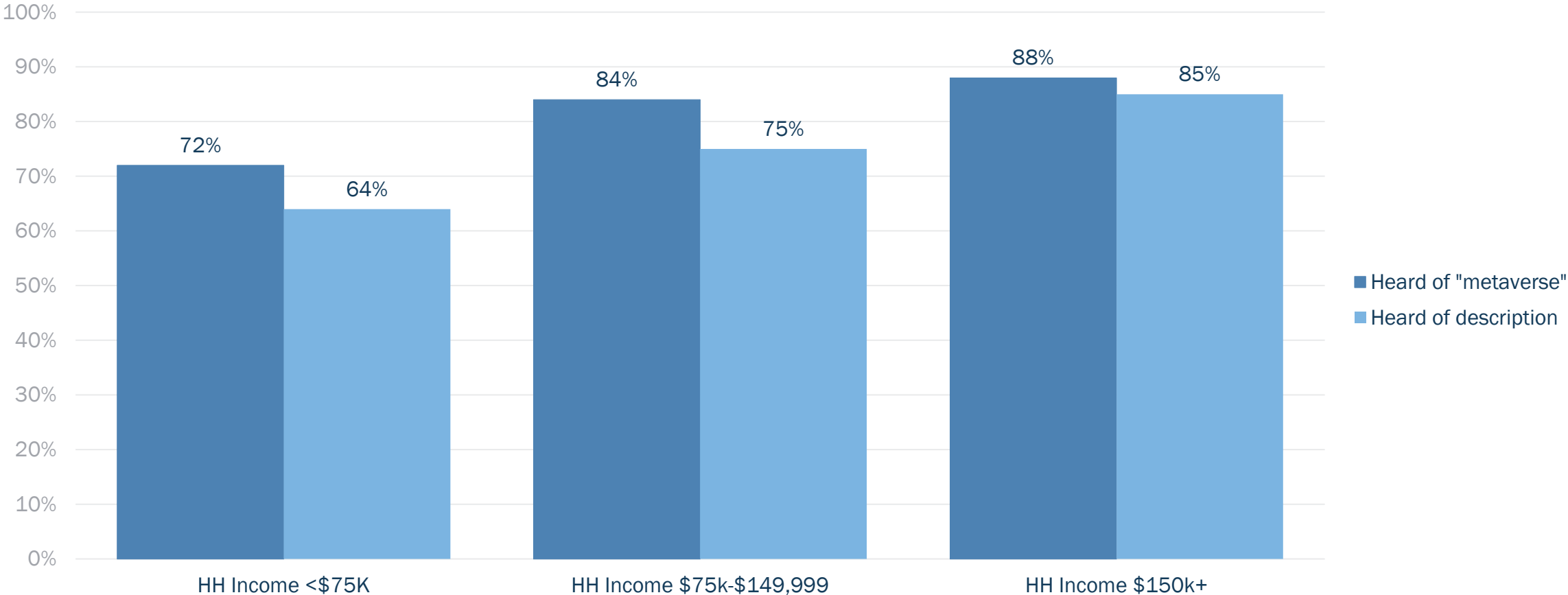
Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

30-44s have the greatest awareness levels for the metaverse, with levels similar for 18-29s and 45-59s



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

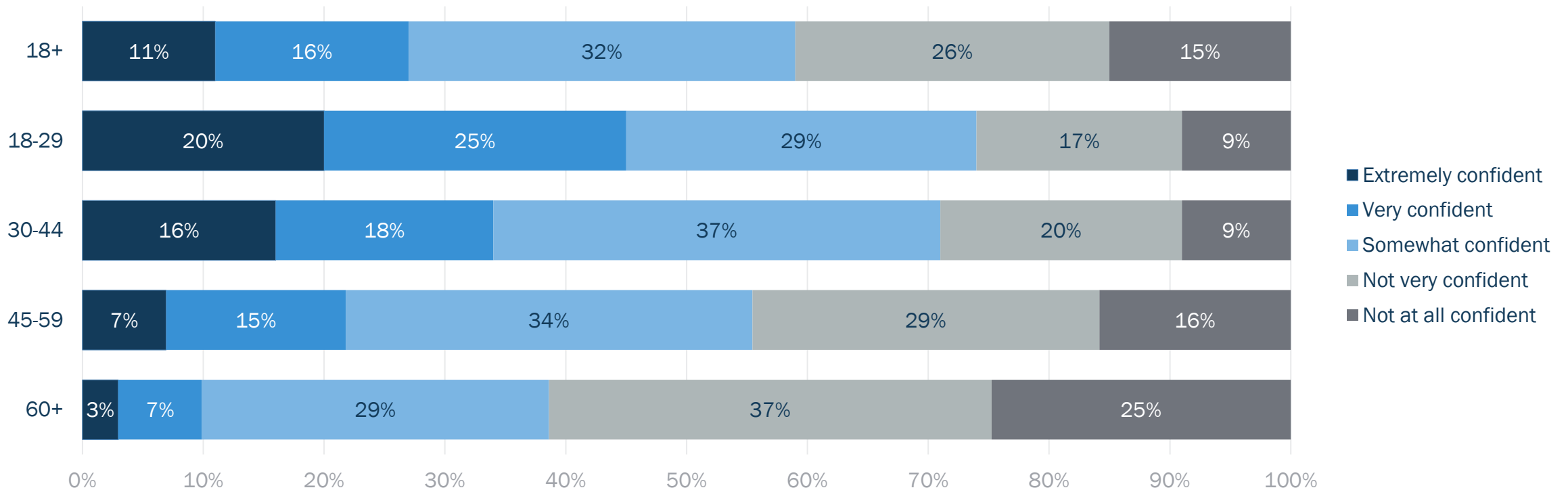
The more wealth one has, the greater the awareness of the broad metaverse term but also the detailed definition



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

Confidence in explaining the metaverse declines by age group; 18-29s are most likely to think they can explain it

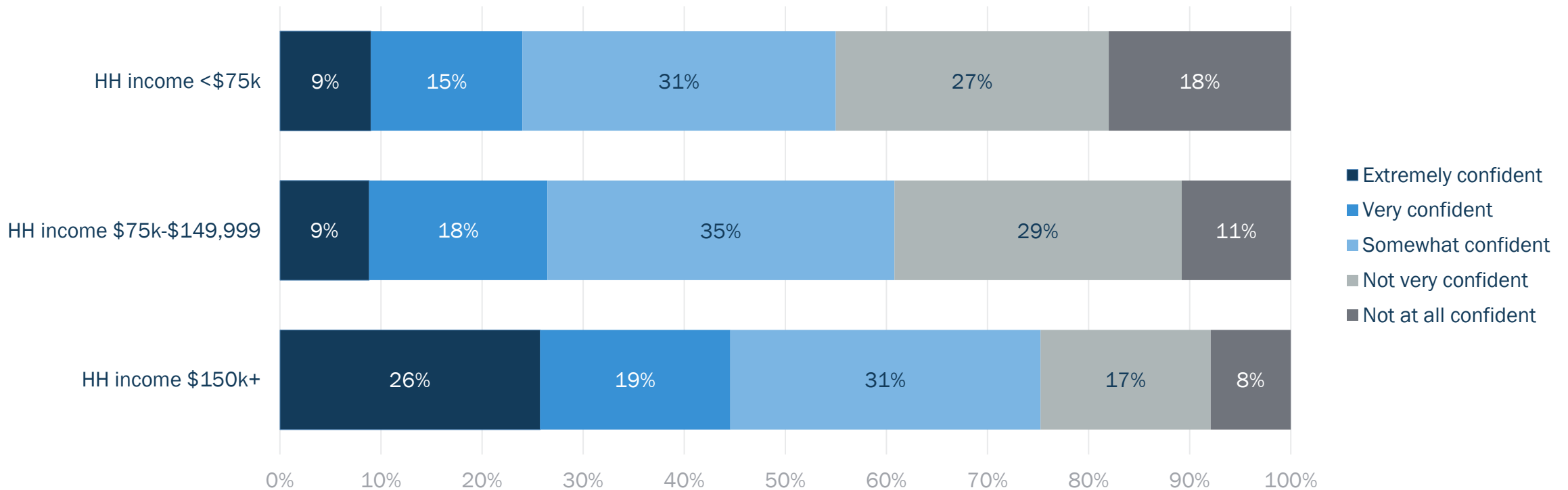
If someone asked you to explain what the metaverse was to them today, how confident are you that you would be able to?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Wealthier households are much more confident they can explain the metaverse, tying in with their interest levels

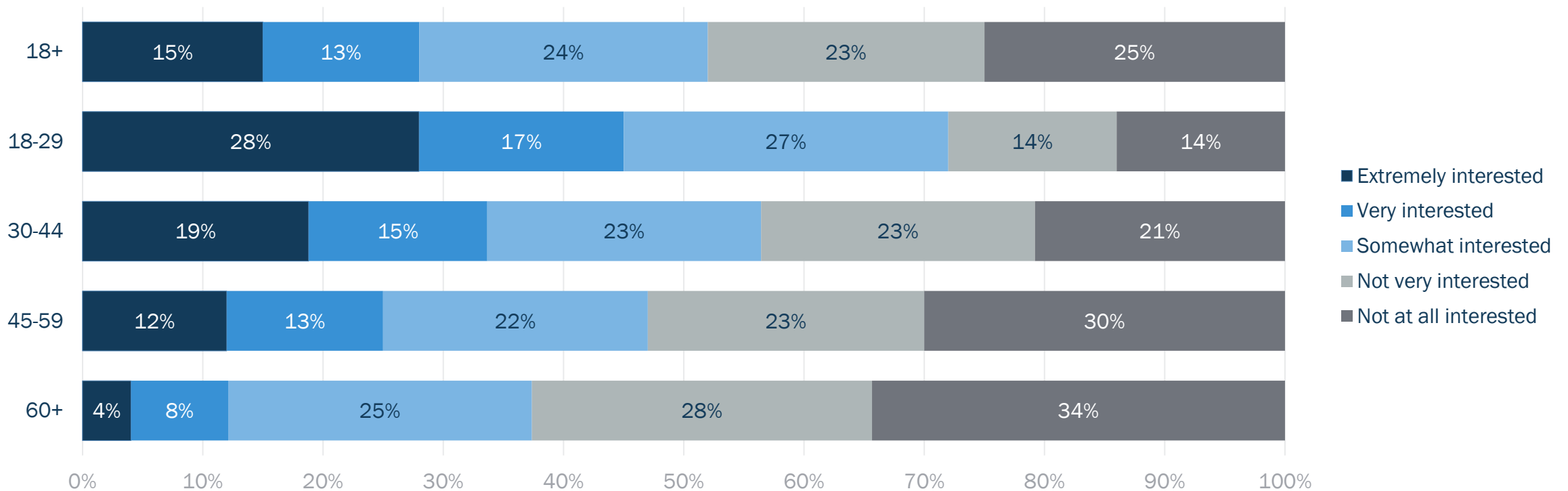
If someone asked you to explain what the metaverse was to them today, how confident are you that you would be able to?



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

Interest in metaverse activities is significantly stronger for 18-29s once they read the description vs. other demos

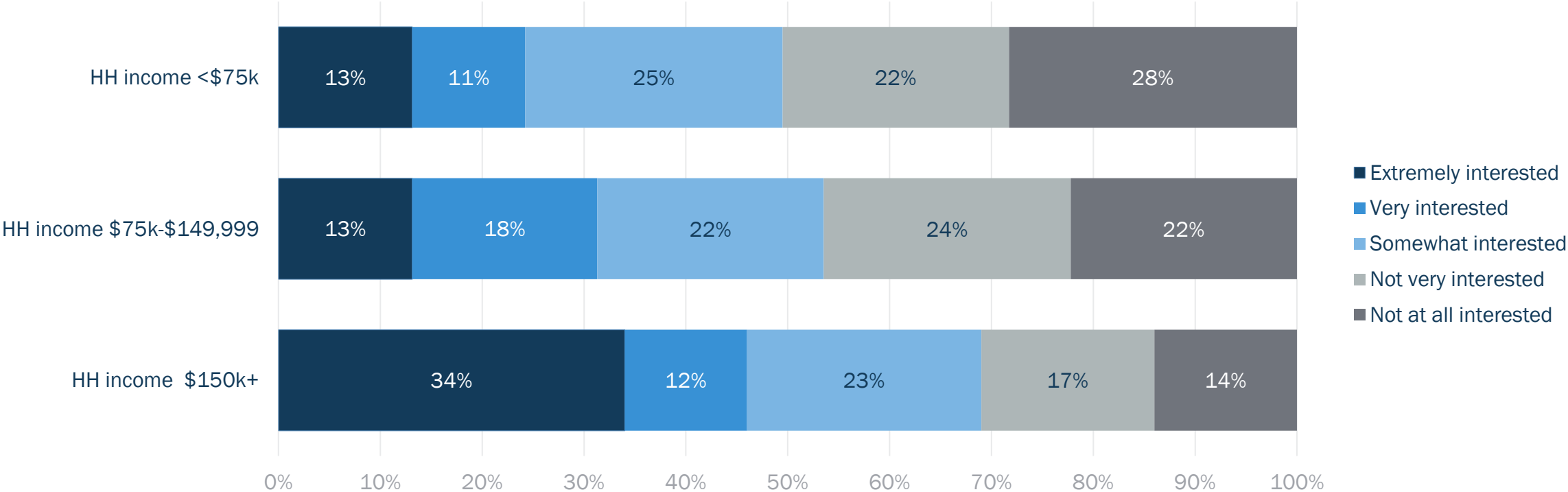
How interested are you in visiting or doing things in the metaverse based on the description you just read?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

The metaverse appears to be driven by wealthy individuals given the richest households have TB interest levels 2.6x others

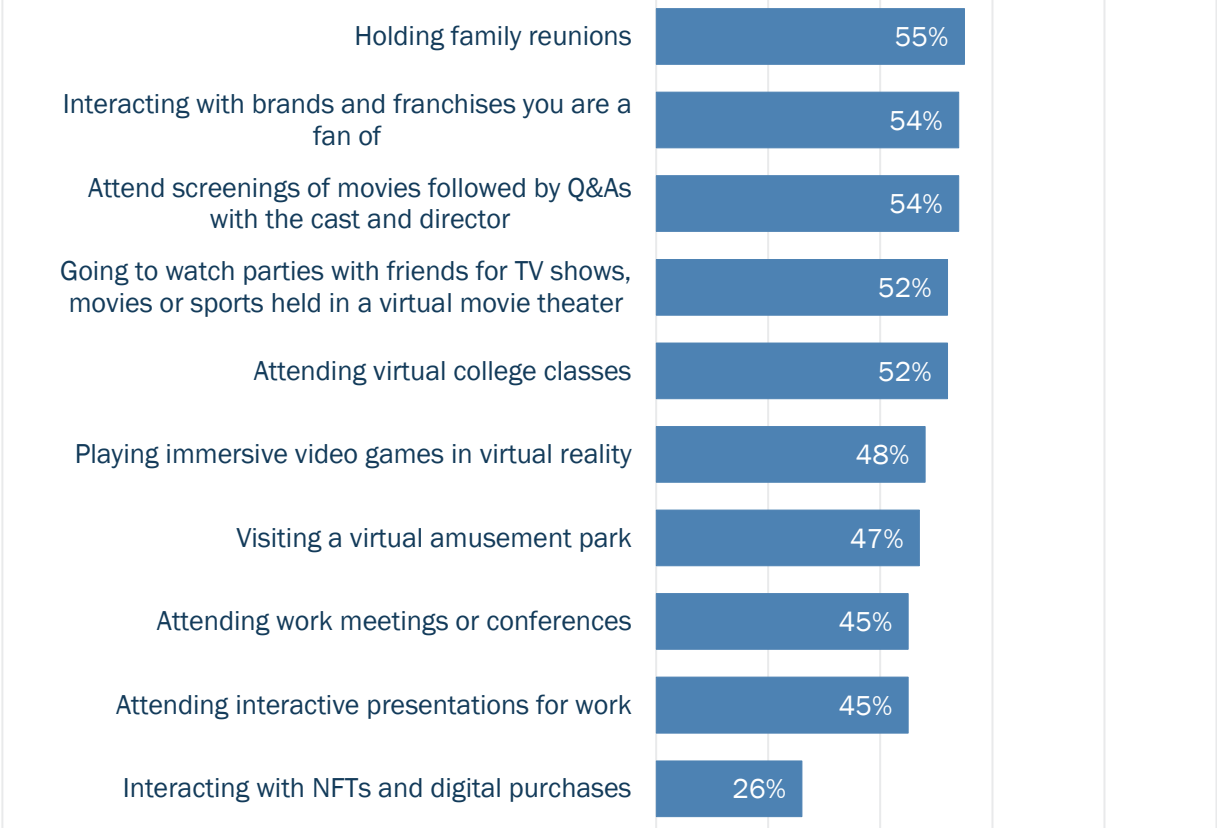
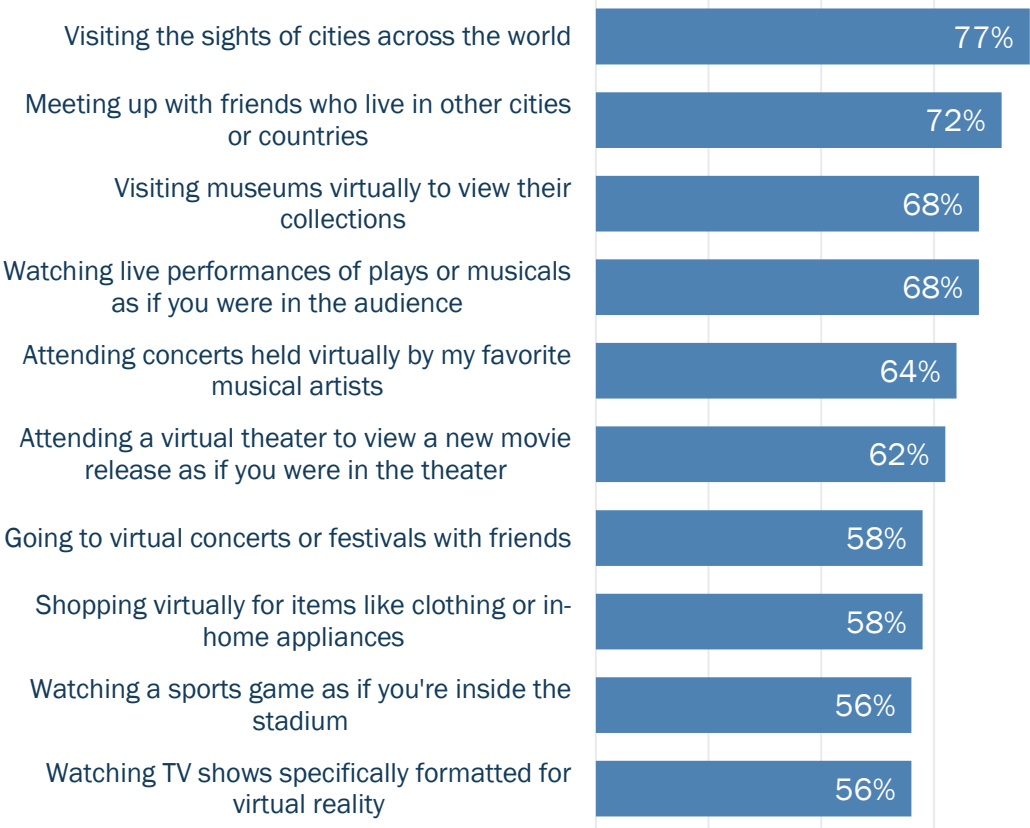
How interested are you in visiting or doing things in the metaverse based on the description you just read?



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

The most popular assumed uses for the metaverses are travel, attending events and meeting friends

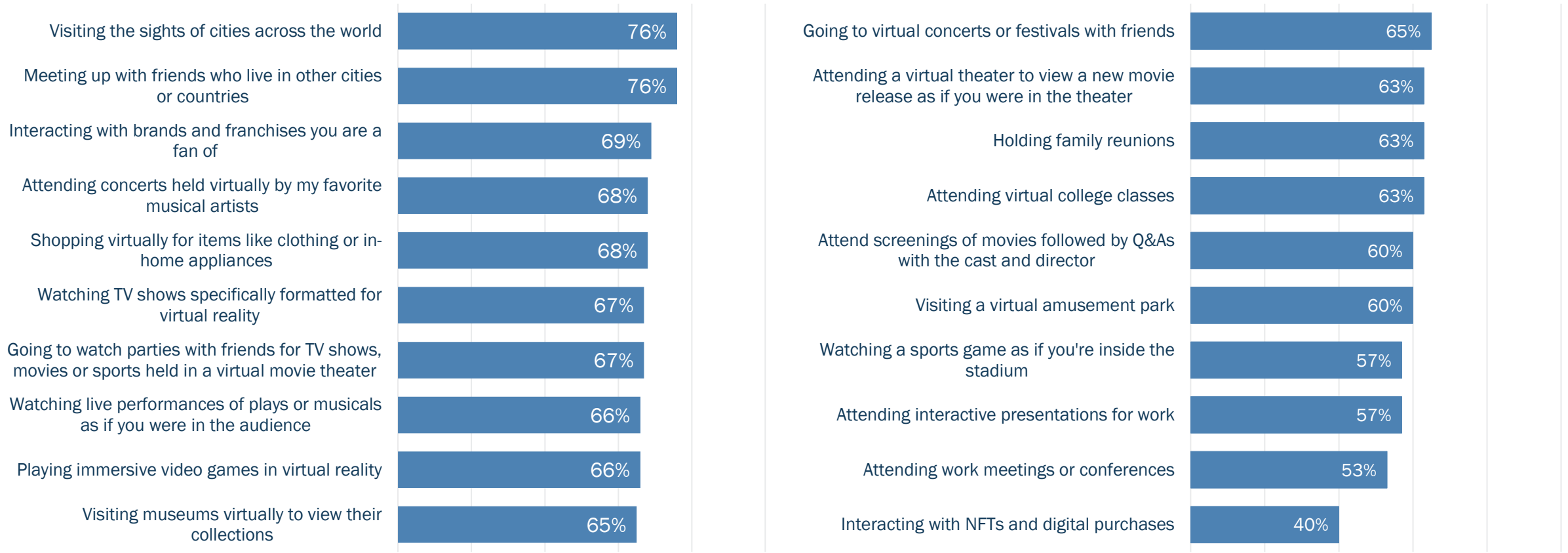
18+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Interactions with brands significantly increases among 18-29s and is one of their most popular intended uses for the metaverse

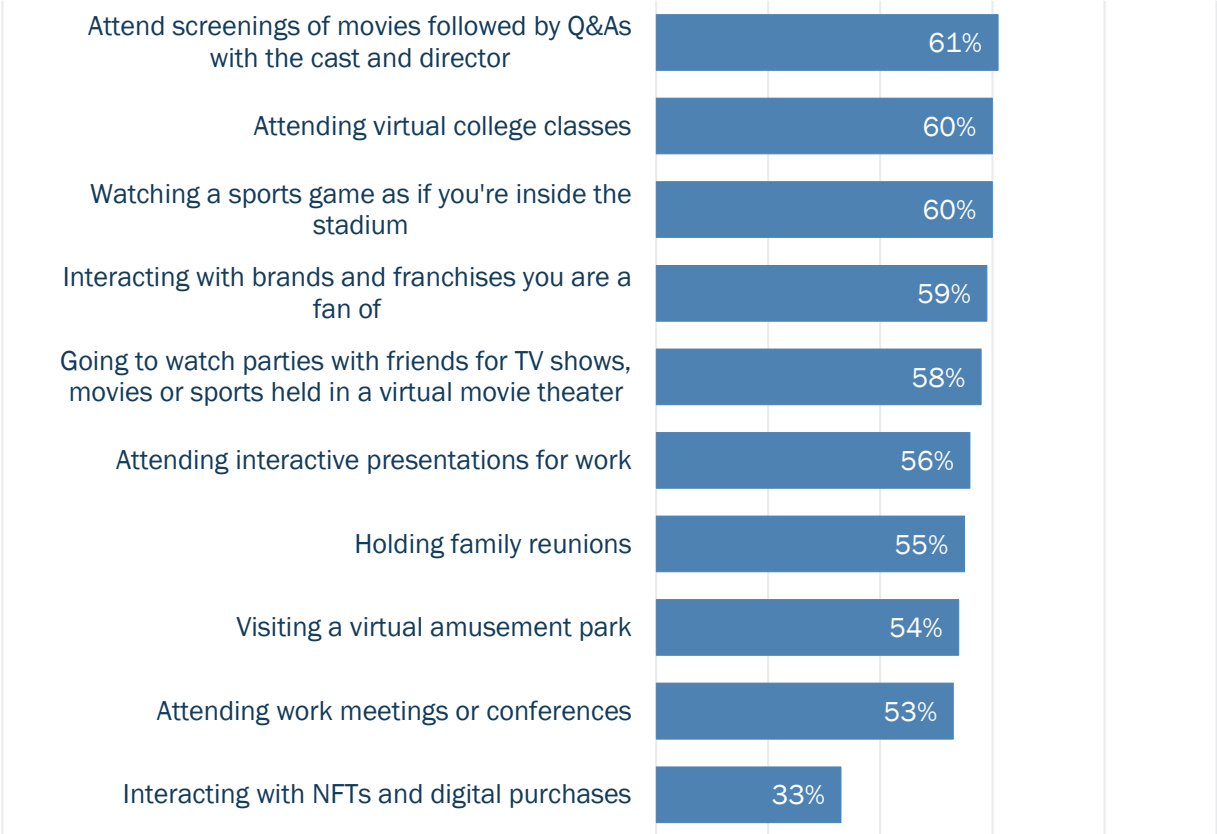
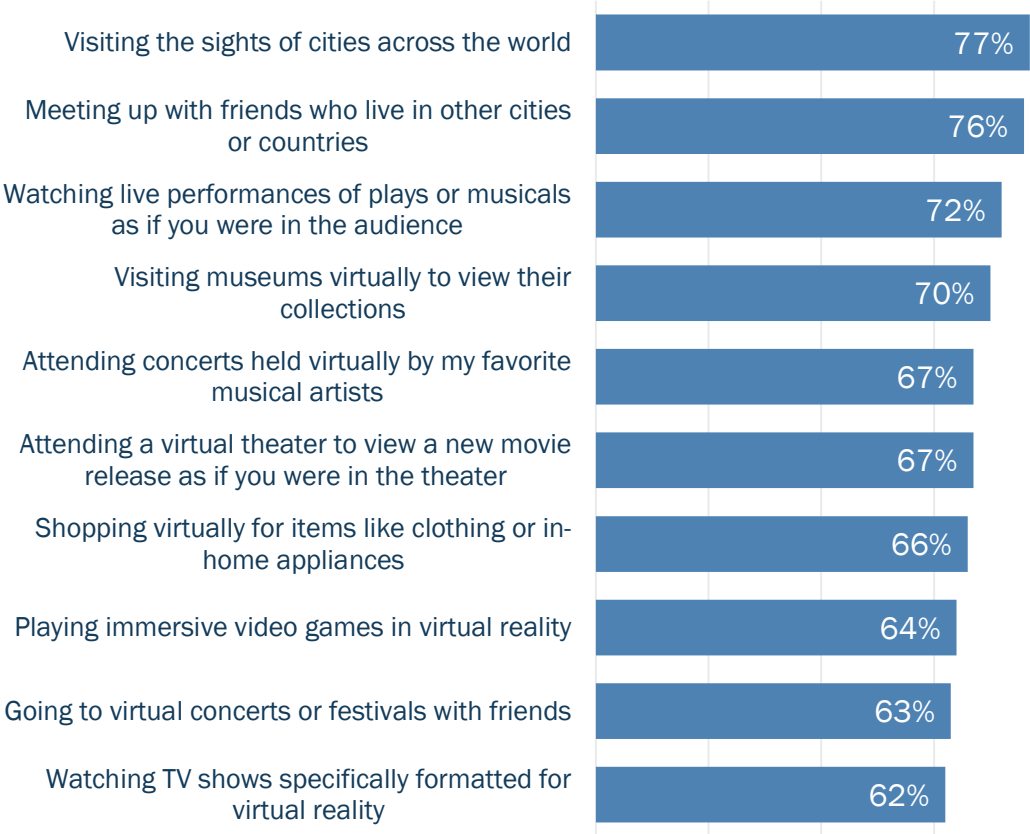
18-29



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Travel and attending virtual events are the most popular concepts for 30-44s, but note high scores for shopping too

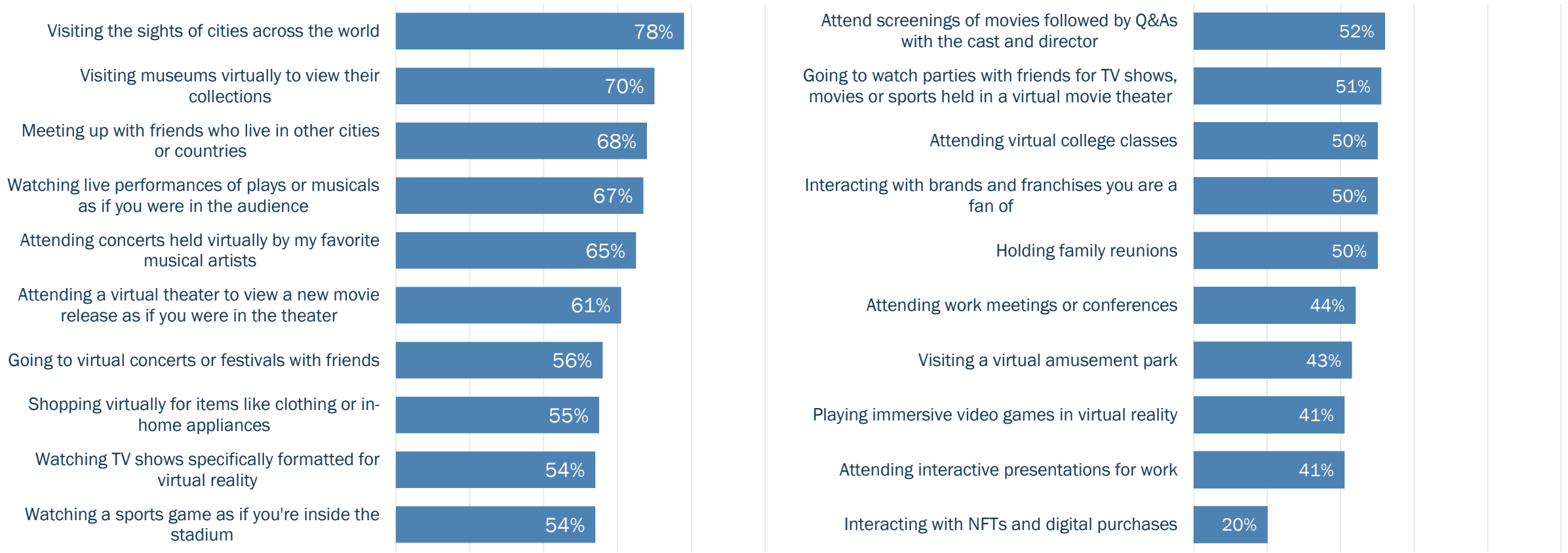
30-44



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Using Web3 technology to virtually trave, visit cultural sights, attend performances and meet friends are most popular for 45-59s

