



The Reality of AR and VR: Highlights from a New Survey

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Methodology

- Online survey in March 2018 of 1,000 US consumers that identify themselves as gamers and who own some type of augmented reality or virtual reality capable device
 - Ages range from 18-74, with nearly 60% falling in the 18-34 range
 - 55% female, 45% male

Definitions

01

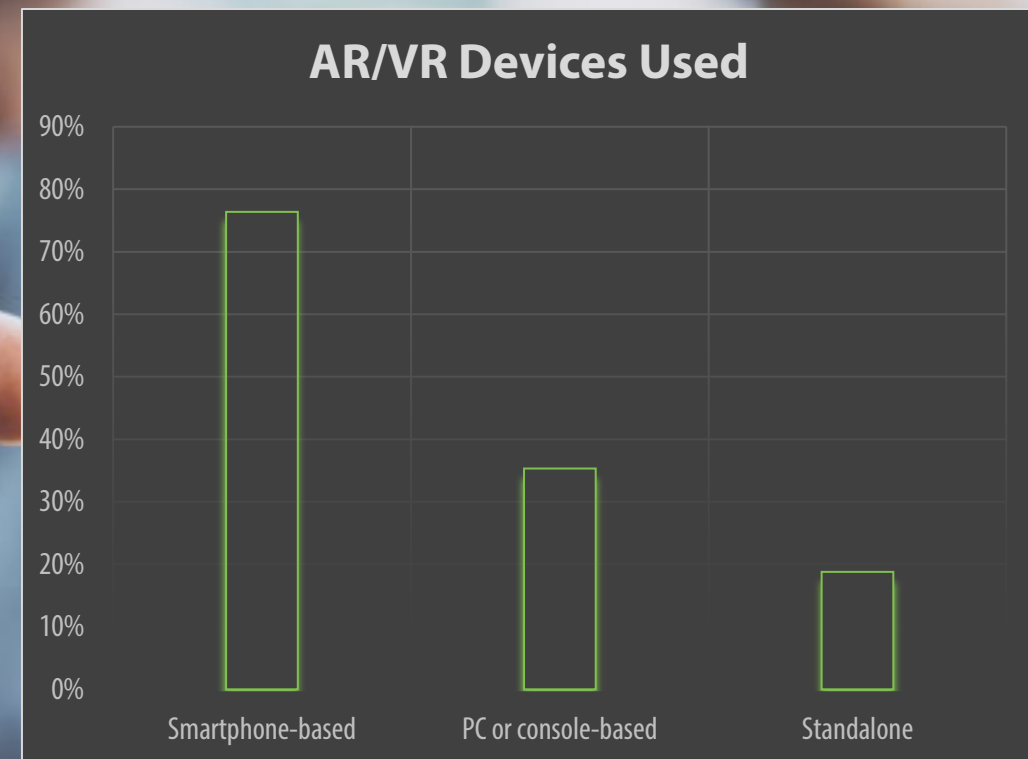
“For purposes of this study, we’re defining augmented reality (AR) as a visual experience that overlays digital information on top of your view of the world, while continuing to let you see the world around you. We’re defining virtual reality (VR) as a visual experience that replaces your whole worldview with a fully simulated one. (Some companies also use the phrase “mixed reality” but for this survey, consider that a form of virtual reality.)

02

A simple example of augmented reality is the Pokemon Go app for smartphones, but another example is the Star Wars Jedi Challenges headset and game released this past Christmas by Lenovo and Disney. Examples of virtual reality products include VR headsets for PCs such as HTC Vive and VR headsets for smartphones such as Samsung Gear VR.”

