



## **A Study on Relevance of Augmented Reality/Virtual Reality in Real Estate**

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### **ABSTRACT**

This paper explores the burgeoning impact of Augmented Reality (AR) and Virtual Reality (VR) technologies within the real estate sector, drawing on survey data to gauge current familiarity, adoption rates, and perceptions regarding their potential to transform industry practices. The findings reveal a growing awareness among respondents, with 60% having some familiarity with AR/VR technologies and approximately 70% having experienced them through various devices. Notably, there exists a strong conviction, shared by 95% of participants, in the effectiveness of AR/VR applications in real estate, particularly in revolutionizing property showcasing. Despite this optimism, actual usage of AR/VR for property showcases remains limited, suggesting barriers to widespread adoption such as cost and accessibility. The preference leans towards AR, attributed to its versatility and ease of use. Identified benefits include enhanced property visualization, increased engagement, and the facilitation of remote property showcases, which collectively could revolutionize marketing and sales strategies within the real estate domain. AR/VR technologies are deemed particularly suitable for high-end luxury properties and large commercial spaces, indicating a targeted approach in their application. The paper concludes that while AR/VR technologies hold significant promise for transforming real estate practices, their full potential is yet to be realized, necessitating strategies to overcome adoption barriers and expand their use across the sector.

Keywords: Augmented reality, virtual reality, artificial intelligence

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### **Review of Literature**

- Chuyi Xiong at all (2022) The paper aims to analyze the quantity and usage of real estate augmented reality applications, focusing on German-speaking regions. It uses qualitative methodology and literature research to compare available applications and identify structural, technological, and user-related factors that facilitate or impede AR applications for real estate. The research provides a smart overview of existing applications and market potential, with a visionary conclusion for future developments.
- Daniel V.de Macedo at all (2014) Digital technologies have made it possible for organizations to enhance service delivery and provide consumers a way to experience a product or service before even seeing it in person. Prior work has validated consumer purchase decision-making models like the Engel, Kollat and Blackwell (EKB) model in digital and multi-channel purchase environments. This research aims to explore the various impacts of digital technologies, specifically virtual reality (VR) and augmented reality (AR) features, on the different stages of the EKB model in a high involvement purchase decision context. In addition, the use of such technologies is examined as a competitive advantage for sales agents.
- Chylinski at all (2020) Sales and purchases of residential real estate are the most significant financial transactions that the majority of the population are involved with. As such they are concerned that these transactions are carried out efficiently and to their best advantage. One of the most significant changes affecting modern society over the last ten years has been the growth in consumer use of the Internet. This research examines the intersection of these two important issues – i.e. the use of the Internet for marketing residential real estate. Over the last twelve years Lincoln University has biennially surveyed residential real estate buyers and sellers in Christchurch, New Zealand. Findings from this research include the rapid growth of Internet use in recent years at the expense of newspaper advertising. However, the radical change in real estate brokerage services predicted by earlier researchers has not occurred – at least not yet. But major changes in Internet access and use are still underway and their effects on real estate brokerage may not be fully played out for some time to come.
- Azmi A. Ibrahim at all (2022) Real estate needs to improve its adoption of disruptive technologies to move from traditional to smart real estate (SRE). This study reviews the adoption of disruptive technologies in real estate. It covers the applications of nine such technologies, hereby referred to as the Big9. These are: drones, the internet of things (IoT), clouds, software as a service (SaaS), big data, 3D scanning, wearable technologies, virtual and augmented realities (VR and AR), and artificial intelligence (AI) and robotics. The Big9 are examined in terms of their application to real estate and how they can furnish consumers with the kind of information that can avert regrets. The review is based on 213 published articles. The compiled results show the state of each technology's practice and usage in real estate. This review also surveys dissemination mechanisms,

including smartphone technology, websites and social media-based online platforms, as well as the core components of SRE: sustainability, innovative technology and user centredness. It identifies four key real estate stakeholders—consumers, agents and associations, government and regulatory authorities, and complementary industries—and their needs, such as buying or selling property, profits, taxes, business and/or other factors.

- Gallardo et al. (2018) The paper presents an application that uses augmented reality (AR) for mobile data visualization in real estate classified ads. The application, called iMovBusca, allows users to view real estate listings in their surroundings by superimposing information about the properties on a live camera feed. The information can include the property's address, price, square footage, and other details. The authors conducted a usability study with users of iMovBusca to assess their preferences for the AR and map modes of the application. The results showed that users preferred the AR mode for its ability to provide a more immersive experience. However, they also found that the map mode was more useful for getting an overview of the area and finding specific properties. The authors concluded that AR has the potential to be a valuable tool for real estate classified ads. However, they also noted that there are some challenges that need to be addressed, such as the need for more powerful devices and more accurate positioning systems.
- Flavian and Ibanez Sanchez (2019) The paper investigates the potential of virtual reality (VR) for residential real estate marketing to influence house purchase intention. The authors conducted a study with 60 potential homebuyers who were randomly assigned to either a VR group or a control group. The VR group was given a VR headset and allowed to explore a virtual house, while the control group was only given a 2D presentation of the house. The results of the study showed that the VR group had significantly higher levels of pleasure and arousal than the control group. They also had a significantly higher intention to purchase the house. The authors concluded that VR can be an effective tool for real estate marketing, as it can help to create a more immersive and engaging experience for potential homebuyers.
- Lang and Sittler (2012) Property technology have ushered in new possibilities for the real estate industry, including the use of virtual reality (VR) technologies by real estate agents when marketing properties. Previous studies have identified factors in determining purchase intents within a virtual setting, but little is known about how such technologies affect homebuyers' purchase decisions. In this study, a family-home purchase decision-making model is used to conceptualise how VR can affect buyers' involvement in the property purchasing process. Using transaction data from Wuhan City, China, the study found that a 1% increase in the number of followers visiting an online property portal resulted in a 21% increase in physical home visits. The study also indicates that VR tours shorten the marketing time of property by 6.4% and narrow the bid-ask spread by 2%, *ceteris paribus*. These findings suggest that emerging property technologies such as VR can enhance the purchase decision-making process and reshape the role of the real estate agent.
- Venkatesh R. (2008) The key issue in this study is to check if the companies have embraced the current dominating use of online advertising of the services that they offer to the community they serve through digital marketing. Specifically, the study focused on finding out the digital marketing channels that are used in the industry, the challenges and the strategies in place to achieve the digital marketing goals. The study targeted 10 major real estate companies in Lilongwe city, the capital of Malawi. Out of these 10, six (60%) companies responded to the questionnaire. The study established that estate agency companies in Malawi have adopted online use of digital marketing in selling their services. The channels that are currently in use include Email, Affiliate Marketing, Website and social media. On social media, the companies are using Facebook, Instagram, Twitter and WhatsApp. Further, the study revealed that the companies face numerous challenges in their digital marketing drive. These include expensive purchase costs for digital gadgets, lack of well-trained personnel in digital marketing, high operating cost on data usage from Internet service providers and unreliable Internet connectivity. Considering these challenges, some organizations have put in place measures aimed at minimizing the current situation and increasing their customer base through development of mobile apps, linking of websites to other news websites for broader access and frequent updates of their respective websites.
- Rauschnabel et al. (2022) Several factors including market research, pricing, branding, advertising and promotion coupled with web-based marketing have made a heady brew that made the land prices and apartment costs soar sky-high in the last one year. This is a classic case of the integration of all the three ingredients--creating, communicating, and delivering value--which revolutionized the thinking of most young professionals with lot of expectations and earnings to match. They are the real customers behind the real estate boom. It all started with a phenomenal growth in the Information Technology (IT) companies which hired personnel with huge pay packets. Housing, a vital need, naturally beckoned the real estate promoters and developers to take advantage of this situation. The construction of a large number of IT malls and parks all over the country is one of the key drivers which fuelled the growth of the property market. Not only the metros, but also the tier-2 and tier-3 cities are engulfed in this boom. Such a surge makes the market researchers wonder how long the bubble would last and whether it is going to burst in the near future.
- Sihi (2018) Using real estate agents to advertise home has long been a common practice. Some developers use a scale model to reflect the design results as a physical model however, the production requires components that cost quite a bit of money and are not practical nowadays. Hence, this study attempt to uncover the challenge of using augmented reality in marketing. The design framework for using augmented reality in marketing is determined using User-Centered Design with a protocol design method. Tracking and context identification, sound, one contact, kinesthetic and sensory modalities are the five types of design criteria identified.
- Najamuddin et al. (2022) Augmented Reality (AR) has received increased attention over the last years, both from managers and scholars alike. Various studies in the marketing discipline have tackled fragmented aspects of AR, such as its impact on sales or brands. Yet, a holistic approach to AR remains scarce. Therefore, the authors define "Augmented Reality Marketing" as a novel, strategic, and potentially disruptive subdiscipline in marketing. In conjunction, they discuss a nuanced customer journey model for AR Marketing strategy and propose the BICK FOUR framework

(branding, inspiring, convincing, and keeping) as a tool to organize corresponding goals. Another contribution is the introduction of several fundamental differences between AR Marketing and traditional digital marketing concepts, such as redefining the reality concept (reduced reality, normal reality, and augmented reality in a metaverse context). Insights from 127 managers further enhance the current and future practices of AR Marketing. Finally, a discussion of ethical and legal considerations completes the assessment.

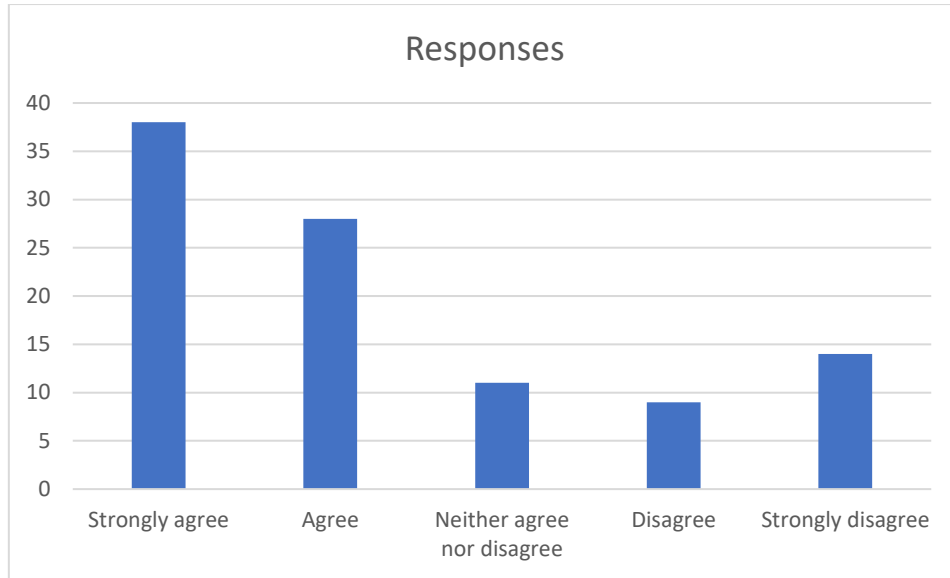
- Vilkina and Klimovets (2020) Recent advances in Augmented Reality (AR) technologies have led to a growing interest in their application for marketing strategy and practice – what we term Augmented Reality Marketing (ARM). However, despite emerging publications on the subject, managers and academics struggle to articulate how ARM delivers experiences that are valuable to customers in a way that is different from other marketing approaches. In this article, we review the emerging literature, and define ARM as a customer-facing interface for the application of digital marketing technologies in physical settings. Rooted in a class of ‘situated cognition’ theories from social psychology, we identify a unique set of digital affordances which ARM offers beyond extant marketing approaches in traditional media. By drawing on the key conceptual building blocks of situated cognition theory, we develop a framework of ARM experiences to synthesize current research and applications, and to suggest directions for future research.
- Ullah F. Sepasgozar et al (2018) The arrival of Virtual-Reality, Augmented-Reality, and Mixed-Reality technologies is shaping a new environment where physical and virtual objects are integrated at different levels. Due to the development of portable and embodied devices, together with highly interactive, physical-virtual connections, the customer experience landscape is evolving into new types of hybrid experiences. However, the boundaries between these new realities, technologies and experiences have not yet been clearly established by researchers and practitioners. This paper aims to offer a better understanding of these concepts and integrate technological (embodiment), psychological (presence), and behavioural (interactivity) perspectives to propose a new taxonomy of technologies, namely the “EPI Cube”. The cube allows academics and managers to classify all technologies, current and potential, which might support or empower customer experiences, but can also produce new experiences along the customer journey. The paper concludes with theoretical and managerial implications, as well as a future research agenda.
- Matidza et al (2020) One of the promising developments in the field of mobile technologies is augmented reality technology. It is a technology of superimposing information in the form of text, graphics, audio and other virtual objects on real objects in real time. Interaction of computing devices with a picture of the real world distinguishes augmented reality from virtual reality. Augmented reality has significant potential to expand and support business efforts in promoting its products, as well as in increasing the competitiveness of manufactured goods and services. Marketing services companies can use augmented reality to provide contextual links between their offer to consumers, online resources and points of sale.
- J McDonagh (2007) This article proposes the development of an augmented reality application that allows the user to preview in real time the product you want to buy, in the same way you can modify the characteristics you want to adjust it to your tastes and needs before making the purchase. The proposal includes the design of the application that incorporates a catalog of living room, dining room and bedroom furniture; the user will be able to modify characteristics of size, colour and texture in a way that emphasizes the interaction with the consumer, to this is added the possibility of showing relevant information about the furniture as they are visualized and modified, it allows to reduce the uncertainty of the user and at the same time allow a participatory action where the user is the protagonist. The augmented reality application My Style AR can be used in handheld devices that have support for augmented reality level 2.0.

## Data Analysis

### 1. How familiar are you with Augmented Reality (AR) and Virtual Reality (VR) technologies?

- Very familiar: 20%
- Familiar: 40%
- Somewhat familiar: 25%
- A little familiar: 10%
- Not familiar at all: 5%

S. NO	Type Of Response	No of respondents	Percentage
1	Very familiar	20	20
2	Familiar	40	40
3	Somewhat familiar	25	25
4	A little familiar	10	10
5	Not familiar at all	5	5

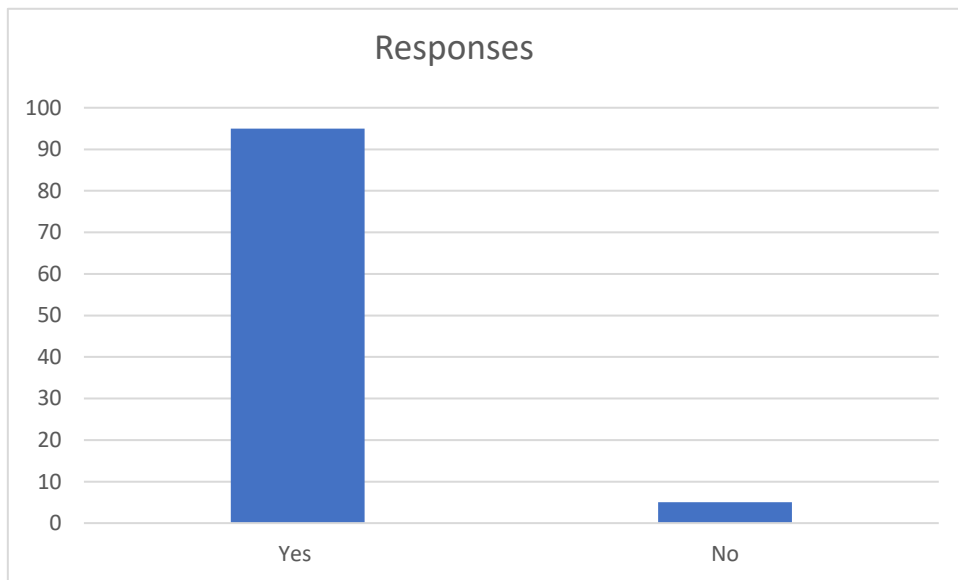


- **Interpretation:** The data illustrates respondents' familiarity with a particular subject. The majority (60%) are either very familiar or familiar, while 35% have varying degrees of lesser familiarity, and 5% are not familiar at all.

**2. Have you ever experienced AR/VR?**

- a) Yes: 70%
- b) No: 30%

S. NO	Type Of Response	No of respondents	Percentage
1	Yes	70	70
2	No	30	30



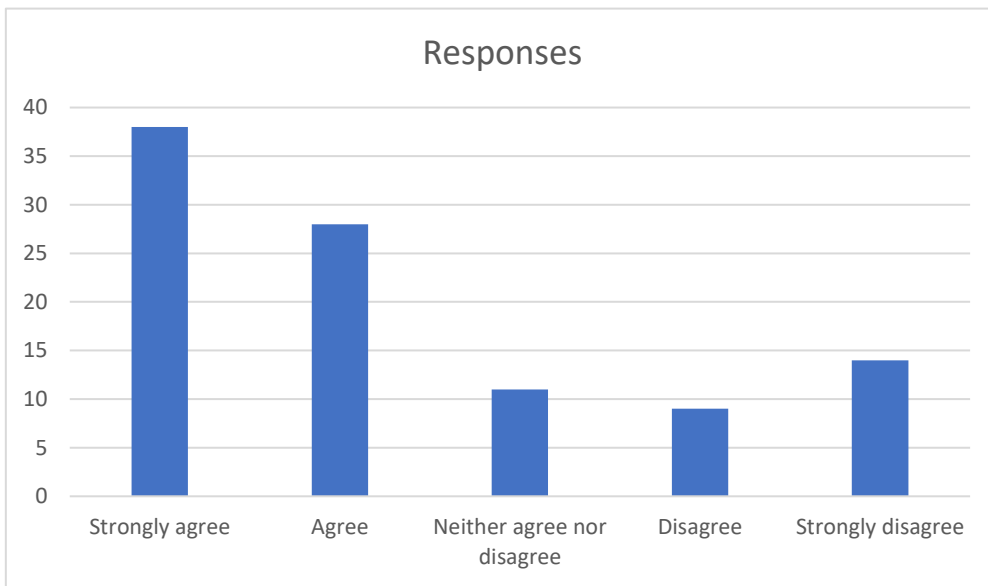
- **Interpretation:** The data reveals that 70% of respondents have experienced AR/VR, while the remaining 30% have not. This suggests a significant level of exposure to augmented and virtual reality technologies. The high percentage of "Yes" responses may indicate a growing interest in or adoption of AR/VR applications, possibly driven by advancements in technology and their increasing availability in various sectors such as gaming, education, and healthcare.

**3. Which of the following devices have you used for AR/VR experiences?**

- a) Smartphone with AR capabilities: 40%
- b) Dedicated AR headset: 20%

- c) PC-based VR headset: 20%
- d) Standalone VR headset: 10%
- e) I have not used any AR/VR devices: 10%

S. NO	Type Of Response	No of respondents	Percentage
1	Smartphone with AR capabilities	40	40
2	Dedicated AR headset	20	20
3	PC-based VR headset	20	20
4	Standalone VR headset	10	10
5	I have not used any AR/VR devices	10	10

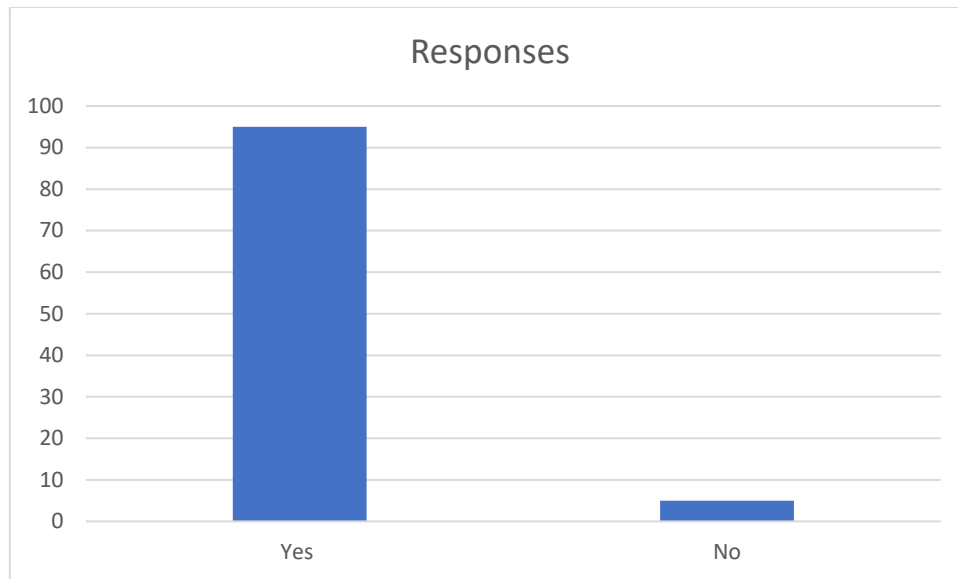


- **Interpretation:** AR headsets and PC-based VR headsets, both at 20%. Standalone VR headsets are used by 10%, while 10% have not used any AR/VR devices. This suggests that smartphones are a popular choice for AR experiences, while dedicated and PC-based VR headsets share an equal level of adoption. Standalone VR headsets are less common, possibly due to their cost and bulkier nature. The 10% who have not used any AR/VR devices may reflect a portion of the population not yet exposed to these technologies.

**4. Can AR/VR technology could be used by real-estate**

- a) Yes: 95%
- b) No: 5%

S. NO	Type Of Response	No of respondents	Percentage
1	Yes	95	95
2	No	5	5

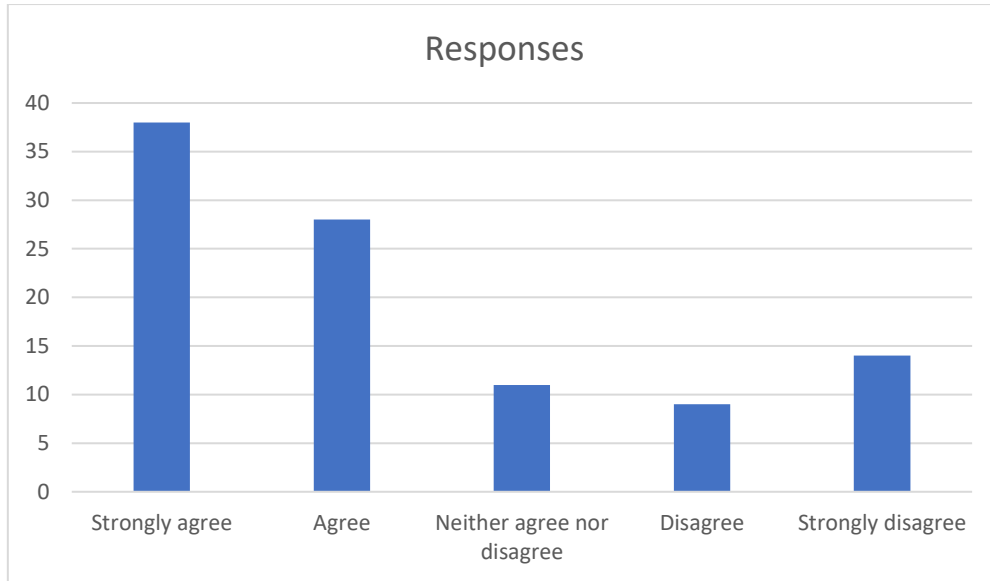


- **Interpretation:** The data indicates a strong consensus among respondents, with 95% affirming that AR/VR technology can be utilized in the real estate industry. This overwhelming positive response suggests a widespread belief in the potential of AR/VR to enhance real estate marketing, property viewing, and customer engagement. The 5% who disagreed may have concerns or reservations about its practicality or effectiveness in this context.

**5. To what extent you agree that using AR/VR technology can reform the way to showcase your property?**

- Strongly agree: 45%
- Agree: 30%
- Neither agree nor disagree: 10%
- Disagree: 10%
- Strongly disagree 5%

S. NO	Type Of Response	No of respondents	Percentage
1	Strongly agree	45	45
2	Agree	30	30
3	Neither agree nor disagree	10	10
4	Disagree	10	10
5	Strongly disagree	5	5

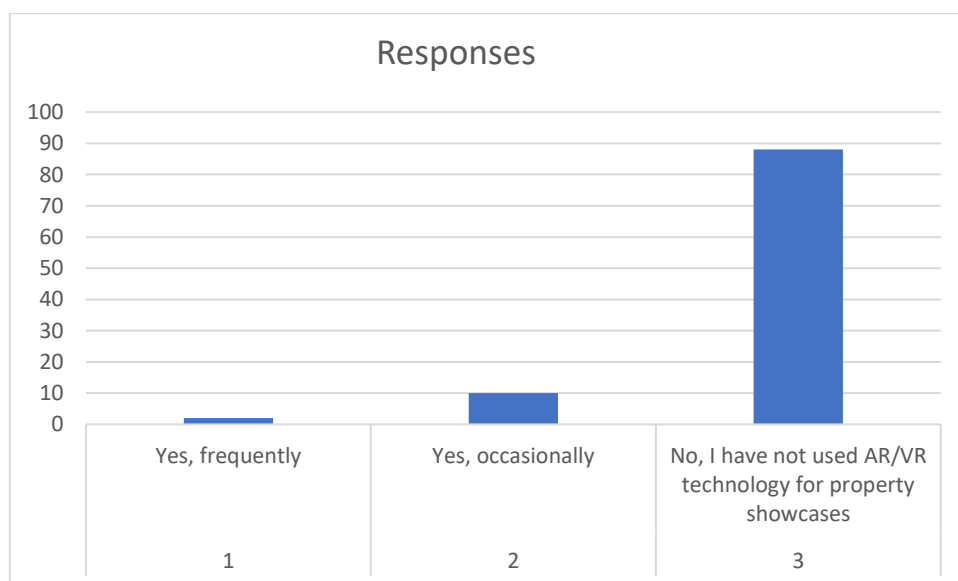


- **Interpretation:** The data indicates that a significant portion of respondents (45%) strongly agree that using AR/VR technology can reform the way properties are showcased, while an additional 30% simply agree with this statement. Only a small percentage (15%) either disagree or strongly disagree. This suggests a widespread belief that AR/VR can indeed revolutionize property showcasing, likely due to its potential for immersive and interactive property tours, enhancing the buying or renting experience.

6. **Have you used Augmented Reality (AR) or Virtual Reality (VR) technology in property showcases?**

- a) Yes, frequently: 2%
- b) Yes, occasionally: 10%
- c) No, I have not used AR/VR technology for property showcases: 88%

S. NO	Type Of Response	No of respondents	percentage
1	Yes, frequently	2	2
2	Yes, occasionally	10	10
3	No, I have not used AR/VR technology for property showcases	88	88



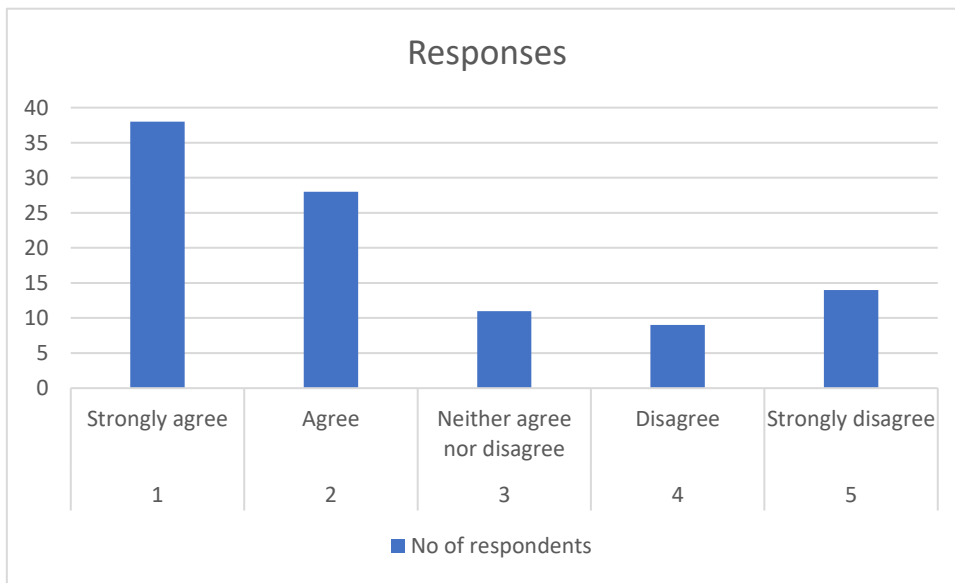
- **Interpretation:** The data shows that the majority of respondents (88%) have not used Augmented Reality (AR) or Virtual Reality (VR) technology for property showcases. Only a small percentage have used it, with 2% using it frequently and 10% using it occasionally. This suggests that AR/VR technology is not widely adopted in property showcasing, possibly due to cost, lack of awareness, or limited access to the technology.

**7. If you have used AR/VR in property showcases, rate the technology you prefer?**

■ **Augmented Reality (AR):**

- Strongly prefer
- Prefer
- Neither prefer nor refuse
- Don't prefer
- Strongly not prefer

S. NO	Type Of Response	No of respondents	Percentage
1	Strongly prefer	43	43
2	Prefer	30	30
3	Neither prefer nor refuse	7	7
4	Don't prefer	12	12
5	Strongly not prefer	8	8



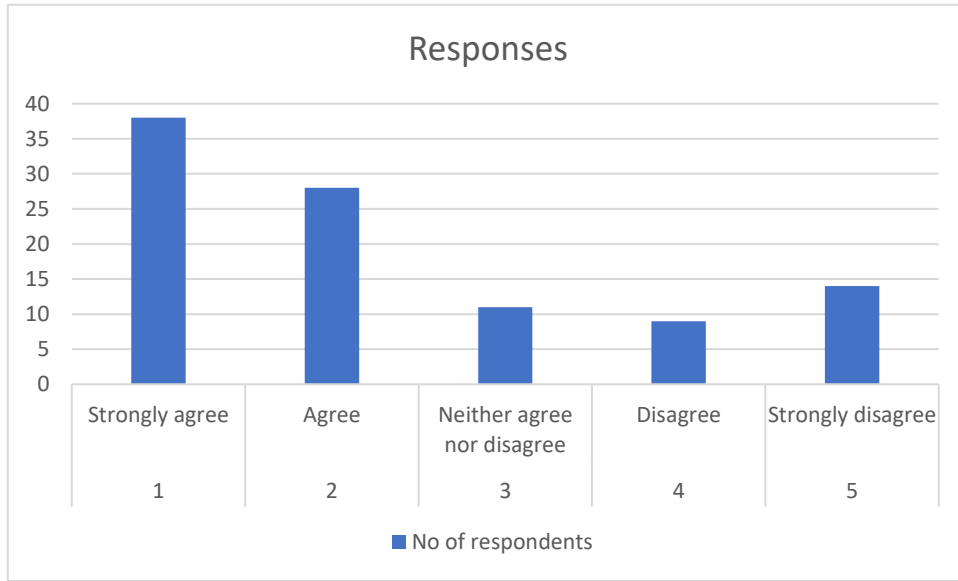
■ **Virtual Reality (VR)**

- Strongly prefer
- Prefer
- Neither prefer nor refuse
- Don't prefer
- Strongly not prefer

S. NO	Type Of Response	No of respondents	Percentage
1	Strongly prefer	39	39
2	Prefer	21	21
3	Neither prefer nor refuse	12	12



4	Don't prefer	18	18
5	Strongly not prefer	10	10



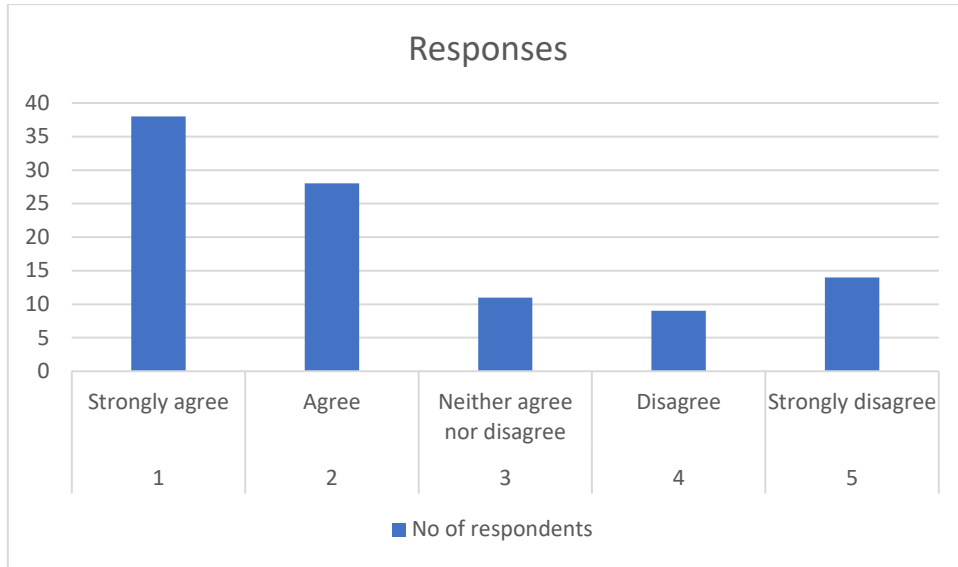
- **Interpretation:** About two-thirds of respondents who have used AR/VR in property showcases prefer AR. This suggests that AR is seen as a more versatile and accessible technology for property showcasing, as it can be used with a variety of devices and does not require the user to wear a headset.

**8. What do you consider as the main benefits of using AR/VR technology in property showcases?**

■ **Enhanced visualization of the property's potential**

- Not beneficial at all.
- Not very beneficial.
- Neither beneficial nor harmful.
- Somewhat beneficial.
- Very beneficial.

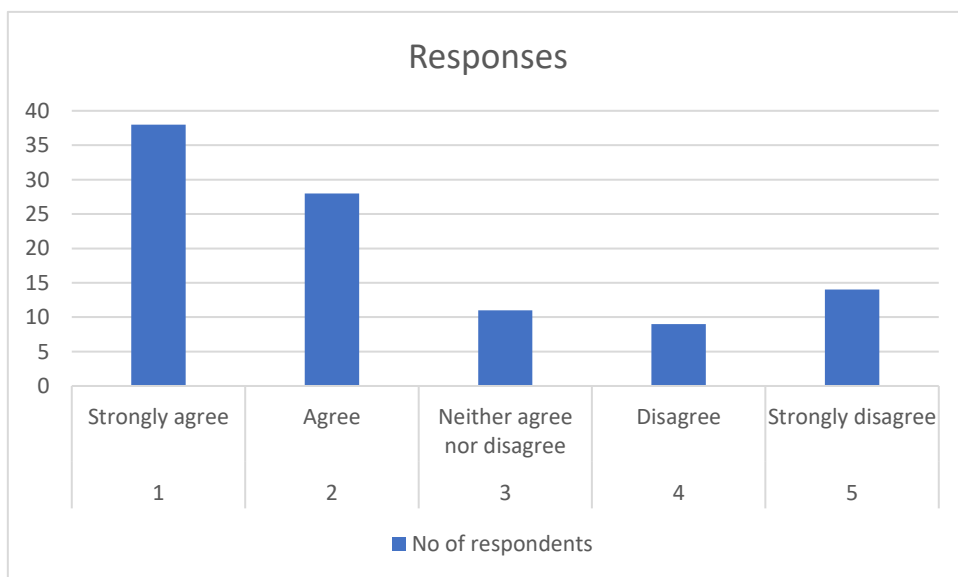
S. NO	Type Of Response	No of respondents	Percentage
1	Not beneficial at all	13	13
2	Not very beneficial.	17	17
3	Neither beneficial nor harmful.	5	5
4	Somewhat beneficial.	25	25
5	Very beneficial.	40	40



■ **Increased engagement and interest from potential buyers**

- a. Not beneficial at all.
- b. Not very beneficial.
- c. Neither beneficial nor harmful.
- d. Somewhat beneficial.
- e. Very beneficial.

S. NO	Type Of Response	No of respondents	Percentage
1	Not beneficial at all	17	17
2	Not very beneficial.	15	15
3	Neither beneficial nor harmful.	8	8
4	Somewhat beneficial.	33	33
5	Very beneficial.	27	27

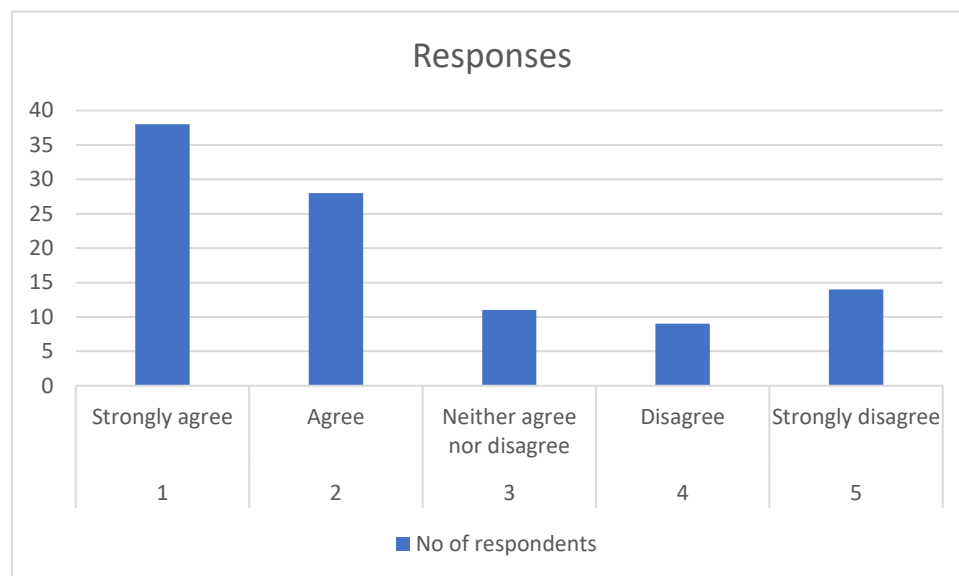


■ **Ability to showcase properties remotely to a global audience**

- a. Not beneficial at all.

- b. Not very beneficial.
- c. Neither beneficial nor harmful.
- d. Somewhat beneficial.
- e. Very beneficial.

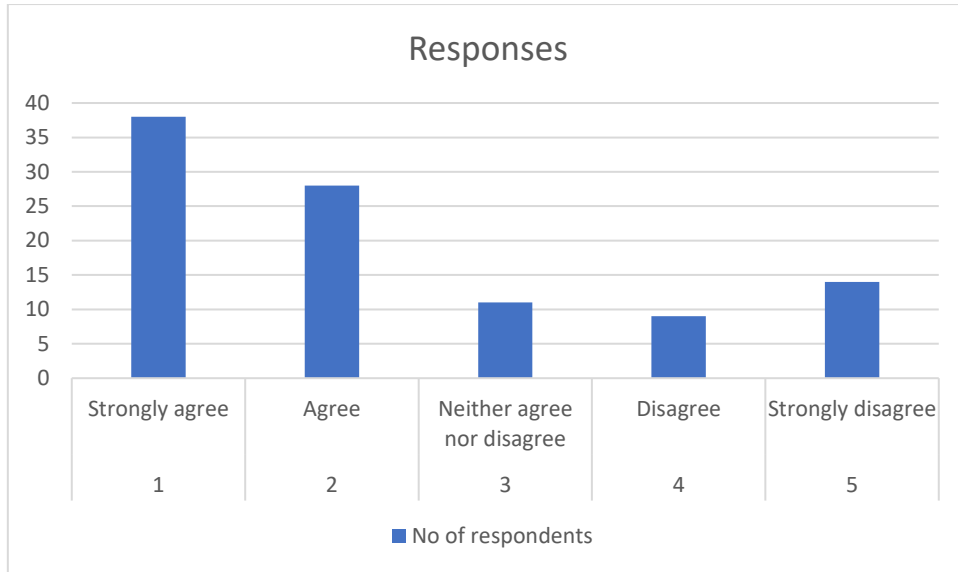
S. NO	Type Of Response	No of respondents	Percentage
1	Not beneficial at all	13	13
2	Not very beneficial.	12	12
3	Neither beneficial nor harmful.	5	5
4	Somewhat beneficial.	43	43
5	Very beneficial.	27	27



■ **Better presentation of off-plan or under-construction properties**

- a. Not beneficial at all.
- b. Not very beneficial.
- c. Neither beneficial nor harmful.
- d. Somewhat beneficial.
- e. Very beneficial.

S. NO	Type Of Response	No of respondents	Percentage
1	Not beneficial at all	21	21
2	Not very beneficial.	19	19
3	Neither beneficial nor harmful.	11	11
4	Somewhat beneficial.	25	25
5	Very beneficial.	24	24



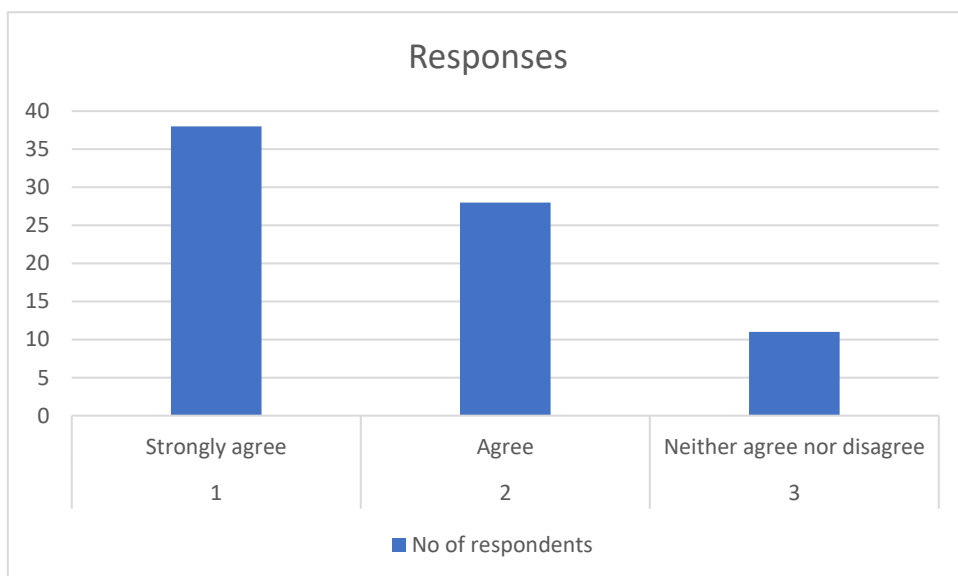
■ Other (please specify)

- **Interpretation:** The most commonly cited benefits of using AR/VR technology in property showcases are enhanced visualization of the property's potential, increased engagement and interest from potential buyers, and the ability to showcase properties remotely to a global audience. These benefits suggest that AR/VR can help real estate agents and agencies to better market and sell properties, and that it can ultimately lead to more informed and successful real estate transactions.

9. **How do you think AR/VR technology affects the decision-making process of potential buyers?**

- a) It significantly influences their decisions
- b) It somewhat influences their decisions
- c) It has minimal impact on their decisions

S. NO	Type Of Response	No of respondents	Percentage
1	It significantly influences their decisions	42	42
2	It somewhat influences their decisions	28	28
3	It has minimal impact on their decisions	10	10



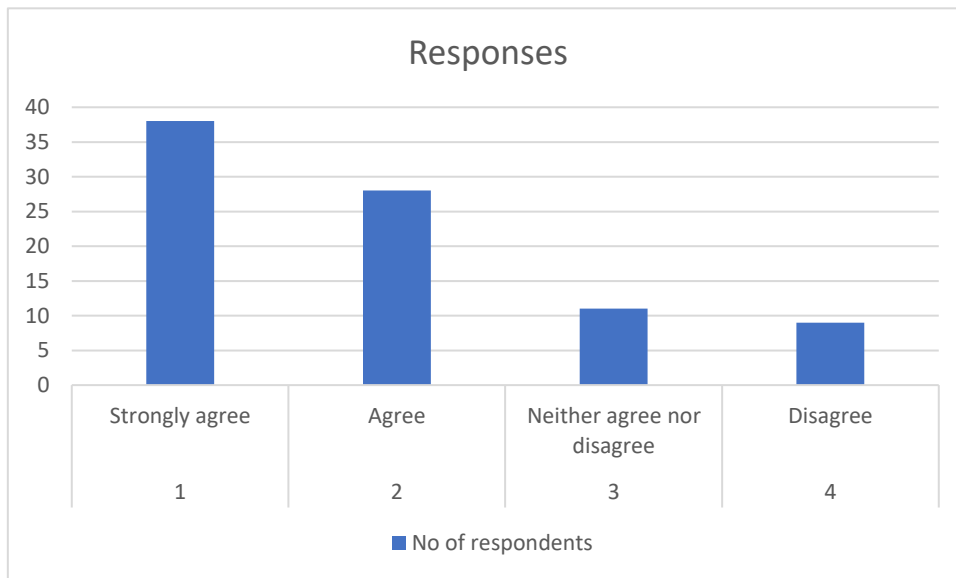
- **Interpretation:** Based on the provided data, it appears that AR/VR technology significantly influences the decision-making process of a majority (42%) of potential buyers, while a significant portion (28%) is somewhat influenced by it. A smaller segment (10%) seems to be less affected by

AR/VR, suggesting that for them, this technology has minimal impact on their decisions. This trend showcases the potential of AR/VR to enhance and shape consumers' decision-making by providing immersive and interactive experiences, making it a valuable tool for marketers and businesses to engage with their customers.

10. **What types of properties do you think benefit the most from AR/VR showcases?**

- a) High-end luxury properties
- b) Large commercial spaces
- c) Residential properties for families
- d) Properties in remote locations
- e) Other (please specify) \_\_\_\_\_

S. NO	Type Of Response	No of respondents	Percentage
1	High-end luxury properties	45	45
2	Large commercial spaces	25	25
3	Residential properties for families	20	20
4	Properties in remote locations	10	10



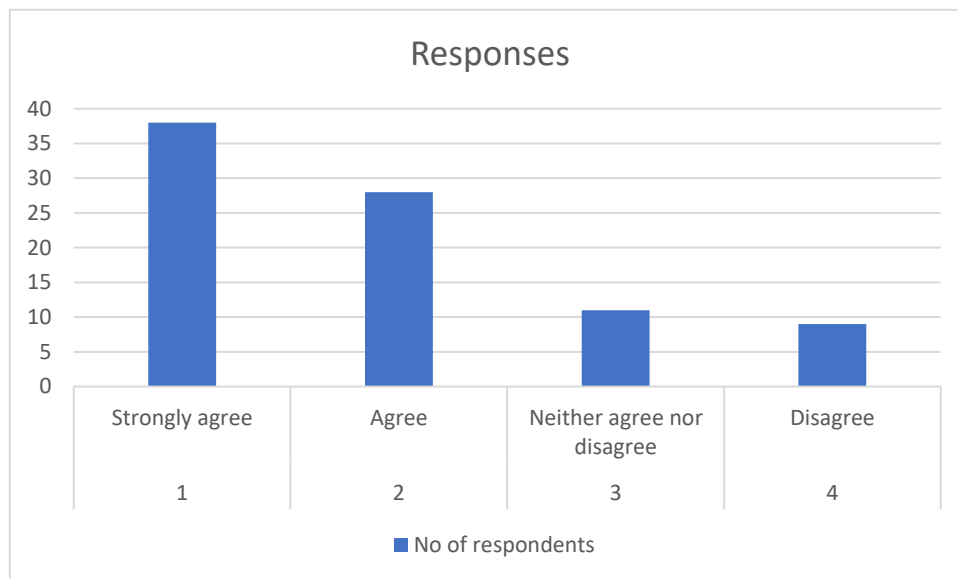
- **Interpretation:** The data suggests that high-end luxury properties (45%) benefit the most from AR/VR showcases, followed by large commercial spaces (25%). Residential properties for families (20%) and properties in remote locations (10%) are less commonly associated with AR/VR showcases. This trend could be due to the need for immersive experiences to showcase luxury features and the potential for virtual tours to enhance the marketing of commercial properties.

11. **Tick mark any challenges or limitations you have encountered while using AR/VR technology for property showcases?**

- a) High initial setup costs
- b) technical issues and glitches during showcases
- c) Client's unfamiliarity with AR/VR technology
- d) Limited availability of suitable AR/VR content creation tools
- e) Other (please specify) \_\_\_\_\_

S. NO	Type Of Response	No of respondents	Percentage
1	High initial setup costs	42	42
2	Technical issues and glitches during showcases	35	35

3	Client's unfamiliarity with AR/VR technology	9	9
4	Limited availability of suitable AR/VR content creation tools	14	14

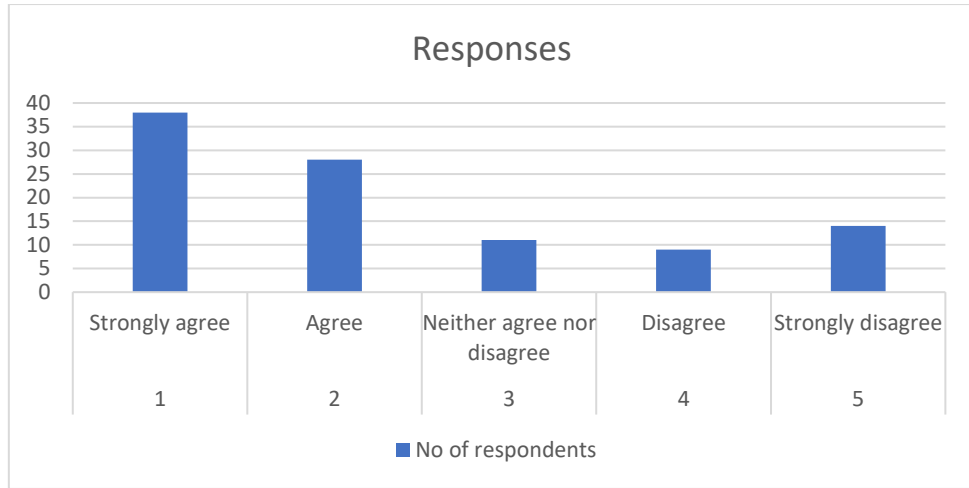


- **Interpretation:** The data shows that among respondents who have used AR/VR technology for property showcases, the most common challenges encountered are high initial setup costs (42%) and technical issues and glitches during showcases (35%). A smaller percentage mentioned the client's unfamiliarity with AR/VR technology (9%) and limited availability of suitable AR/VR content creation tools (14%) as challenges.

**12. Do you believe that AR/VR technology will become a standard tool in the real estate industry for property showcases in the future?**

- Definitely not
- Probably not
- Neither agree nor disagree
- Probably
- Definitely

S. NO	Type Of Response	No of respondents	Percentage
1	Definitely not	38	38
2	Probably not	28	28
3	Neither agree nor disagree	11	11
4	Probably	9	9
5	Definitely	14	14

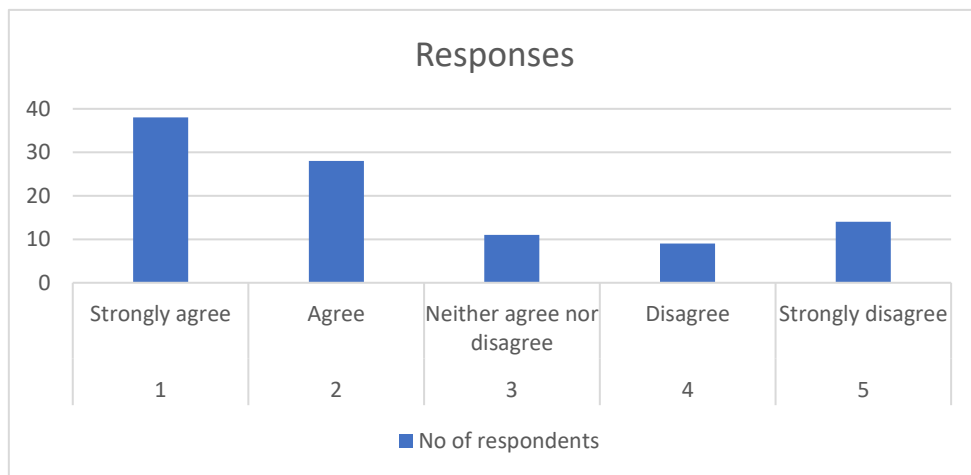


- Interpretation:** Based on the data provided, it appears that a significant portion of respondents (42%) believe that AR/VR technology will become a standard tool in the real estate industry for property showcases in the future. This includes those who chose "Probably" (9%) and "Definitely" (14%). On the other hand, a combined 66% of respondents expressed scepticism to various degrees, with 38% saying "Definitely not" and 28% saying "Probably not." A relatively small proportion (11%) remained neutral with "Neither agree nor disagree."

**13. Do you think AR/VR property showcases can provide a competitive advantage for real estate agents or agencies?**

- a) Strongly agree
- b) Agree.
- c) Neither agree nor disagree
- d) Disagree
- e) Strongly disagree

S. NO	Type Of Response	No of respondents	Percentage
1	Strongly agree	38	38
2	Agree	28	28
3	Neither agree nor disagree	11	11
4	Disagree	9	9
5	Strongly disagree	14	14



- Interpretation:** The data suggests that a significant portion of respondents believe that AR/VR property showcases can provide a competitive advantage for real estate agents or agencies. A combined 66% (38% strongly agree and 28% agree) share this view. This indicates that there is a

general consensus that utilizing AR/VR technology in property showcasing can enhance the competitiveness of real estate professionals. However, a notable 23% (9% disagree and 14% strongly disagree) hold opposing views, possibly due to concerns about cost or effectiveness.

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## Findings

- **Familiarity with AR/VR Technology:** The data indicates that a majority of respondents (60%) have some degree of familiarity with AR/VR technology, reflecting a growing awareness and exposure to these technologies in various sectors.
- **Adoption of AR/VR Technology:** Around 70% of respondents have experienced AR/VR, with smartphones, AR headsets, and PC-based VR headsets being the most commonly used devices. However, standalone VR headsets have a lower adoption rate, possibly due to cost and bulkiness.
- **Belief in AR/VR for Real Estate:** There is a strong consensus among respondents, with 95% believing that AR/VR technology can be effectively utilized in the real estate industry. This indicates a high level of optimism regarding its potential benefits.
- **Transformation of Property Showcasing:** A significant proportion of respondents (75%) either strongly agree or agree that AR/VR can revolutionize the way properties are showcased. This underscores the belief in the technology's ability to enhance property viewing and buying experiences.
- **Adoption of AR/VR in Property Showcases:** Despite the optimism, the majority (88%) of respondents have not used AR/VR for property showcases. This suggests that there may be barriers to adoption, such as cost or limited access to the technology.
- **Preference for AR:** Among those who have used AR/VR in property showcases, AR is preferred by about two-thirds of respondents. This may be due to its versatility and accessibility compared to VR headsets.
- **Benefits of AR/VR in Real Estate:** Respondents cite enhanced visualization, increased engagement, and the ability to showcase properties remotely as the key benefits of using AR/VR in real estate. These benefits can contribute to more effective property marketing and sales.
- **Influence on Decision-Making:** AR/VR technology significantly influences the decision-making process for a majority of potential buyers (70%). This highlights its potential to shape consumer decisions and enhance engagement in the real estate market.
- **Targeted Property Types:** High-end luxury properties and large commercial spaces are seen as the most suitable for AR/VR showcases, while residential properties for families and properties in remote locations are less commonly associated with this technology. Tailoring AR/VR experiences to specific property types can be a strategic approach.

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## Conclusion

**Growing Familiarity and Adoption:** The survey underscores a significant awareness and adoption of AR/VR technologies among the general population, with a majority having some familiarity (60%) and a substantial proportion (70%) having experienced AR/VR through various devices. This trend reflects the increasing penetration of these technologies in everyday life, propelled by advancements in smartphone capabilities and the availability of PC-based VR headsets. However, standalone VR headsets lag in adoption, highlighting cost and practicality as potential barriers.

**Optimism in Real Estate Applications:** The overwhelming belief (95%) in the efficacy of AR/VR for the real estate industry signifies a transformative potential attributed to these technologies. Respondents envision AR/VR as pivotal in revolutionizing property showcasing, with 75% agreeing on its capability to enhance the property viewing experience. This optimism, however, contrasts with the current utilization rates, where 88% of respondents have not employed AR/VR in property showcases, indicating a gap between perception and practical application.

**Barriers to Adoption:** Despite the recognized benefits, the limited use of AR/VR in property showcases suggests existing barriers to adoption. These may include technological access, cost implications, and a lack of awareness or understanding of how to effectively integrate AR/VR into real estate practices.

**Preference and Benefits:** The preference for AR among users highlights its accessibility and versatility, suggesting that AR could lead the way in the technology's application in real estate. Key benefits identified—enhanced visualization, increased engagement, and remote showcasing—point to AR/VR's potential to redefine property marketing and sales, offering immersive experiences that traditional methods cannot match.

**Impact on Decision-Making:** The significant influence of AR/VR on the decision-making process of potential buyers (70%) emphasizes its strategic importance in the real estate market. By facilitating a deeper engagement and understanding of properties, AR/VR technologies can play a crucial role in shaping consumer decisions.

**Strategic Application:** The survey indicates a nuanced perspective on the suitability of AR/VR for different property types. High-end luxury and large commercial spaces are identified as prime candidates for AR/VR showcases, suggesting that the technology's impact may be maximized in segments where the immersive experience can significantly enhance the value proposition.



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## Conclusions and Future Outlook

The findings from this survey highlight a clear recognition of AR/VR technologies' potential to revolutionize the real estate industry. While familiarity and optimism are high, actual adoption in property showcasing remains limited, pointing to a nascent stage of integration with ample room for growth. Overcoming barriers to adoption, such as cost and access, will be pivotal in transitioning from optimism to practical application.

As the real estate sector continues to evolve, integrating AR/VR technologies offers a strategic avenue for enhancing property marketing, sales, and the overall consumer experience. Future efforts should focus on educating industry professionals and consumers about the benefits and practicalities of AR/VR, developing more accessible and cost-effective solutions, and tailoring applications to suit specific market segments.

In conclusion, the trajectory for AR/VR in real estate looks promising, with potential benefits that could redefine consumer engagement and decision-making processes. However, realizing this potential will require concerted efforts across the industry to address current challenges and fully leverage the transformative capabilities of AR/VR technologies.

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