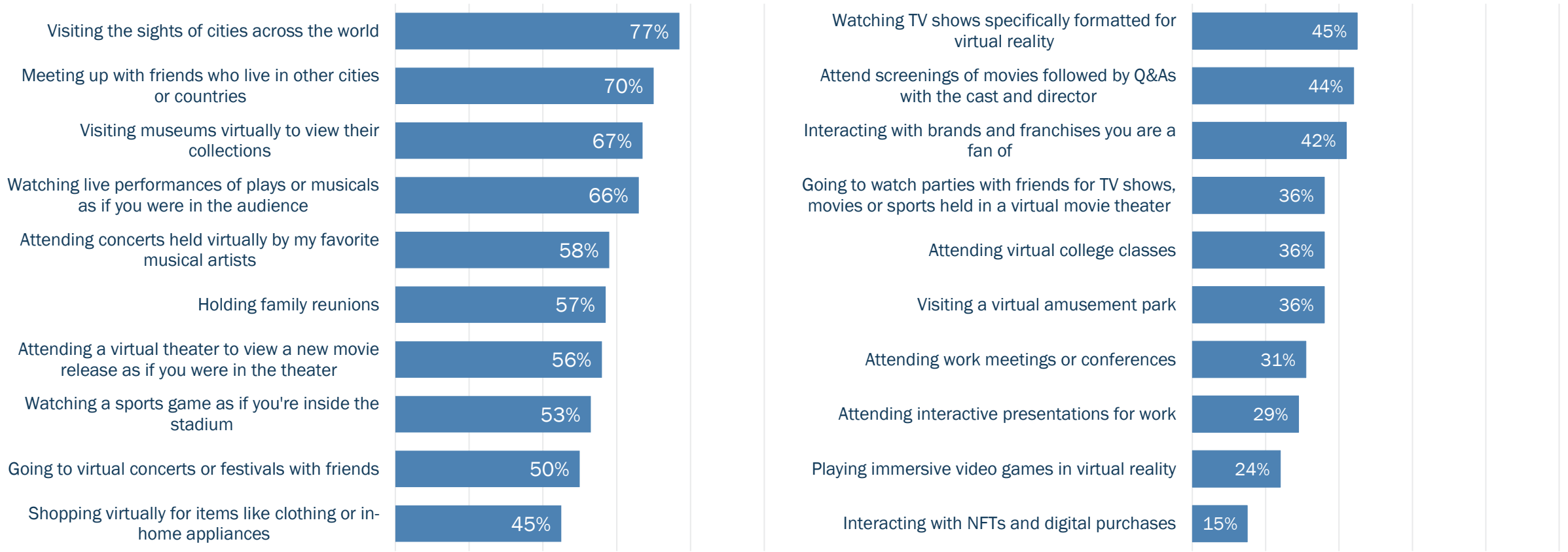
45-59



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Using the metaverse to hold family reunions rises in interest in those over 60 as many other concepts decline in interest

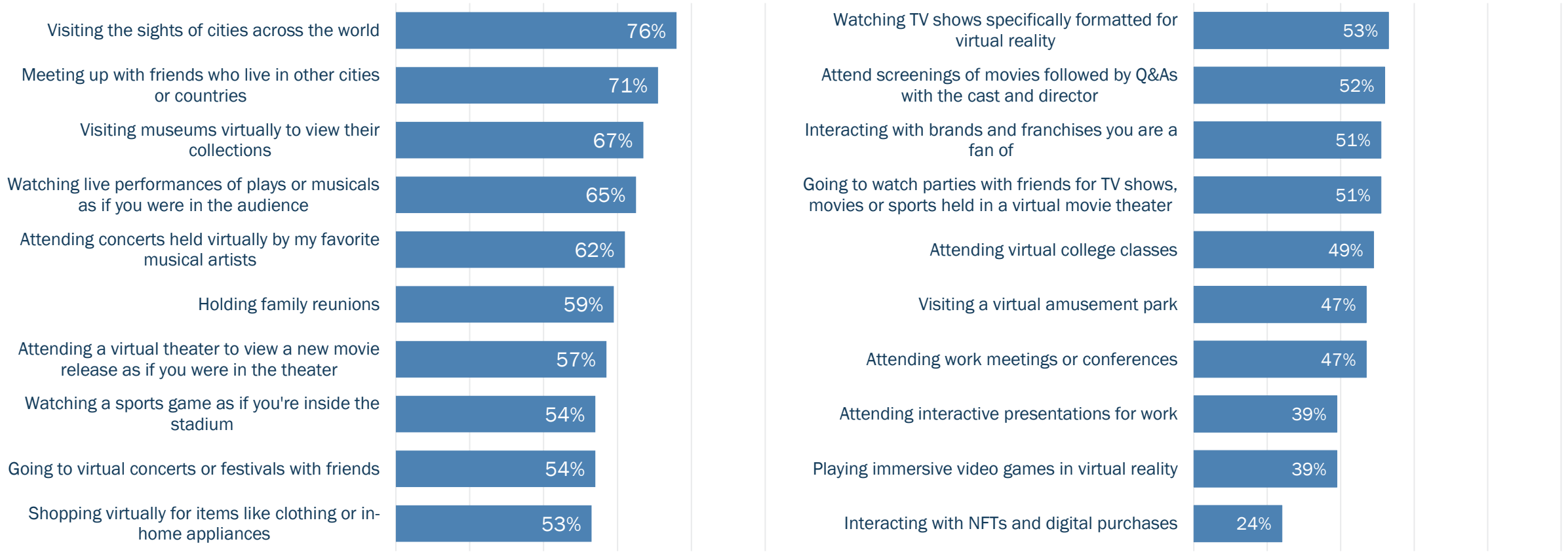
60+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Households with an income below \$75k are most interested in using the metaverse to visit cities or meet friends

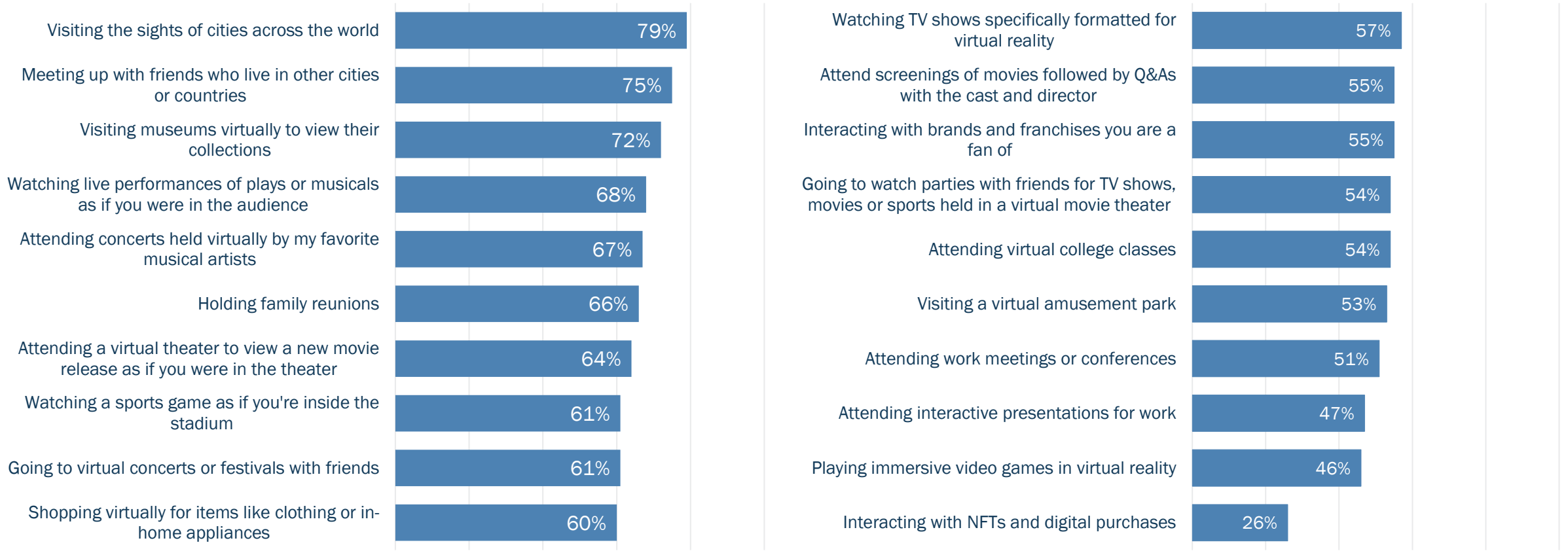
Household income under \$75k



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

The most interesting Web3 concepts for middle-income households fall out the same as for less affluent ones, just with stronger interest levels

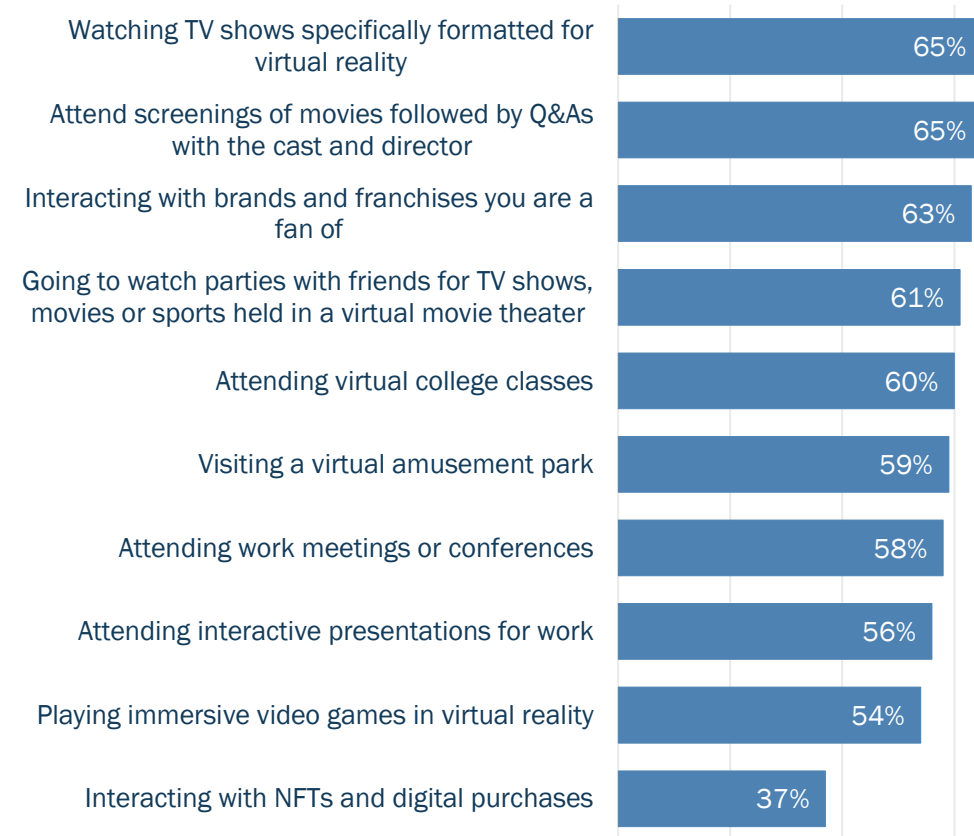
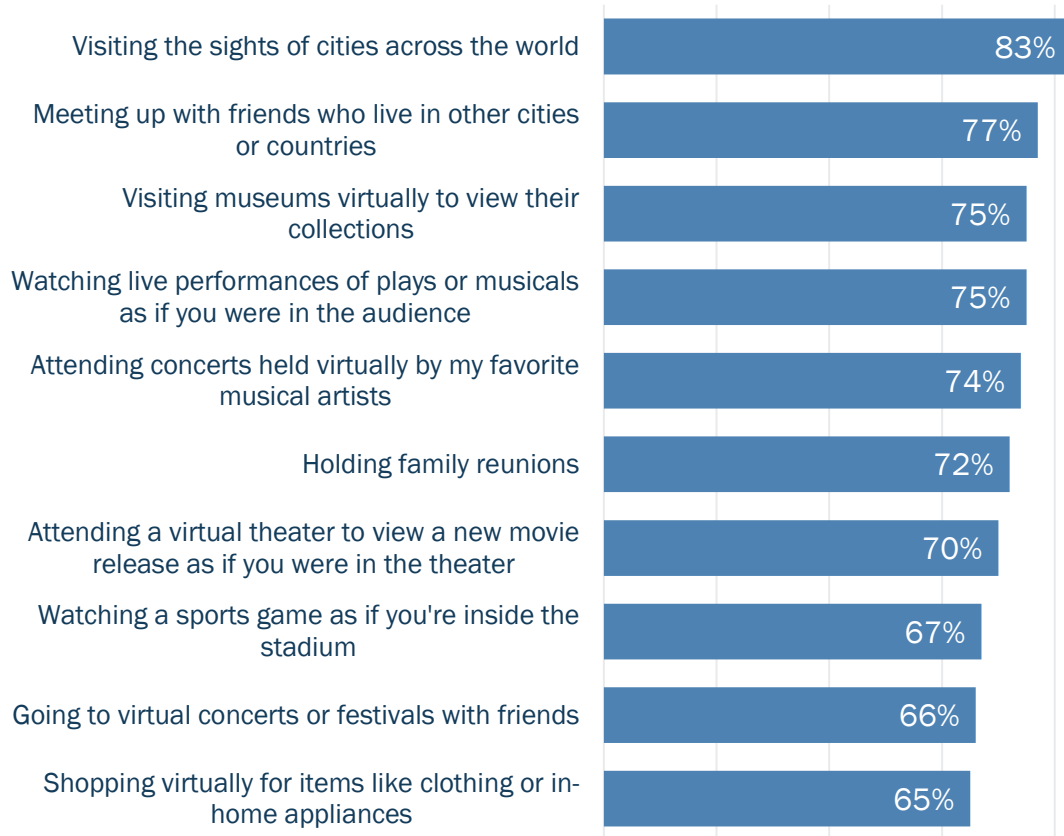
Household income under \$75k-<\$150k



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

The same hold trues for the most affluent Americans; broad concepts rank the same but see interest continue to strengthen

Household income \$150k+

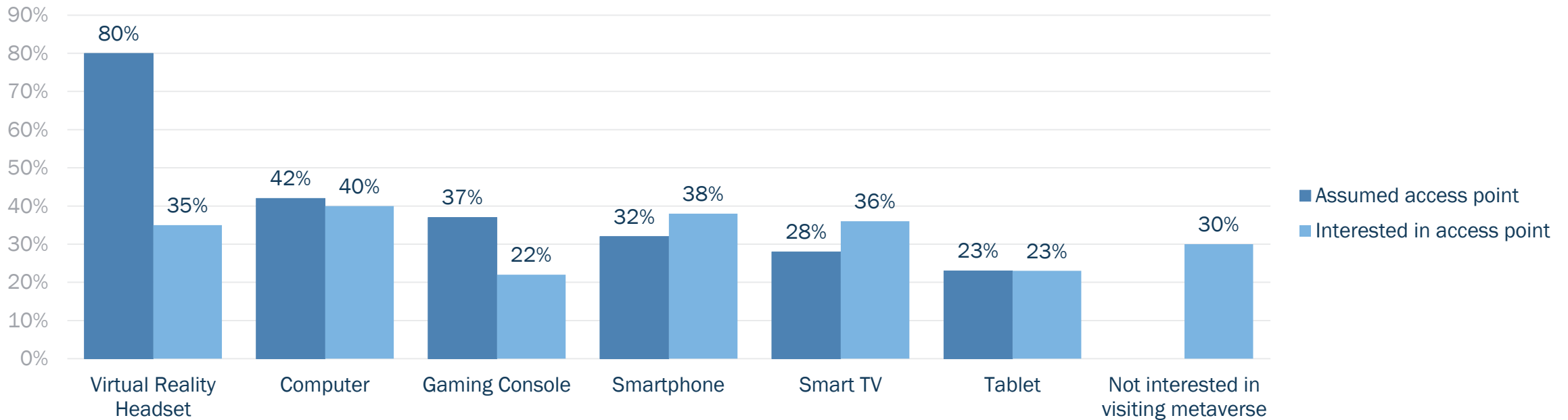


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Most people do not know that the metaverse can be accessed in 2D, once aware, interest in 2D access rises

18+

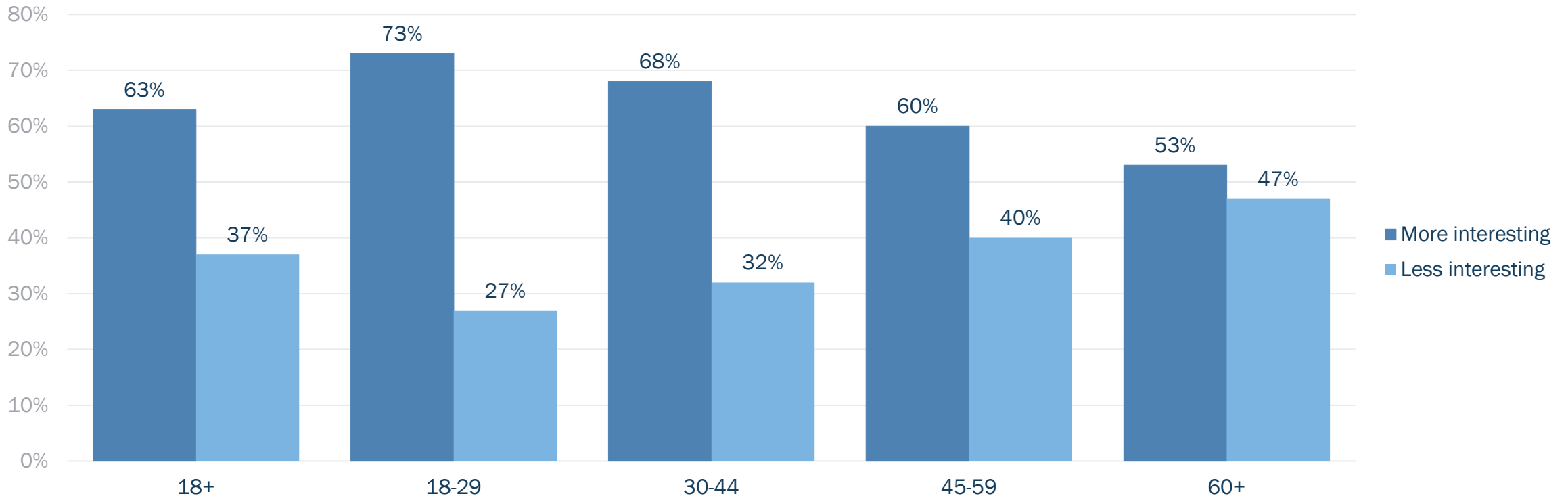
To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

Being able to access the metaverse in 2D ramps up interest among all age groups

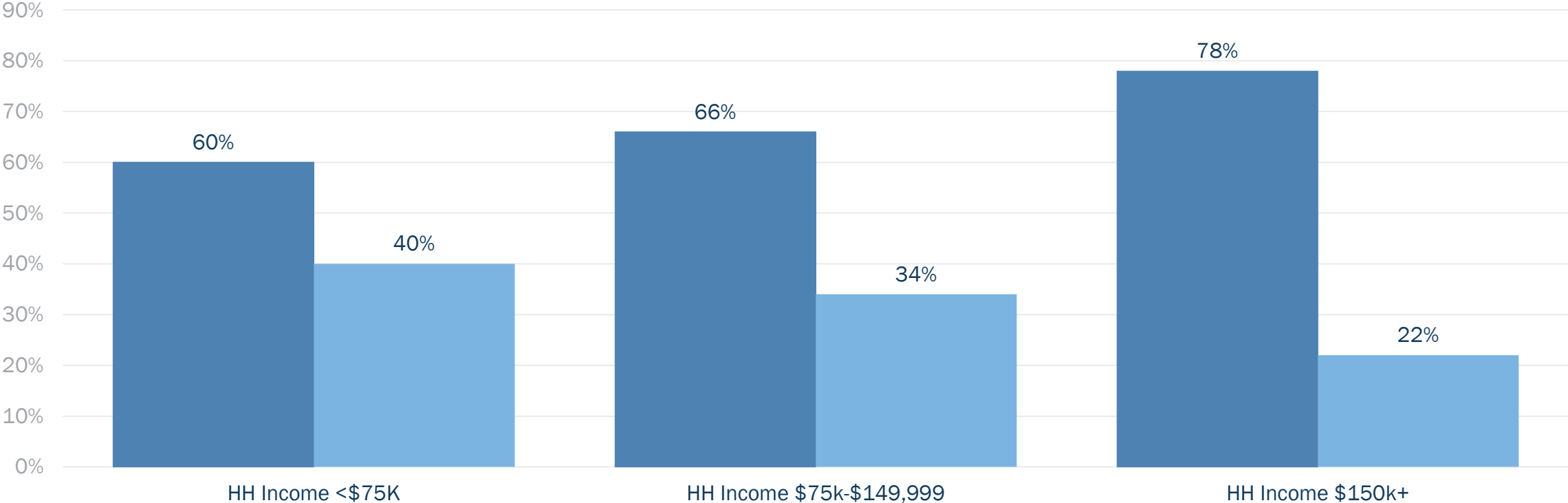
Does the fact that you could access the metaverse via a phone, computer or gaming console make the concept more or less interesting to you?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

A 2D Metaverse sees interest increase the strongest among the most affluent households

Does the fact that you could access the metaverse via a phone, computer or gaming console make the concept more or less interesting to you?

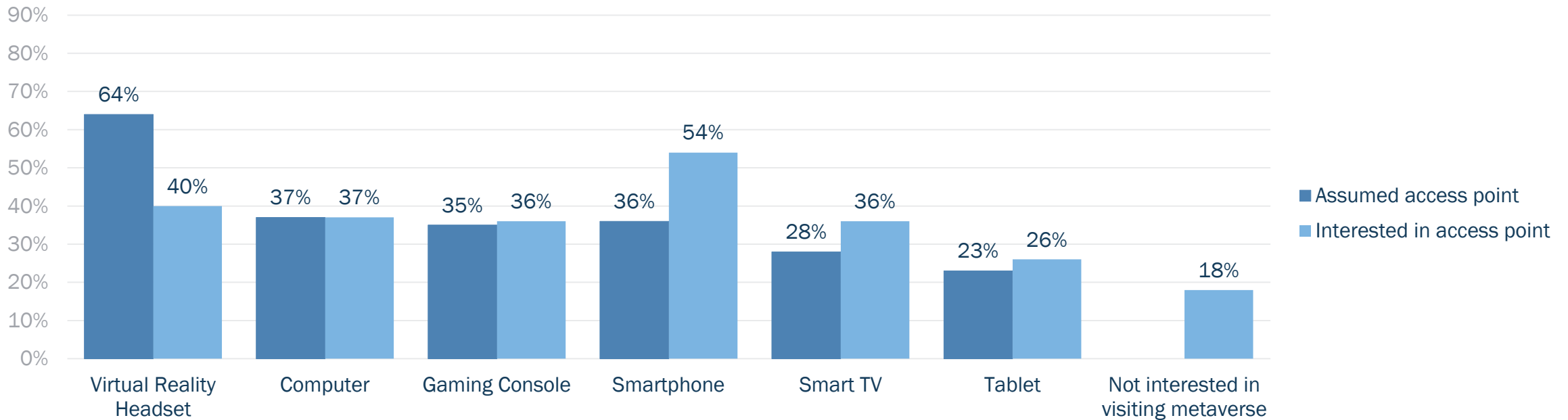


Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

One-fifth of all 18-29s are not interested in visiting the metaverse, with smartphones are the most popular access point

18-29

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?

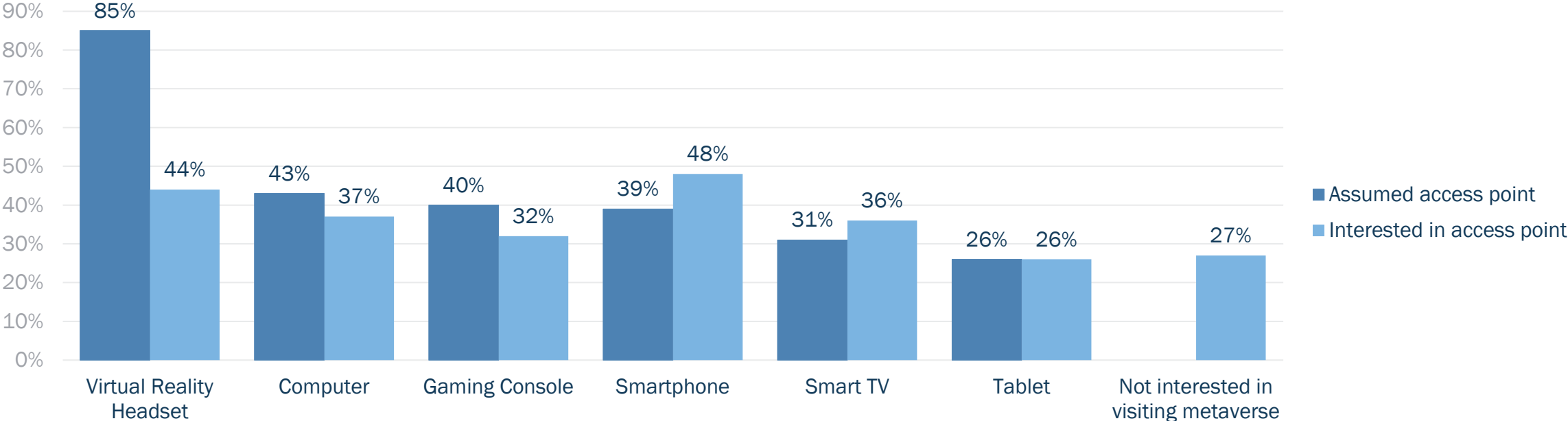


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18-29 (n=294)

Smartphones remain the most popular metaverse access point for 30-44s, but VR headsets are a closer second, followed by computers and smart TVs. Over a quarter are not interested in visiting the metaverse

30-44

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?

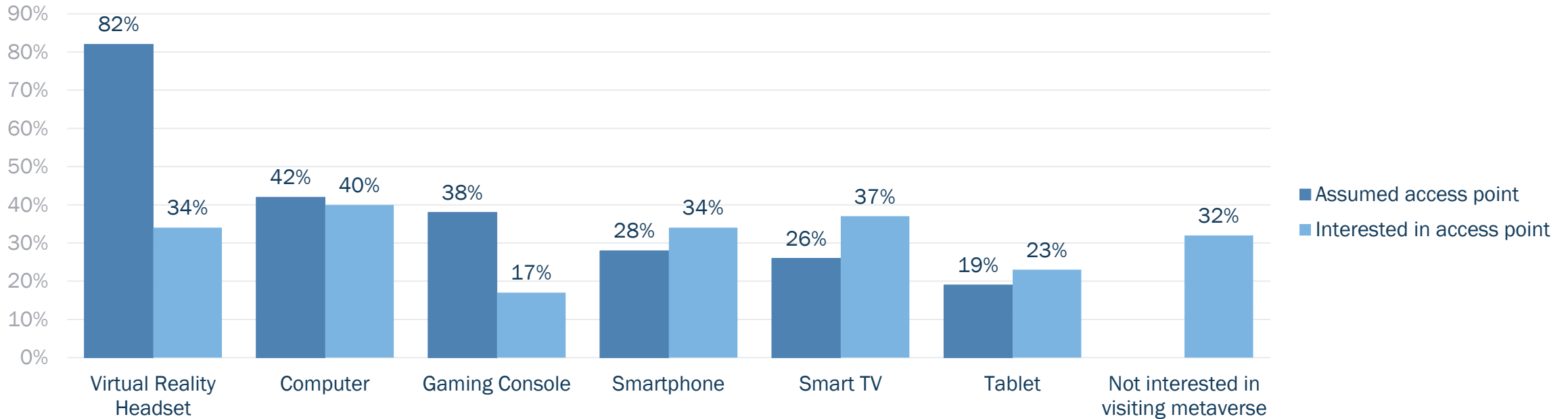


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P30-44 (n=450)

Metaverse disinterest rises to a third of 45-59s, who see computers eke out smartphones and smart TVs as the most popular access point

45-59

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?

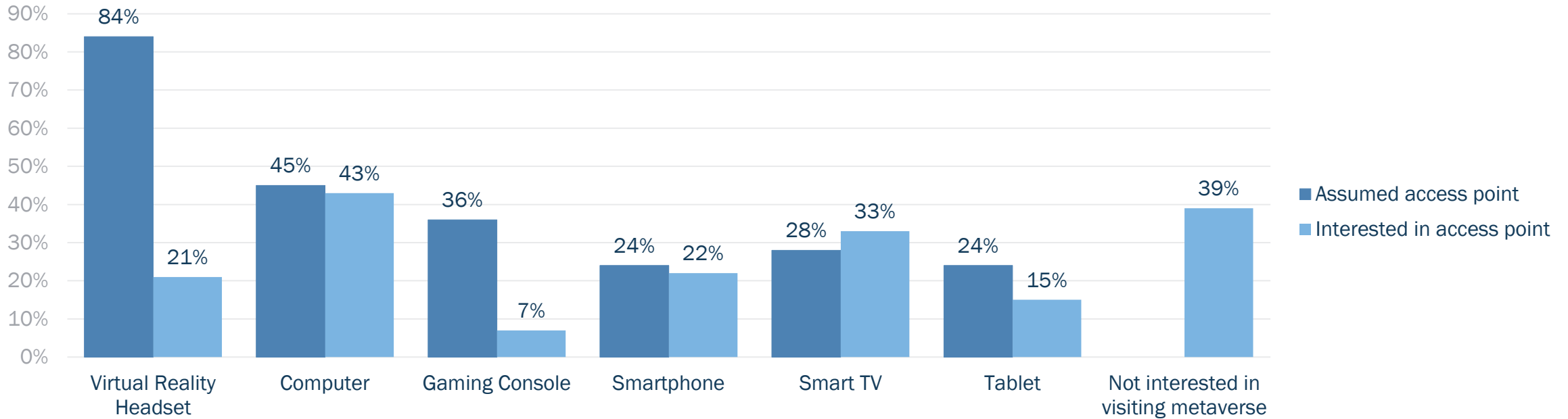


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P45-59 (n=450)

Computers are the most popular access point for the Metaverse among those 60+, followed by smart TVs. Two-fifths have no interest

60+

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?

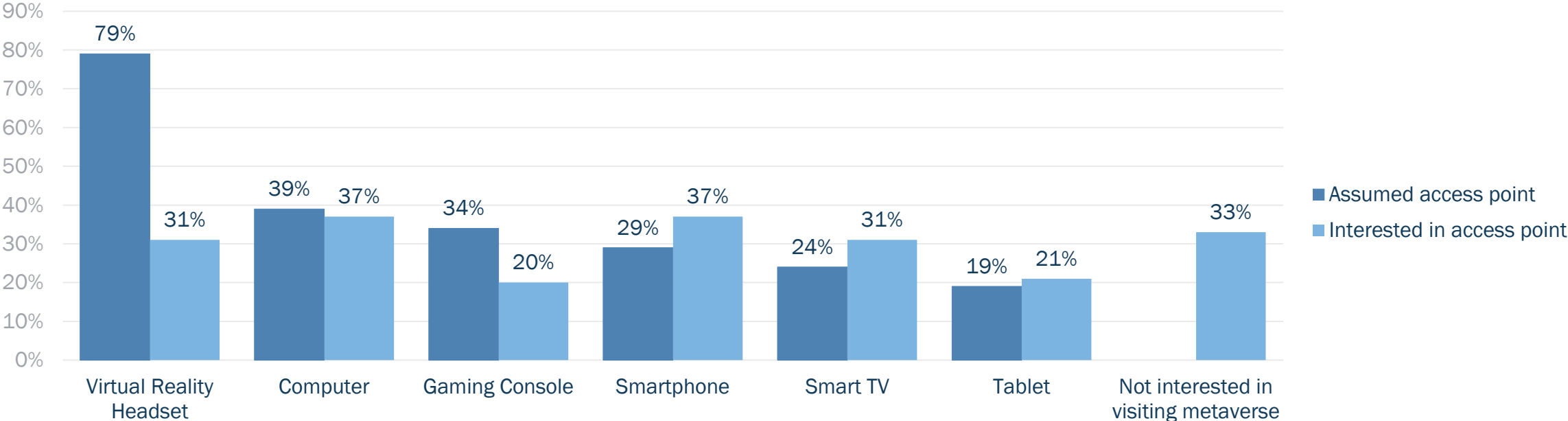


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P60+ (n=406)

A third of households with an income below \$75k are not interested in the metaverse; computers and smartphones are most popular access points

Household income under \$75k

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?

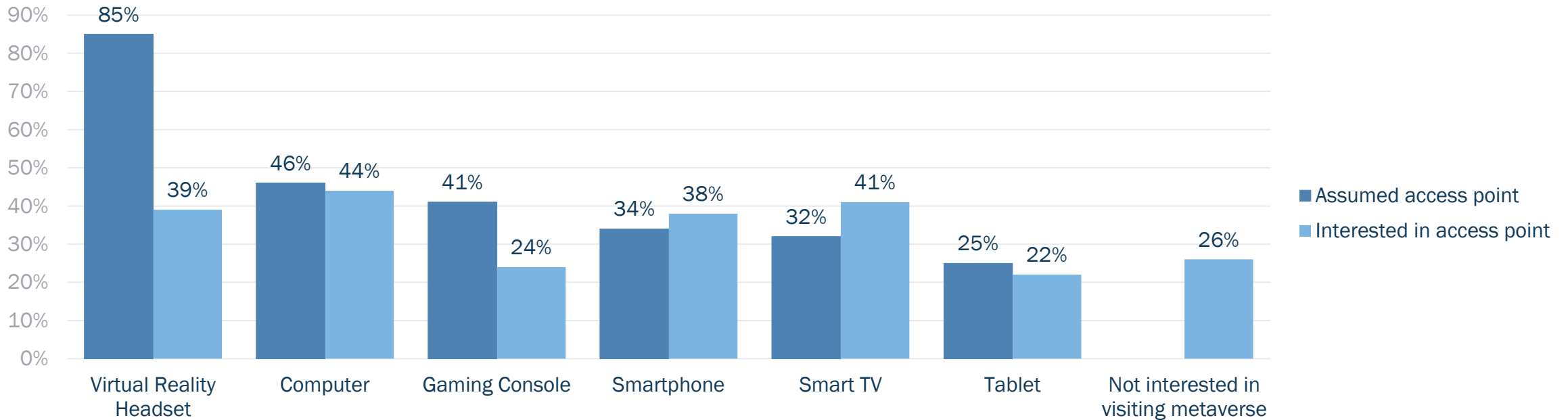


Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913)

Three-quarters of HHs with an income between \$75k and \$150k are interested in visiting the metaverse with the most popular ways to do so a computer, a smart TV, a VR headset and a smartphone

Household income \$75k-<\$150k

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?

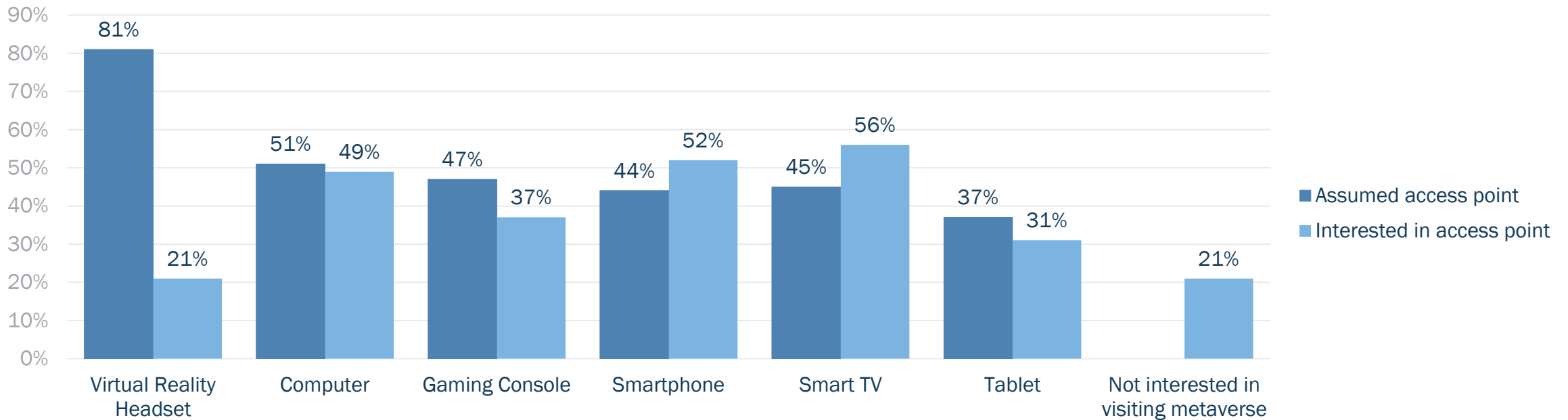


Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: \$75k-<\$150k (n=451)

Metaverse interest increases with income – just one in five affluent households are not interested in visiting, with interest in access via existing tech stronger than other households (but not for VR access)

Household income >\$150k

To the best of your knowledge, which of the following can be used to access the Metaverse? Which, if any, of the following metaverse access points would you be interested to use to visit the metaverse?



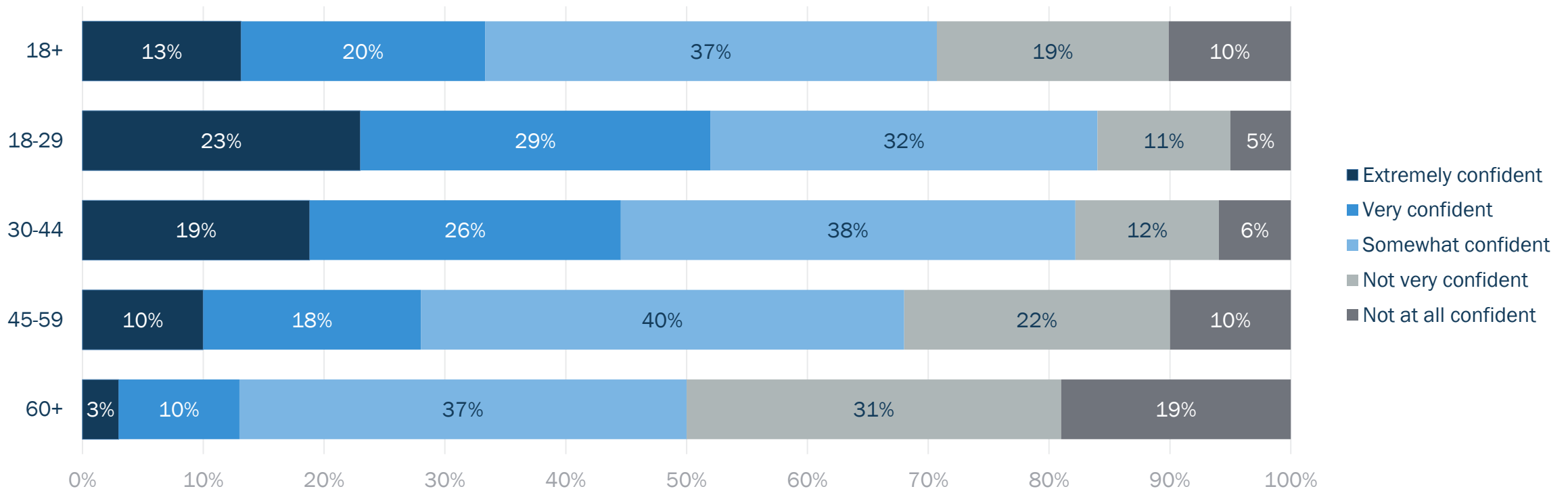
Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: \$150k+ (n=156)



Virtual Reality

The younger one is, the greater the confidence in being able to explain VR. Close to a quarter of 18-29s are extremely confident

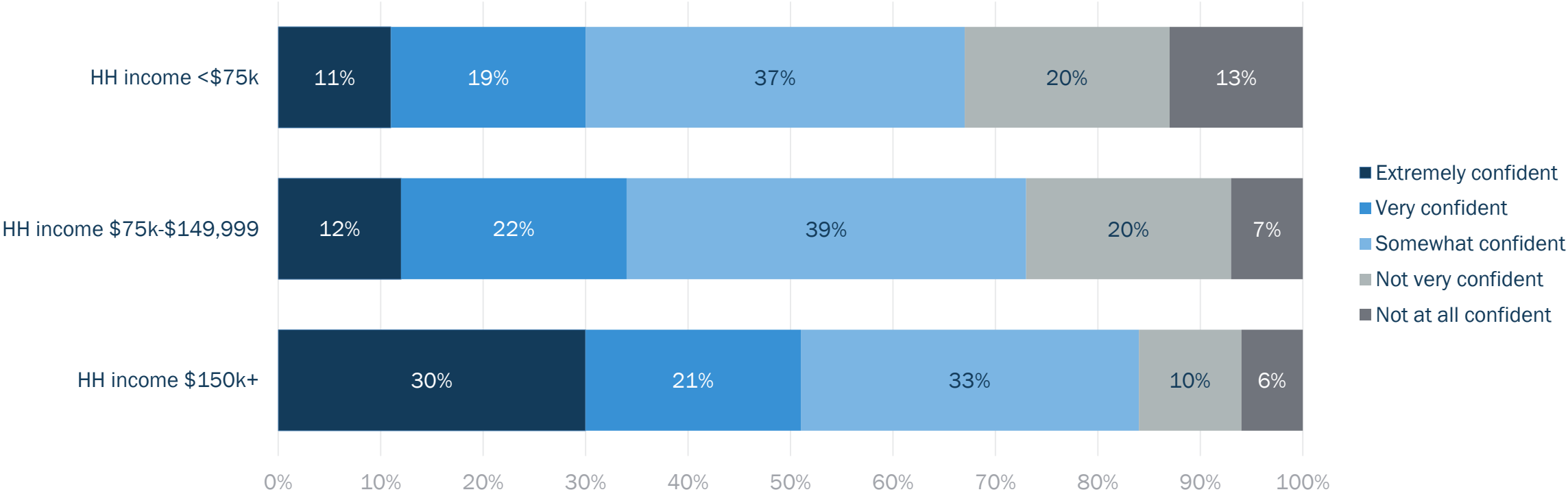
If someone asked you to explain what virtual reality was to them today, how confident are you that you would be able to?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Affluent households are the most likely to be confident of being able to explain virtual reality to others

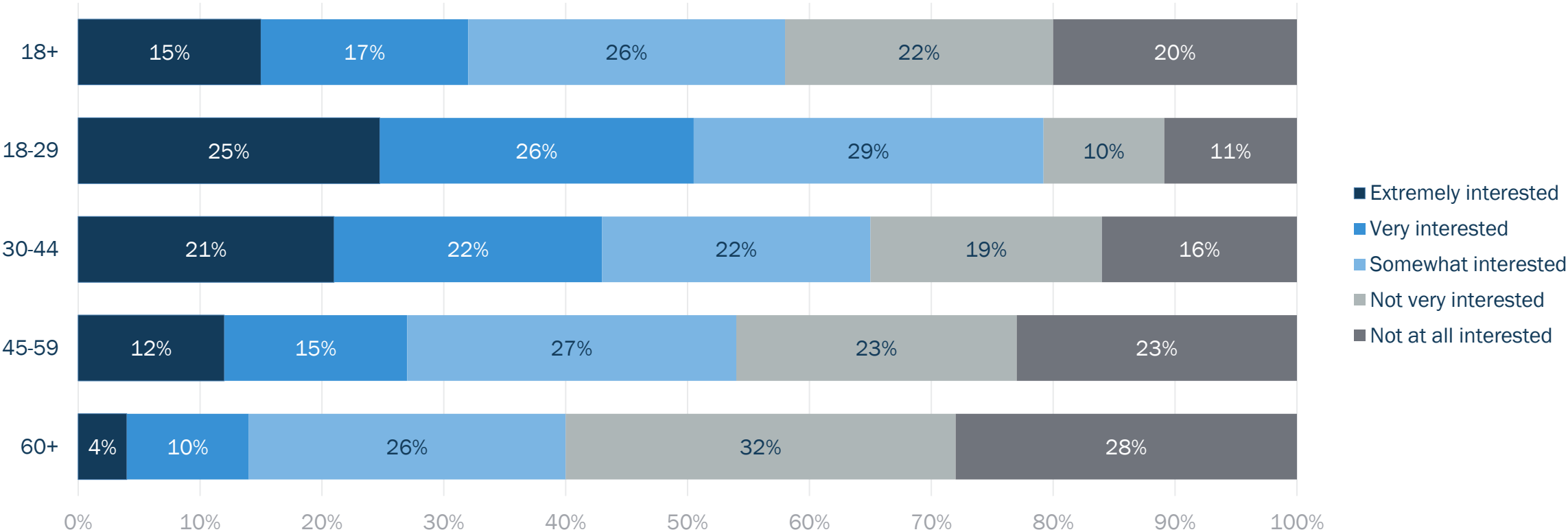
If someone asked you to explain what virtual reality was to them today, how confident are you that you would be able to?



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A third of adults have T2B interest in VR with this rising to over half of 18-29s and falling to one in seven 60+

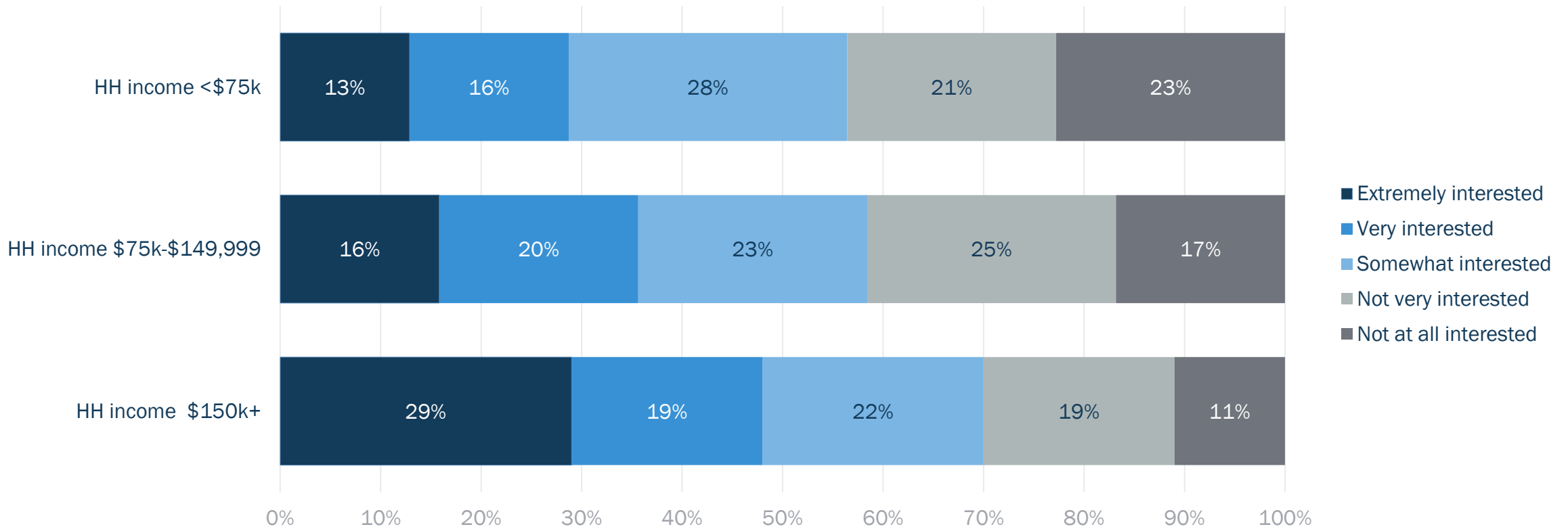
How interested are you in using virtual reality?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Households with an income over \$150k have almost double the strong interest in virtual reality than HHs below \$75k

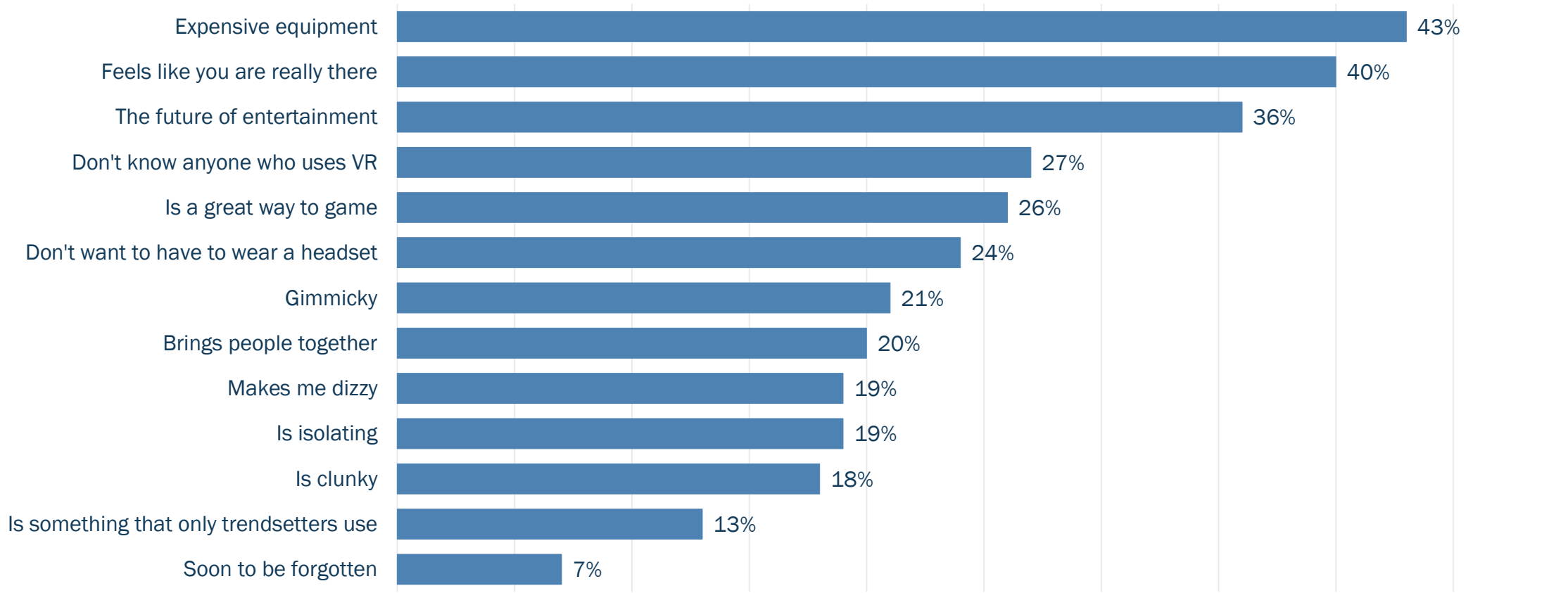
How interested are you in using virtual reality?



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

The most common perception of virtual reality is that it has expensive equipment, but over a third of adults say it is the future of entertainment

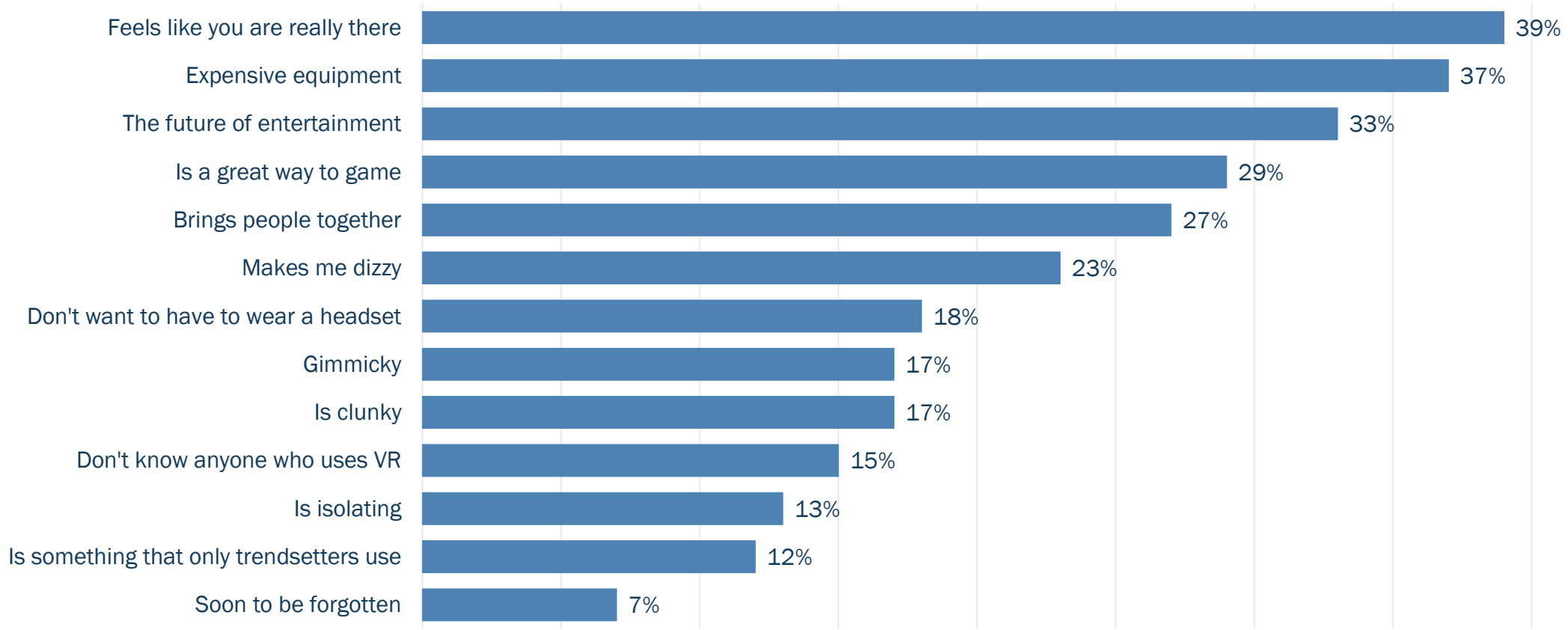
18+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

18-29s are the only demo to see “expensive equipment” rated below “feels like you’re really there” suggesting wide possible adoption rates for the tech among younger consumers

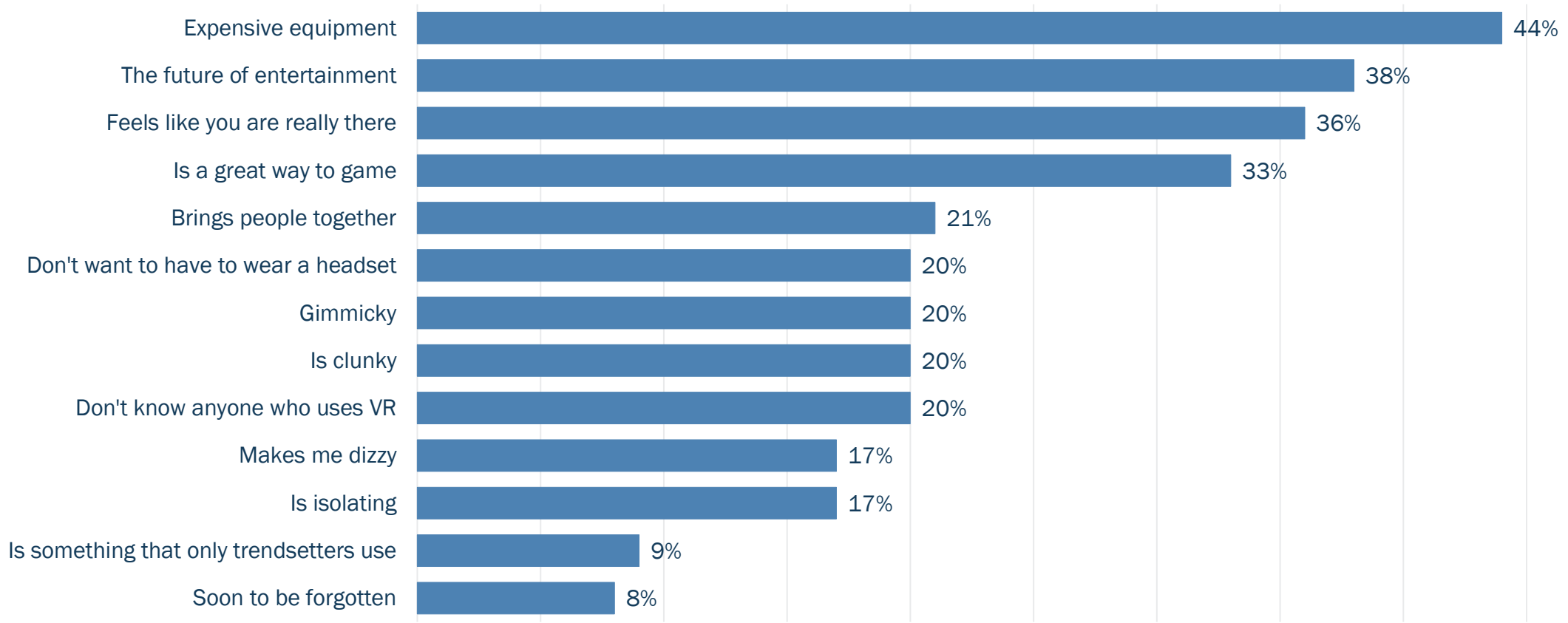
18-29



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18-29 (n=294)

Close to half of 30-44s consider VR to be expensive, suggesting a hurdle that needs to be cleared for mass adoption. Yet two-fifths say it is the future of entertainment and a third that it's a great way to game

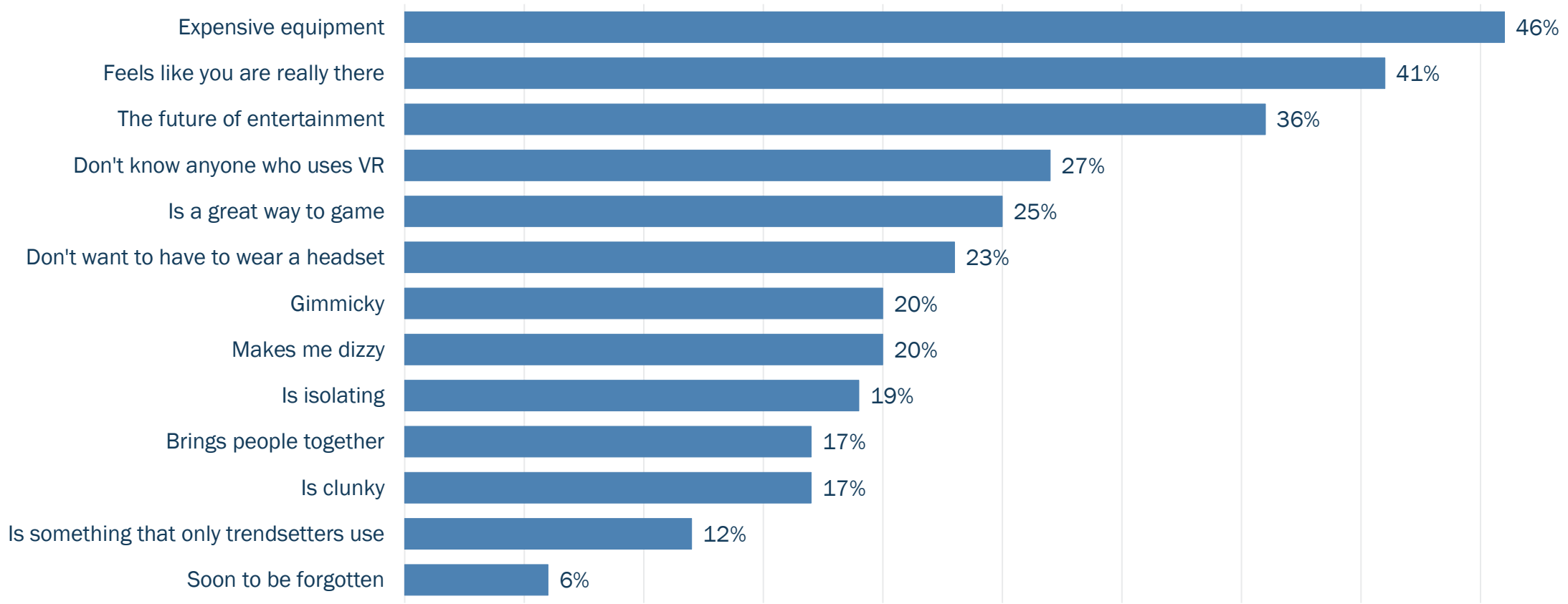
30-44



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P30-44 (n=450)

The most common perception of VR among 44-59s is that it is expensive, but positive attributes like it feeling real and being the future of entertainment are among the most popular for the tech

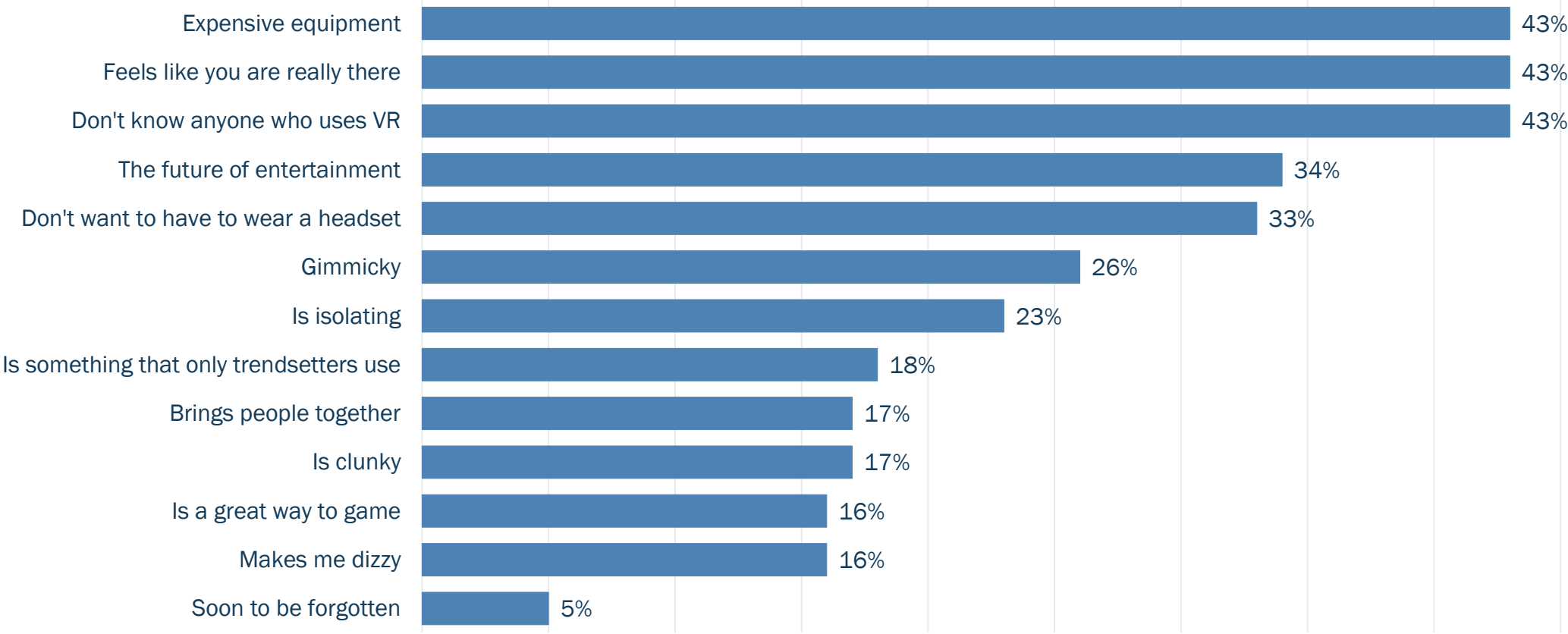
44-59



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P44-50 (n=450)

Those 60 or older are equally as likely to say that VR is expensive, they don't know anyone who uses it, but also that it's immersive

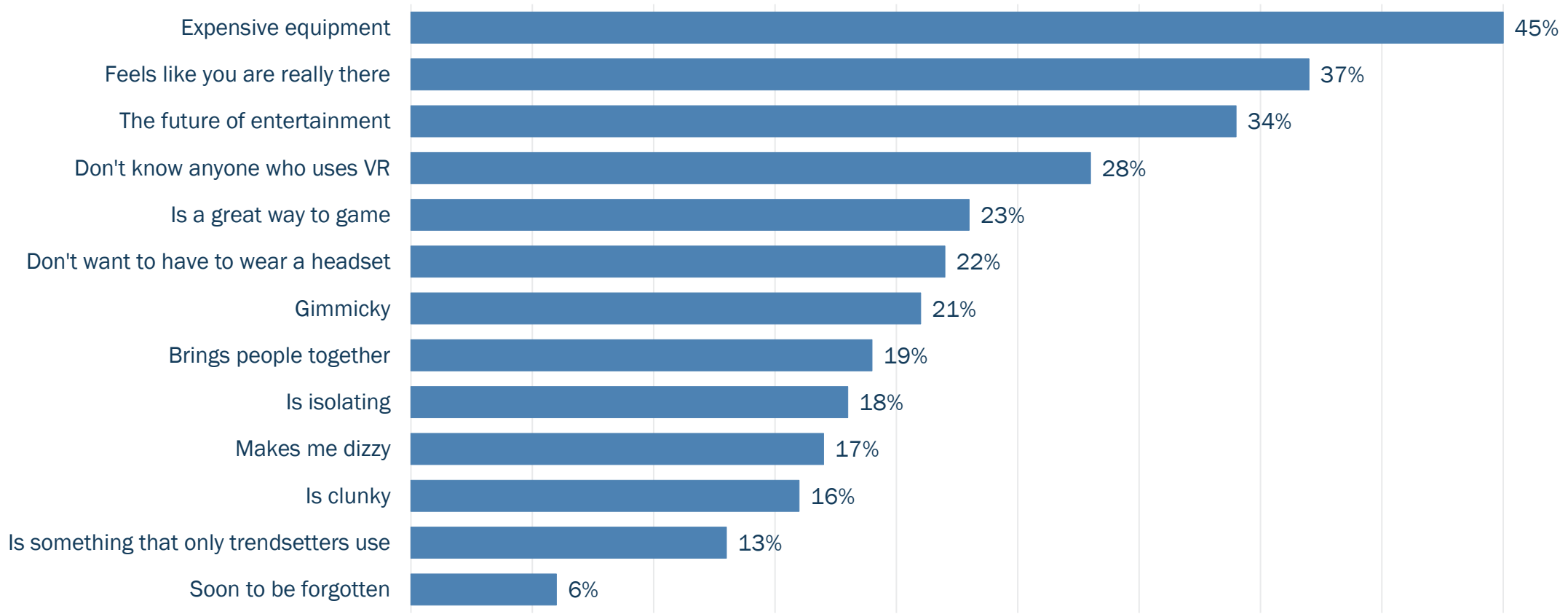
60+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P60+ (n=406)

Less affluent households are most likely to see virtual reality as something that's expensive, but a third think it's the future

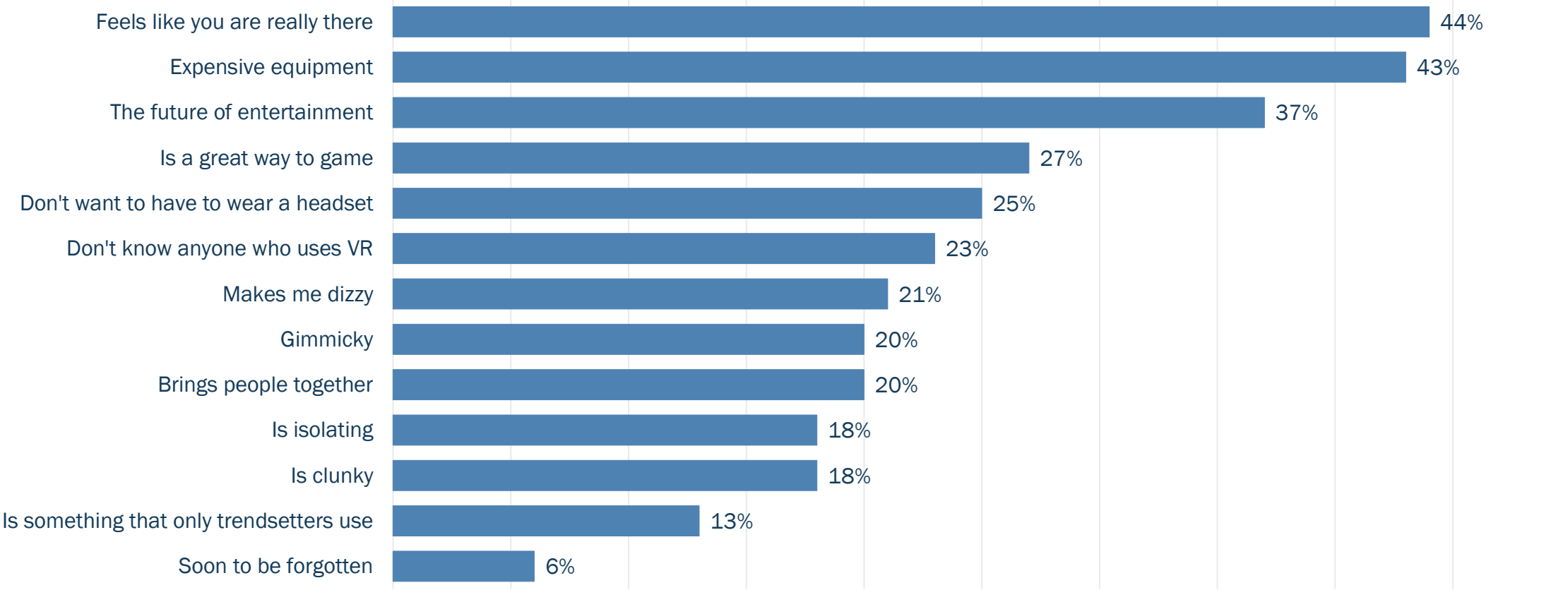
Household income under \$75k



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income <\$75k (n=913)

The cost of VR equipment remains a strong perception among middle income households

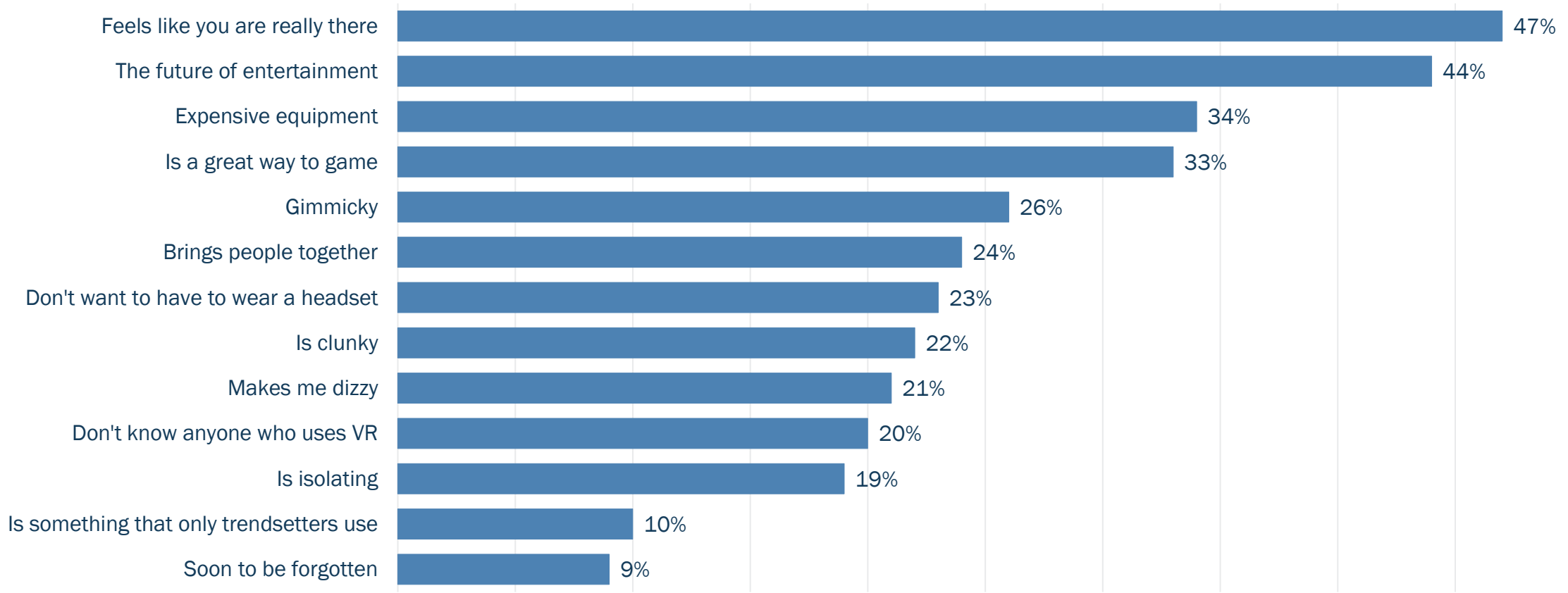
Household income \$75k-<\$150k



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income \$75k-<\$150k (n=451)

Considering VR to be the future of entertainment is strongest among the most affluent, but a third consider it to be expensive

Household income >\$150k

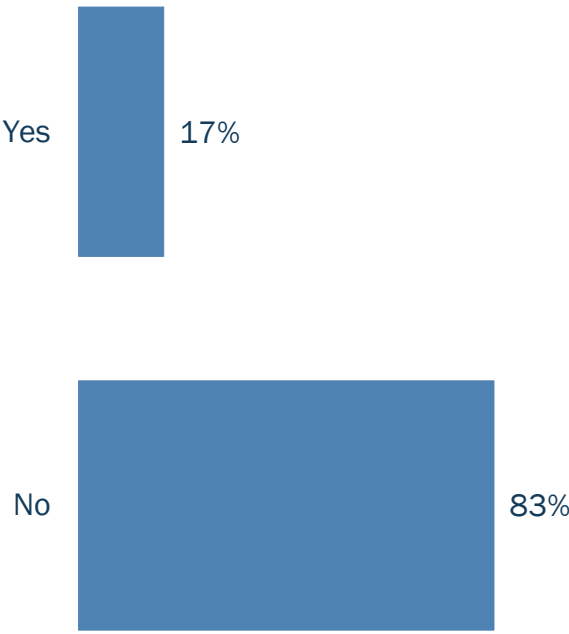


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: HH income >\$150k (n=156)

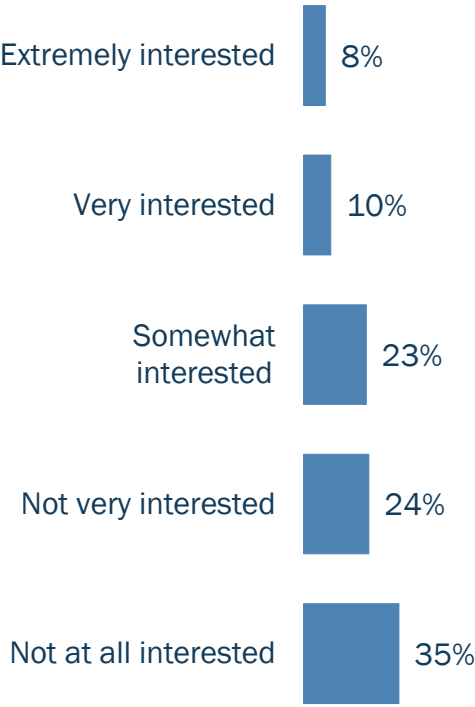
Among those who don't already own a VR headset, a fall in costs would see a significant increase in market size

18+

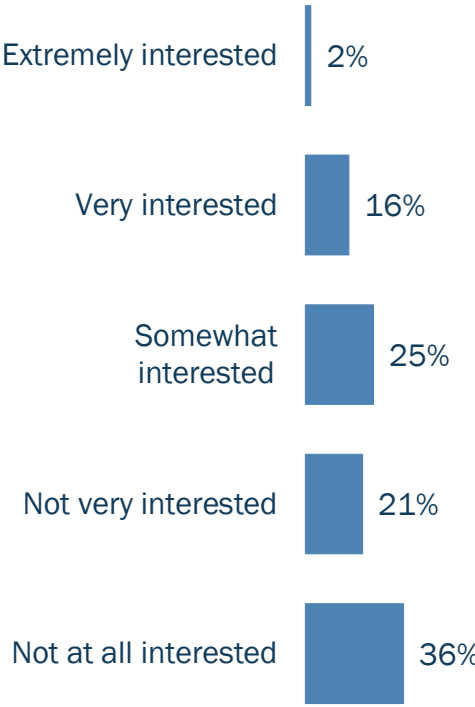
Currently Own



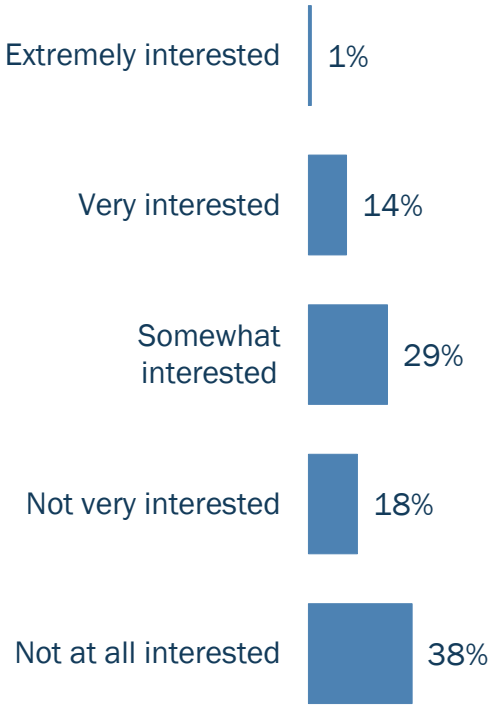
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

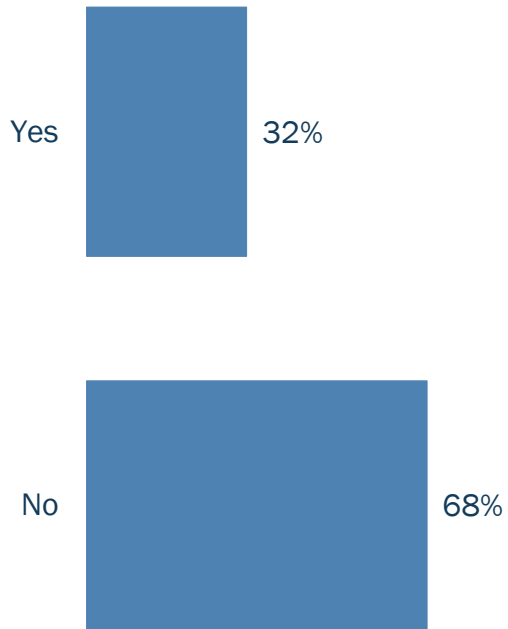


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

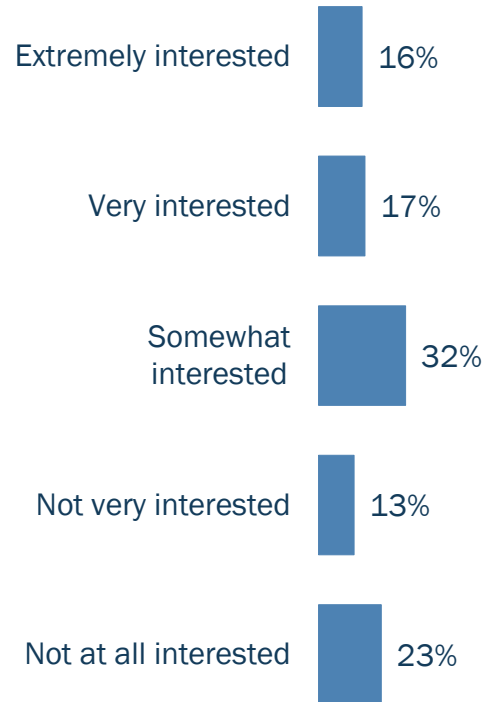
A third of 18-29s already own a VR headset, with interest levels spiking if prices fall

18-29

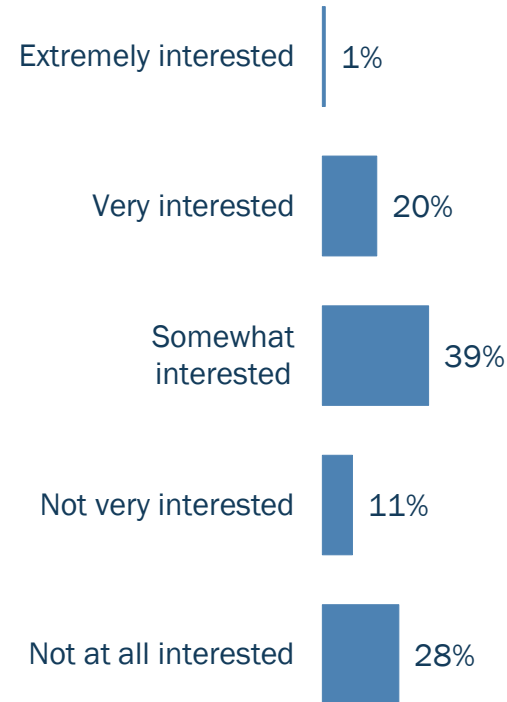
Currently Own



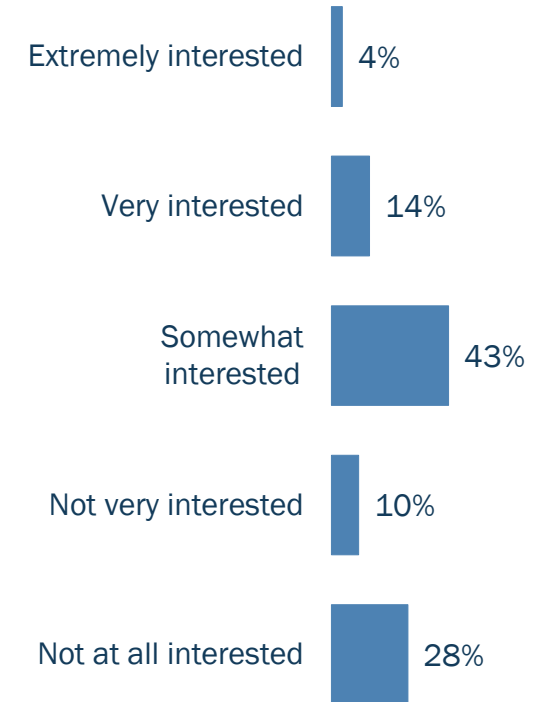
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

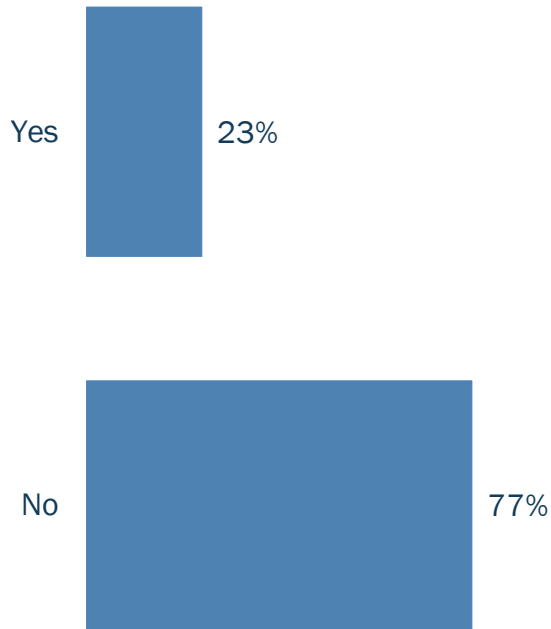


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18-29 (n=294)

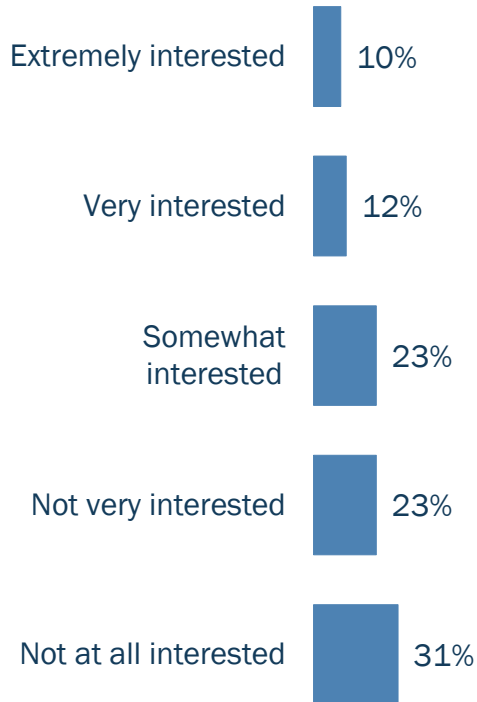
VR ownership falls to around one in four, but decreases in headset costs would see more 30-44s own the tech

30-44

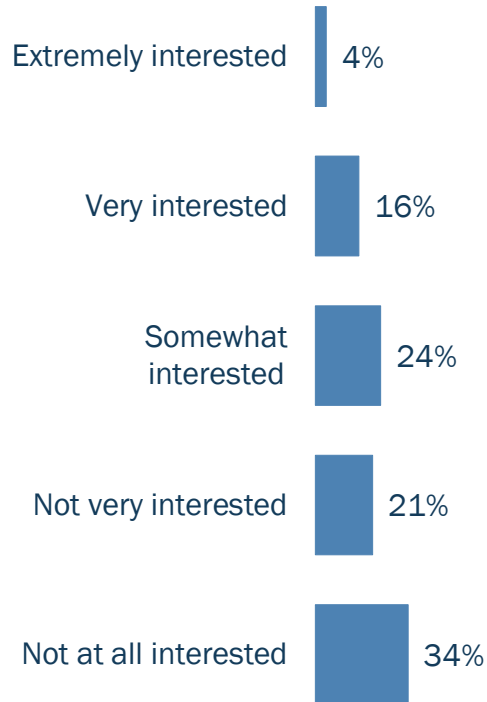
Currently Own



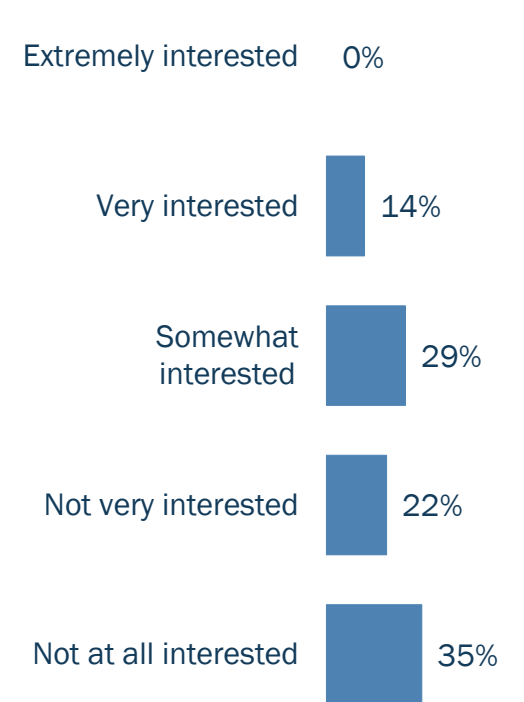
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

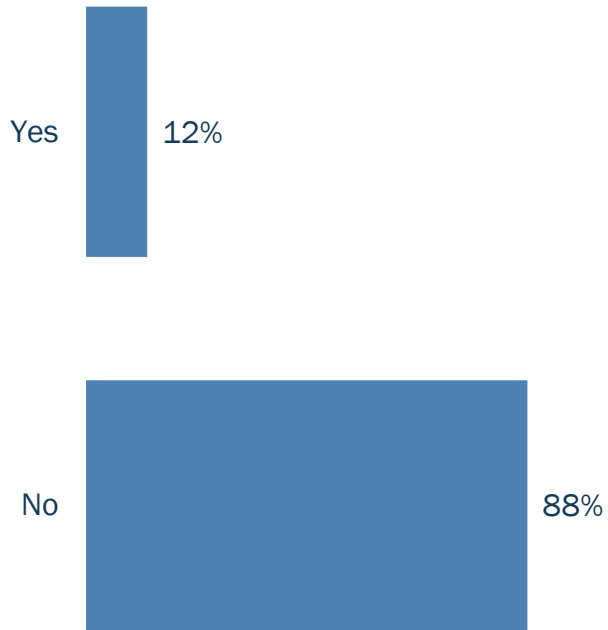


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P30-44 (n=450)

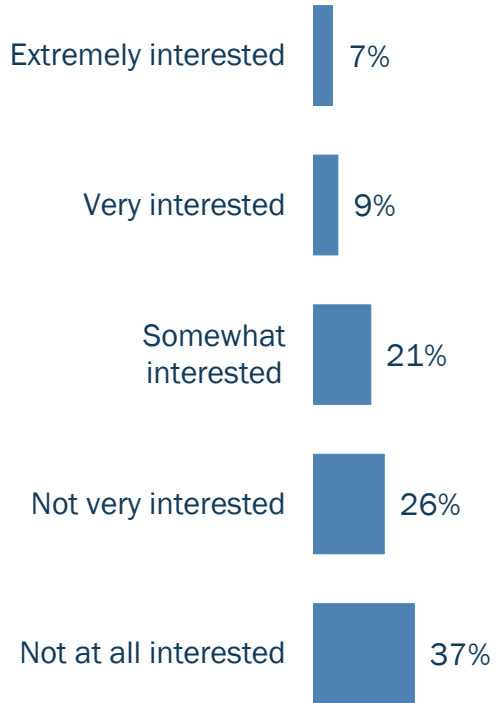
VR headset ownership considerably declines for 45-59s and even making them more affordable would see smaller pick-up rates than among younger consumers

45-59

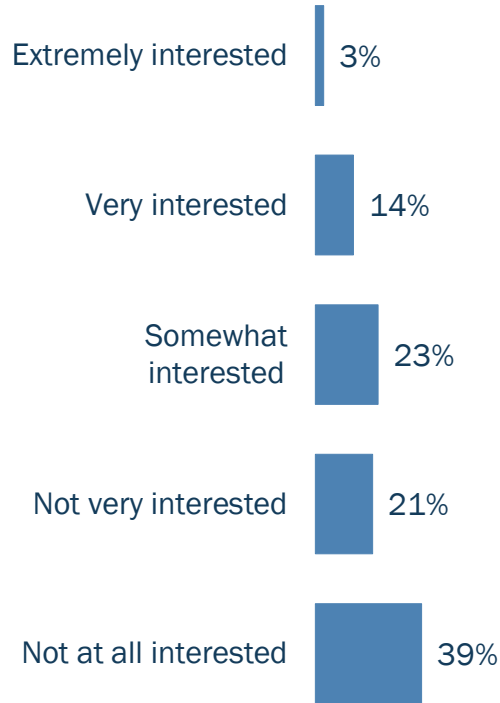
Currently Own



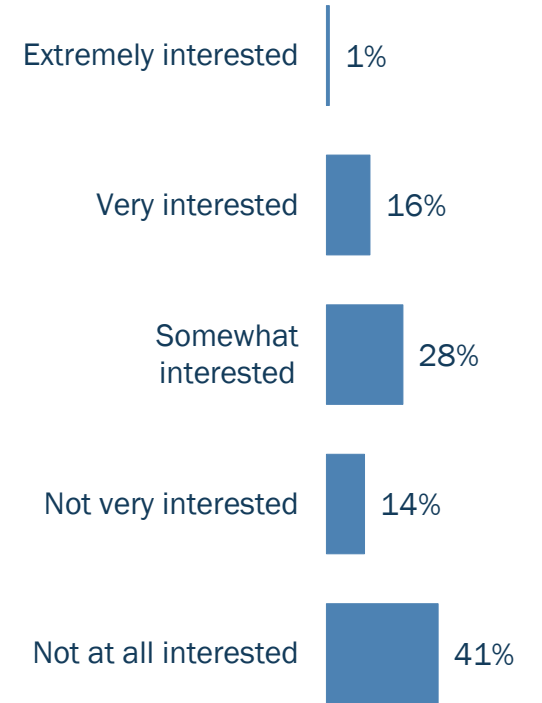
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

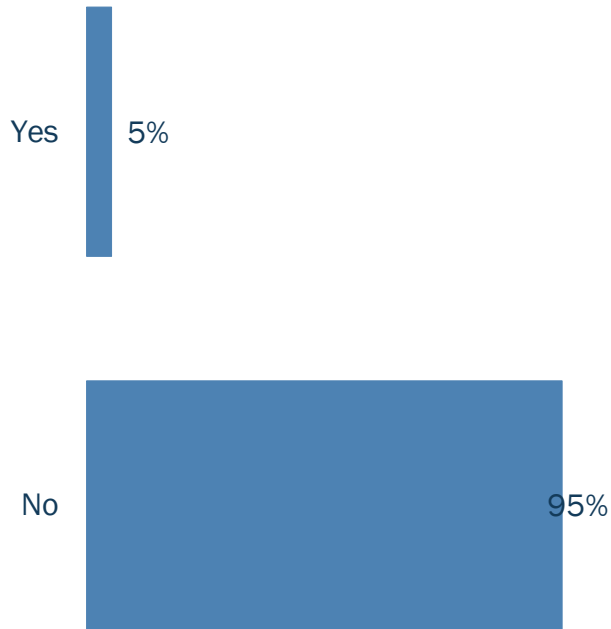


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P45-59 (n=450)

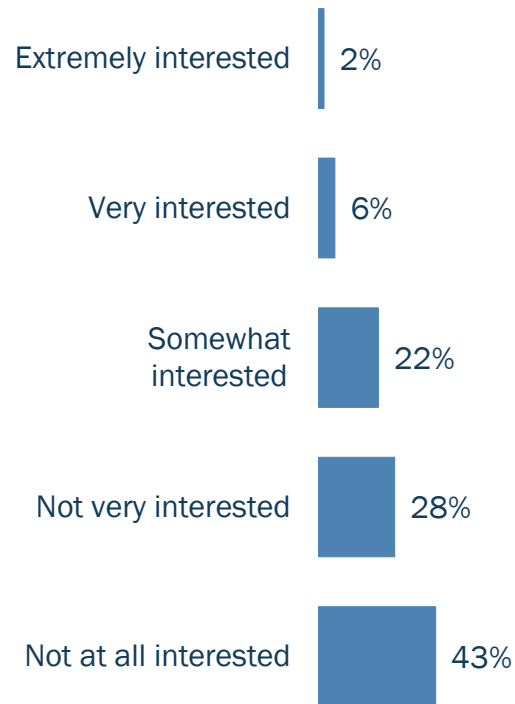
Just 1 in 20 people 60 or older own a VR headset and top box interest remains low even with price cuts

60+

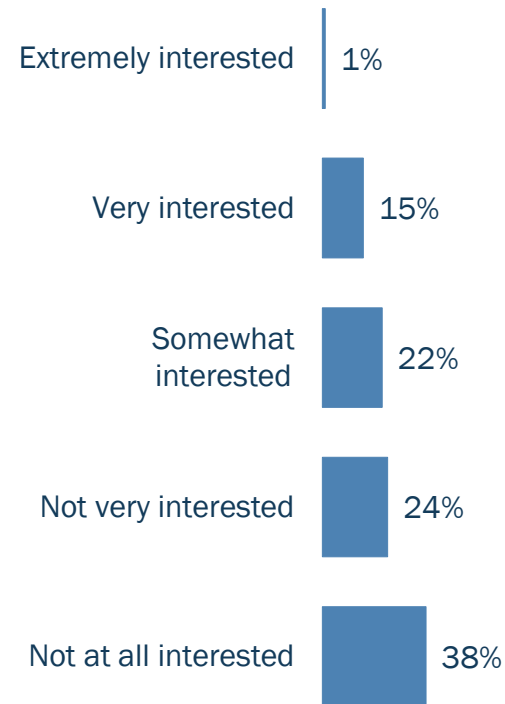
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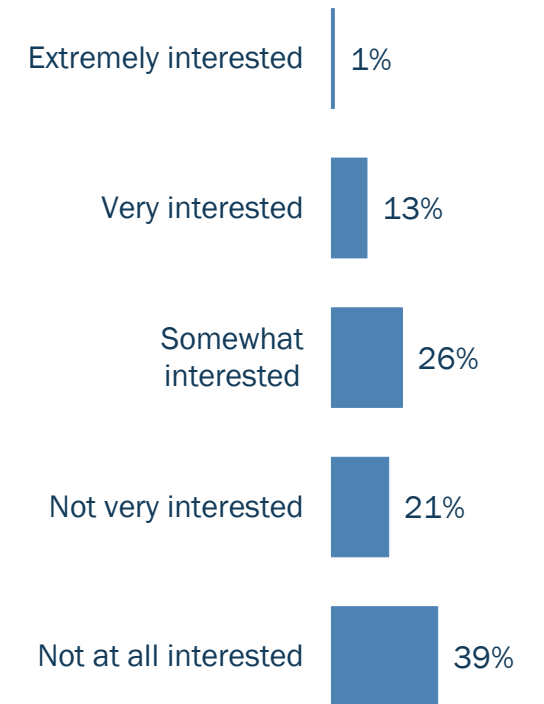
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

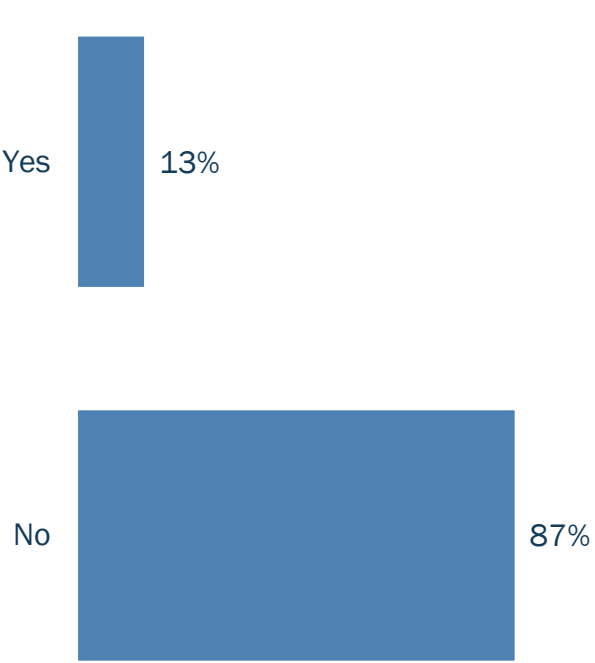


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P60+ (n=406)

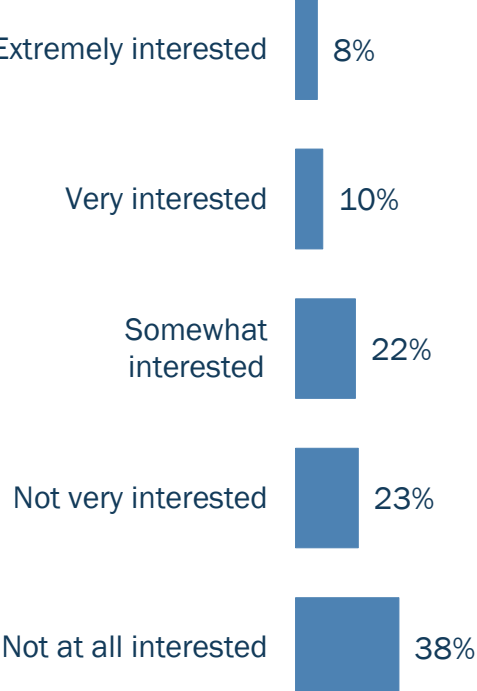
Around one in 7 lower income households own a VR headset and, while some would purchase if prices fell, this group will remain under-represented in the ongoing virtual reality landscape

Household income under \$75k

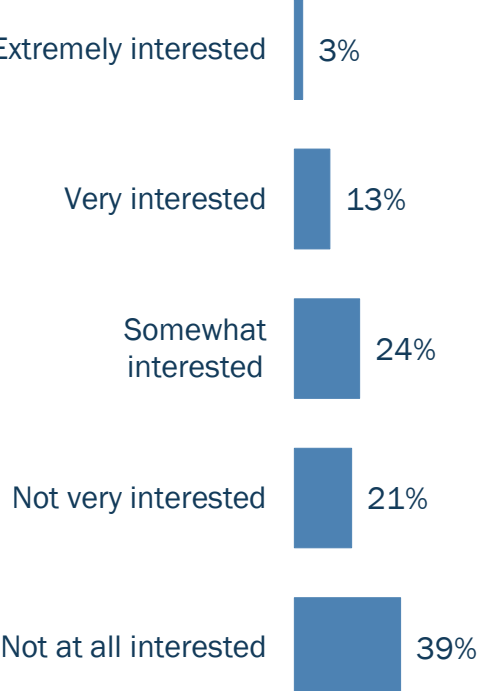
Currently Own



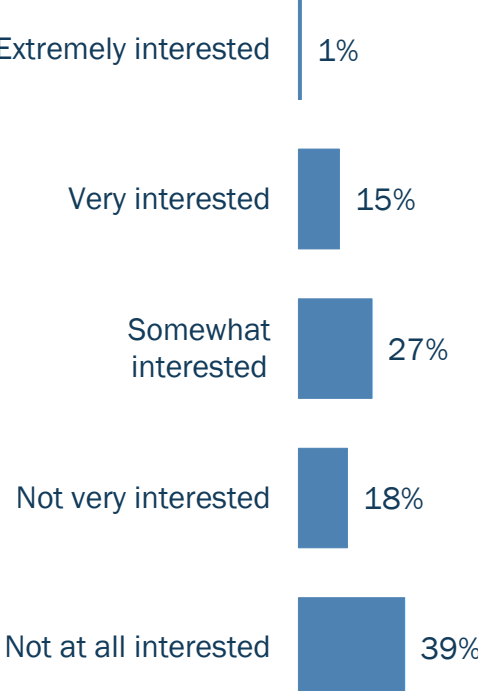
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

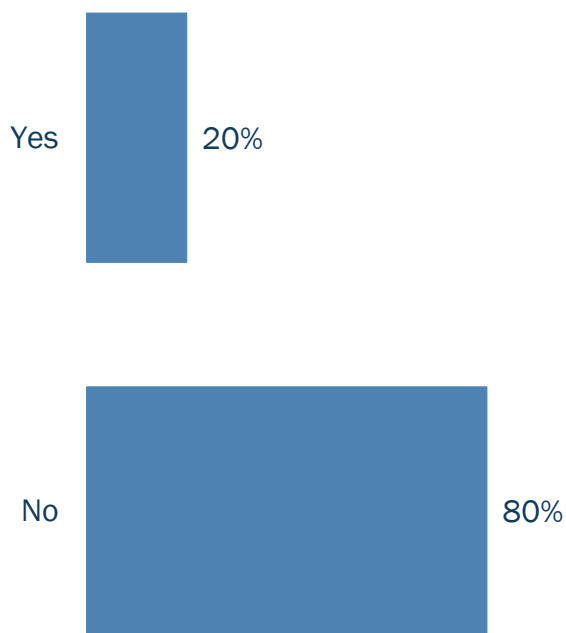


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income <\$75k (n=913)

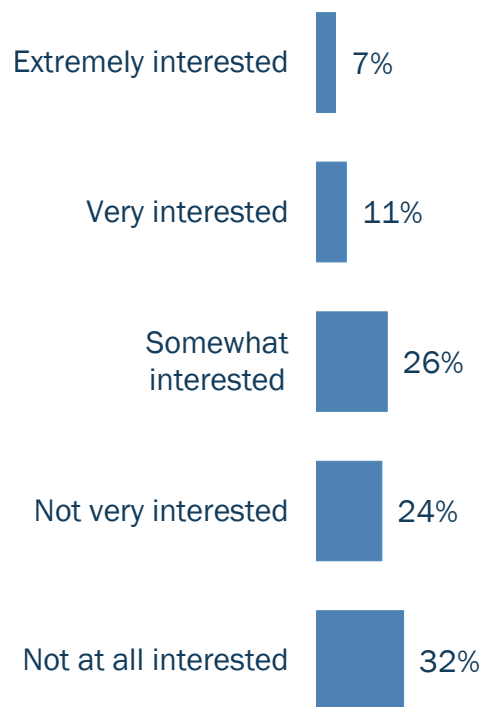
A fifth of middle income HHs currently own VR equipment; cutting prices will see more embrace the tech

Household income \$75k-<\$150k

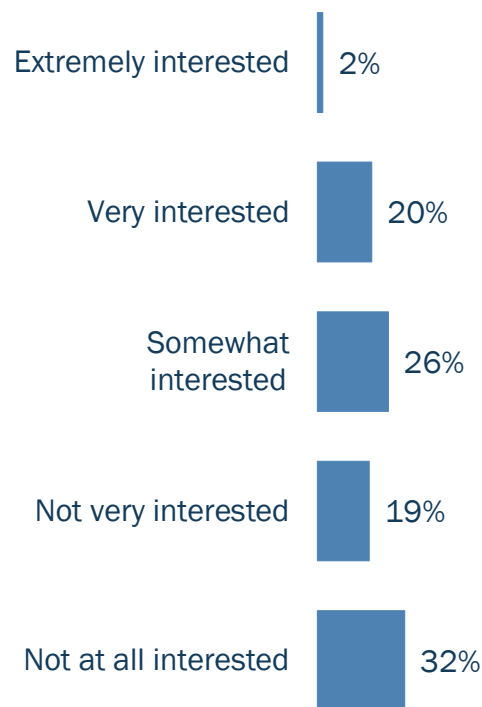
Currently Own



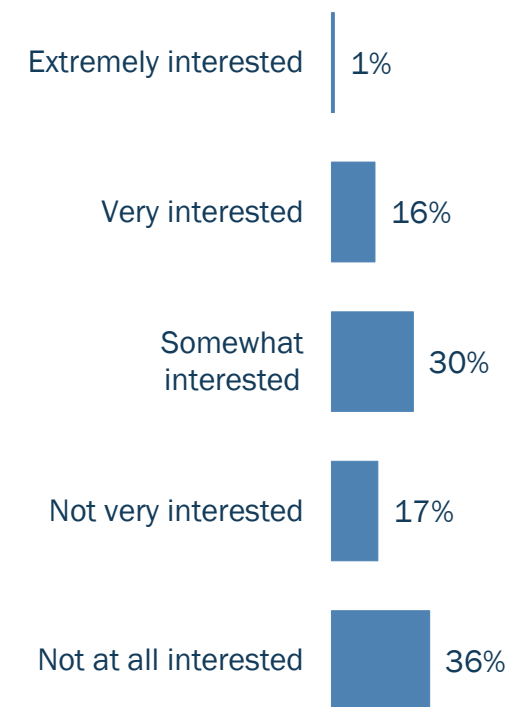
If not, buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

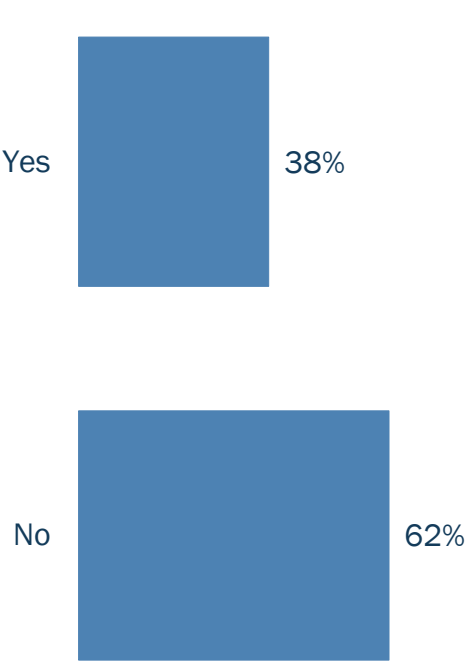


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income \$75k-<\$150k (n=451)

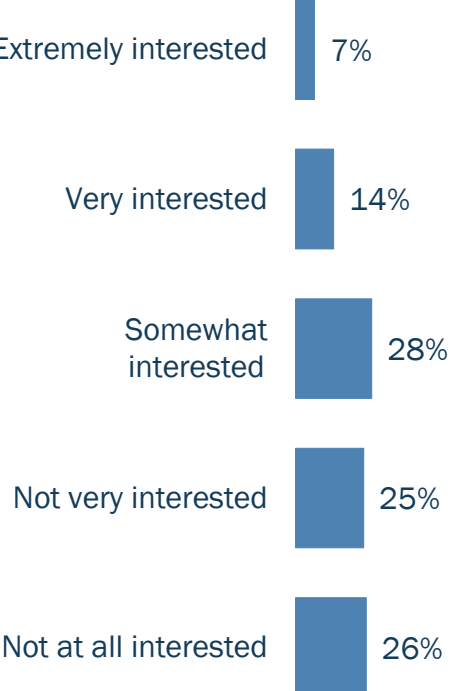
Affluent households have the highest ownership rate of VR and can be expected to see that grow the most should prices fall

Household income >\$150k

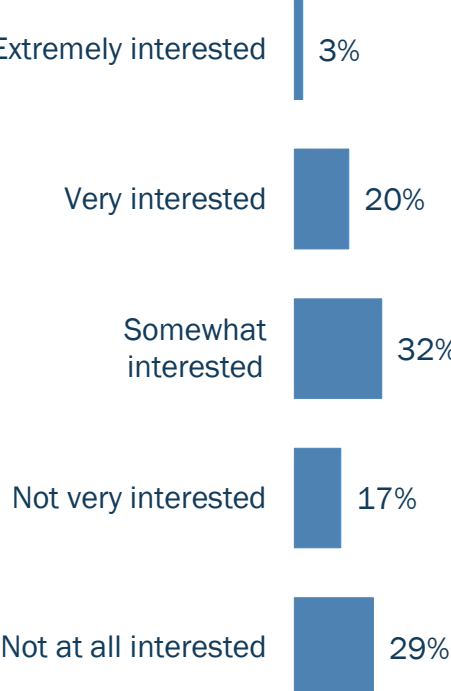
Currently Own



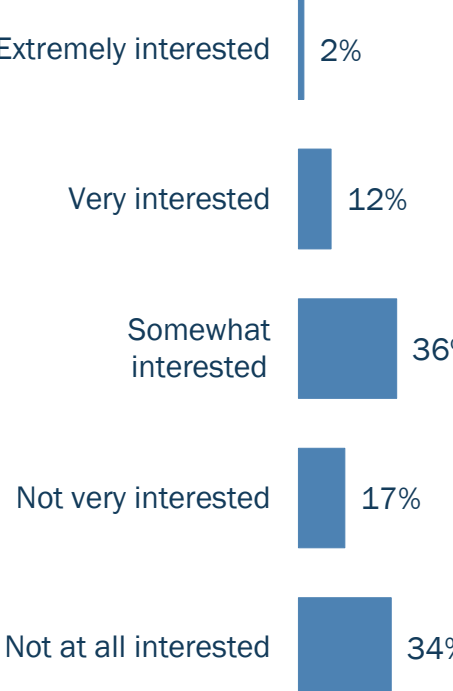
If not, buy for \$200?



If not \$200, \$100?

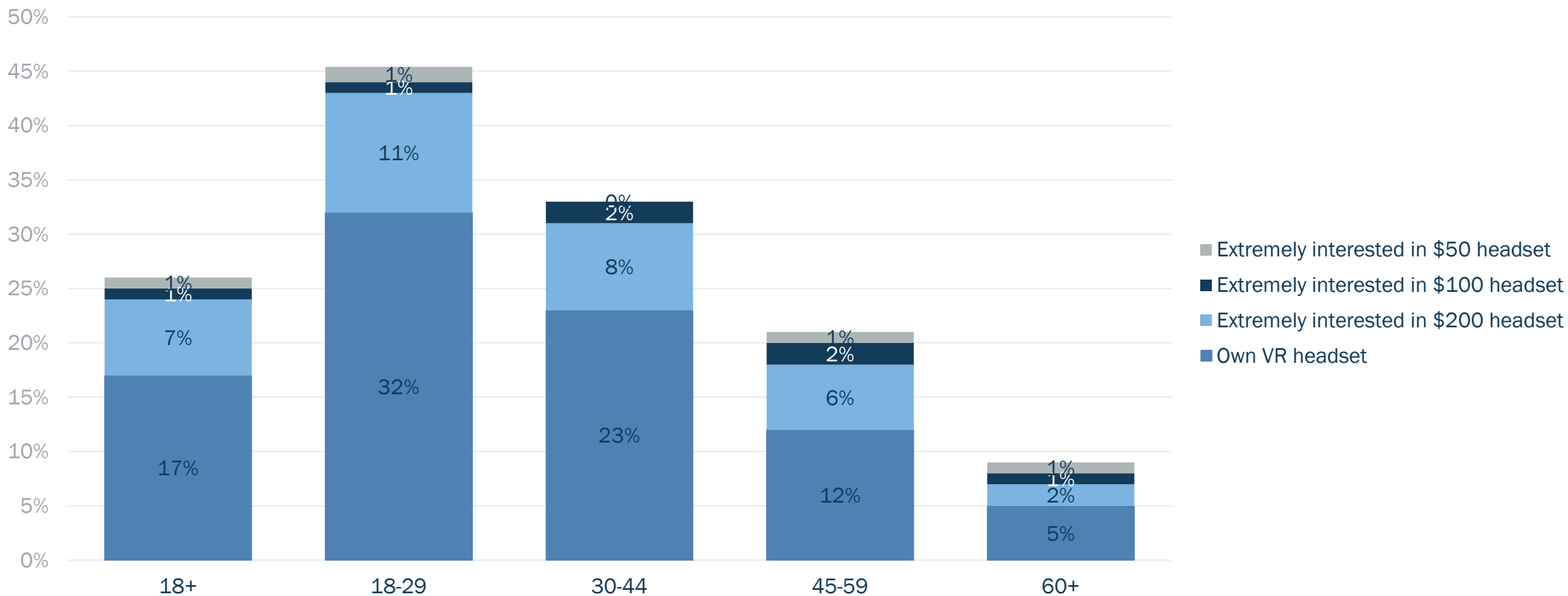


If not \$100, \$50?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income >\$150k (n=156)

Factoring in current and anticipated ownership of VR capable devices sees best estimates hitting around a quarter of US adults, with this close to half among 18-29s and less than 10% of those 60+



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

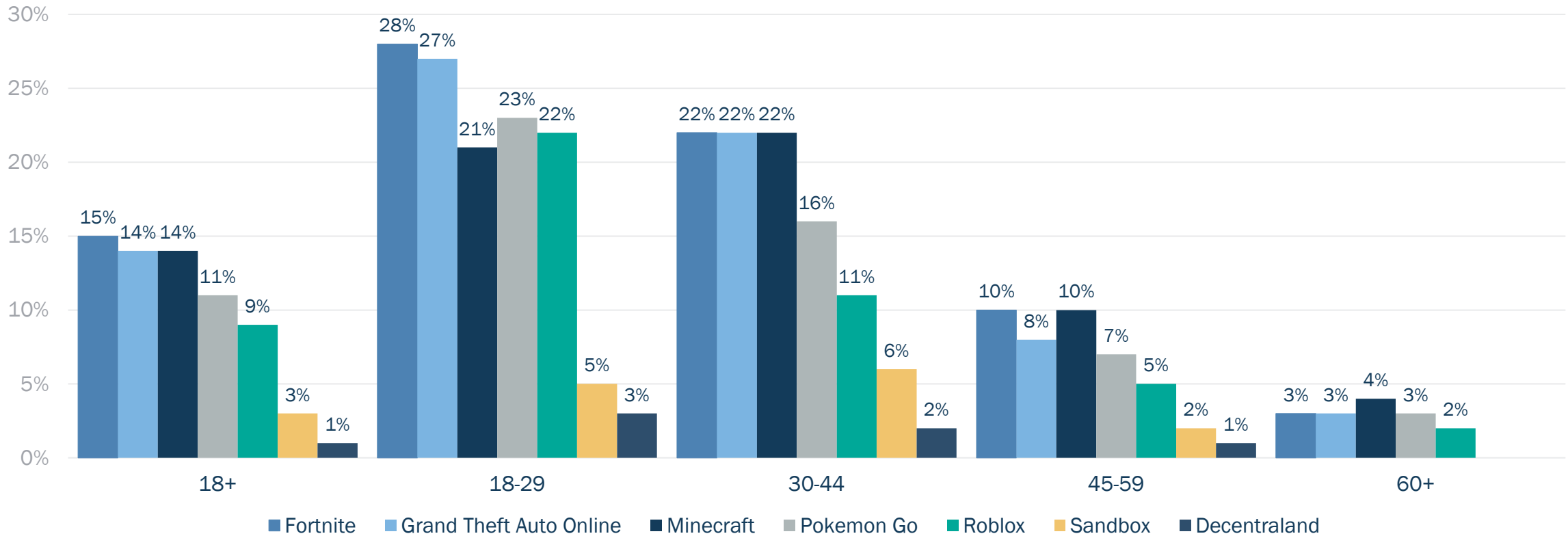


Metaverse & VR Potential

Interest in Activities & Concepts

Of the proto-metaverse games assessed, NFT-based ones saw markedly lower use among all ages

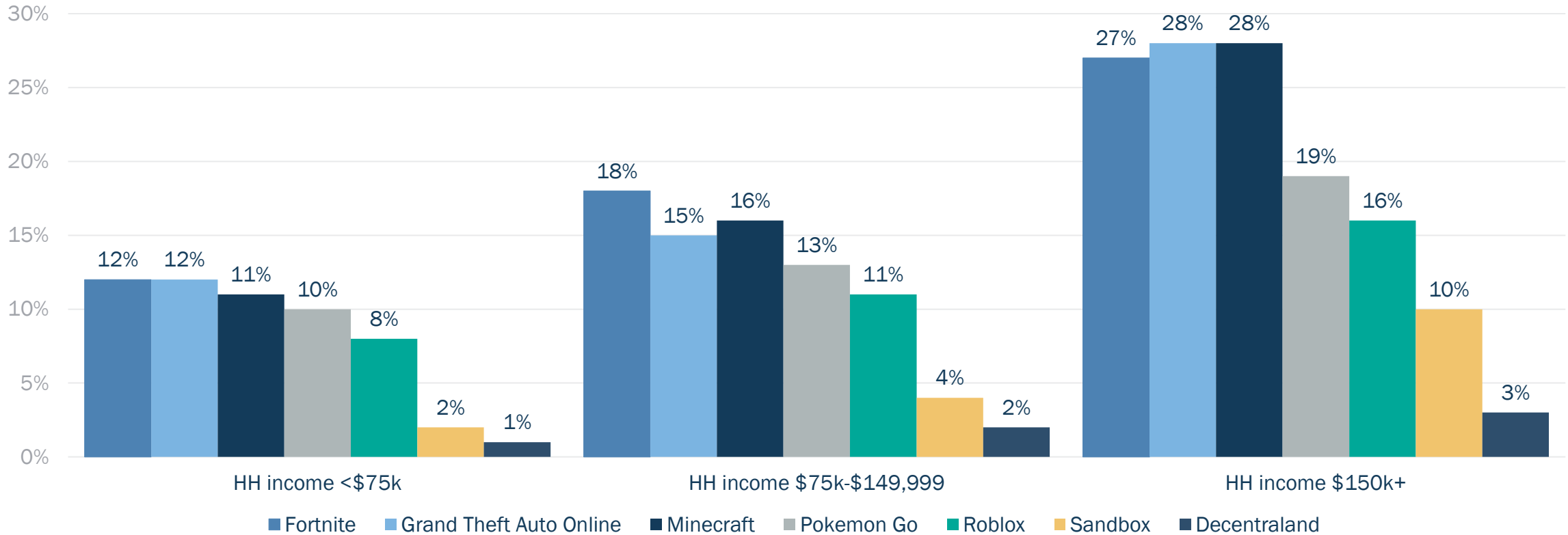
Which, if any, of the following games do you regularly play?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Considering that proto-metaverse games typically follow the freemium model, it is not a surprise to see significantly greater usage among more affluent households

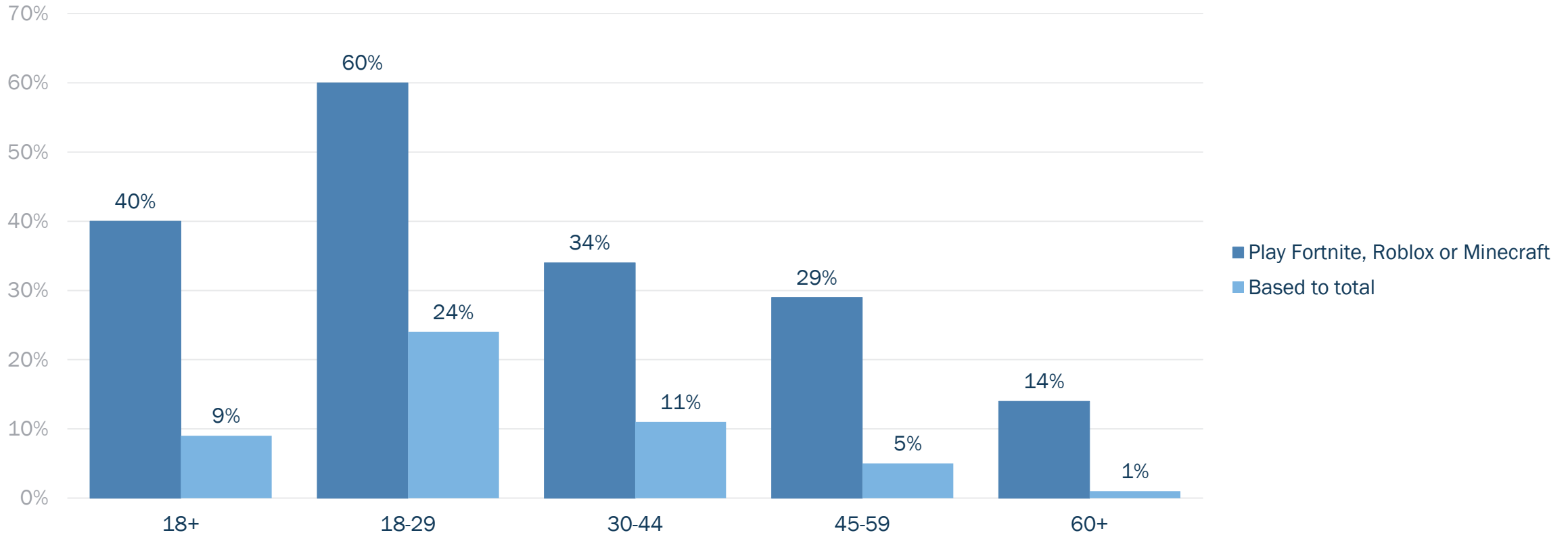
Which, if any, of the following games do you regularly play?