Smartphone-Based VR Devices Most Popular

About 1/4 of respondents had also tried more than one type

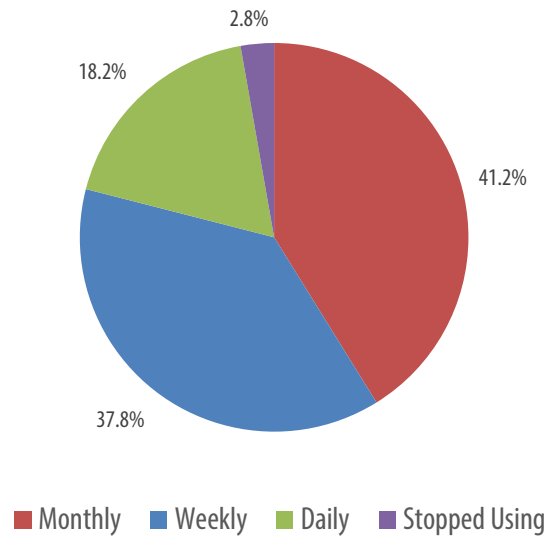


Fans of AR/VR Own Multiple Devices

1.4

Average Number of AR/VR Devices Owned

Usage Frequency



| Top 5 AR/VR Devices |
|-----------------------------|
| Samsung Gear VR |
| Sony PlayStation VR |
| Other VR Smartphone Headset |
| Oculus Rift VR Headset |
| HTC Vive VR Headset |

Most Devices Only Used Occasionally

41%

Measure Usage Monthly

38%

Measure Usage Weekly

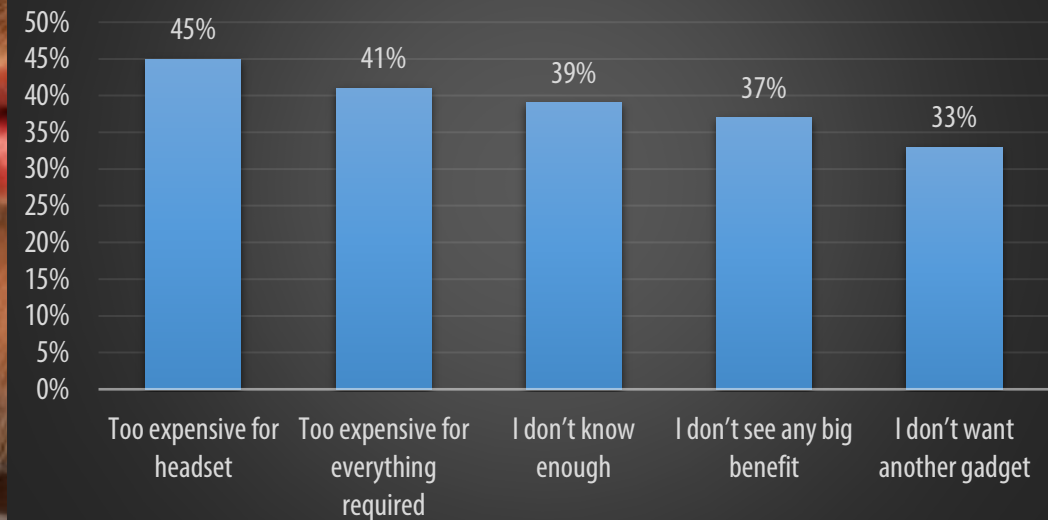
18%

Measure Usage Daily

Price is Major Factor for Non-Buyers

- Both the price of headsets alone and the overall cost of a total solution are major detriments to purchase for people who don't currently own an AR/VR device

Top Reasons for Not Buying AR/VR

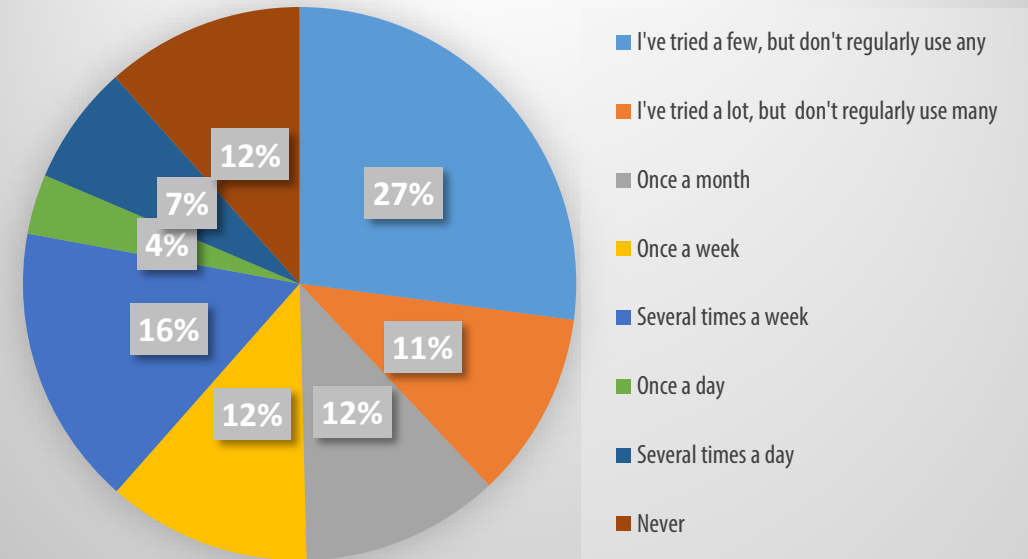




Smartphone-Based AR App Adoption is Limited

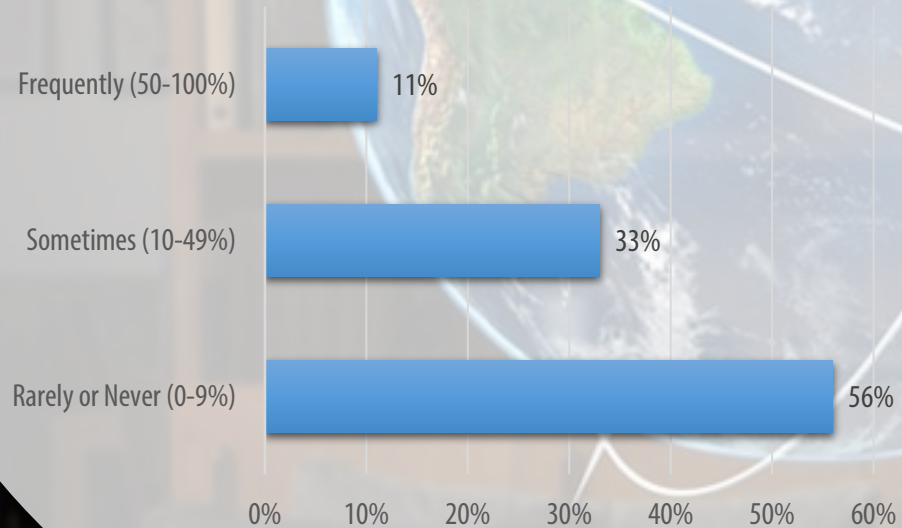
About ½ of respondents use them, but ½ don't

Smartphone AR Usage



VR-Inspired Motion Sickness is Still a Problem For More Than 40%

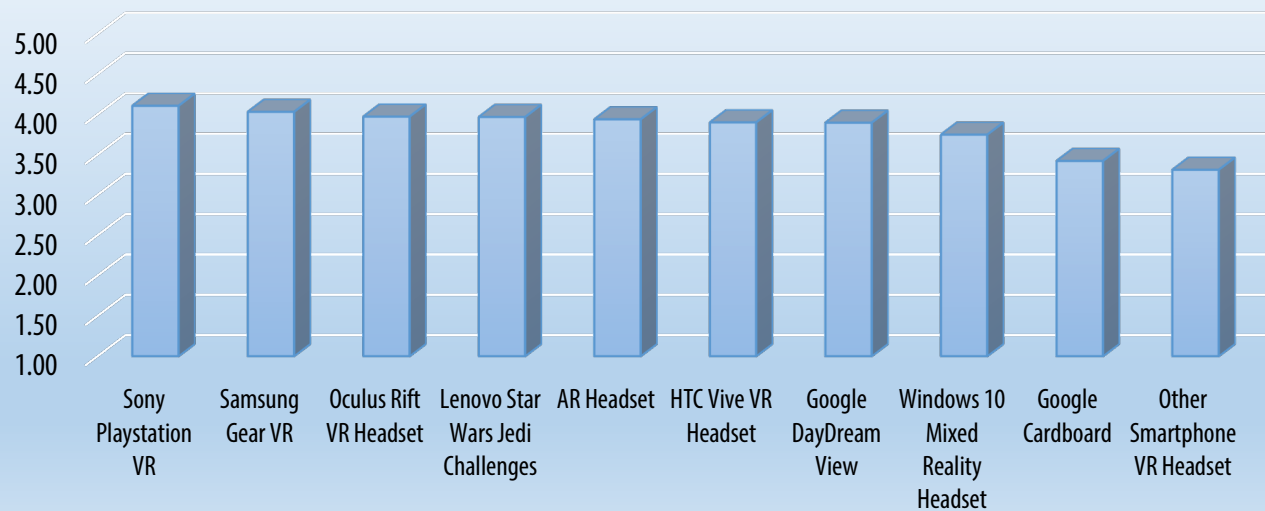
Feeling ill



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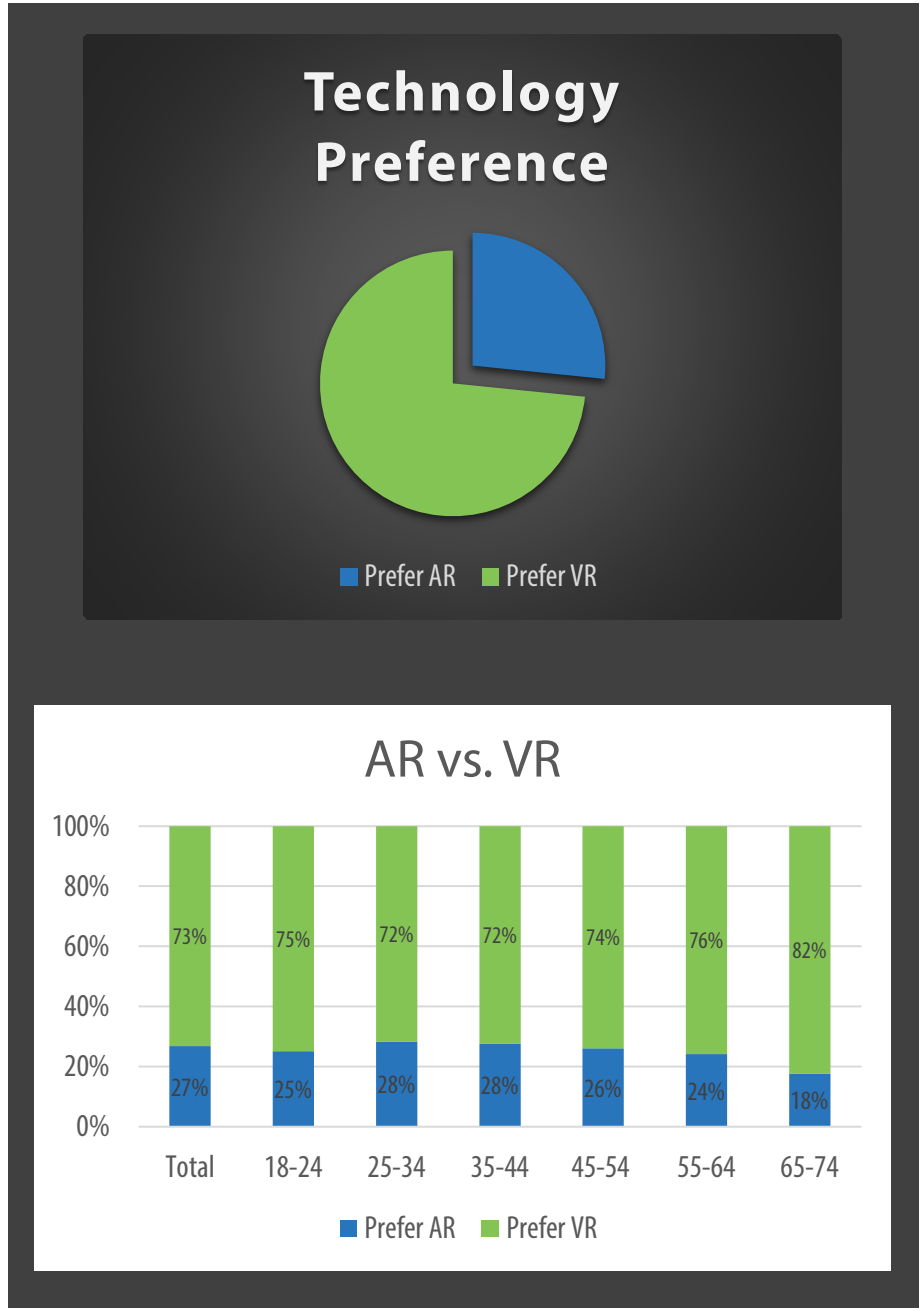
Satisfaction Among Owners Generally High

Satisfaction Levels
(5 is extremely satisfied, 1 is not at all satisfied)





Consumers Prefer VR 3:1 Over AR



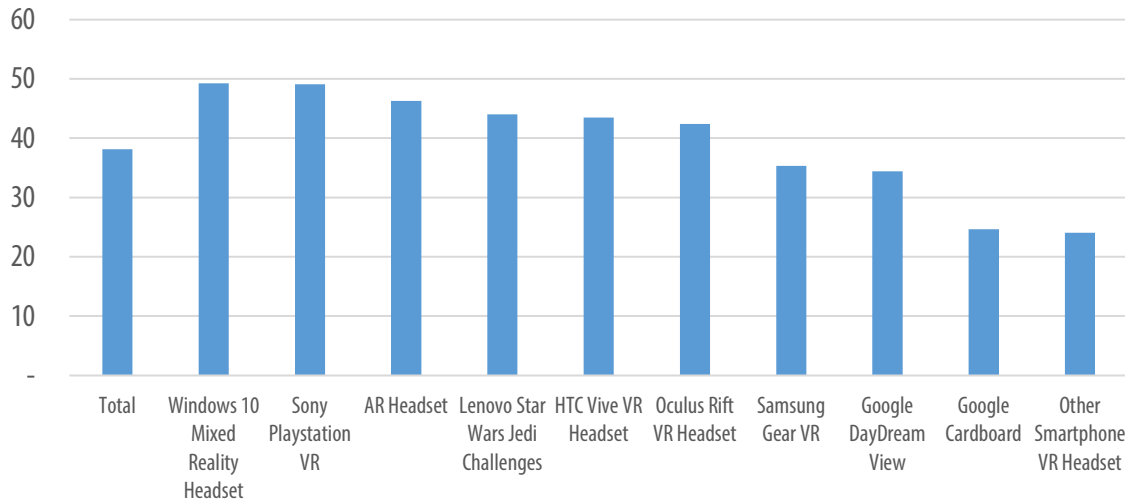
Gaming Still Dominates

55%

Respondents Who Said They Use Their Headset Primarily for Gaming

| Top 5 AR/VR Applications |
|--|
| Intensive Gaming (e.g., first-person shooters) |
| Casual Gaming |
| Virtual Travel/Exploration |
| View VR/AR/360 Degree Movies |
| General Entertainment |

Average Session Time (Minutes)



Usage Time is Relatively Long

38 Typical Session Length Minutes

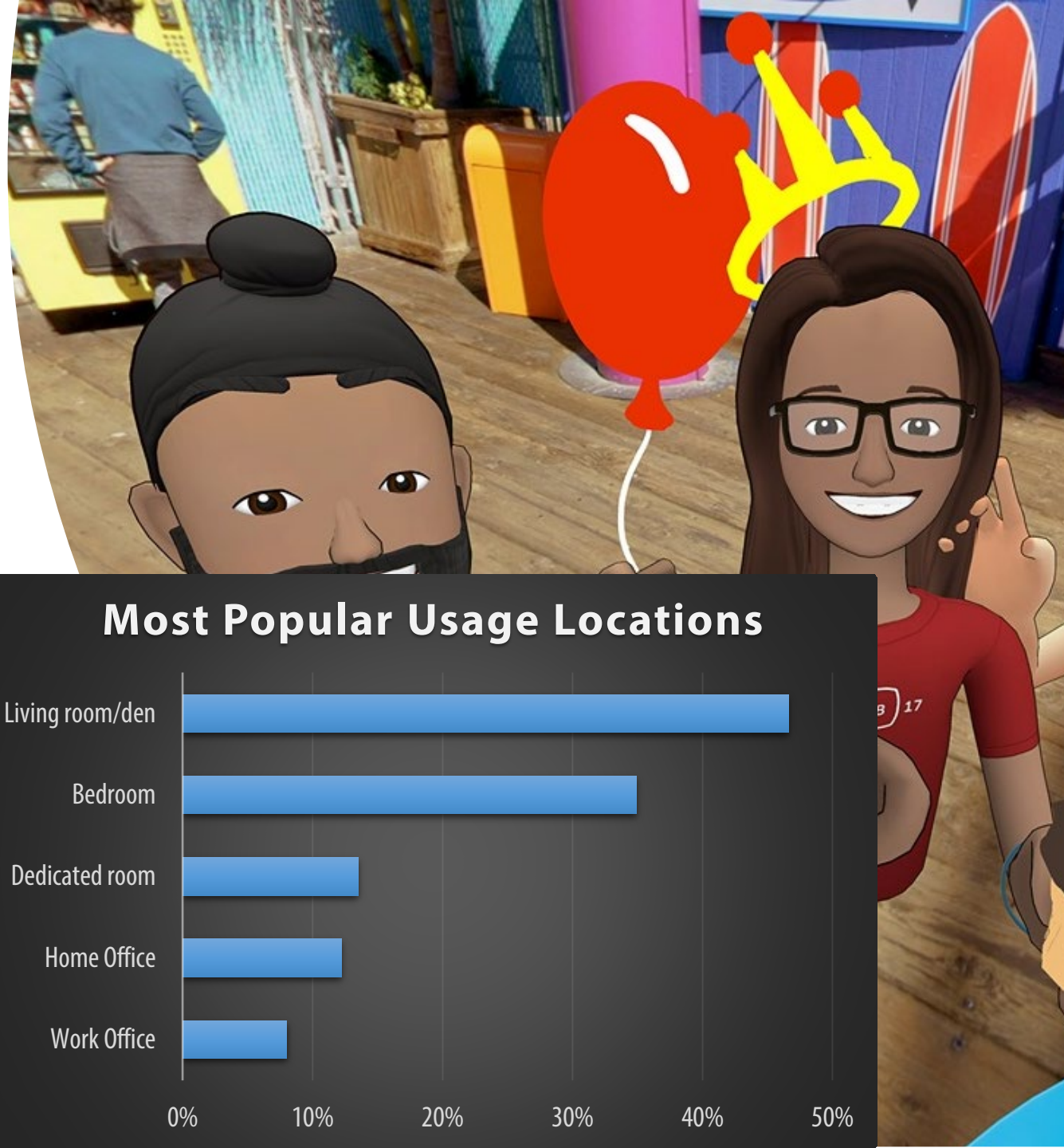
Strong Interest in Simulations and Virtual Travel

- People are interested in many different types of new applications they haven't tried yet
- Most simply don't know enough about the possibilities, however
- About one-third also raised concerns about time and potential costs



VR Starting to Become More Social

- A bit more than half of respondents use AR/VR headsets on their own
 - However, about one quarter say they use them with others who are also wearing AR/VR headsets
 - Another one quarter say they use them with others who are not wearing headsets
- Top places for using the devices are living room/den and bedrooms



Ease of Use Essential for Satisfaction

67%

Respondents Whose Favorite
Characteristic Was
Ease of Use

| Worst Characteristics |
|---------------------------------|
| Uncomfortable hardware |
| Poor/limited software choices |
| Makes me feel ill when using it |
| Hard to use |
| Poor visual experience |

| Favorite Characteristics |
|--------------------------------|
| Easy to use |
| High quality visual experience |
| Realistic overall experiences |
| Good overall value |
| Reliable operation |

Awkward Hardware Designs Still a Big Issue

27%

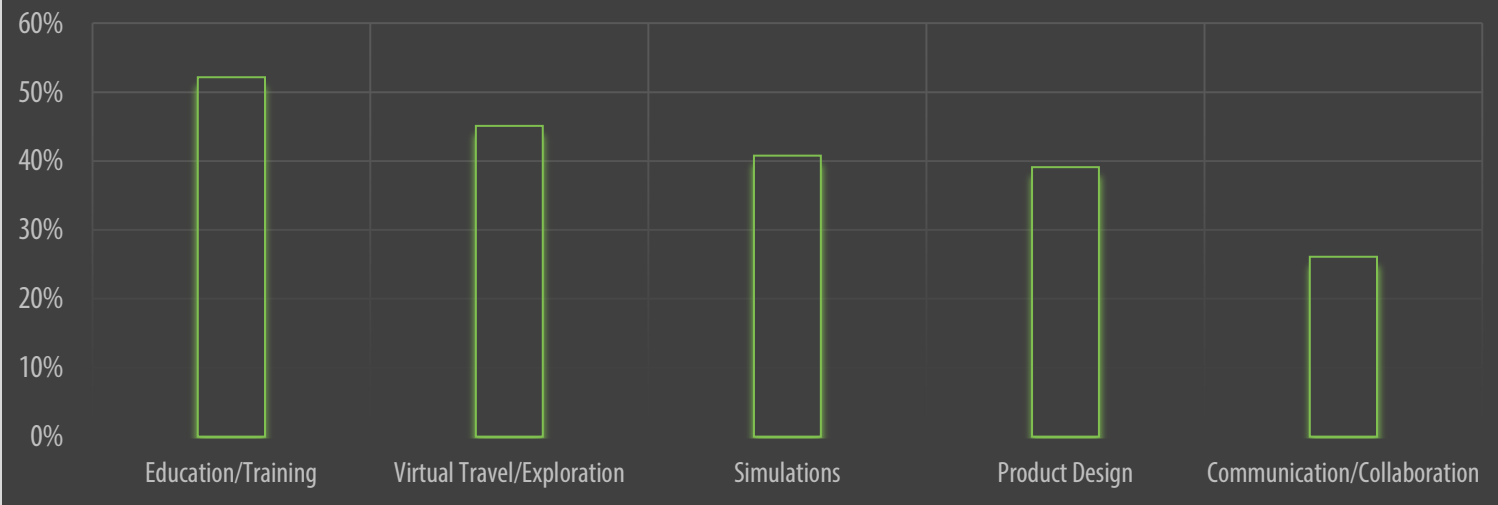
Respondents Whose
Biggest Concern Was
Uncomfortable
Hardware


Nearly 20% Have Used AR/VR at Work

Education and training apps were most popular



Top Work Applications





Consumers want convenience and comfort

46% Would Prefer a Standalone Device

Higher-resolution screens are most desired feature



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Final Thoughts

- Consumers love VR, but also know it's in its early days
- Future buyers are looking for smaller, lighter, more comfortable standalone headsets at prices in the \$200 range
- They're open to and excited for new types of applications, but need much more education to learn about them
- Gaming is important, but the primary reason for buying is to have new experiences



Contact



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For additional information and complete survey results, a 107-slide version of this report is available for purchase.



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