



How VR Creators Are Navigating the Space

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Background

As virtual and mixed reality devices begin to capture mainstream consumer interest, industry leaders want to understand how creators and developers are reacting to and using these new technologies. Creation of quality experiences has been a difficult challenge to overcome in this new market. Cognito, Inc. has conducted two studies to date - covering 2016 & 2017 with current VR/AR creators.

This report tracks 2016 findings as well as 2017 research and helps us understand the support environment, key challenges and critical needs for VR development and is essential to supporting a push to mainstream mixed reality usage.

Cognito will use this knowledge to help our customers and the industry at large.

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Objectives & Methodology

Objectives

Explore perceived challenges and opportunities within virtual reality spaces, especially as it relates to experience creators.

- Challenges related to software/hardware and others
- Expectations for 2018 in VR/AR
- Follow journey of creators over time



Recruitment & Methods

RECRUITMENT

- 2017 study participants are a subset of 2016 participants
- Low adoption rates presented a challenge for traditional recruitment models, therefore initial 2016 recruitment was exclusively from Facebook, Twitter, LinkedIn, Slack & participant referral.
- Facebook most effective at recruiting early adopters for original 2016 study

METHOD

- Qualitative in-depth interviews conducted via web/Skype
- 10 sessions
- 30-min interviews
- Mix of genders
- Mix of life stages: students, career-focused, retired

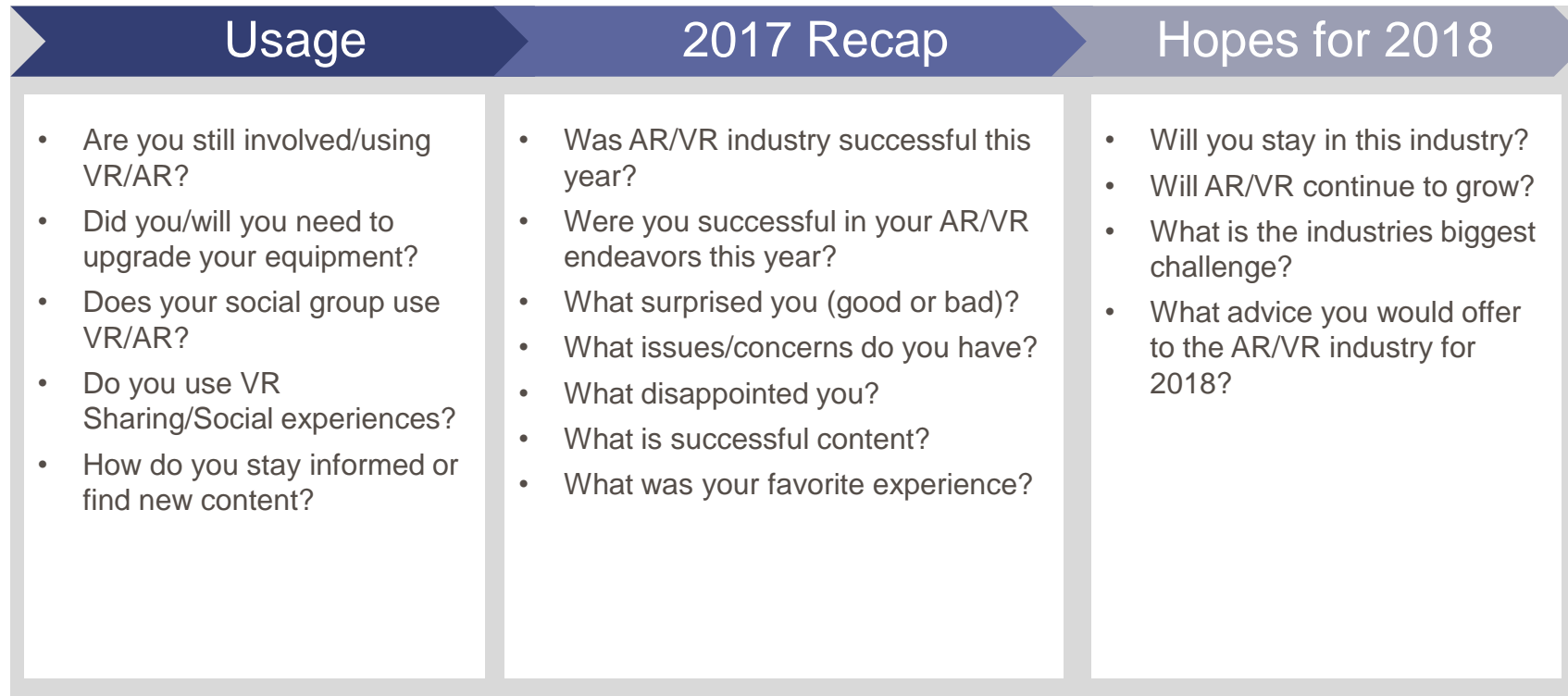
Participant Demographics



Research targeted early adopters of AR/VR who are creating VR/AR experiences – a mix of people with different jobs, interests, and life stages for a good population cross-section.

- