

ADOPTION OF

XR TECHNOLOGY

IN INDIA



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Digital
BEHAVIOR
INITIATIVE

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INTRODUCTION

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The humongous boom in the digital landscape has only been furthered by the launch of 5G services in India. This is a momentous milestone in facilitating ease of doing business and will revolutionize the digital sector. It'll uplift the Indian economy and reform various sectors such as agriculture, healthcare, education, logistics, transport, fintech and others. 5G services will significantly improve the nation's digital ecosystem and act as a generational leap to the next phase of industrial revolution. The current state of technological development has led us to believe that an amalgamation of the physical and virtual could completely transform how we perceive our world. And this technology has slowly seeped into our lives in the form of extended reality (XR), which is a combination of virtual reality (VR), augmented reality (AR) and other forms of immersive technology. With the advent of 5G in this country, consumers are inching closer to a mixed reality experience very soon in the form of the Metaverse. Combining 5G, IoT, cloud computing and Web3, consumers are about to enter a new era of networking that will be markedly innovative and immersive.

The initial purpose of using a VR device for most people has been entertainment, such as attending concerts or watching movies, visiting festivals or watching live shows, and adding the possibility of using XR in myriad applications. The metaverse and VR devices will usher in the new experience era. The level of detail in the metaverse, combined with the possibility of networking in one platform, is set to change the course of human interaction. This is precisely what the metaverse intends to do. And the most vital part of moving on to this phase would be hardware. This hardware comes in the form of virtual reality headsets.

The growth of the metaverse will boost the adoption of extended reality, which together could be instrumental in solving real-world problems. With much better penetration in the Indian consumer market because of 5G and investments from global brands, metaverse and XR are expected to be accepted imminently at a much larger scale. Brands should fast-track their focus toward incorporating these technologies into new strategies to lay a solid foundation for the internet's future.

XR TECHNOLOGY

For Consumers



Experience with XR TECHNOLOGY

Consumer’s Views on Extended Reality (XR)

Top Box

Median 36%

I am familiar with the usage of Augmented Reality (AR) and Virtual Reality (VR) technology

37%

I like the experience of the apps that use AR/VR technology

36%

I’d like to play games like Roblox, Minecraft, Among us, etc. on VR headsets

36%

I would be interested in virtual shopping that uses Extended Reality (XR) technology

35%

I’d like if smartphones are replaced by wearables technology that support voice, AR, and hologram interfaces

35%

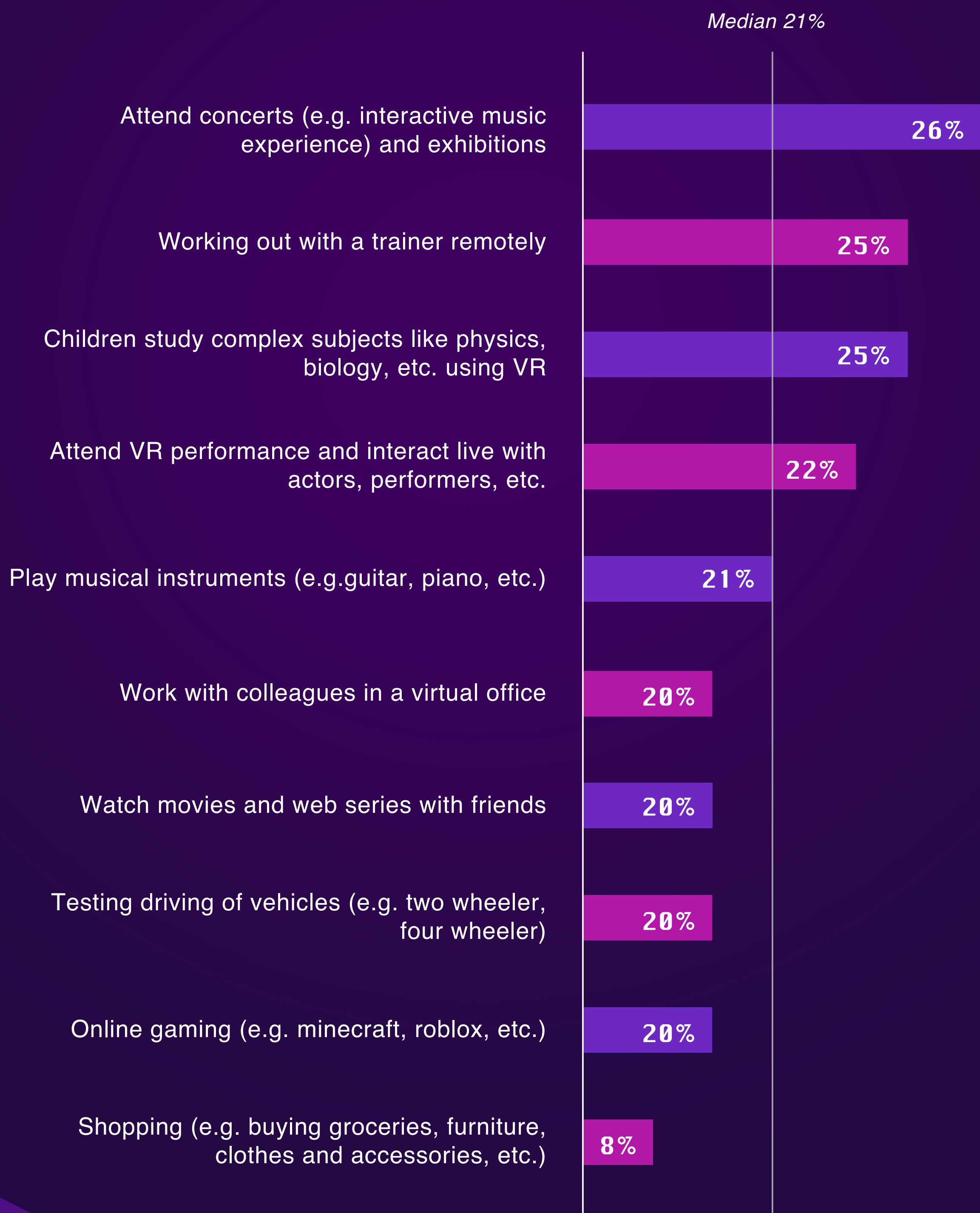
XR technology takes the consumers to a whole other world with an immersive experience. It lets them manipulate and interact with the virtual environment that is similar to a real-world environment. The XR technology is the culmination of two types of immersive technologies, i.e., augmented reality (AR) and virtual reality (VR).

Consumers are familiar with the usage of augmented reality (AR) and virtual reality (VR) technologies. They would be interested to play games like Roblox, Minecraft, etc. on VR headsets.

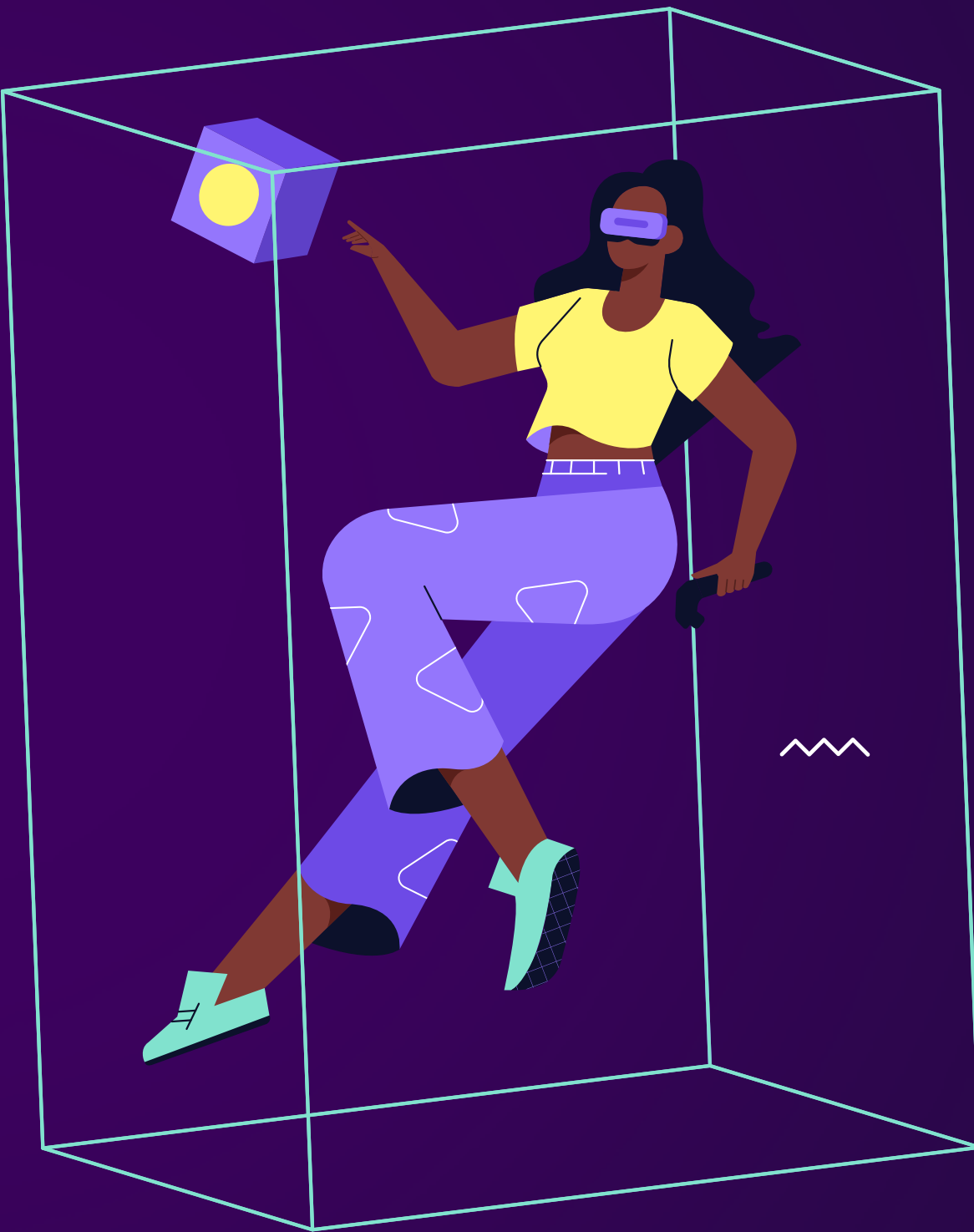
In the current usage of apps that have augmented reality and virtual reality, the experience with these technologies is liked by the consumers.

Consumers identify their first experience or impression of augmented reality in day-to-day life through the Ikea app. Right now, with innumerable examples such as Pokemon Go or Snapchat filters available for the general consumer, augmented reality has become a household feature that does not seem formidable at this point.

Activities in the VR Environment



From the consumer’s perspective, the primary purpose of using a VR device for most respondents is entertainment, such as attending concerts and exhibitions. This is closely followed by working out with a trainer remotely.



Consumers feel that education would benefit from XR because of the increased accessibility and increased audio-visual capabilities of the teacher to explain complex topics. It would make interactive models easier, making the teaching process more intricate and elaborate. The consumers would attend VR performances and interact live with performers, actors, etc. Visiting festivals or watching live shows, but almost all of them added the possibility of using XR in myriad applications.

Even though actual users have been sparse, most respondents had a myriad of uses of XR in mind when asked to address the applications of XR in daily life.

Virtual, augmented and mixed realities technologies are shifting the paradigm of how we learn, do business, and communicate. The XR technology is being implemented in several industries such as healthcare, higher education, workplace connections, retail, manufacturing, etc.

Activities Driving Familiarity with XR Technologies

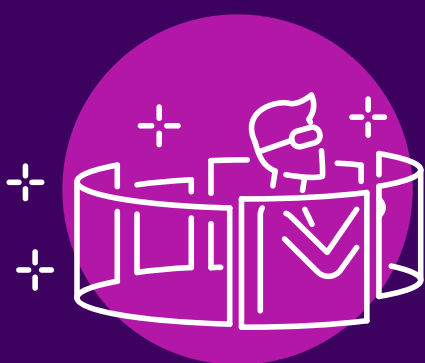
Drivers of XR Familiarity



Exercising remotely with trainer



Children's education involving complex subjects



Attending virtual concerts and exhibition



Online gaming

Activities such as working out and exercising remotely with a trainer, children's education involving complex subject, attending concerts and exhibitions, and online gaming are the major drivers of increasing the familiarity with XR technology applications.

Watching movies and shows with friends and online gaming are the main familiarity drivers for Youngsters below 18 years, while children's education and remote exercise training drives familiarity among elders.

Working with colleagues in a virtual office drives familiarity among the users from small metros and towns.

Activities Driving Positive XR Experience

Drivers of Positive XR Experience



Remote working with colleagues in virtual office



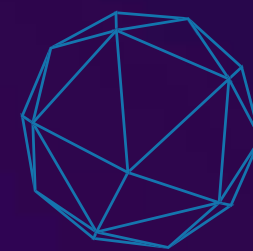
Online gaming

Applications involving remote working with colleagues in a virtual office environment and online gaming drove the positive experience towards XR technology.

Youngsters below 18 years had positive experiences around education involving complex subjects while elders had positive experiences with remote exercise and workout trainings.

Consumer Usage of VR HEADSET

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Majority of the consumers have used the VR headset and have experienced the use of its features at least once in the past. Consumers like to play games, access entertainment and experience adventure sports using VR headsets. In terms of games, multiplayer games would be the main attraction because of their high accuracy in details and better overall experience. Players would feel like they are inside the battlefield or are driving the car themselves.

Where entertainment is concerned, VR can ensure the user attends each concert, without the caveats of logistics, from the comfort of their home.

This gradual warming up and acceptance of augmented reality technology only tells us that in the near future, consumers will see extended reality in the same light, i.e., they would not be intimidated or perplexed by the technology and will instead choose to accept it as a part of their daily lives.



Experience VR USAGE



With VR, users will never miss another experience because of the location, timing, overhead expenses, or even the weather. People with physical disabilities could easily participate and experience things they could not in the real world, like a day out with friends, or a game in the bowling alley, all of which will be available on the VR device where they could interact with friends and do everything, they otherwise would be unable to do. For example, if someone wants to learn how to fly a plane, do bungee jumping or look at the view from Mt. Everest, more of such activities are possible with XR.

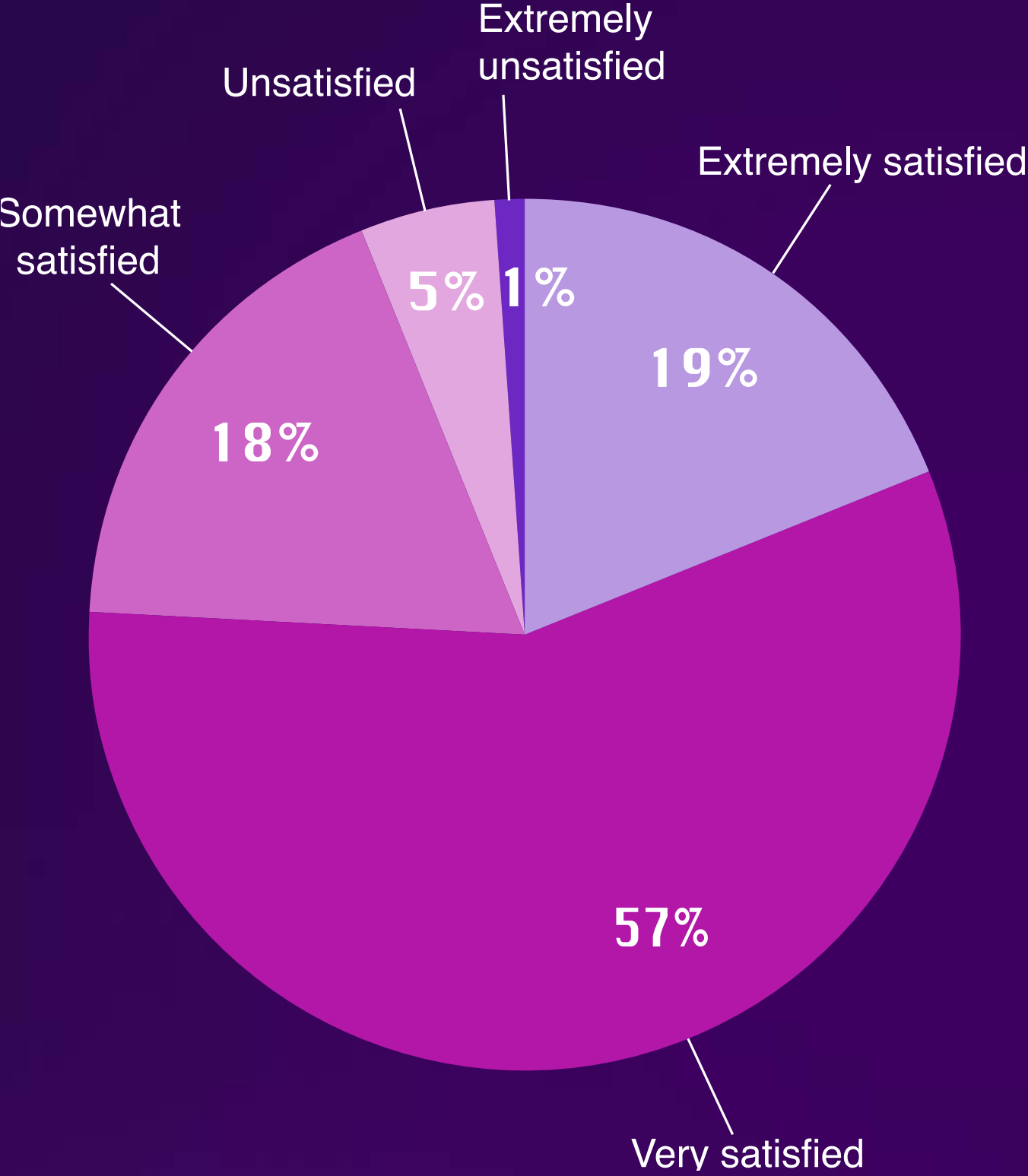
Consumers who have used the VR headsets were overwhelmed with the interactive options. Although, they did feel somewhat comfortable while using the VR headsets. The experience itself was unique and the users felt like they had entered a new world and were intrigued by the virtual environment.

When it comes to challenges for this exclusive set of respondents, there are a few they are deeply concerned about. Firstly, the factor of dissonance to the reality that would be a possibility if one spends long hours in virtual reality. Next would be an unwelcome addiction to that world. But these issues should not be concerning since they can be resolved by putting guidelines and laws in order.

This leaves us with the most vital cause for concern, the VR headsets themselves. Users, including most of our respondents, complained about the ergonomics of the devices. They are bulky and uncomfortable to use and most importantly, cause headaches and nausea after prolonged use. This is one issue that could drive customers away, but the hardware is bound to improve with time and further development.



Satisfaction with VR Experience



While the users were satisfied with the overall experience of VR technology, they felt the VR headsets to be quite bulky and not ideal be used for a prolonged time.

The current state of technological development has led us to believe that an amalgamation of the physical and the virtual could completely transform how we perceive our world. And this technology has slowly seeped into our lives in the form of extended reality (XR), which is a combination of virtual reality (VR), augmented reality (AR) and other forms of immersive technology. With the advent of 5G in this country, consumers are inching closer to a mixed reality experience very soon in the form of the metaverse. Combining 5G, IoT, cloud computing and Web3, consumers are about to enter a new era of networking that will be markedly innovative and immersive.

Immersive experiences are changing the way people connect with information, and experience through virtual and augmented reality. The XR technology helps relocate people in time and space. It'll bring about the end of distance with the use of XR technology. The growth of the XR technology is noticeable because of the hardware, software and immersive content. Most of the respondents are satisfied with the VR experience.



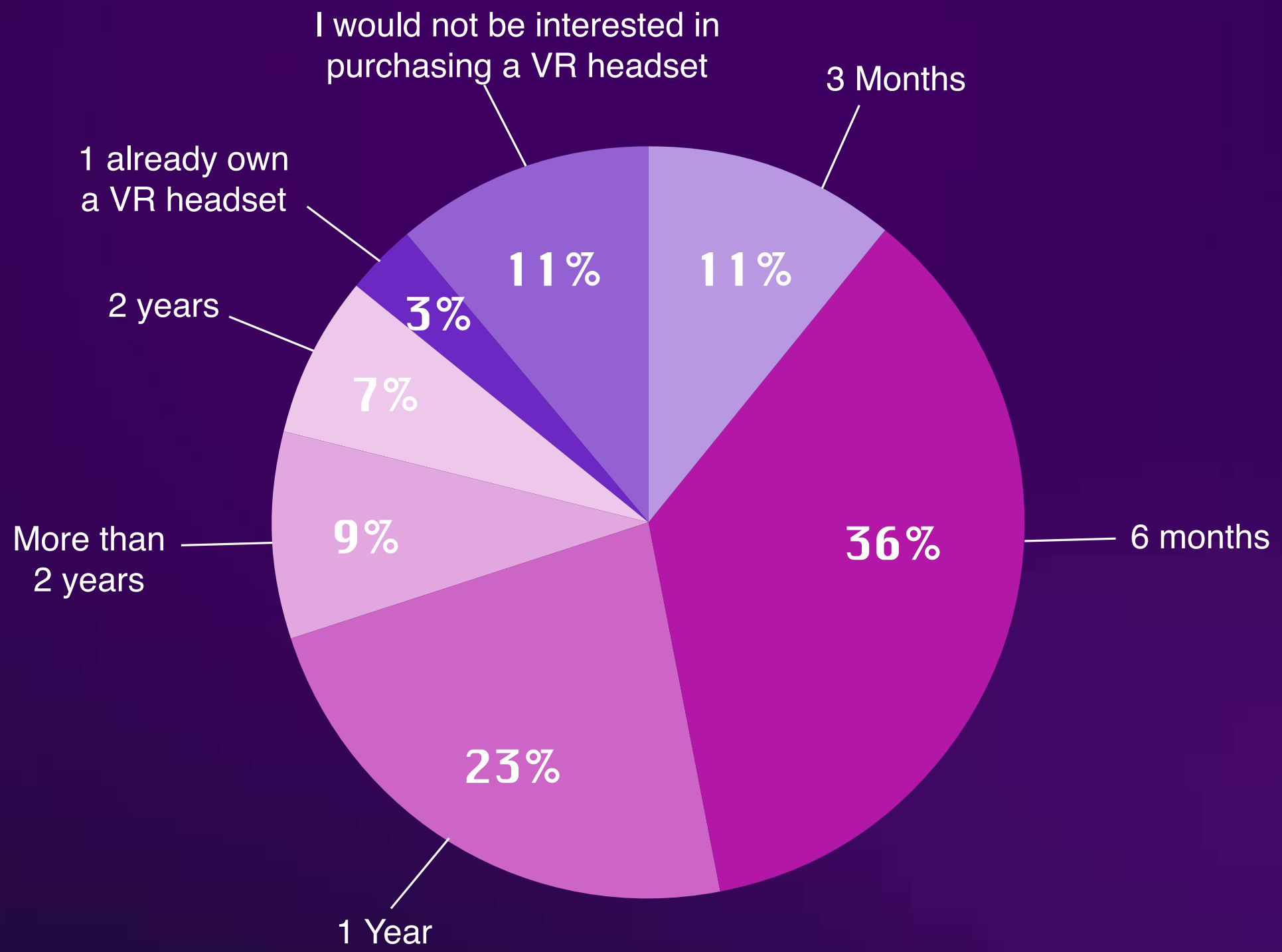
Learning new skills become easier. With the help of audio and visual outputs, it extends our senses and makes grasping information better.



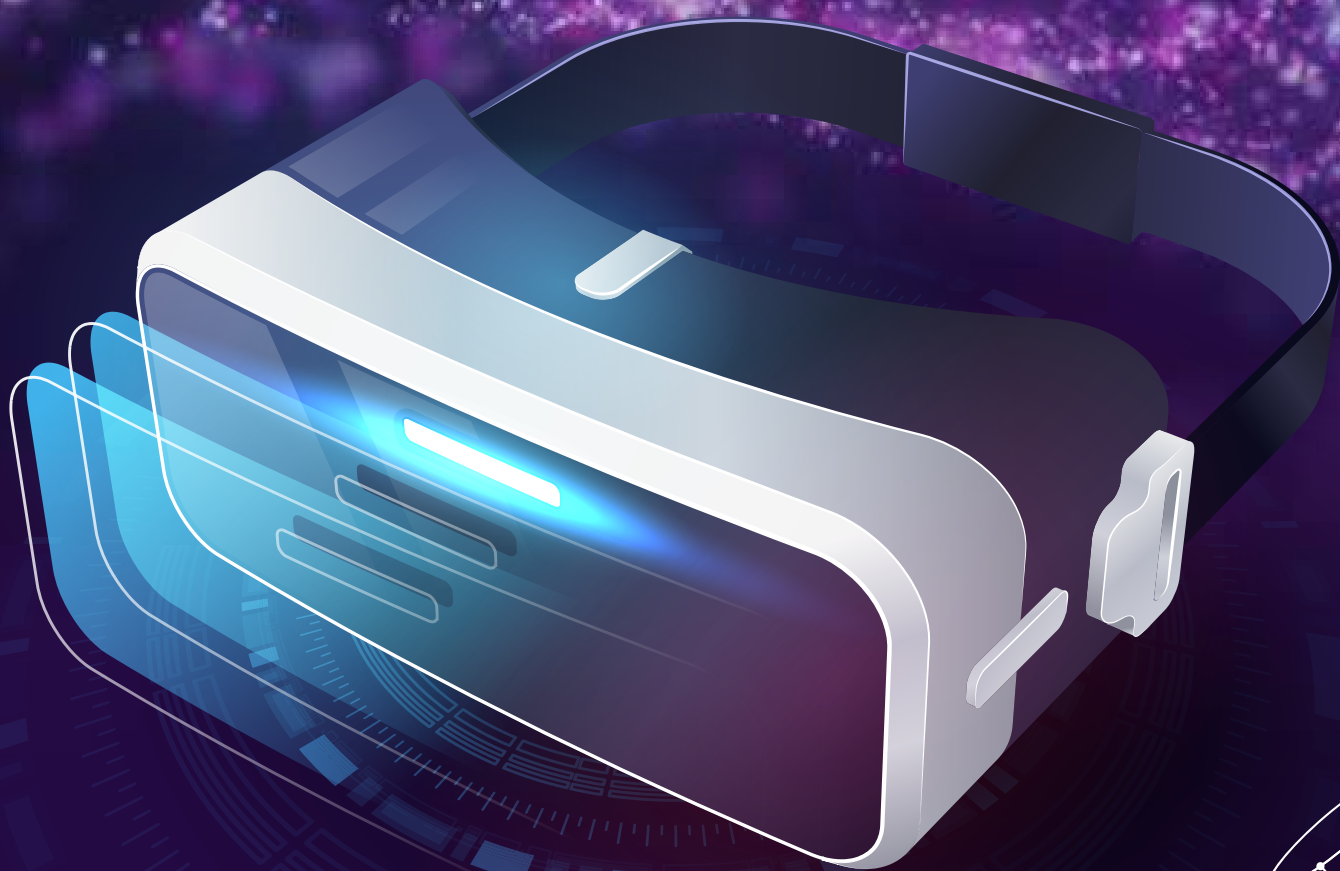
Male, 45-year, Top 4 Metros

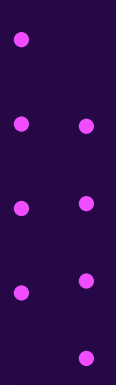
Purchase of VR HEADSET

Purchase Intent of VR Headsets



Most people are interested to purchase a VR headset in the next 6 months (36%). 23% of the people might plan to purchase a VR headset in the coming year.





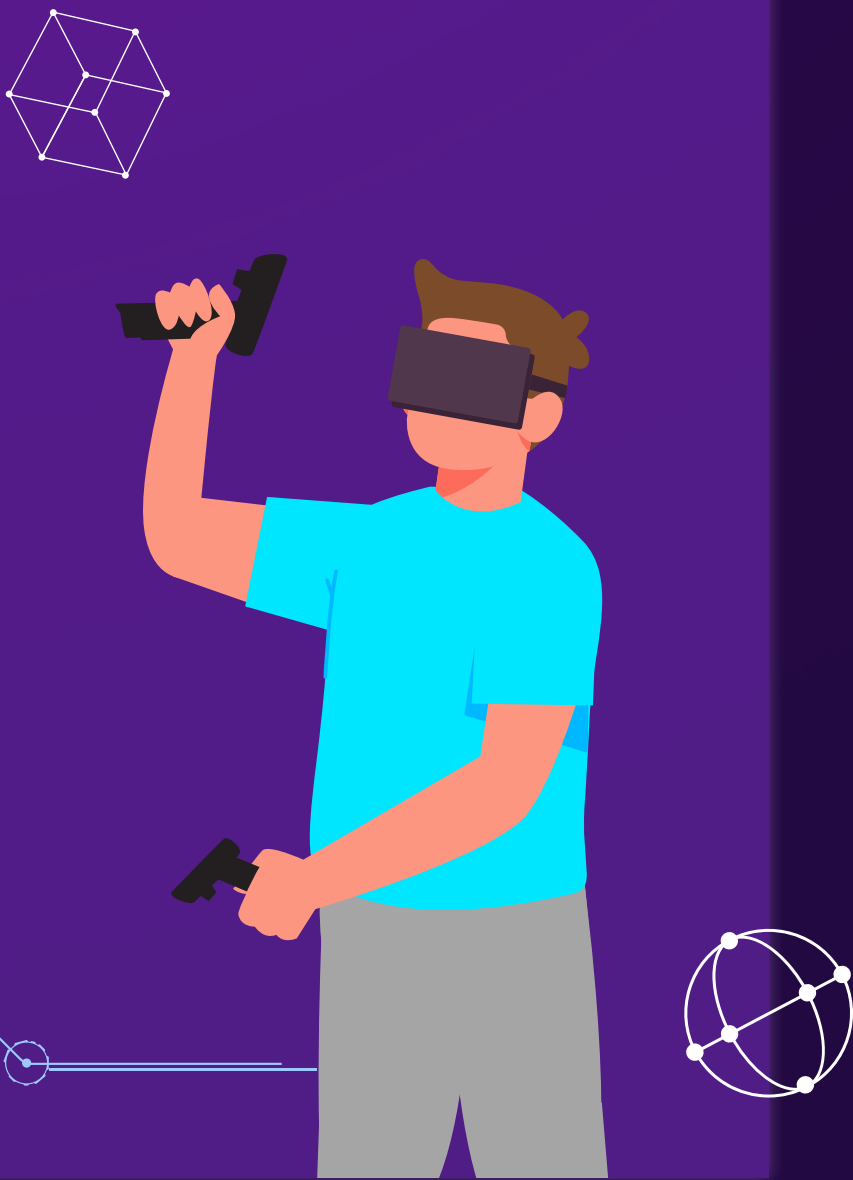
The world of social media is about to change all thanks to Web3. Web3 is gradually gaining traction with Metaverse on its side. The World Wide Web’s next stage is about to be decentralized; this implies that applications will be running on blockchain technology and networks that have been decentralized with peer-to-peer nodes. But this level of complexity for the internet will require even faster speed. This is where 5G comes into play. 5G has been developing exponentially and is about to launch in India very soon.

This network technology comes with lower latency, high speed, better coverage and accessibility. A lot is happening in this industry, and it is only expected to grow more. This rise is credited to the increase in demand from companies around the world because of digital transformation. VR and AR are transforming the way companies engage with employees, suppliers, partners or customers. Enterprise adoption is rising rapidly when it comes to immersive technologies.

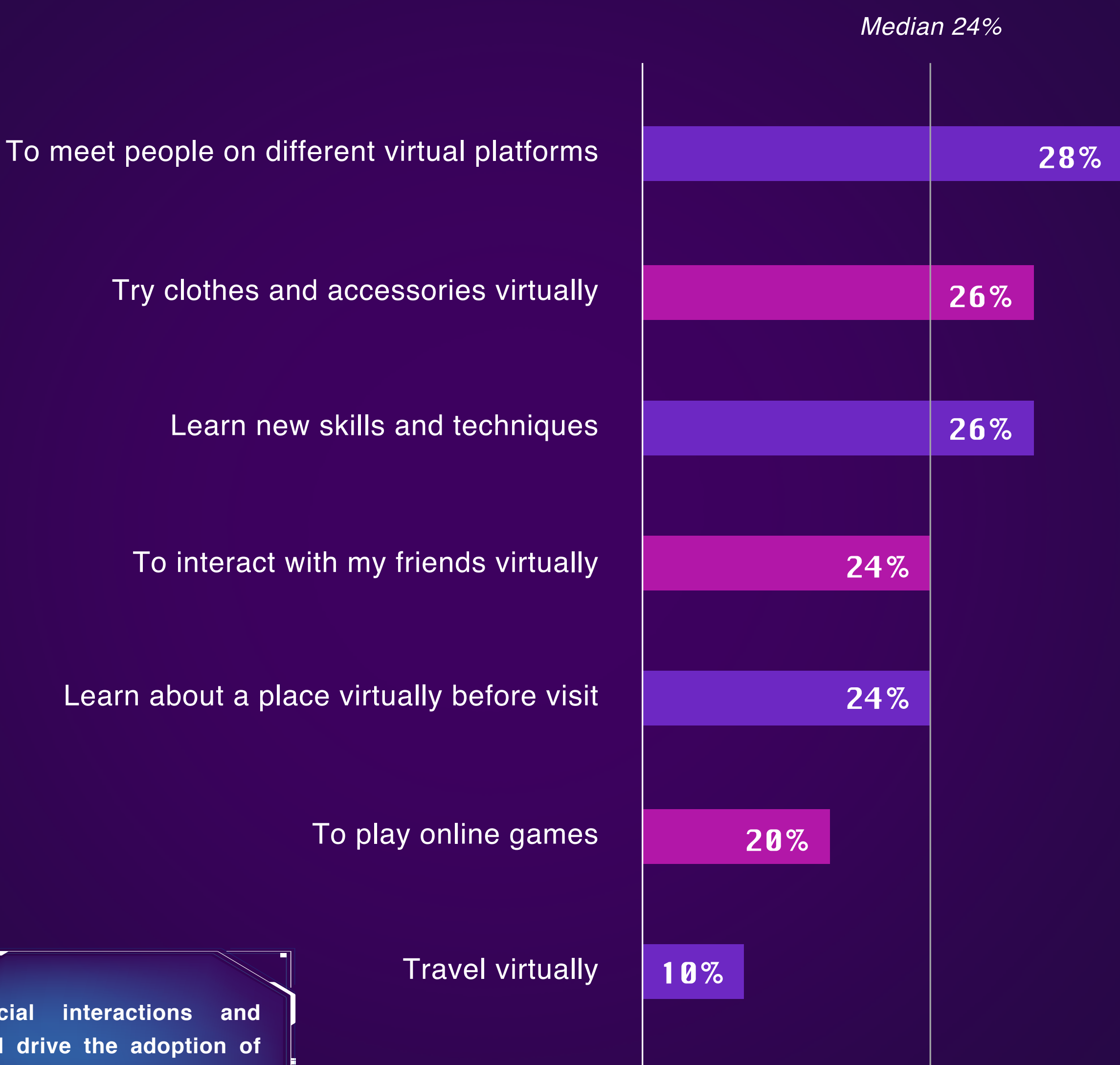
When it comes to experience, comfort while using the VR headset will drive the purchase of this technology among consumers.

Activities and applications such as vehicle test drives, online gaming and virtual live performances with artists will drive the purchase of VR technology platform among consumers.

“ We could learn to drive any vehicle on XR before doing it on an actual vehicle. This way, we could get used to driving rules without the fear of accidents.”
Male, 24-year, Top 4 Metros



Reasons to own a VR Headset



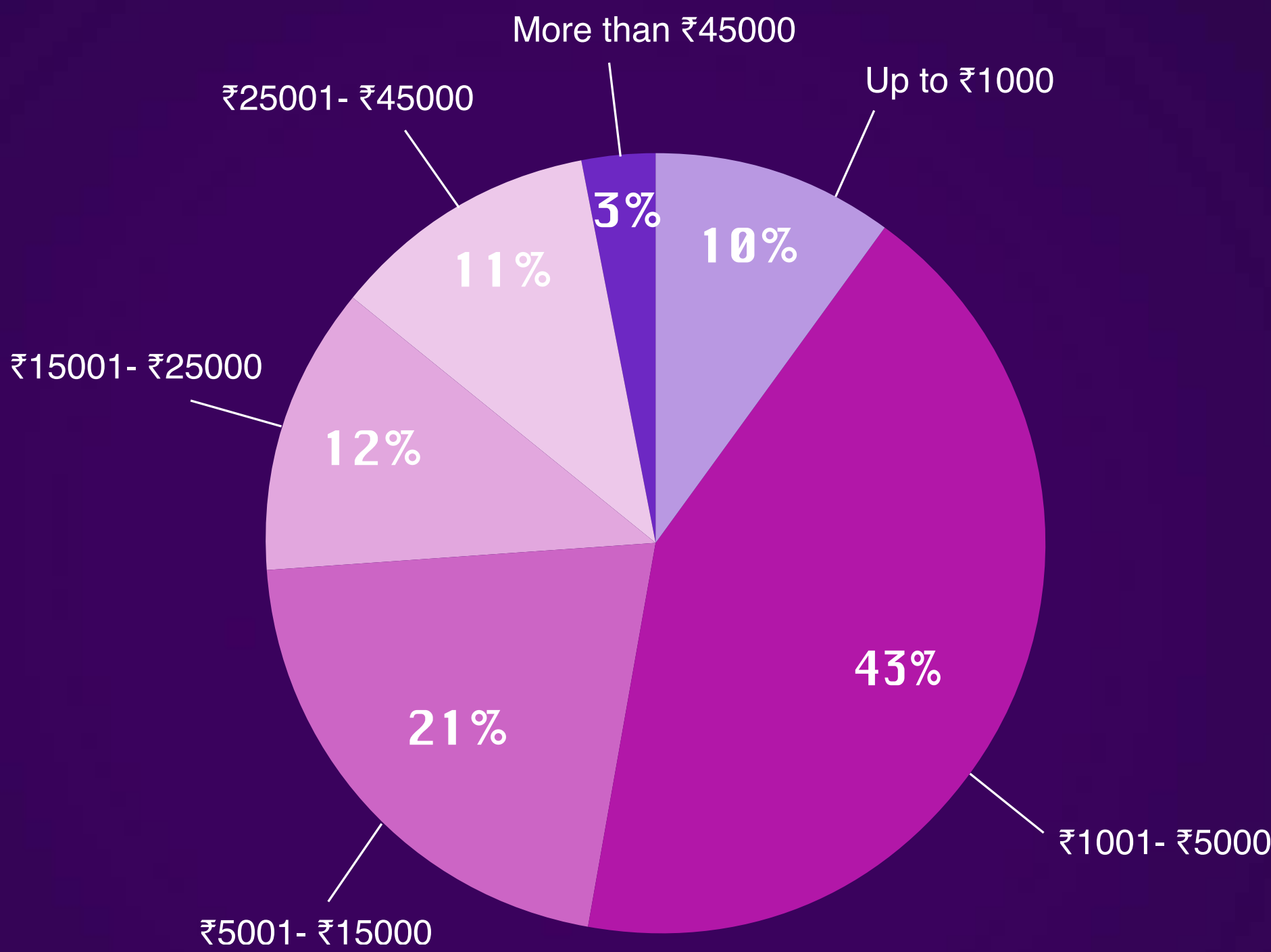
Virtual social interactions and tourism will drive the adoption of VR technology in the near future.

Virtual reality is an experience that could be simulated to be similar or different from the real world. It is the use of computer simulation to enable interaction with people in an environment that is made artificially. Consumers think complex tasks can be simplified using virtual and augmented reality visualization.

The reasons for purchasing a VR headset are to meet people on different virtual platforms (28%) followed by trying clothes and accessories virtually and to learn new skills and techniques (26%). People also like to interact with friends and learn about a place virtually before the visit.

The prospect of XR devices have certain specific purposes which could justify the use of such a device because enjoyment and entertainment do not cut a deal with an everyday consumer. Most consumers think that the current use cases are confined to the entertainment sector, which is why they would like to play games, attend concerts or watch movies using XR, and their sole reason was the added layer of immersion. When it came to tasks outside of the entertainment world, a majority were seen in the simulated adventure sports area. Driving or river rafting in XR is useful in a simulated environment.

Customer Budget for VR Headset



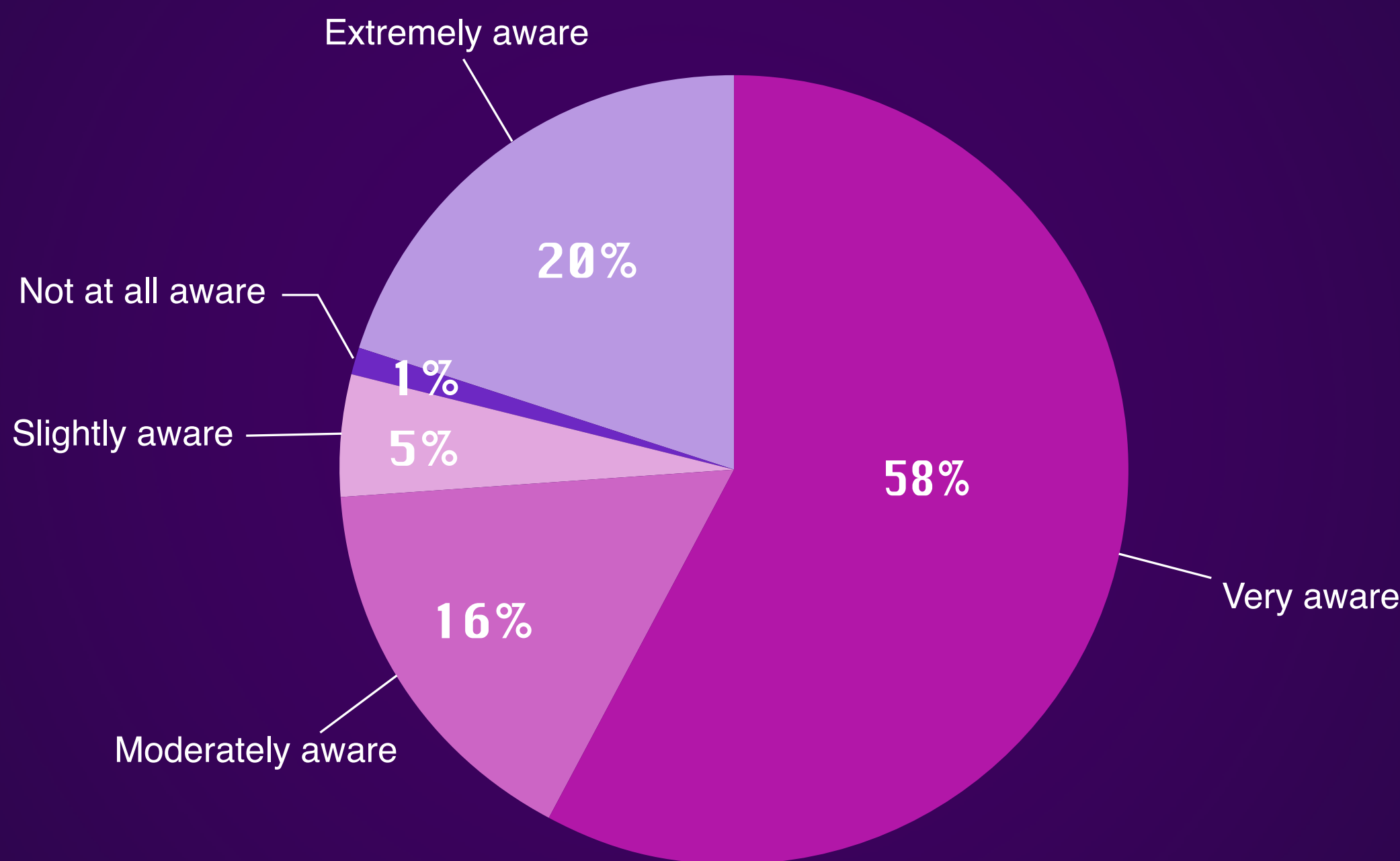
When it comes to the willingness to pay for a device such as a VR headset, people have voiced their concerns about the current pricing. Most people say that their budget for purchasing a VR headset is in the price range of Rs. 1001 and Rs. 5000 (43%).

The current pricing is not attractive to an average consumer who does not wish to spend more than they would dispense for a budget smartphone.

Either way, pricing should not be an issue for long; with the gradual uptake of XR devices into better production lines and competitive pricing among brands, the cost of the devices will go down gradually in the near future. The consensus steered towards the practicality of such a purchase and how they can make do with a regular smartphone they own already, and buying another device seems like an added chore. The VR set is indeed a maximization of the digital experience that one can imagine to experience, as an enriched experiential involvement is a premium luxury that comes in additional packages.

Awareness of the METaverse

Awareness of the Metaverse



The present concept of the metaverse solely focuses on letting users do anything they would do in real life. When it comes to the basic idea of metaverse among Indian consumers, most defined it as a place of networking.

Around two-thirds of the people are aware of the metaverse. Online gaming and social media are the connectors for people to join the metaverse.

This indicates that metaverse currently seems like a giant networking site which requires an added device (VR headset).

If experiences on offer are relevant to the user, they might spend money on it, but well within their budget. There is a consensus people spending actual money on the metaverse is a luxury. They also mention that premium and luxury brands like Nike or Gucci could treat the metaverse as an open playground since most of their products rely on the brand value more than the experience in itself; thus, users who intend to splurge on assets could be drawn to this kind of a market.



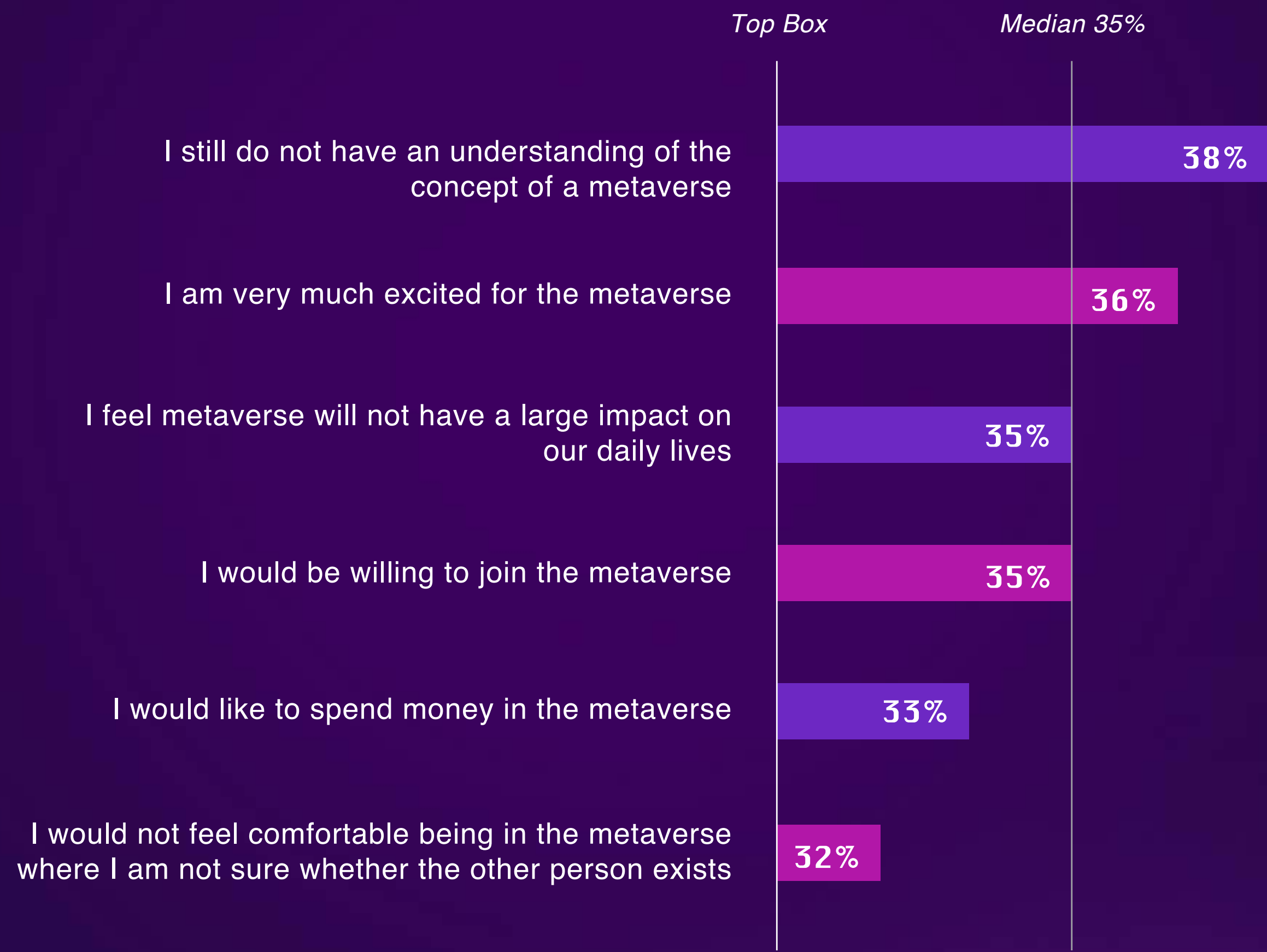
I feel Metaverse is a place to learn, collaborate and communicate. There are no geographical restraints.



Female, 22-year, Top 4 Metros

Attitude Towards METAVERSE

Customer Attitude Towards Metaverse



Willingness to join and transact in the metaverse is high among the users who are aware of this platform.

There is a plethora of activities one can do in the metaverse. Respondents pointed out unique things they would like to experience using VR headsets, and some of them include attending interactive music experiences and exhibitions, studying complex subjects, working out remotely and so on.

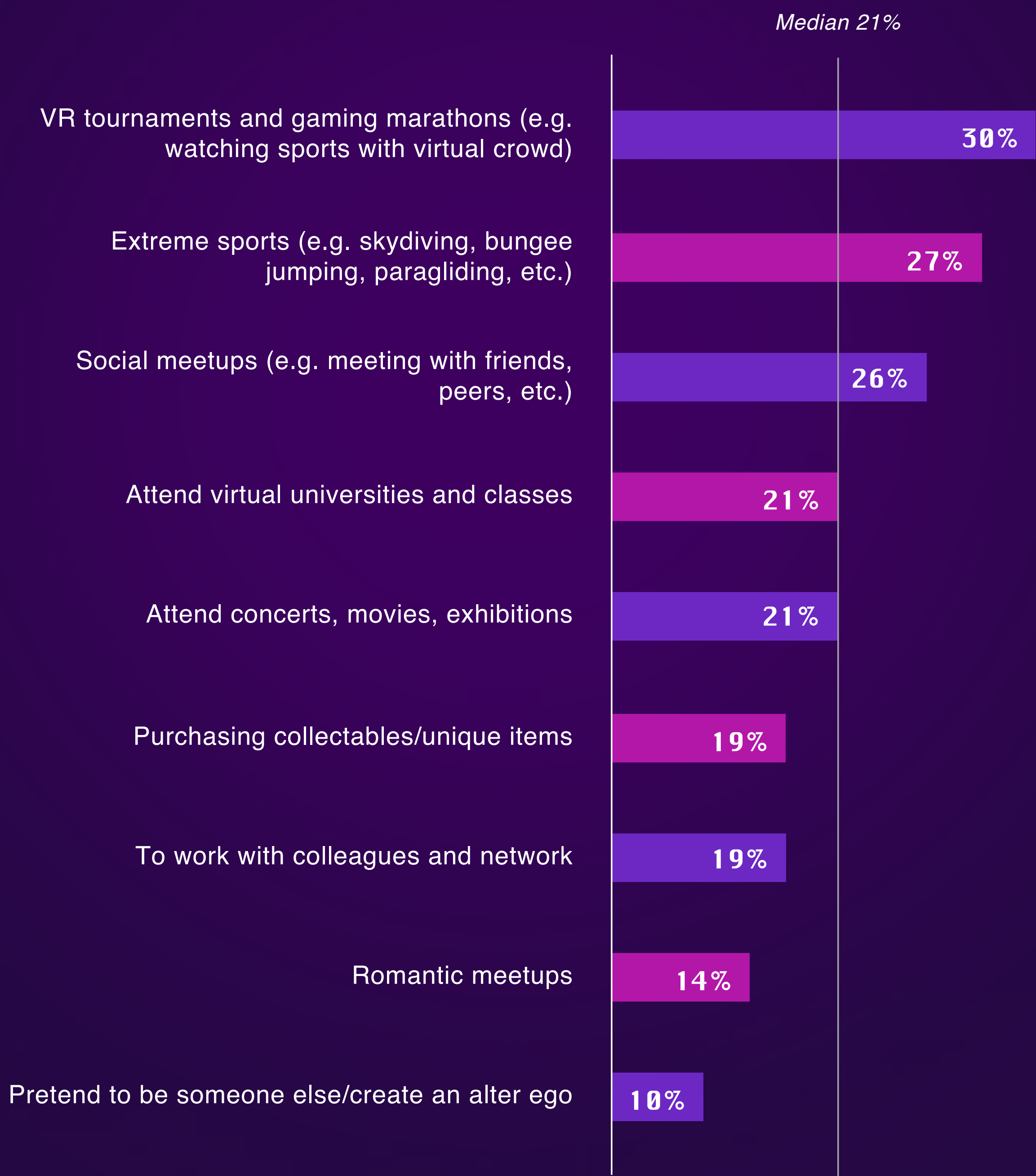
Along with these one-of-a-kind responses, the generic answers revolved around watching movies with friends, shopping for clothes or groceries, playing musical instruments and playing games online.



Respondents were aware of the use of avatars in the metaverse, and they revealed that soon they would want their avatars to look like their real selves. There were a few exceptions where users wanted to look different from their real selves, and one unique reason was that people could get a fresh start on building their image on the metaverse without any preconceived prejudices.

Even though the metaverse from Meta will have a single login policy that will link Facebook profiles to their counterparts in the metaverse, there are several other metaverses that allow anonymous access, and some more along those lines must pop up in the near future as well.

Reasons to join the Metaverse



People would like to join VR tournaments and gaming marathons in the metaverse. They would also like to try out extreme sports like skydiving, bungee jumping, etc.

They would also like to join the metaverse for social meetups and attend virtual universities and classes.



Work routines have drastically changed in the past couple of years because of the gradual seeping of augmented and virtual reality. Companies such as Meta and Spatial have developed experiences like the Metaverse for their users by providing VR products for businesses. The metaverse could serve as an alternative to physical office goers, which will enable employees to stay engaged remotely, exactly as if they were on-site. There is a lot of potential in remote engagement because it increases productivity and allows more people to focus without any distractions, and also eliminates the requirement of any in-person meetings or lengthy video calls.

The main driving force for consumer enrollment is unanimously linked to the presence of their peer group on the platform. It seems peer pressure will work on consumers to encourage enrollment rather than the facilities provided. Quite a few were unaware of how developed the metaverse is right now and said they would wait sometime before the technology was in its full bloom, but they were ready to join the metaverse without hesitation if there was a chance of meeting a familiar face or if their friends were already on the platform.

The behaviour towards the metaverse gives validation of human psychology to associate with like-minded people and emerge as the pivotal connection within the communities.

However, the metaverse serves as a cushion to prevent the effect of shock, anxiety, and risk that comes with real-life decisions. In augmented reality, decisions are taken, and judgments are made, but they in a way give way to an alternate reality which modifies much or challenges the settled realities of the actual life.



Activities Driving Metaverse Adoption

Drivers of Metaverse Adoption



Virtual Gaming Tournaments/Marathons



Extreme Sports



Purchase of Unique Collectible Items



Social Meet-ups

Virtual gaming tournaments/marathons and extreme sports are the major factors which will drive users to join the metaverse. Purchase of unique collectible items and social meet-ups will also drive adoption of metaverse.

Application involving Social meet-ups will drive females while Sporting and gaming applications will drive males to join the metaverse.

Users in the smaller metros and towns will be driven by the virtual learning and education applications to join the metaverse.



Perceived Benefits of Metaverse



Benefits such as opportunities for self-expression, new possibilities in education and enhancing creativity and imagination are the main benefits that will drive the adoption of metaverse among users in the near future.

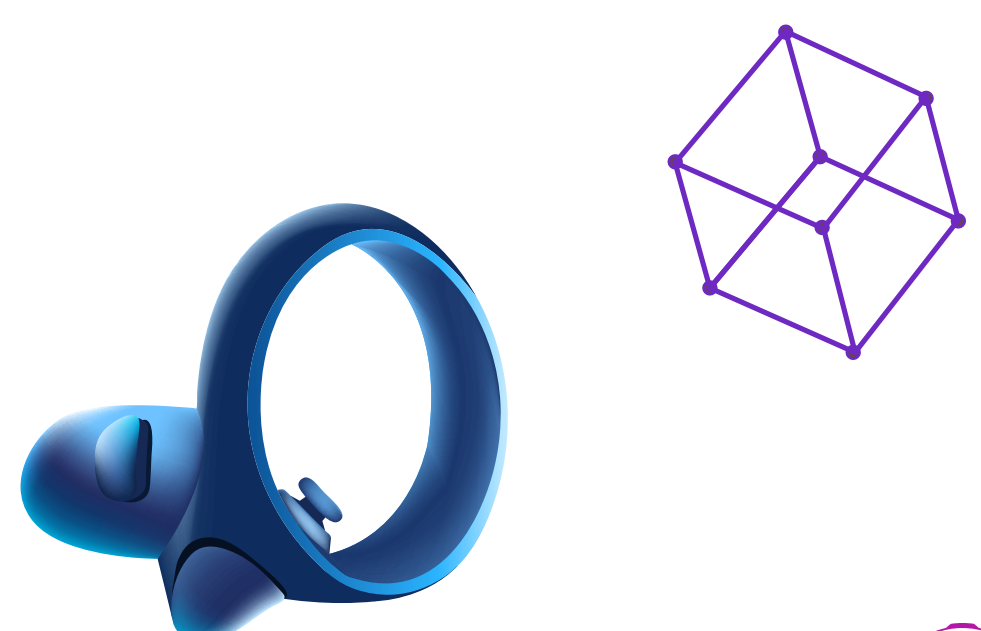


When it comes to benefits from the metaverse, most people feel that there will be more possibilities in the field of education (32%). It'll benefit enhancing creativity and imagination (29%). Metaverse will help people with disabilities that otherwise would prevent them from doing something in life.

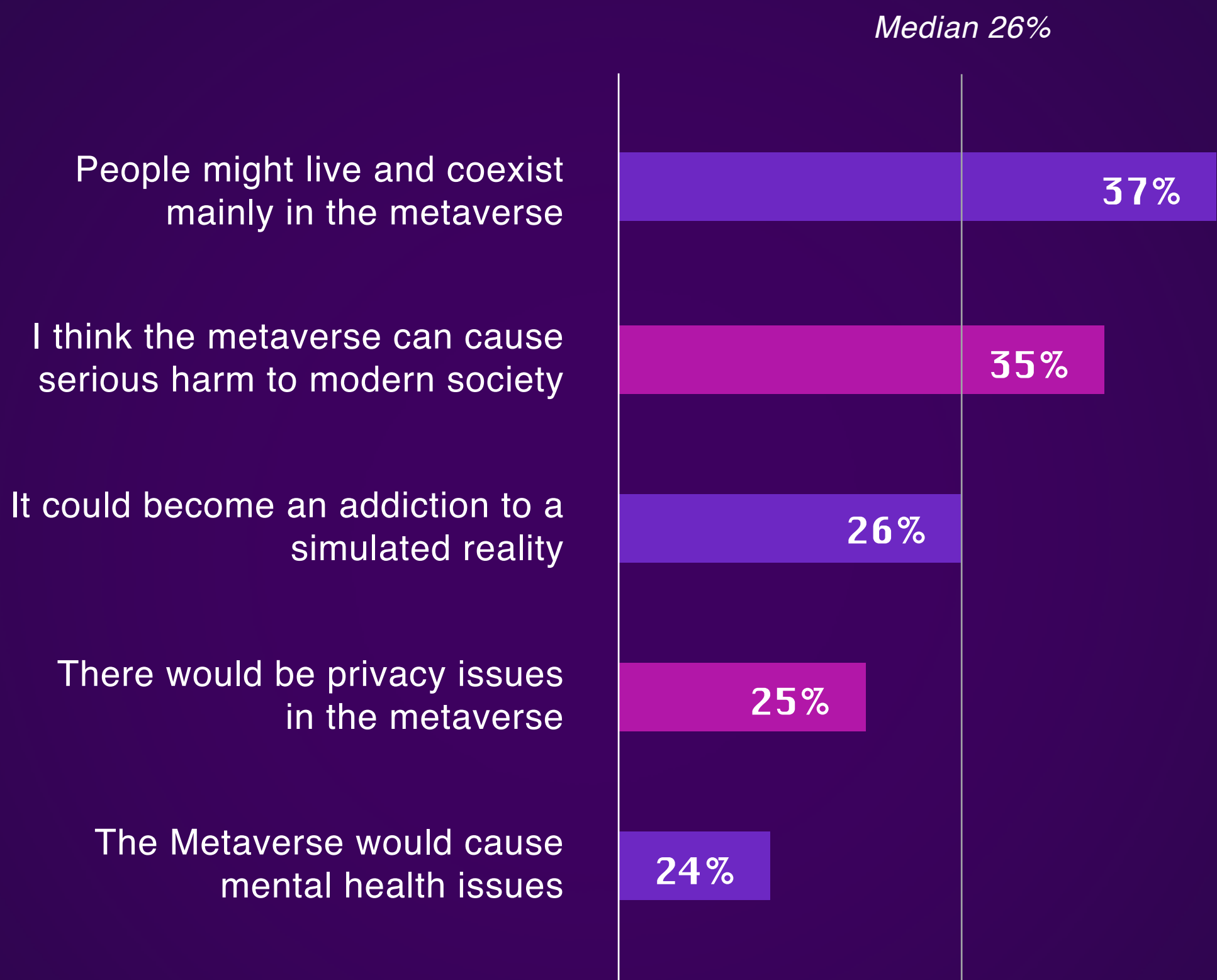
Since there are no physical laws on the metaverse and everything could be augmented to suit the user, people could do work meetings inside these games or go for a run on the Himalayas. The possibilities would be endless. This is a boon and a bane for this type of budding technology since there are no boundaries for expectations either. Metaverse does promise a unique experience, which could be the primary draw for the users.

The possibility of connecting to people without any geographical restraints, much like social media right now, but a completely personalised experience where consumers feel their presence in the form of avatars and the personalised premise could be a game-changer in the world of networking. Along with logistics, Metaverse saves time and makes their lives easier.

The benefits of the metaverse finally boiled down to experiences. The experience of any kind of product would improve exponentially because of the immersive technology. Consumers could enhance creativity and imagination, overcome obstacles that prevent them from doing certain real-life activities, increase technological literacy and skills, and give opportunities for self-expression. This leap in technological advancement would benefit games the most. They would want to play games that would require crisp graphics, such as fantasy or supernatural games, so that they could be directly teleported to that world. The games could be multiplayer. That way, the metaverse could be a place for networking and entertainment.



Current Consumer Perception of Metaverse



An iteration of the internet which provides an extremely immersive experience is basically what the metaverse implies. Consumers will have the opportunity to be a part of a social network using avatars, or the internet will be available to them in the form of extended reality. There have been several mentions of the current state of the metaverse and how it is transforming the way we view the internet.

People feel that soon they'll might live and co-exist mainly in the metaverse and feel the metaverse can cause serious problem in the society. And they might be addicted to a simulated reality.

Shopping has already changed because of the use of Augmented reality (AR). The Place app brought forward by IKEA used augmented reality technology to virtually see how their furniture would look direct in a consumer's home or office space before purchasing.



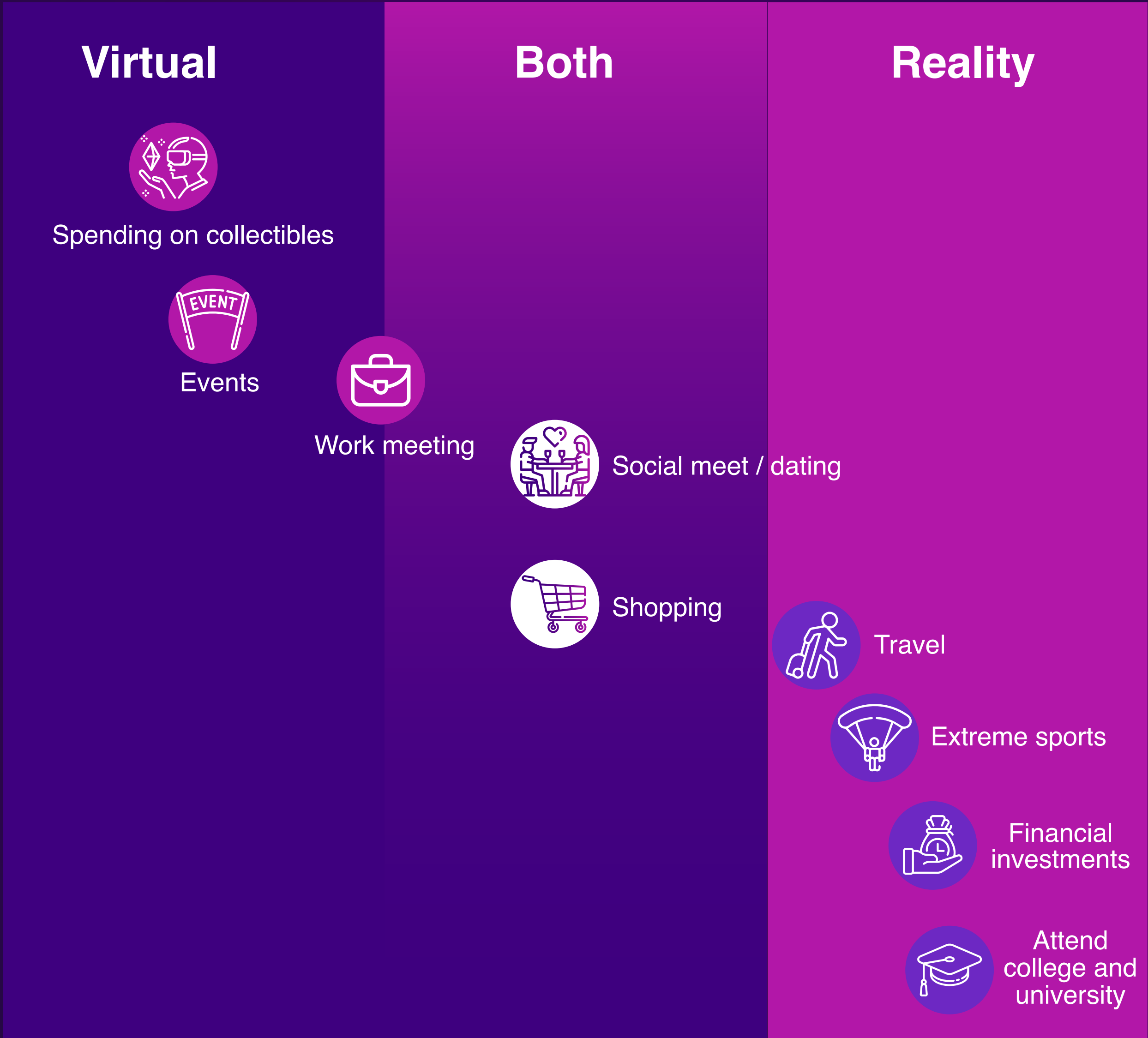
I would want to be anonymous. My avatar will look nothing like me, if possible. The metaverse will be a clean slate.



Male, 35 years, Next 5 Metros



Preference of Activities in VIRTUAL OR REAL ENVIRONMENTS



Users are willing to spend on collectables and unique items exclusively in the VR environment. They are inclined a bit more towards VR than real life when it comes to events and working/professional meetings.

Users are fine with social and romantic meet-ups equally on both VR and the real life, as they are with shopping for regular use products.

When it comes to activities like leisure travel and extreme sports, users are more inclined towards real life than VR.

Financial activities such as transactions and investments have more preference towards real life, although a small fraction of preference is reserved for VR environments.

Pertaining to activities around education such as attending university and colleges, users are willing to do it exclusively in the real life compared to virtual world, when given a preference.

Users belonging to the younger age group are open to conducting financial transactions and education in VR along with in real life while those in the older age groups look to use VR mostly for recreational activities.

XR TECHNOLOGY

For Enterprise Ecosystem



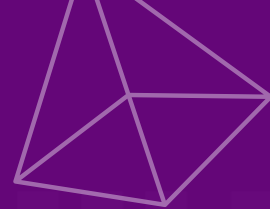
XR TECHNOLOGY in Enterprise Ecosystem



Enterprises using immersive technologies have grown exponentially in the past couple of years. Virtual reality (VR) and augmented reality (AR), along with extended reality (XR), will soon be used for activities ranging from entertainment to education, manufacturing, healthcare and many more. A lot is happening in this industry, and it is only expected to grow even further. This rise is credited to the increase in demand from companies around the world because of digital transformation. VR and AR are transforming the way companies engage with employees, suppliers, partners or customers.

Enterprise adoption is rising rapidly when it comes to immersive technologies. This could be difficult to predict just how fast this transformation would go mainstream.

Widespread adoption could be affected because this technology needs specialized hardware along with cutting-edge software. Another caveat could be the impact on employee productivity and engagement because of the way immersive technology can disrupt the workforce. Immersive technologies, when it comes to enterprises, are a unique new perimeter for businesses. Using these innovative tools in marketing strategies, companies can give their customers and prospective clients a much richer experience. There is a revolution underway in the world of learning, communication and collaboration because of immersive technologies. With the addition of Google glasses, Oculus Rift or HTC Vive, along with AR devices like Microsoft HoloLens and many more such products in the near future, immersive technology must see a substantial explosion in use by several enterprises.



XR TECHNOLOGY in Enterprise Ecosystem



XR technology will also be useful for hiring purposes in the manufacturing sector. At present, there are systems in which anyone who joins anew must go through a training module and almost every training module that is currently being used is in video format. It becomes mundane for the person to follow, especially with involvement of complicated hardware. In this situation, the use of AR and VR would be an enormous move in becoming efficient and competitive.

It's better than video-based training, where visualizations in a three-dimensional environment increases the interest of the employee and, there is no need of training personnel to guide. It greatly improves the efficiency of systems dedicated to training that forms one of the biggest part of the budget for a manufacturing industry.