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

Virtual concert attendance is currently a younger person's activity (linked to their greater VR headset ownership rates) with a quarter saying that they attended one via Fortnite, Roblox or Minecraft

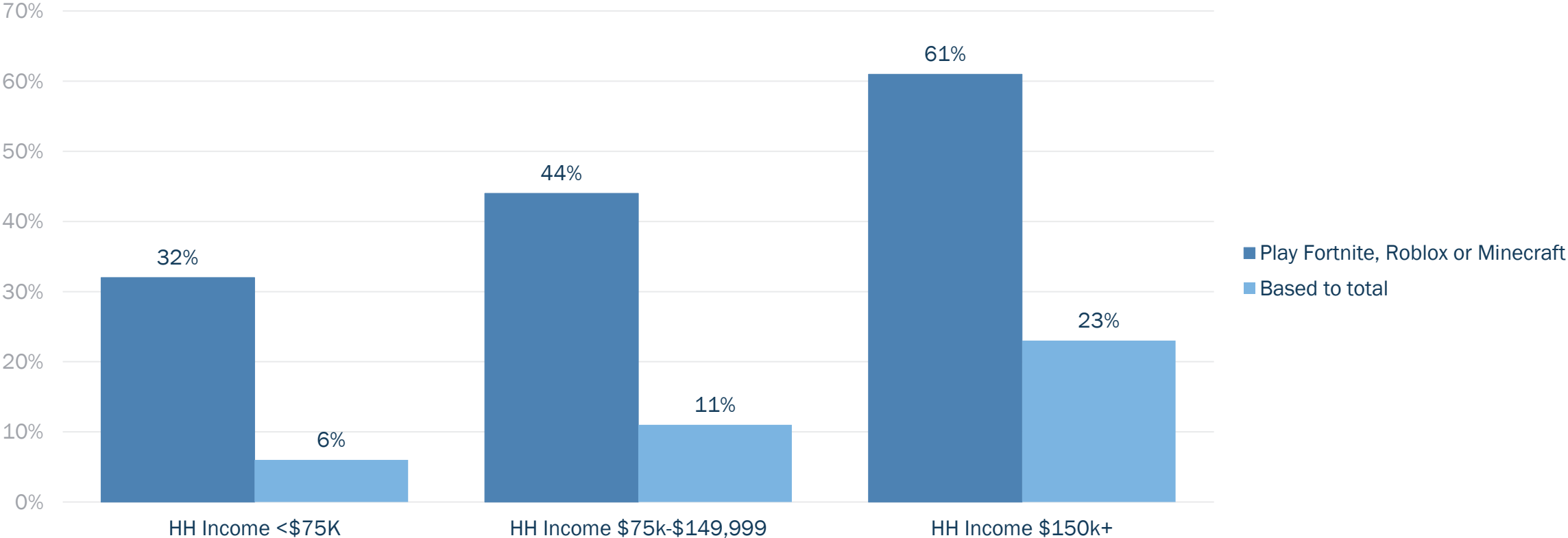
Have you ever attended a virtual concert in Fortnite, Roblox or Minecraft?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Virtual concert attendees tend to be more affluent with almost a quarter of HHs earning \$150k+ attending one

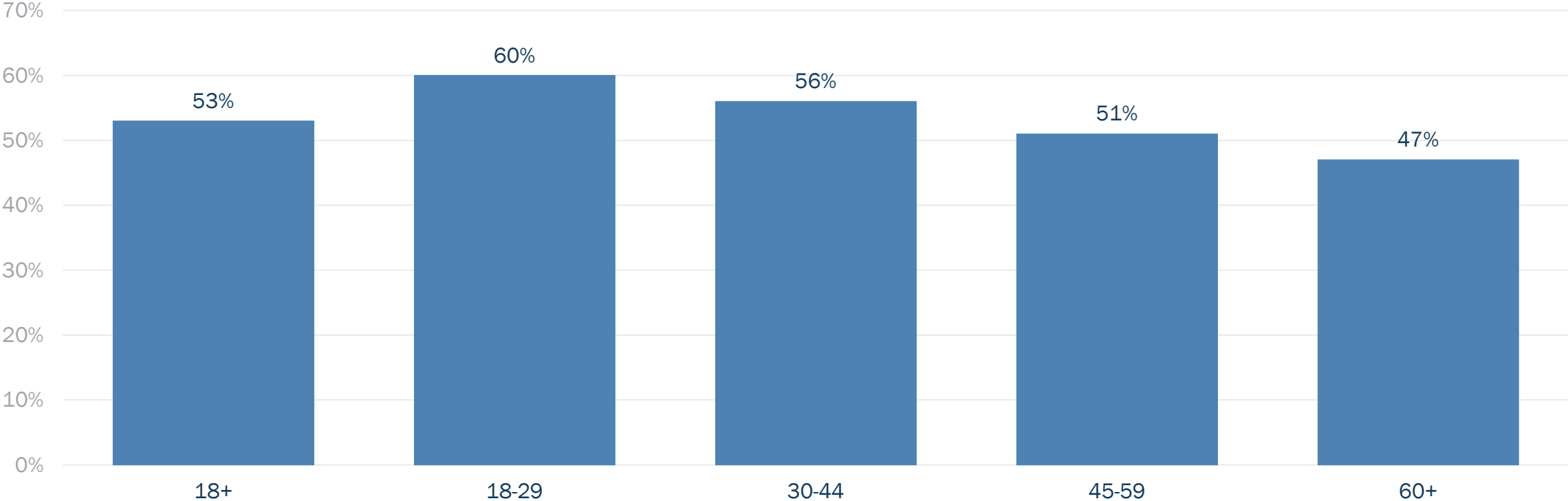
Have you ever attended a virtual concert in Fortnite, Roblox or Minecraft?



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

There is strong interest in the concept of a virtual concert, with this not varying greatly by age

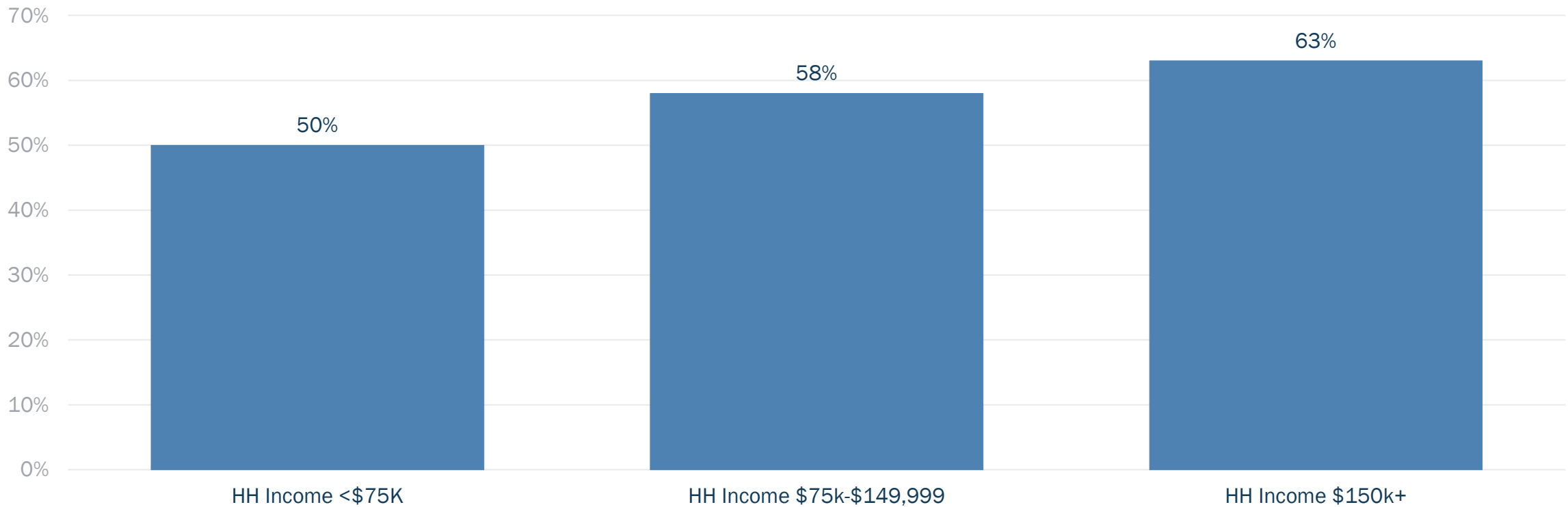
Would you attend a concert or festival via virtual reality if your favorite artist was performing an exclusive set? [Yes responses shown]



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Income is not a limiter in terms of virtual concert interest, with half of those earning less than \$75k interested in attending one

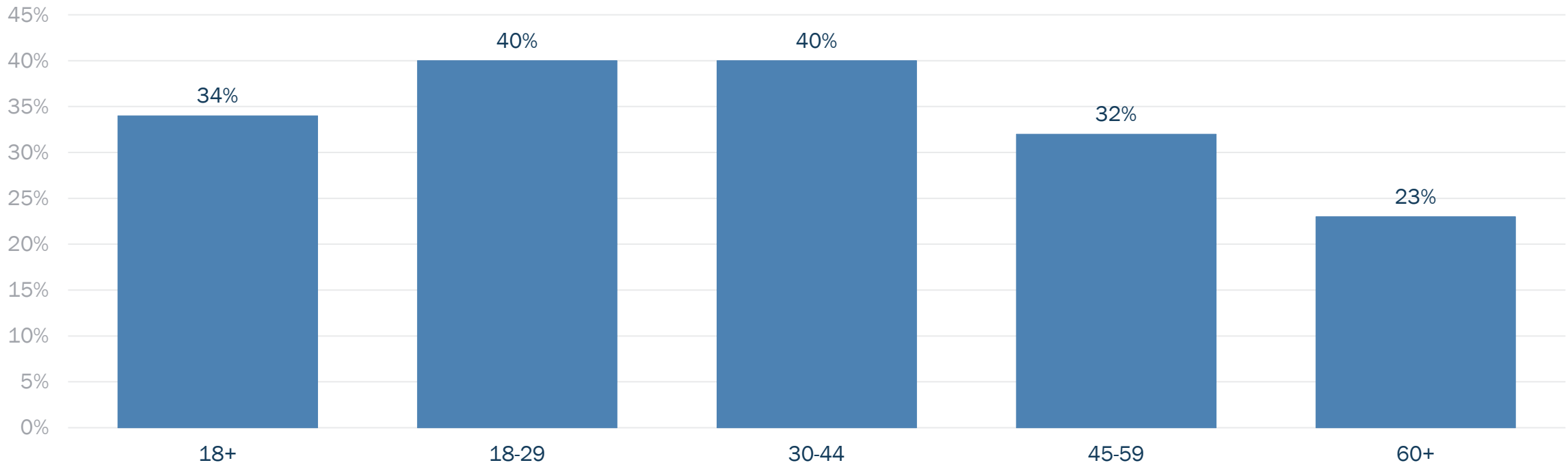
Would you attend a concert or festival via virtual reality if your favorite artist was performing an exclusive set? [Yes responses shown]



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

Overall a third of US adults are interested in paying to experience watching a sports game virtually like they were in the stadium

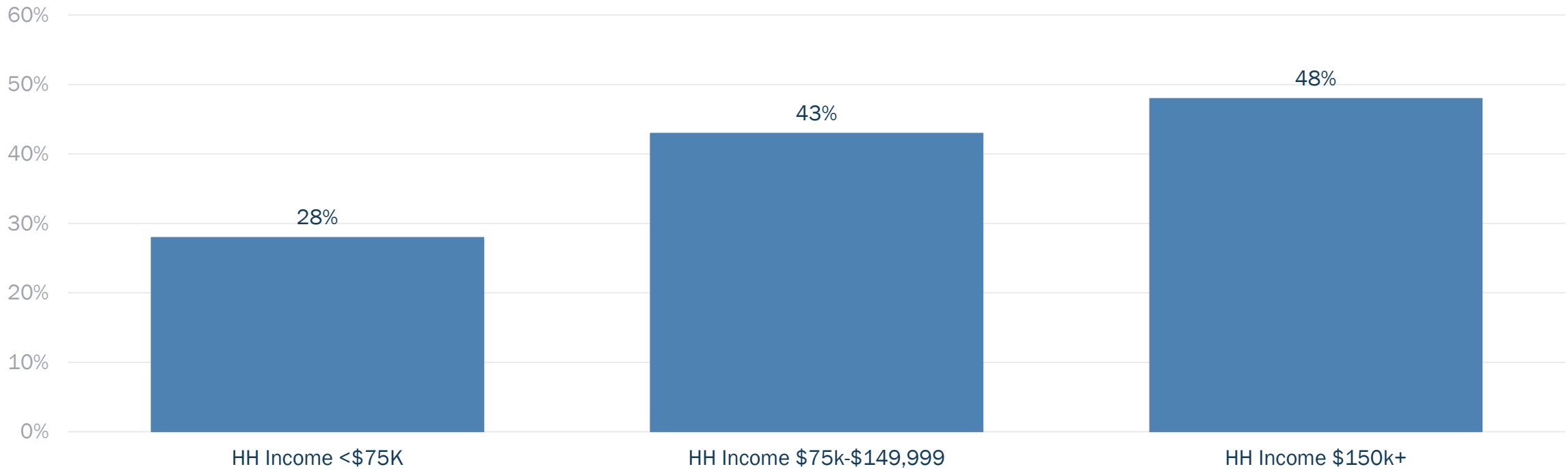
Would you pay to watch a TV sports broadcast like an NBA, MLB or NFL game from home as if you were in a stadium, sat in the crowd, experiencing the atmosphere, and with a great view of the field? [Yes responses shown]



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Interest in virtual sports attendance increases with available income

Would you pay to watch a TV sports broadcast like an NBA, MLB or NFL game from home as if you were in a stadium, sat in the crowd, experiencing the atmosphere, and with a great view of the field? [Yes responses shown]

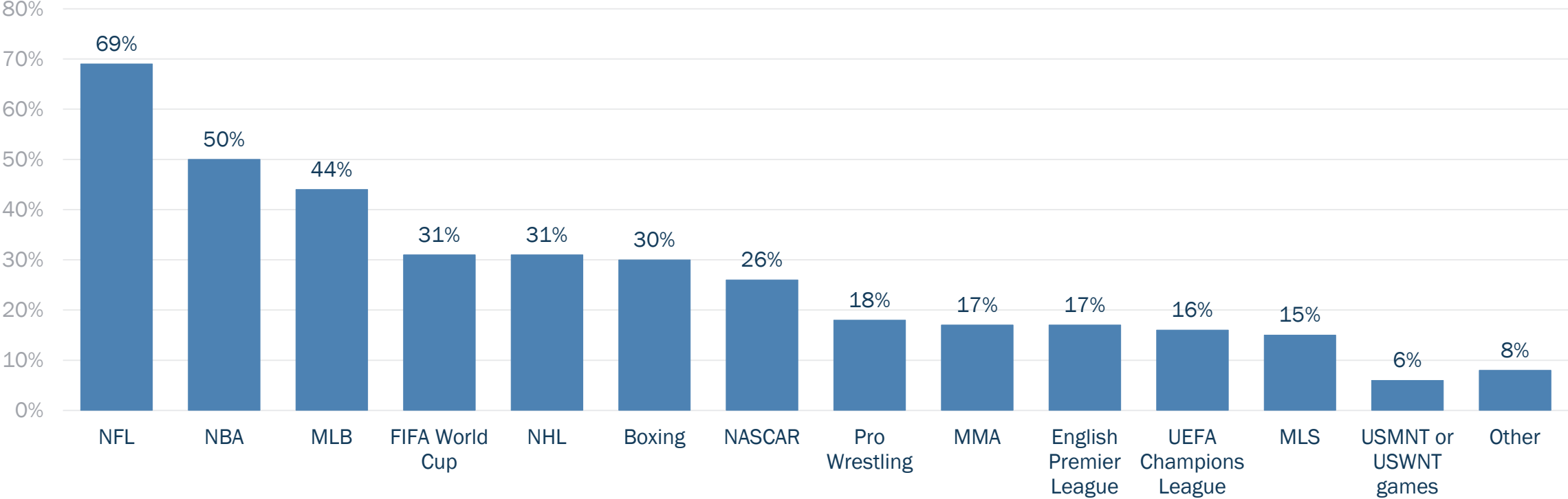


Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

The most popular sports to watch virtually are the NFL, NBA and MLB, but markets exist for all sports and should be explored

18+

Which sports would you be interested in doing this for?

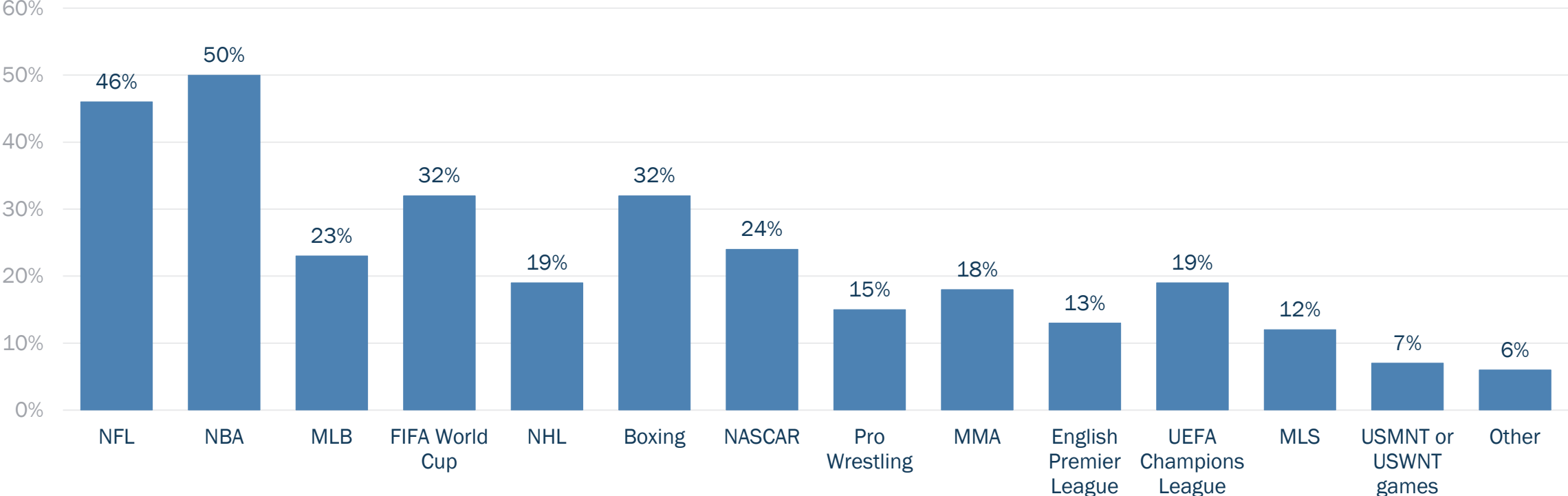


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

The NBA is most popular to virtually attend among 18-29s (mirroring popularity) with the NFL a close second

18-29

Which sports would you be interested in doing this for?

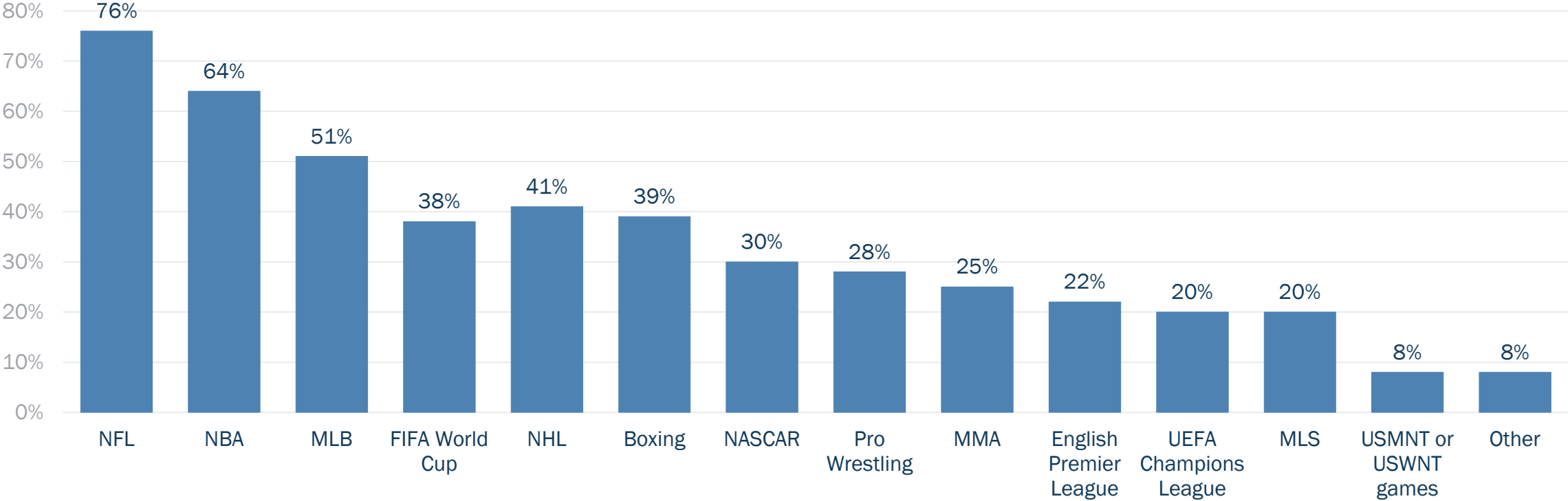


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18-29 (n=294)

Three-quarters of 30-44s interested in virtual sports attendance would pay to watch an NFL game

30-44

Which sports would you be interested in doing this for?

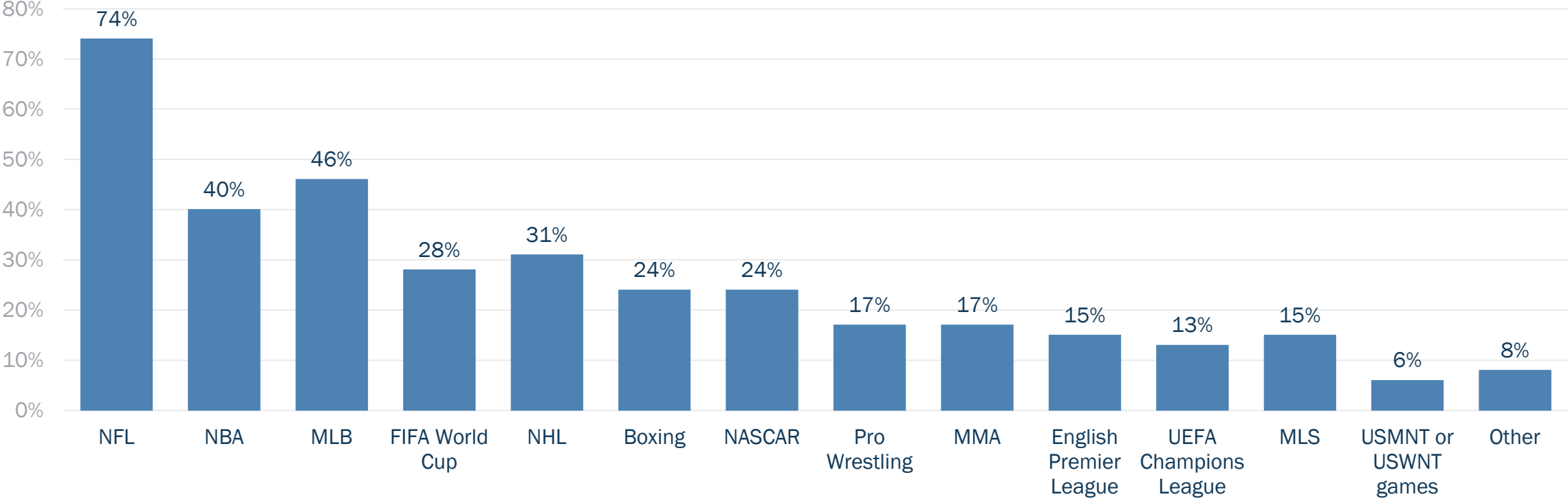


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P30-44 (n=450)

The same proportion of 45-59s interested in virtual sport attendance are interested in doing it for the NFL, then MLB

45-59

Which sports would you be interested in doing this for?

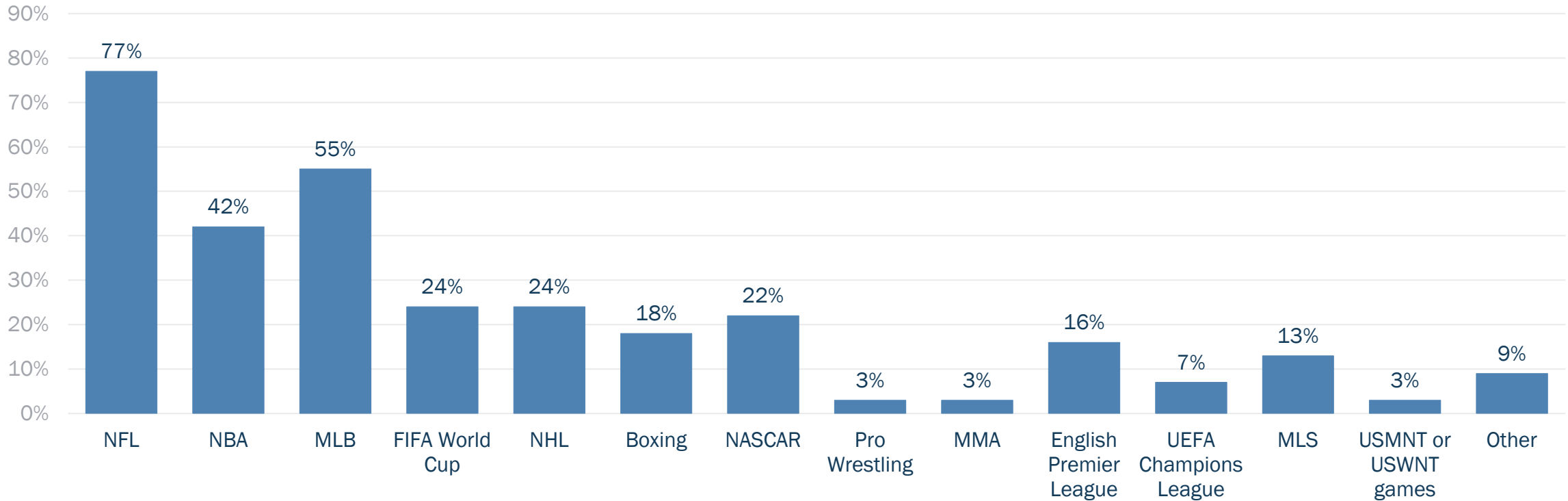


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P45-59 (n=450)

MLB virtual viewing interest increases among those 60 or older, but NFL remains the most popular option

60+

Which sports would you be interested in doing this for?