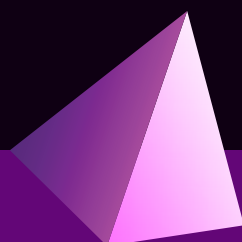
Media as an industry has always been at the forefront of creating, adapting, and evolving with technology while ensuring that the consumers get the most engaging and immersive experience, Just like getting live scores on ESPNcricinfo way back in 1992 to a dedicated mobile app in 2007 and now digital streaming of live content on handheld devices – evolving with technology. Within the sports ecosystem we are already seeing a lot of work globally & in India around XR technology for a seamless and unrestricted viewing experience and at the same time provide something so convincing that it cannot be distinguished from reality.

As a leader in the sports industry, ESPNcricinfo has always prided itself on being part of the future and has already taken steps to leverage our extensive statistical repositories created over three decades and build VR-based immersive experiences. With the focus on current & Next gen Fan needs, coupled with the launch of 5G, the real world and virtual world will be better connected as more real-time robust data sharing would be possible making it feasible to create and build XR technology-based experiences accessible to the masses without any compromise on the quality.

There is no better live content genre than sports and cricket, it will see a lot of path-breaking and innovative work in the next 3-5 years will be seen around XR. The sports experience will be more personalized, screen-independent, and convergence of virtual and real-time live action & data without any restrictions.



Akshaya Kolhe,
Head of Revenue
ESPN India and South Asia



Future of XR TECHNOLOGY India



OPPORTUNITIES And Challenges

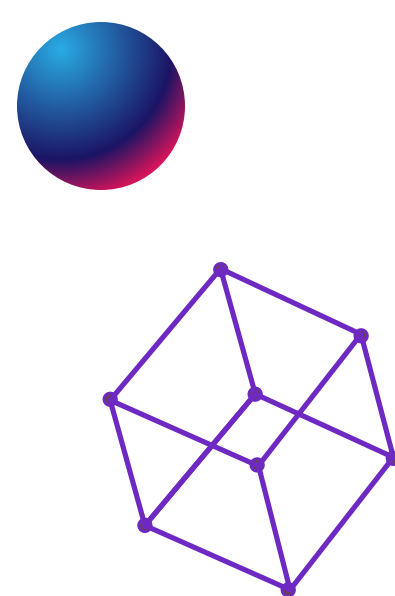


OPPORTUNITIES

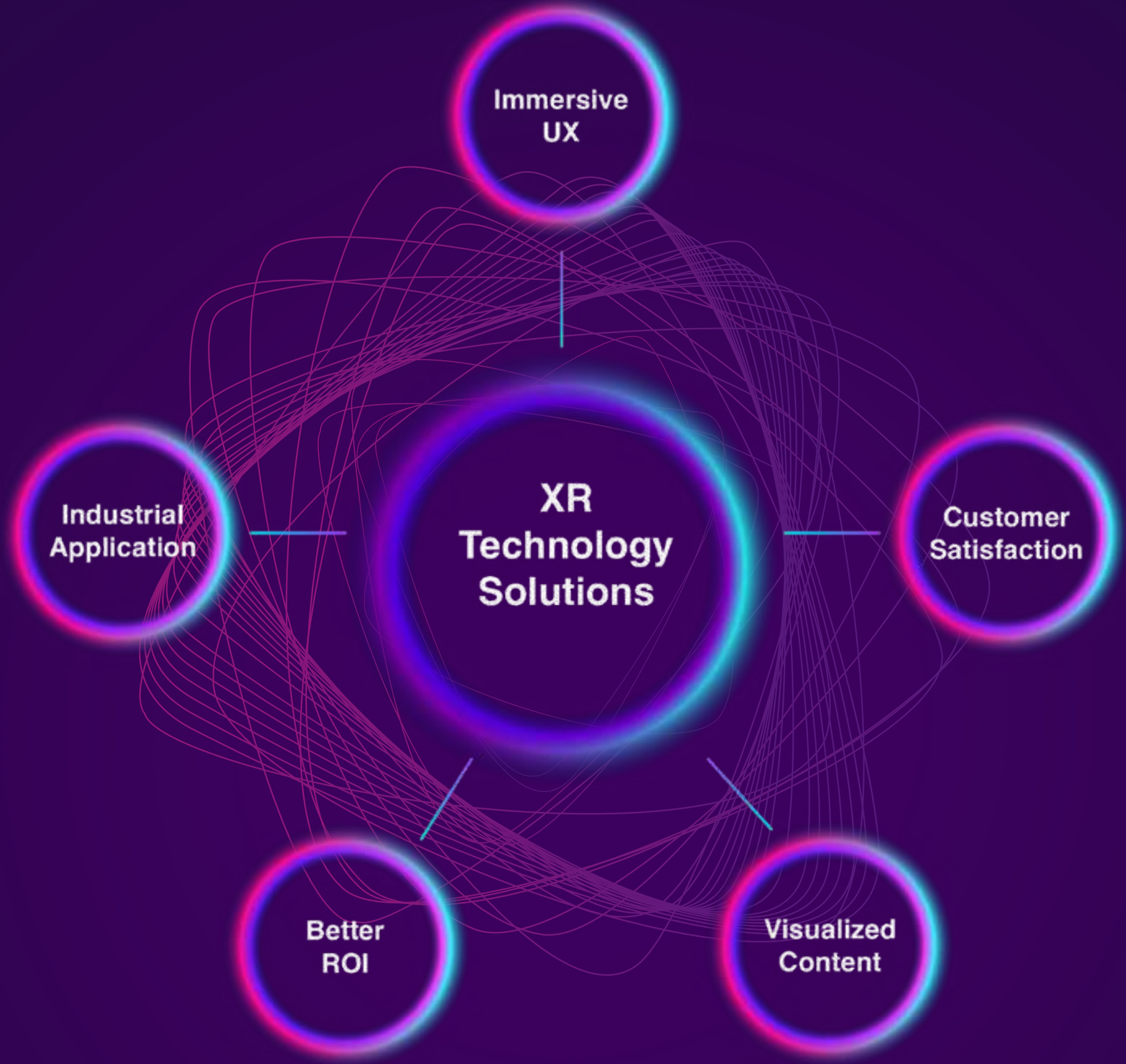
- The implementation of the technology across a myriad of industries. From the enterprise perspective, XR could improve safety for workers, and enhance customer experience.
- Game developers can make use of the technology and give gamers the immersive experience that they can feel while exploring fantastic futuristic worlds in the virtual environment.
- The e-commerce platforms with the use of AR and VR technologies can bring shoppers closer to an in-person experience. Since people generally want to interact with a product before buying, XR technology allows them to do so. The XR technology will allow the user to experience the product firsthand in a digital environment.
- During the pandemic, people worked remotely, and companies adopted the hybrid work model, which triggered a series of new workplaces. The use of XR technology can ease the way employees communicate and meet in a virtual environment to potentially work more efficiently without the constraints of workplace or space.
- In industrial settings, XR technology can make training more efficient as learners can visualise and process information faster when learning about complex equipment training. The trainees can explore each component and learn additional information about the equipment they need to work with.

CHALLENGES

- For companies, utilizing XR technology will be challenged by cost concerns as the hardware is expensive.
- The virtual and augmented realities are still regarded as a luxury. In terms of growth, investors, on the other hand, notice that the industry is fresh and fewer proven business models are successful currently.
- When it comes to challenges, the factor of dissonance with reality would be a possibility if one spends long hours in virtual reality. Next would be the addiction to that world. But these issues should not be concerning since they can be resolved by putting guidelines and laws in order.
- Users, complain about the ergonomics of the devices. They are bulky and uncomfortable to use and most importantly, cause headaches and nausea after prolonged use. This is one issue that could sway customers away, but the hardware will improve with time and further development.



Future of XR TECHNOLOGY



The metaverse has already moved ahead of VR to enable collaboration between different companies. Large companies are trying to produce a multisensory 3D experience for their consumers while they lay the foundations of the underlying architectures of the metaverse. Things like real-time holoportation, and holograms that provide visual effects as though users are sitting across from each other while conversing, transitioning from the flatscreen to the next stage of spatial computing, are the things companies are betting on. Forensic science is getting momentum, and stuff from sci-fi films is coming into life. Things like ‘digital twinning’ of crime scenes and several other futuristic technologies seem to come into place because of XR, which could potentially change how we live our day-to-day lives.

One potential solution is expanding possible interactions to ride the experience economy. Imagine a bunch of experience cafés initially boosted by large consumer electronics companies like Sony where people go to experience different things through VR. This then fits into the next level of customer service companies and low-cost kiosks for startups using the same approach - mix it with industry takers. For example, a 3D tourism startup runs a kiosk and tags up with a bigger brand (like MakeMyTrip or Thomas Cook) to sell custom packages in tourism. For example, Sony and Thomas Cook collaborate and setup free experience studios for consumers at large to take a troll in the Himalayas.

The whole point is to boost the experience of consumers to kick off trial and usage.

The technology functions like a medium, the core is the aspirational space that this real-world XR technology enables people to achieve, interact, and feel accomplished in a virtual world.

Roadmap from NOVELTY TO NECESSITY



XR Application and Product Awareness

Businesses should use immersive experience studios to drive consumer awareness

Encourage early adopters to advocate to fill information gaps

Magnify consumer curiosity with immersive experience and technology exposure

Introduce XR-based products and services



Create Consumer Curiosity



XR-Product Evaluation

Encourage customers to try and evaluate XR products and services

Evaluate the user expectations, usage experience, etc. to identify the use-cases



Latent Need Identification

Businesses should identify, realize, and understand latent customers' needs

They should solve customer-driven problems and issues and highlight use-cases



XR-Product Trial

Encourage early adopters to examine and test the products in the trial phase

Trial and adoption should depend on the user experience and benefits

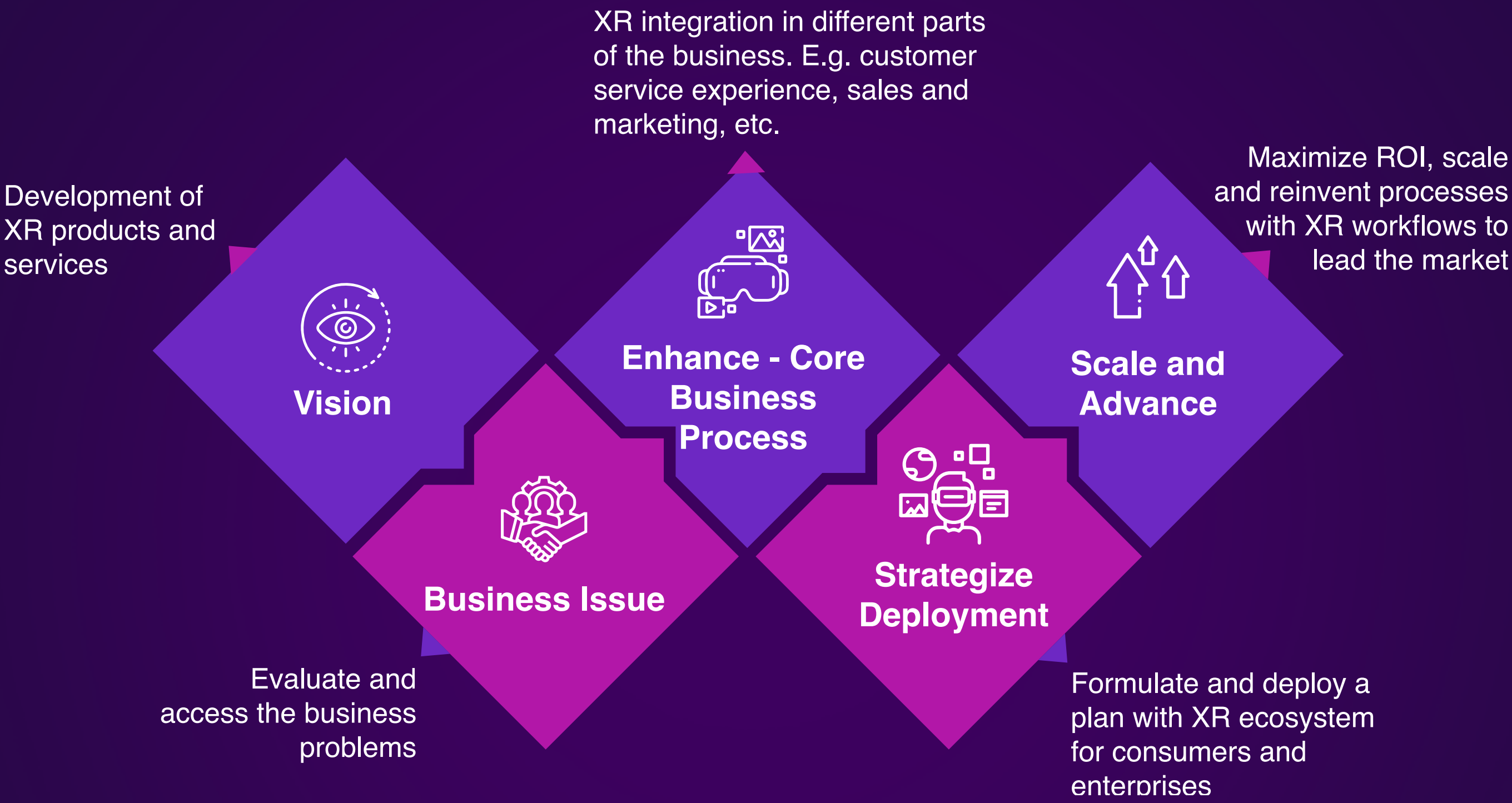


XR Technology and Product Adoption

Identify the change in consumer behaviour during the adoption phase

Make users become more comfortable, leading to the adoption and regular use

Roadmap for BUSINESS TRANSFORMATION



Enterprises need to have a clear vision for developing XR products and services that will help build a product strategy that is forward-looking and customer-driven. Vision is the essence of where the business wants the products and services to be in the future. The vision begins with knowing your customers and what they need. The business needs to understand the challenges and how its products and services will help.

The business issues are issues that impact the ability to sell, provide diagnosis, market and scale. The businesses might face issues such as cost of capital, price competition, regulations and compliances, technology innovation, etc. The technologies can have a greater impact on various aspects of the business; hence the core business process must integrate XR technology in different parts of the business. For example, in the sales process enhancing it with the XR technology and offering products and services in a virtual environment.

E-commerce platforms and retailers can integrate XR technology and enhance the experience of the customers by serving them with virtual try-on of the products.

With the XR technology integration, tourism and travel firms can let customers have an immersive experience of their choice of vacation destination with the use of a VR headset. It becomes important for businesses to formulate and deploy a plan keeping the XR ecosystem in mind. Prioritizing the core business processes and deployment of the same is a need to put into place a robust and sustainable business model and it also takes care of the stakeholders such as investors, internal personnel, and external customers. The business model must be scalable with the integration of technological innovation. There needs to be the reinvention of processes and workflows for businesses to advance in the market.

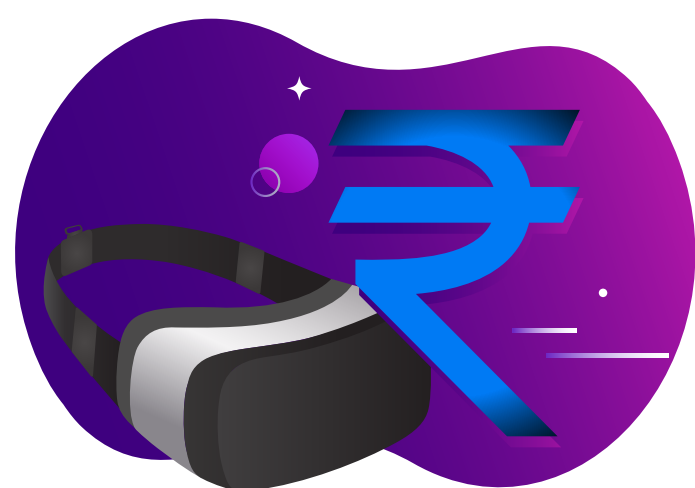
Furtherance of XR TECHNOLOGY ADOPTION IN INDIA



In the Indian context, an immersive technology such as extended reality needs to gain widespread adoption and across multiple sectors to improve efficiencies, collaborations, and innovation. With the recent introduction of the 5G services in India, and as we move forward there will be new opportunities and extended reality's immersive experiences will push us beyond the edge.

It is important that there is more acceleration in adoption which will happen with investments in the technology and its innovative application. Bringing consumer's attention to extended reality with a focus on practical application and combining it with accessibility, interactive experience, and convenience is critical towards the mass adoption of the technology in India.

Investments in XR



Introduction of support programmes by the government and social media giants to accelerate and support the growth of XR technology-based firms in India. These start-ups and XR-based companies need to be supported during their nascent business stage so that they can have the first mover advantage in the Indian market.

Innovative Uses of Virtual Reality



Industries such as medicine, education, and architecture are some of the areas that can take advantage of the technology in India. Despite this technology being in existence decades ago, still many people are unfamiliar with the concept of virtual reality. Consumers will become aware of the technology and would try it only if practical use cases are put forward.

Attention to VR



Consumers are comfortable with their smartphones and do not seem interested to move on from them. It is important to make people move on from AR. The real challenge for marketers would be to establish some level of convenience for customers. This would ensure that they move on from handheld devices and purchase head-mounted ones.

Accessibility and Convenience



Users from every section mentioned that headsets are uncomfortable. Be it the bulkiness of the form factor or the nauseating feeling one gets if one uses it for too long. Solving this issue of head-mounted displays and making it look more appealing could lead to better conversion rates.

Interactive Experience



How brands and companies tell their stories on the metaverse. Given the hyper-immersive atmosphere, generic approaches might fall short regarding customer conversions. Companies should give their customers the excitement and thrill that was missing in regular advertisements and campaigns. Everything will be larger than life in the metaverse, and so would be customers' expectations.

RESEARCH Methodology



RESEARCH

Methodology



Quantitative Research

Survey was conducted among a sample size of 673 respondents across age groups, gender, and town class using stratified random sampling to gather the required data.

Qualitative Research

Conducted in-depth interviews with the industry stakeholders. Furthermore, in-depth interviews were conducted with consumers across age groups, gender, occupation and town class to identify the qualitative aspects.

Research Period

May- August 2022

Town Class Definition

TOWN-CLASS	DEFINITION
Top 4 Metros	Mumbai, Delhi, Kolkata, Chennai
Next 5 Metros	Bangalore, Pune, Hyderabad, Ahmedabad, Surat
Small Metros	Cities with population up to 5 million

Research Team for this Report

This research report is a collaborative effort by the teams from Dentsu India, Digital Behaviour Initiative at IIT Delhi and and Payel C. Mukherjee at IIIT-Delhi.



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About Recogn

Recogn, a research-based consulting division of Dentsu India, complements the agency’s knowledge of digital media over a period of 10 years with the understanding of the digital audience. Recogn provides marketers with deeper insights into the minds of consumers and helps create more focused marketing strategies. Recogn provides end-to-end research services like customized primary research into the domains of marketing strategy, brand strategy, product and communication strategies, among others.

About Dentsu International

Part of Dentsu Group, Dentsu International is a network designed for what’s next, helping clients predict and plan for disruptive future opportunities and create new paths to growth in the sustainable economy. Dentsu delivers people-focused solutions and services to drive better business and societal outcomes. This is delivered through five global leadership brands - Carat, Dentsu Creative, dentsu X, iProspect and Merkle, each with deep specialisms. Dentsu International’s radically collaborative team of diverse creators unifies people, clients and capabilities through horizontal creativity to help clients create culture, change society, and invent the future. Powered by 100% renewable energy, Dentsu International operates in over 145 markets worldwide with more than 46,000 dedicated specialists, and partners with 91 of the top 100 global advertisers.

<https://www.dentsu.com>



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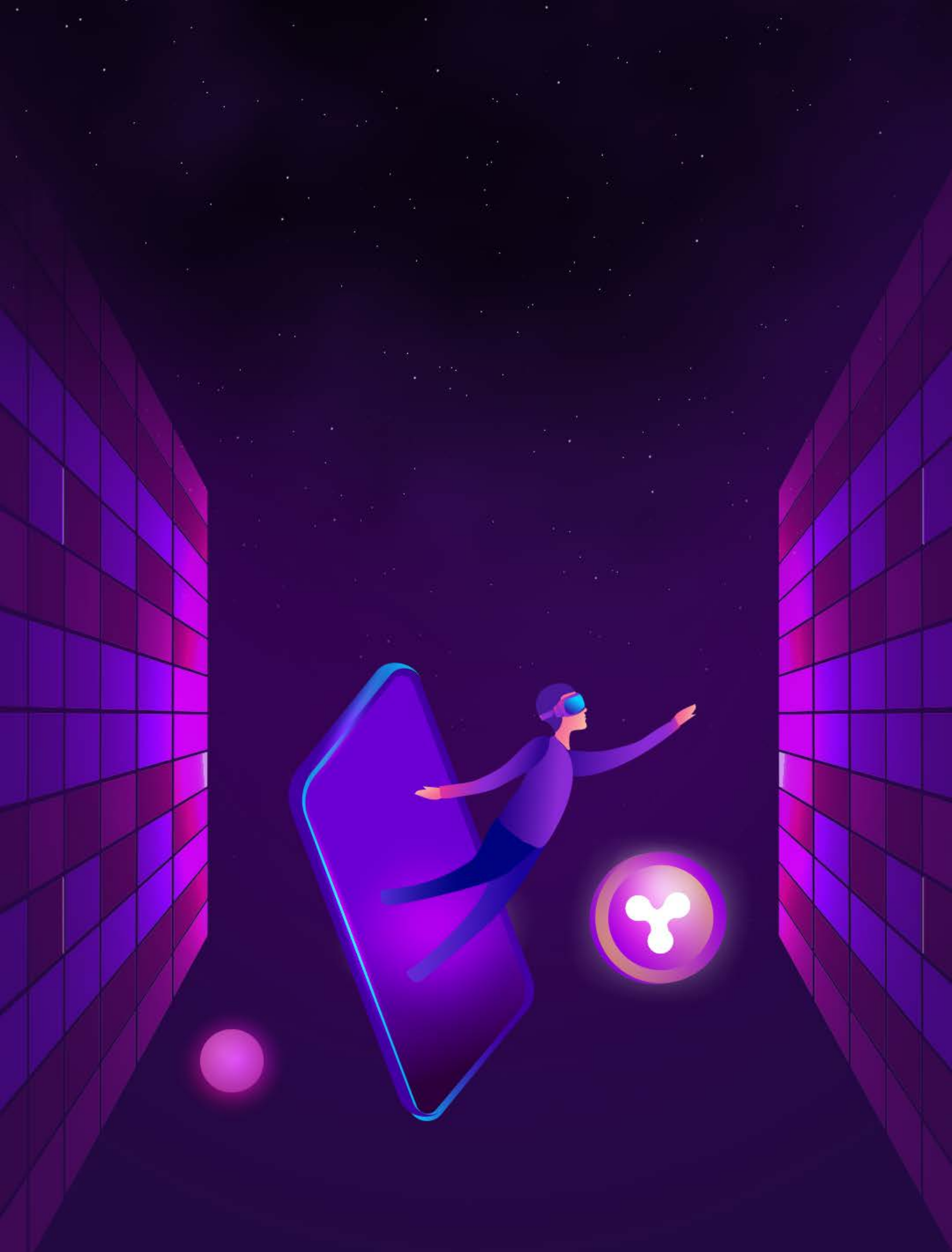
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Digital Behaviour Initiative at IIT Delhi

Digital Behavior Initiative at IIT Delhi aims to work as a non-partisan academic research - based information tank in India that engages and informs the public about key aspects of human behavior or cognition in the digital world. The initiative and this report was in joint collaboration between Dr. Sumitava Mukherjee at IIT Delhi and Dr. Payel C Mukherjee at IIIT- Delhi.

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