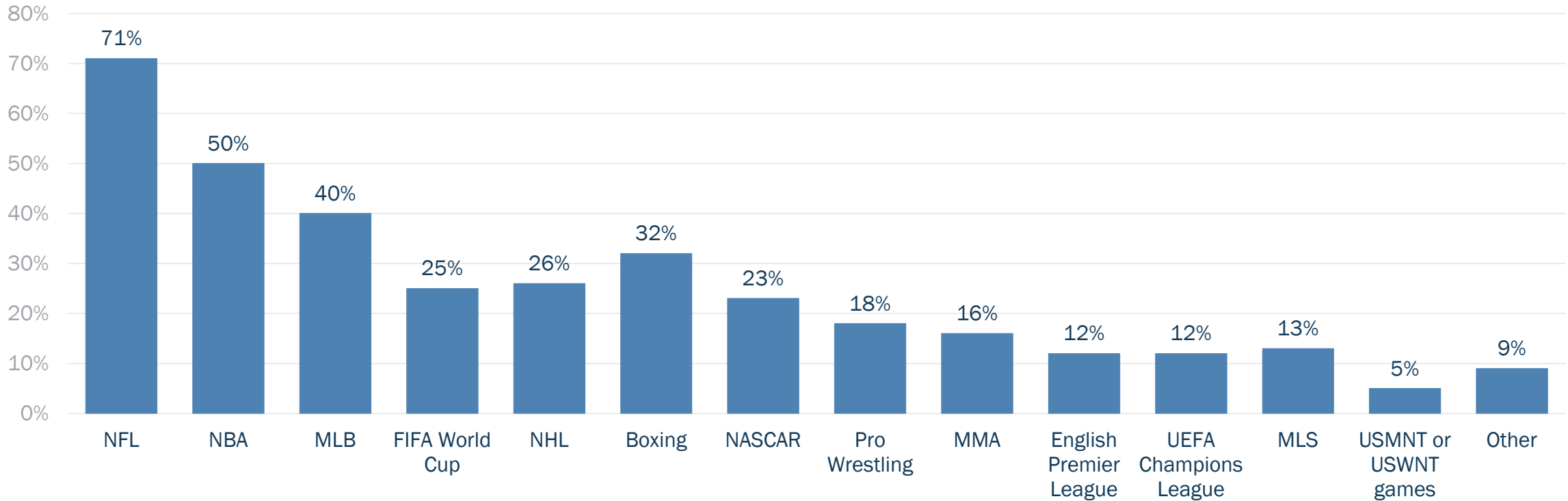


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P60+ (n=406)

For households earning less than \$75k, the NFL is the most popular sport for virtual viewing

Household income under \$75k

Which sports would you be interested in doing this for?

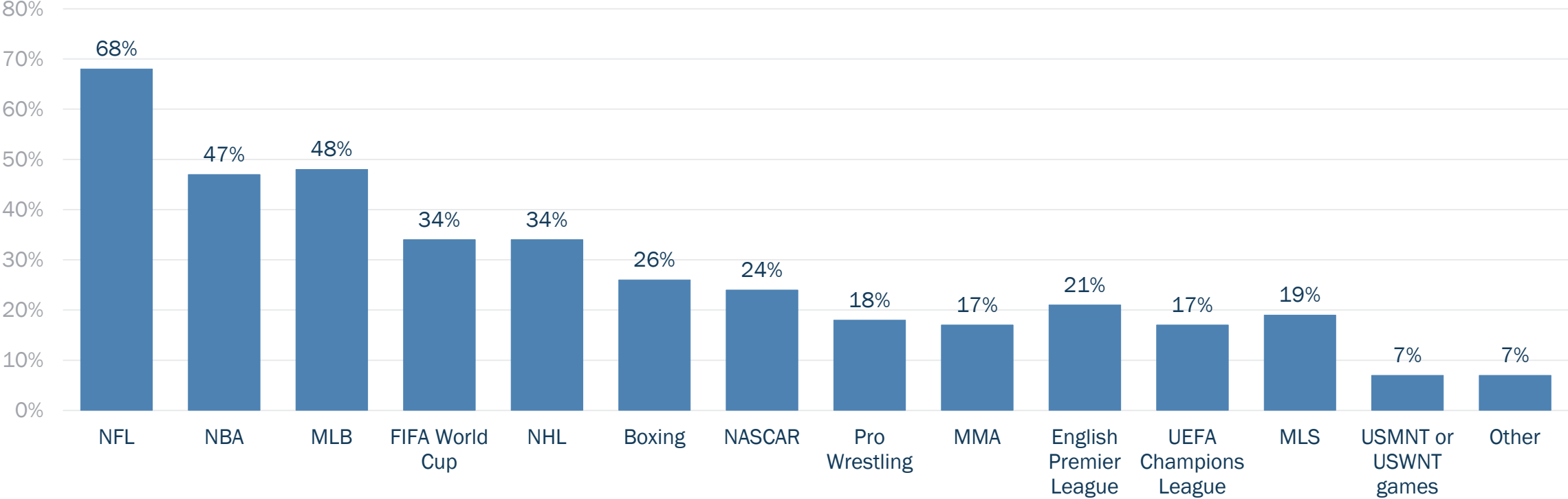


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income <\$75k (n=913)

The NFL has the biggest opportunity to explore in virtual sports viewing, with it the sport with highest interest in virtual attendance among households with an income between \$75k-<\$150k

Household income \$75k-<\$150k

Which sports would you be interested in doing this for?

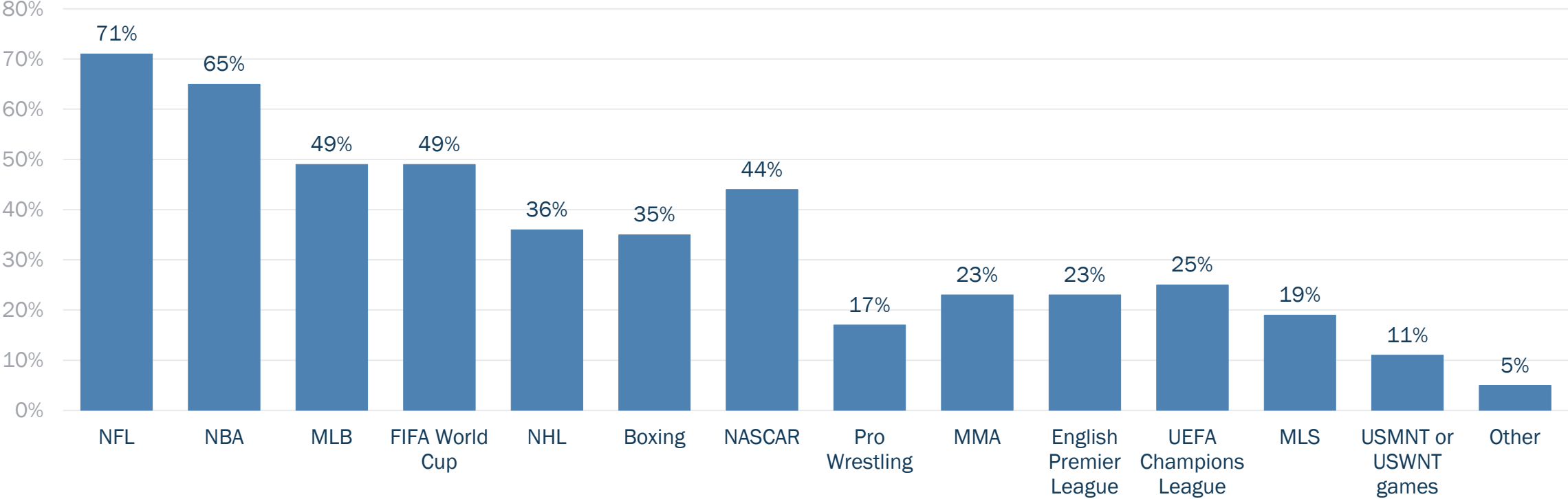


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income \$75k-<\$150k (n=451)

Affluent households interested in watching sports virtually have strong interest levels in doing so for the NFL, NBA, MLB and FIFA World Cup

Household income \$150k+

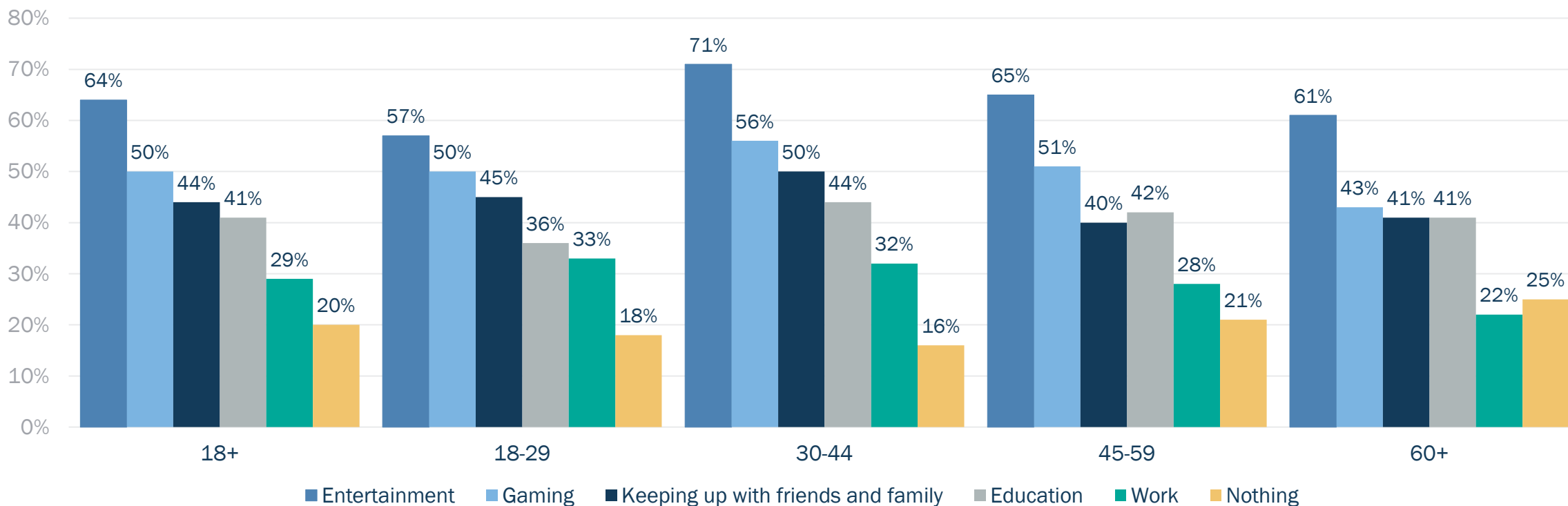
Which sports would you be interested in doing this for?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income >\$150k (n=1,600)

Entertainment is the concept most associate the Metaverse with, followed by gaming and personal relationships

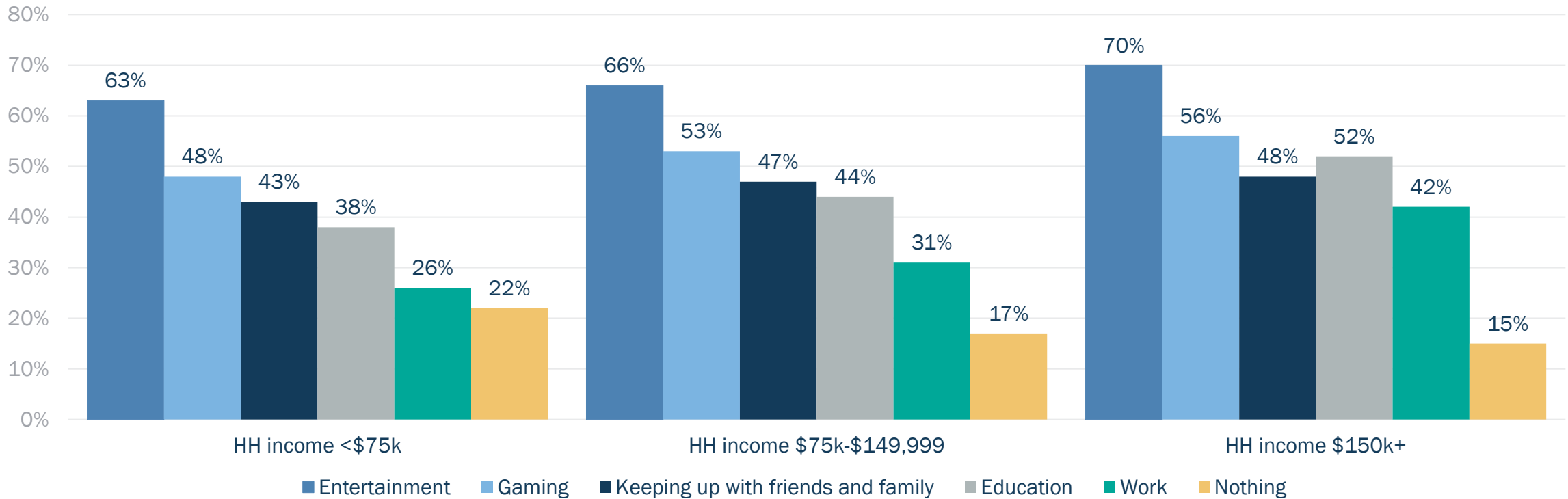
Please select any of the following concepts that you think that the Metaverse will be a useful tool for.



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Perceptions of how the Metaverse may be useful do not change greatly with income level

Please select any of the following concepts that you think that the Metaverse will be a useful tool for.



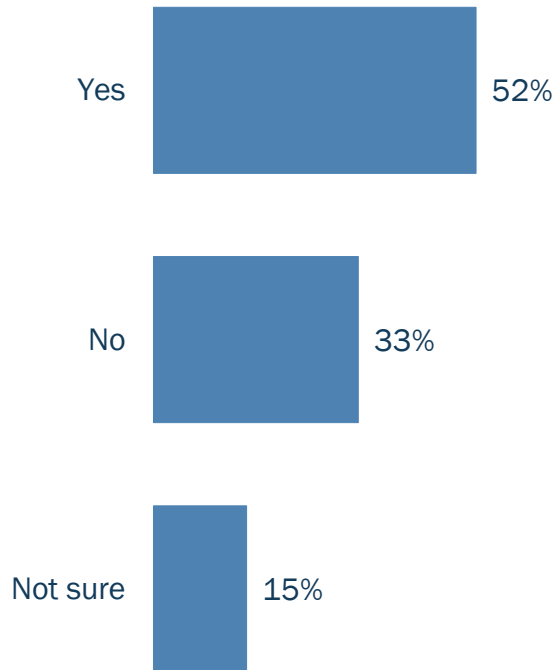
Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)



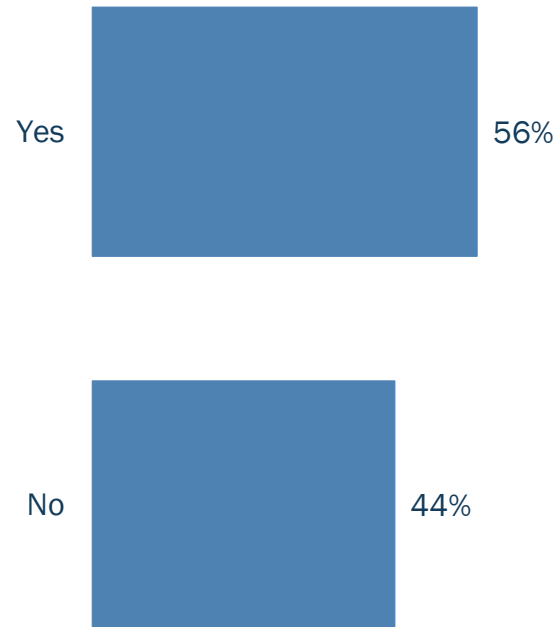
Augmented Reality

Half of Americans had heard of augmented reality, with this not shifting much after seeing a detailed description

Heard of augmented reality



Heard of definition



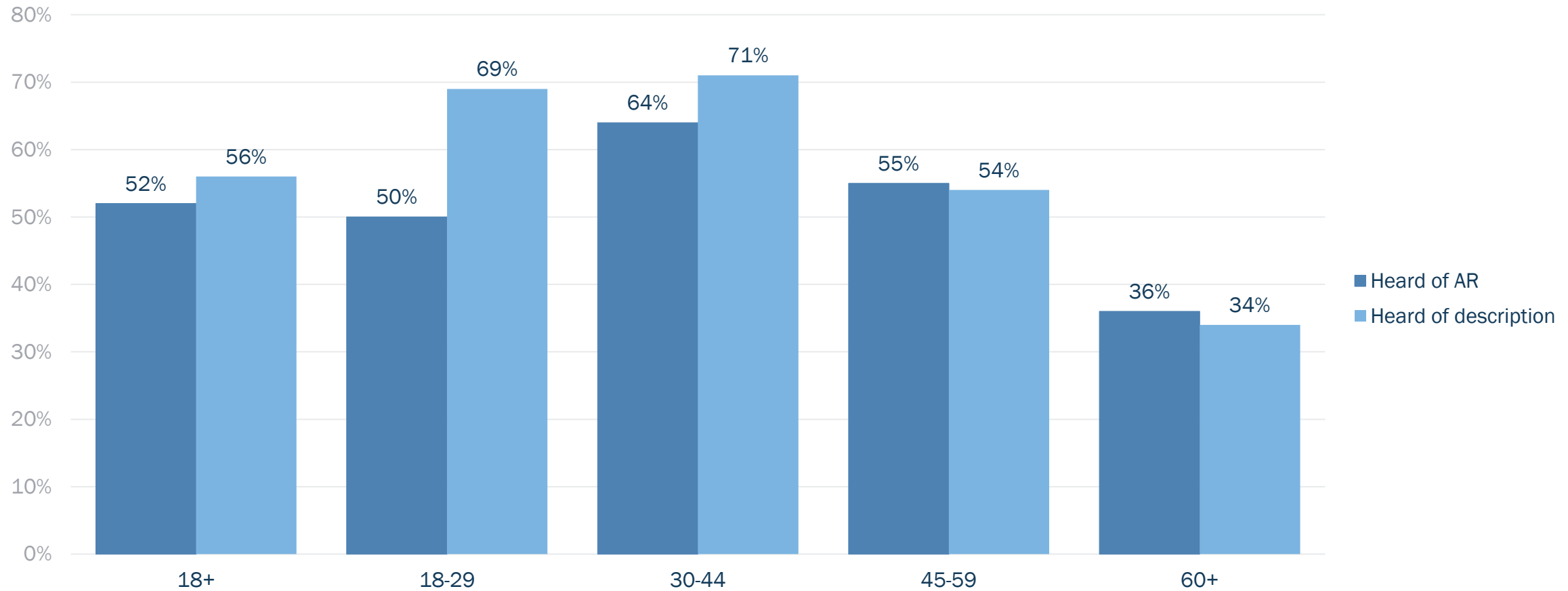
AR definition:

Augmented reality is when you mix computer-generated graphics with the real world, either by a smartphone, smart glasses, or virtual reality headset. Examples would be filters within Snapchat, playing games like Pokémon Go, or when events on TV blend graphics with live action, such as when NFL games on Nickelodeon have slime cannons when a touchdown occurs.

Knowing this, have you heard, seen, or read anything about augmented reality before today?

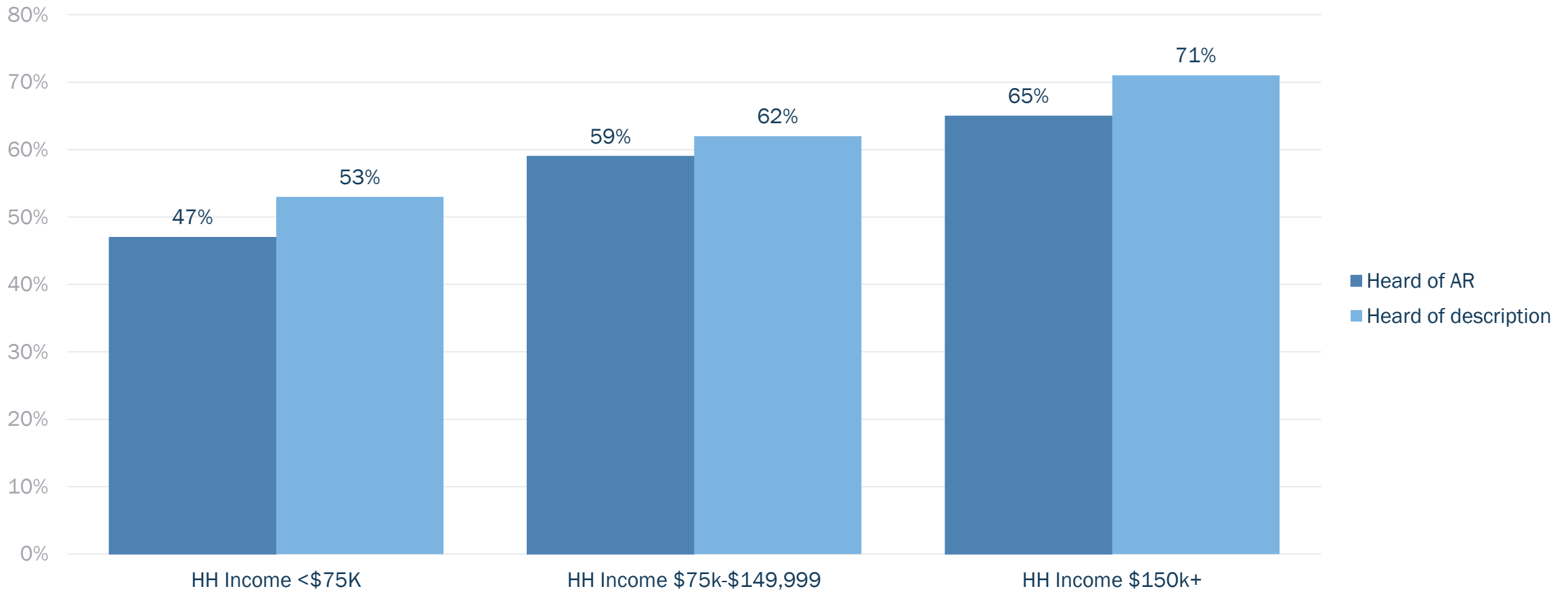
Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600)

AR awareness is greatest among younger Americans, but half of those 45-59 are also aware of it



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

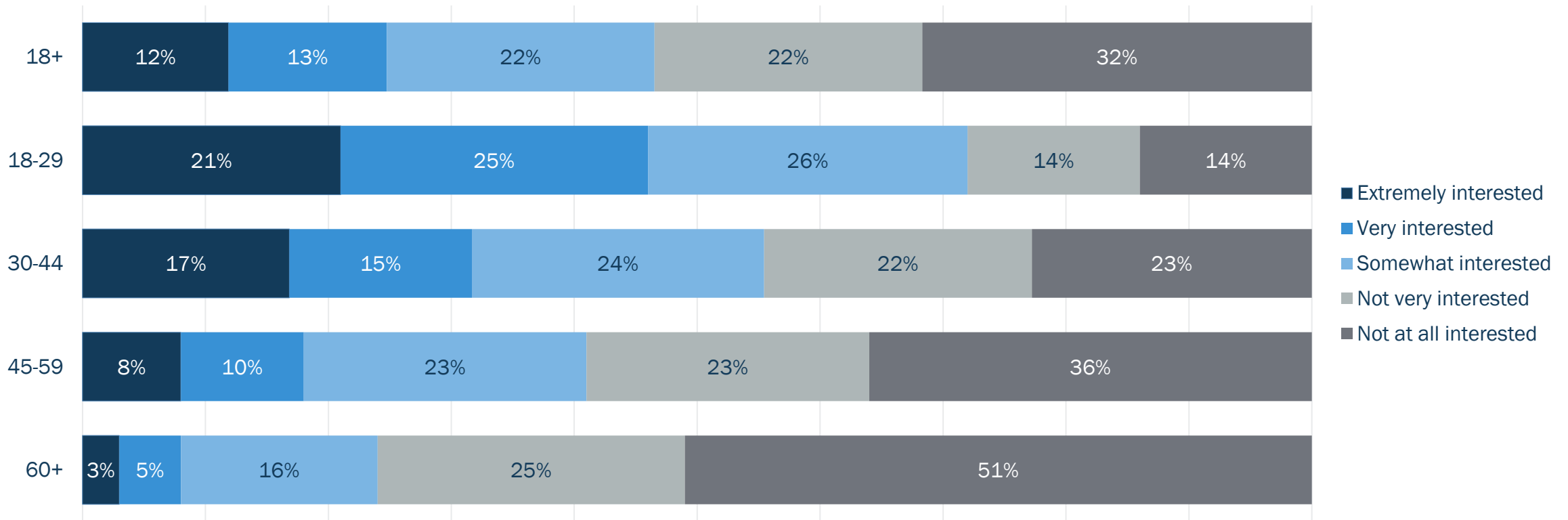
AR awareness grows with income



Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

One in four Americans are interested in using augmented reality, with this close to half for 18-29s but declining with age

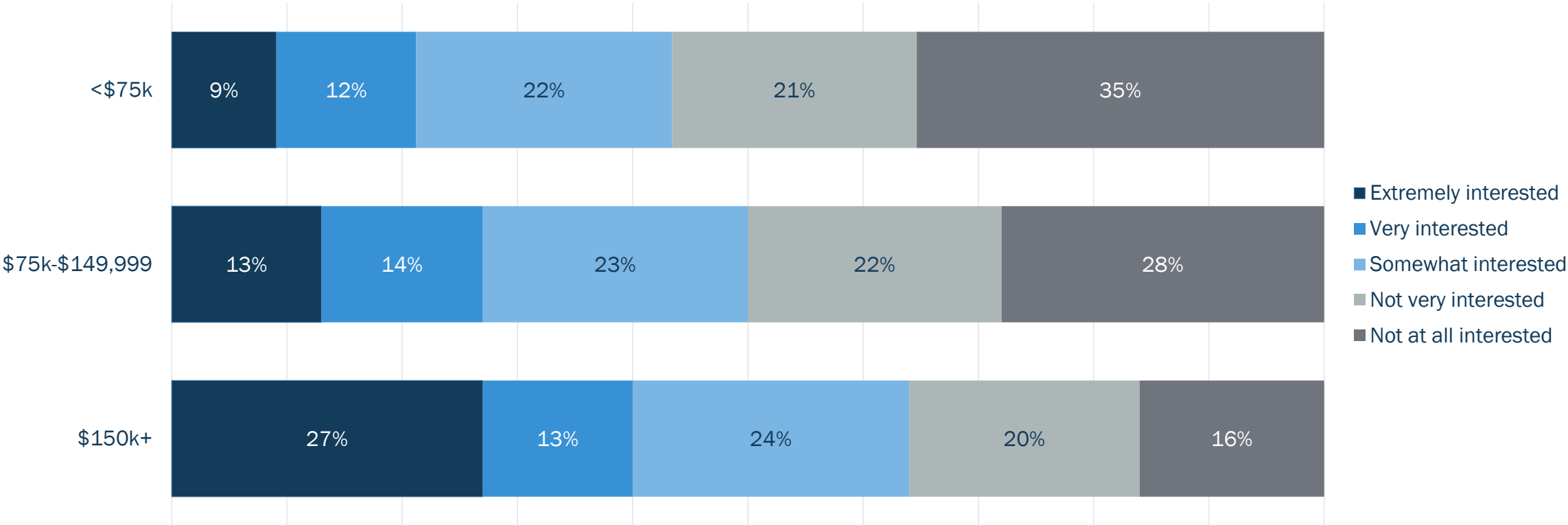
How interested are you in using augmented reality?



Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18+ (n=1,600), P18-29 (n=294), P30-44 (n=450), P45-59 (n=450), P60+ (n=406)

Over one quarter of affluent households are extremely interested in using AR

How interested are you in using augmented reality?

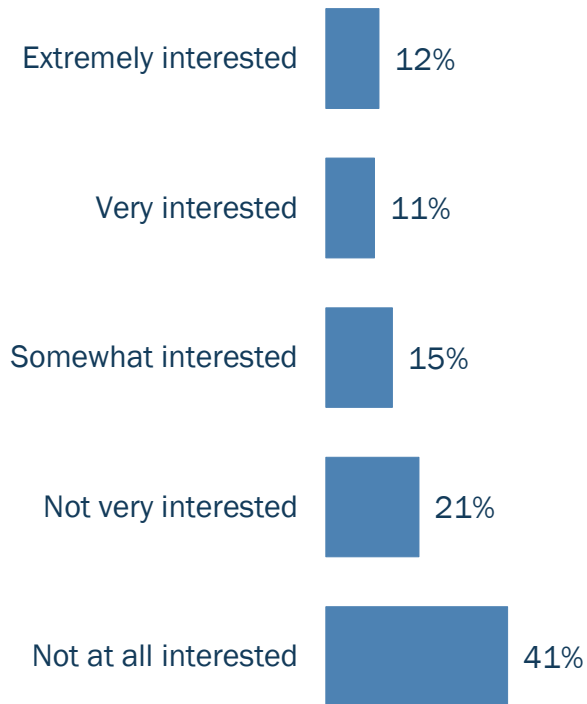


Source: Maru Entertainment & Technology. Data fielded November 2022. Household income base: <\$75k (n=913), \$75k-<\$150k (n=451), \$150k+ (n=156)

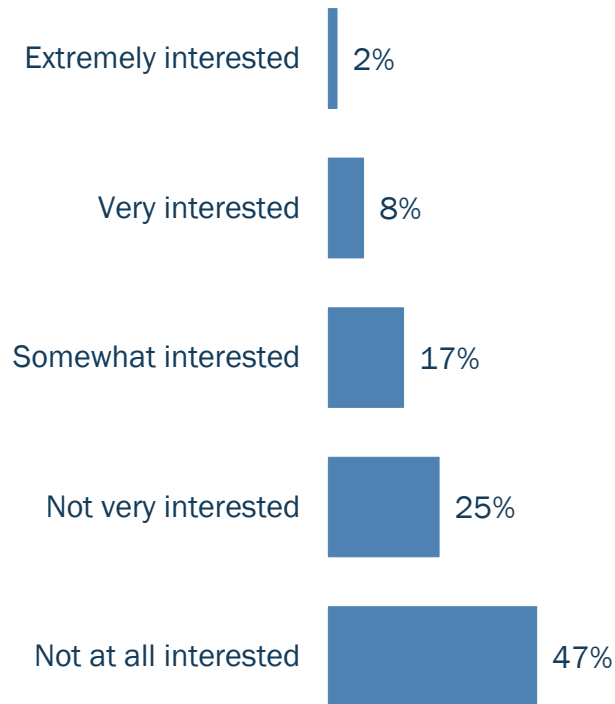
Cheap AR smart glasses would increase adoption but AR glasses would likely remain an overall niche item

18+

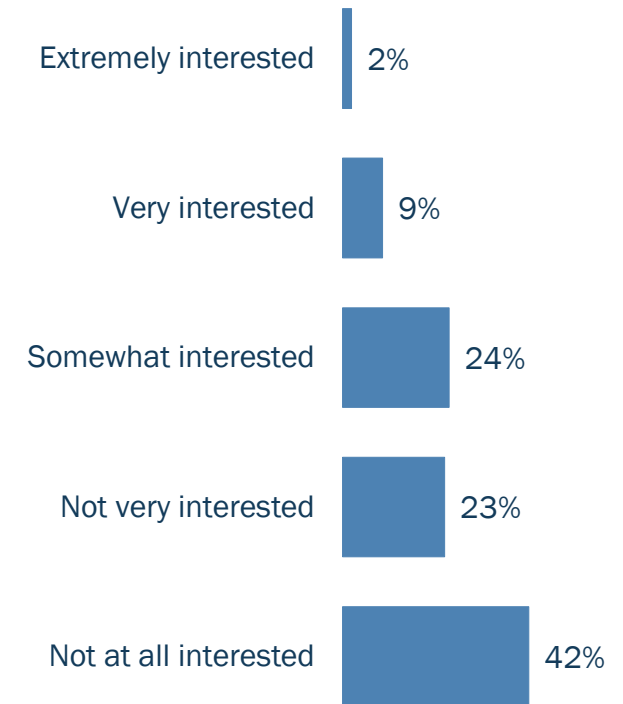
Buy for \$200?



If not \$200, \$100?



If not \$100, \$50?

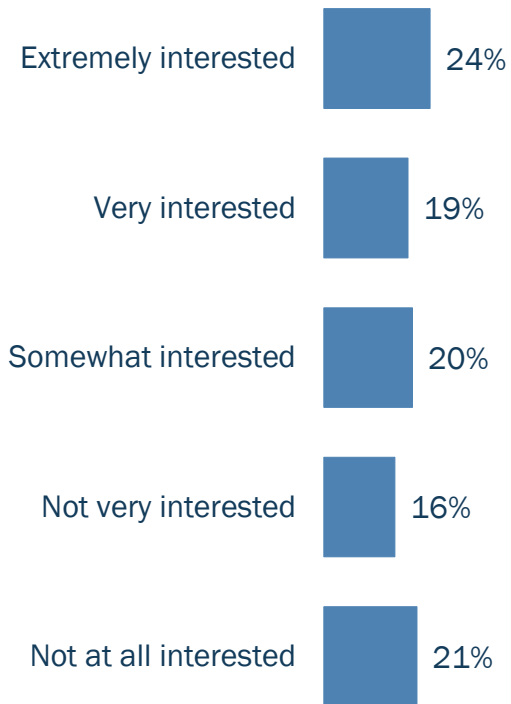


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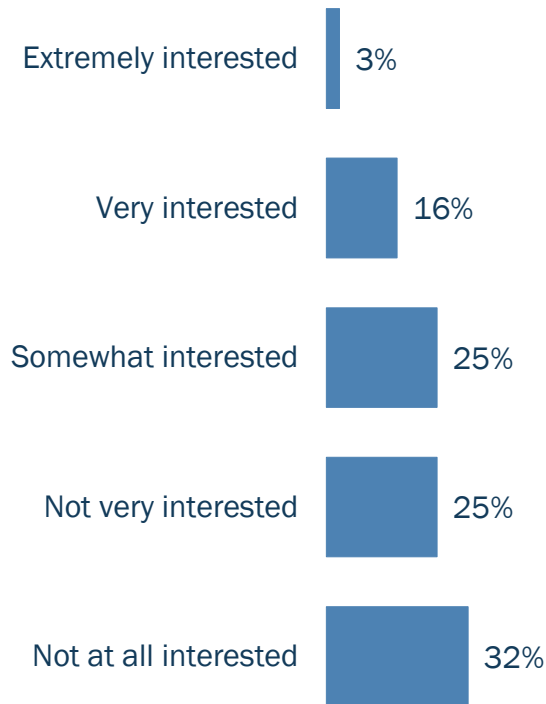
If priced correctly, up to half of 18-29s would have top 2 box interest in owning AR smart glasses

18-29

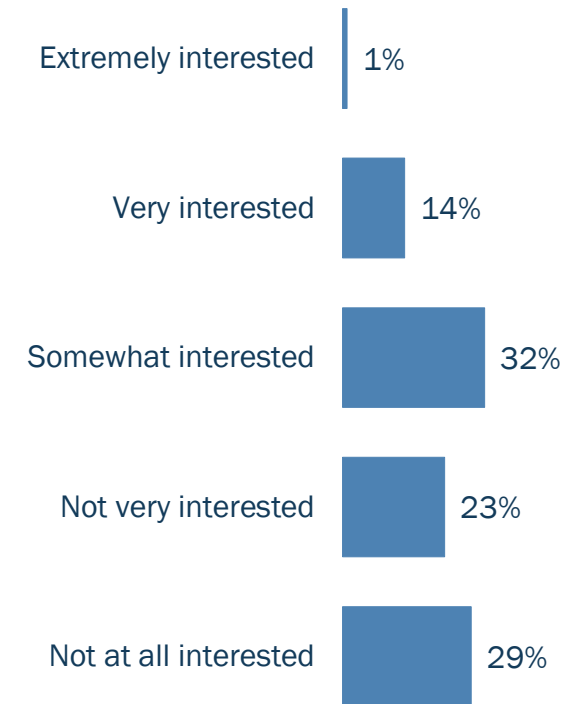
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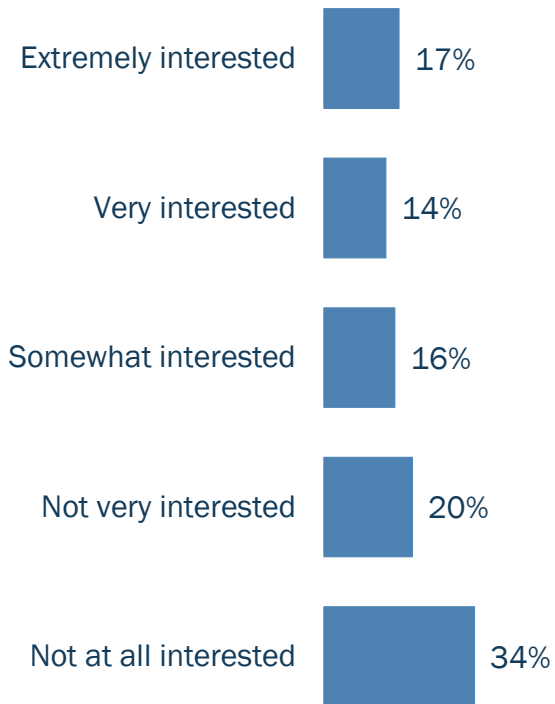


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P18-29 (n=294)

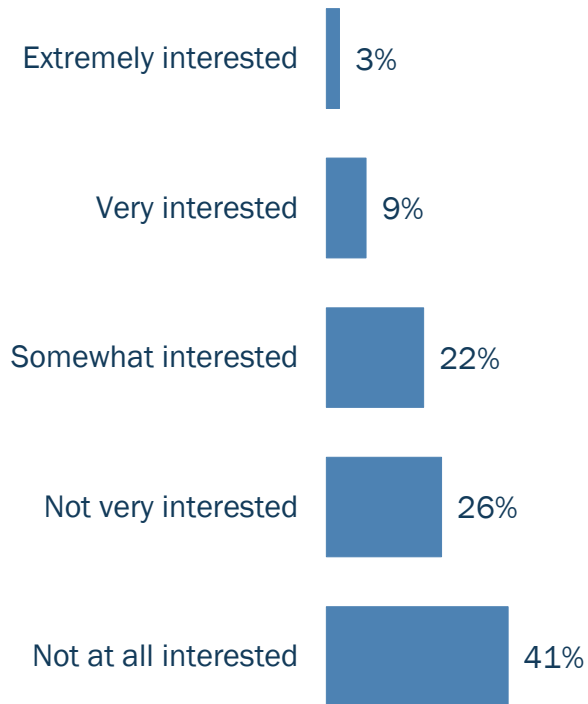
Based on top box interest levels, optimal AR smart glasses pricing would see between 20%-50% adopt the technology

30-44

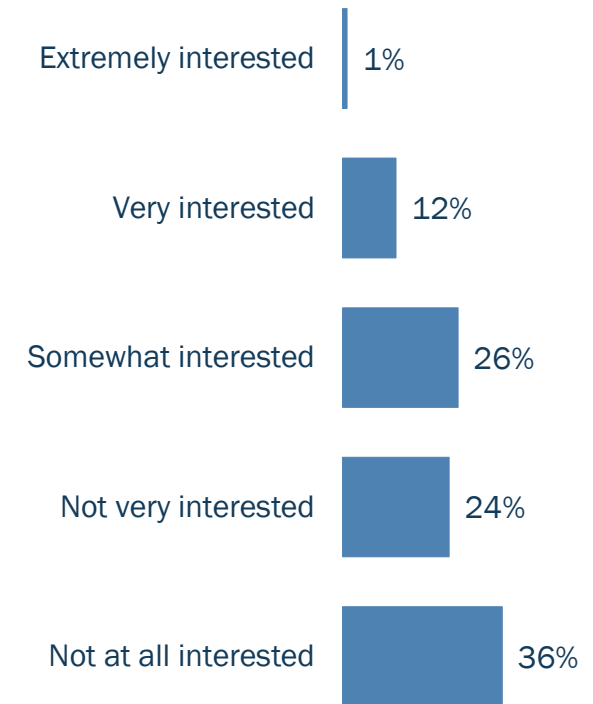
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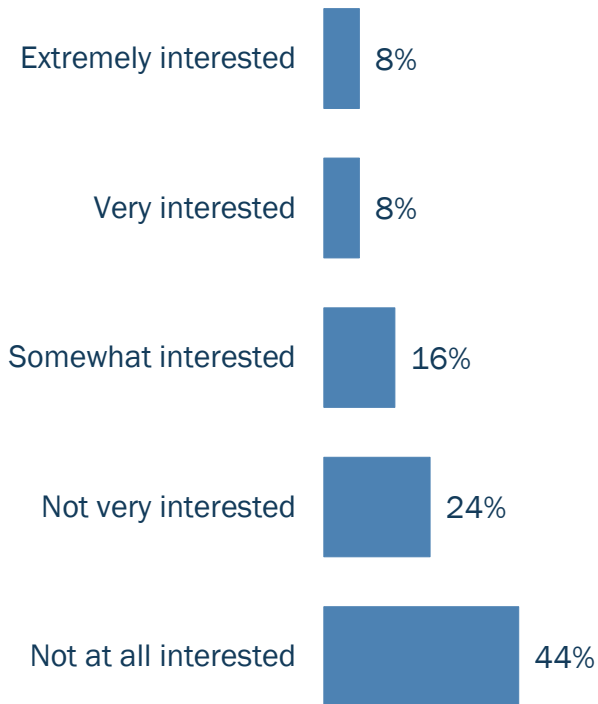


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P30-44 (n=450)

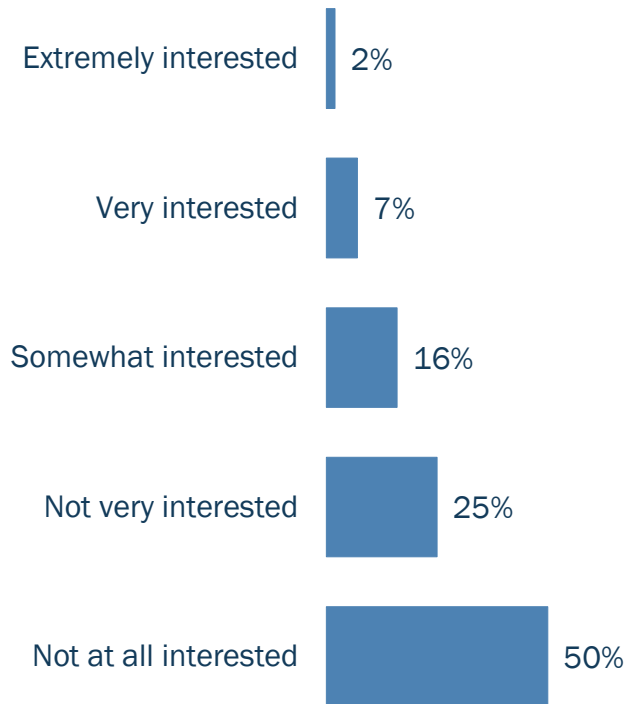
Interest in AR smart glasses drops for 45-59s, but a minimum of one in ten could be expected to own

45-59

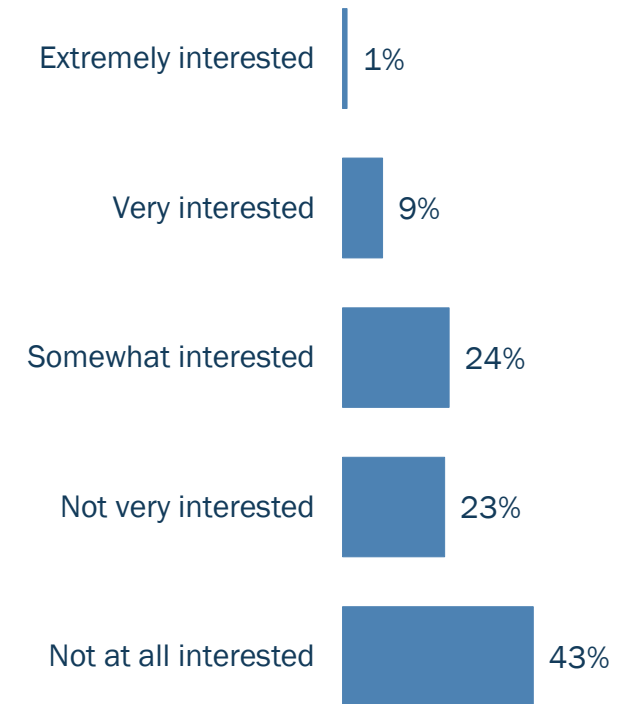
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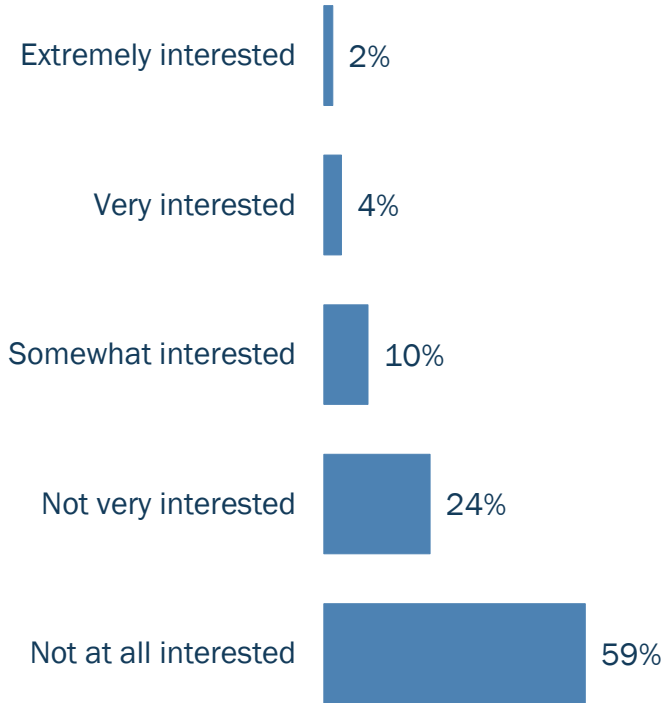


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P45-59 (n=450)

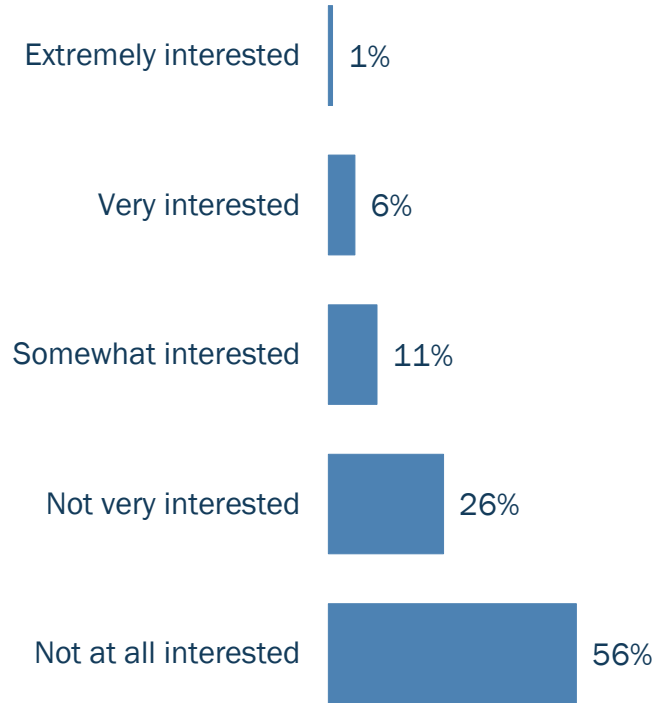
Older consumers have low interest in AR smart glasses, but remember they also often wear prescription lenses

60+

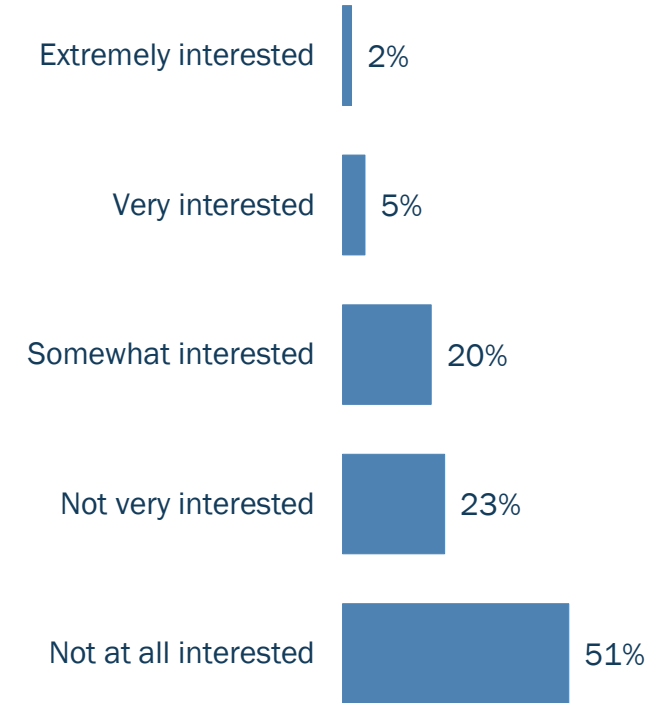
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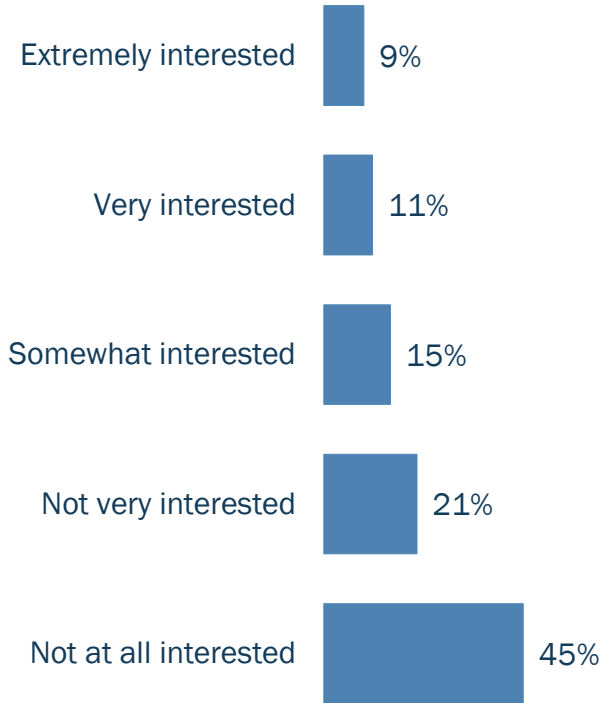


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: P60+ (n=406)

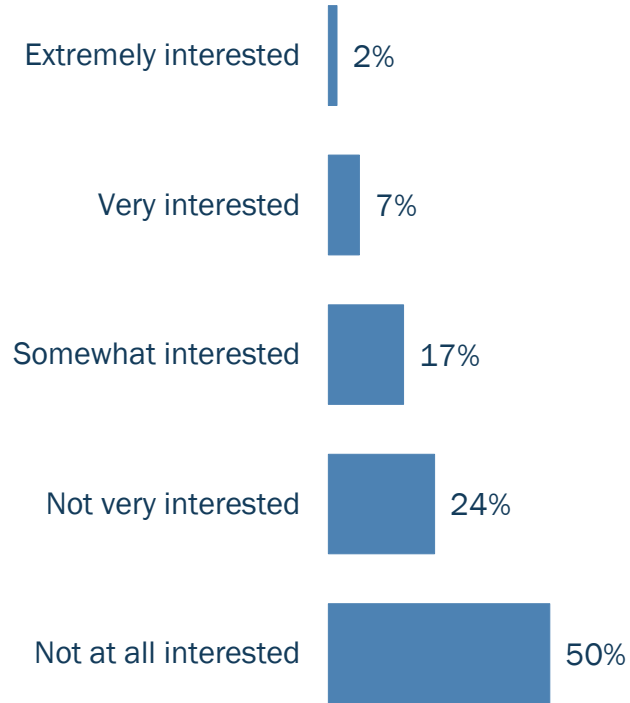
There's some interest among less affluent households for appropriately priced AR smart glasses, but high disinterest

Household income under \$75k

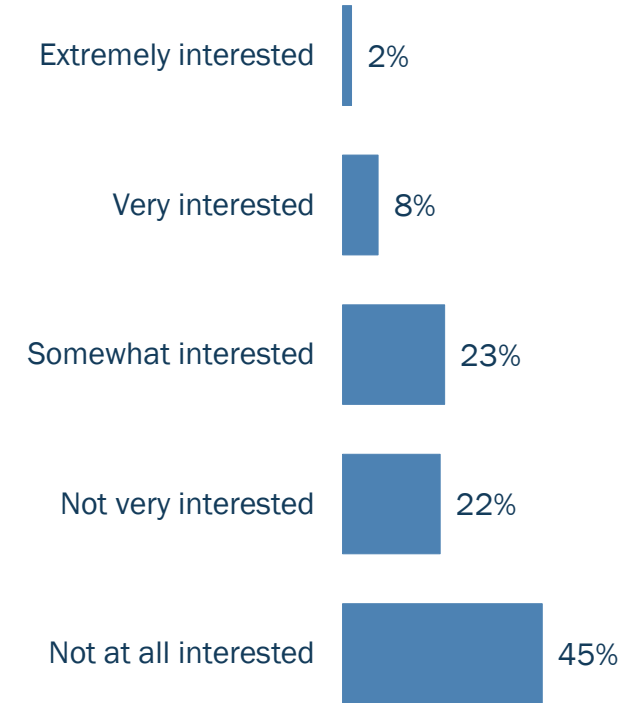
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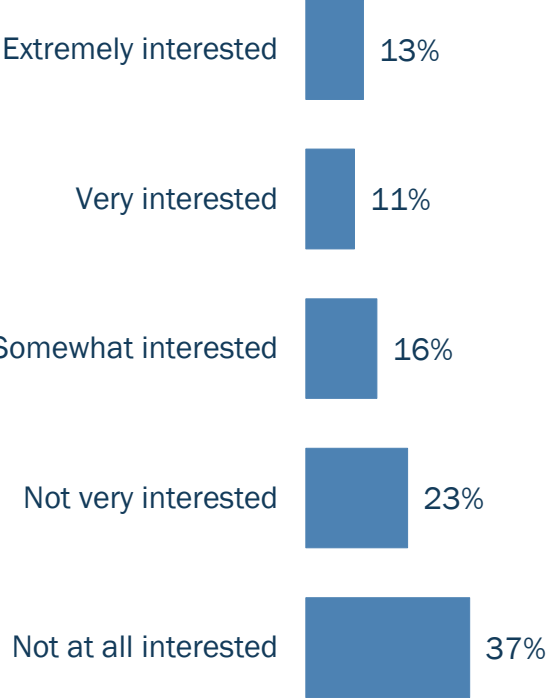


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income <\$75k (n=913)

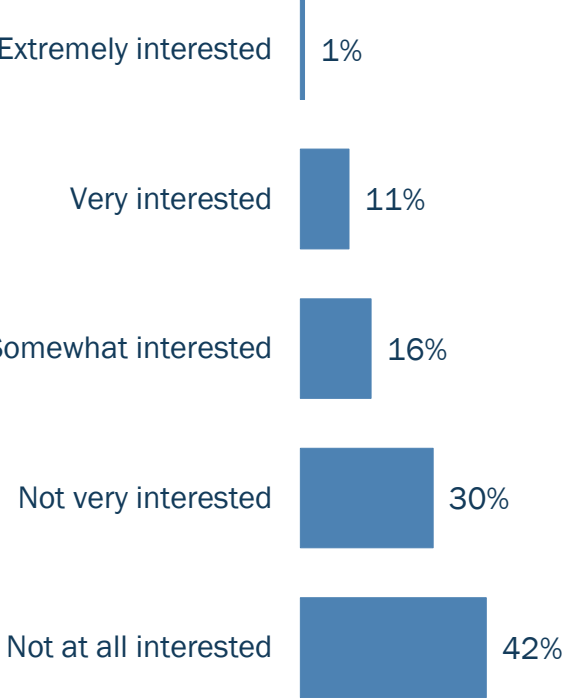
Around two in five mid-tier households have no interest in AR smart glasses, but a sizeable interest remains

Household income \$75k-<\$150k

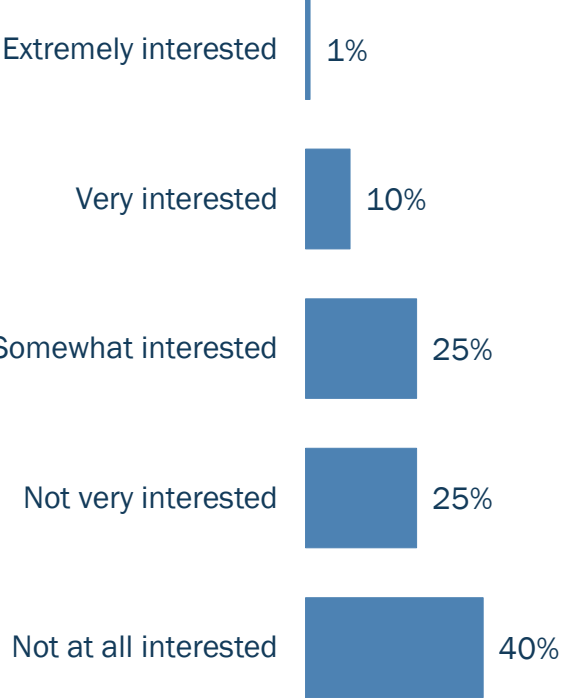
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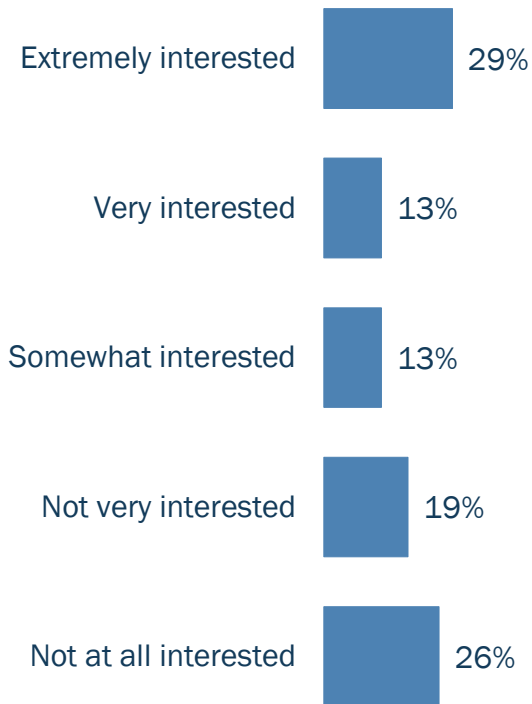


Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income \$75k-<\$150k (n=451)

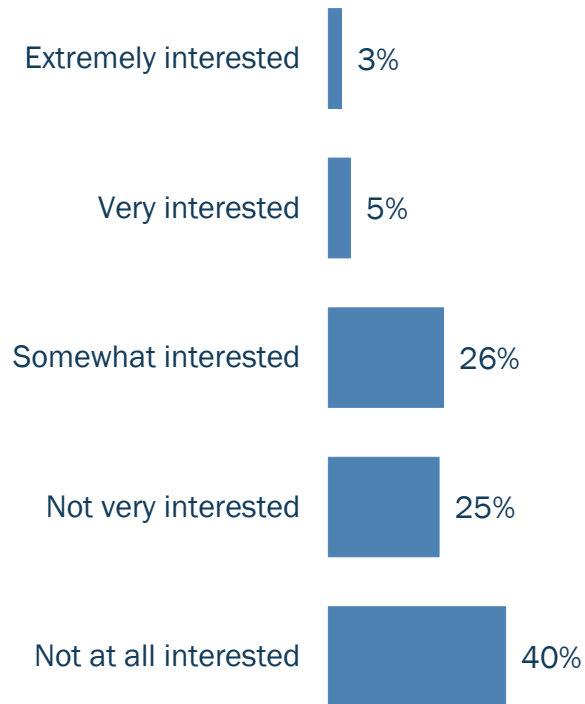
Affluent households have the greatest interest levels in AR smart glasses if priced at \$200 or less

Household income >\$150k

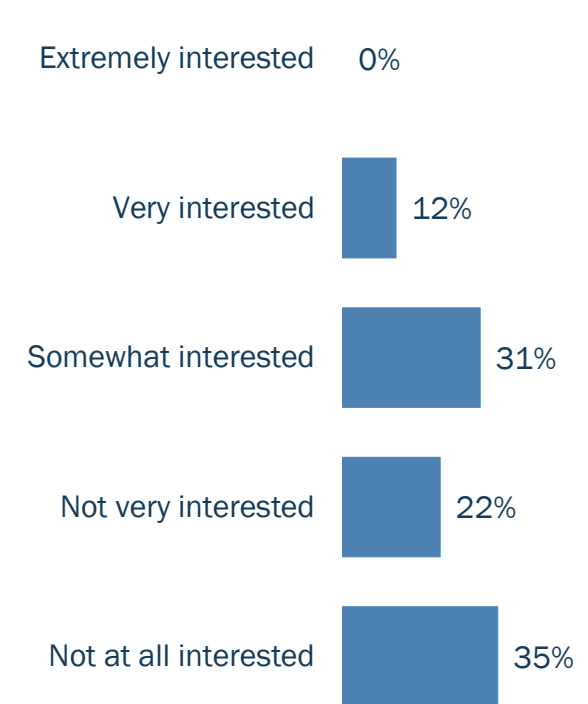
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Source: Maru Entertainment & Technology. Data fielded November 2022. Base: Household income >\$150k (n=156)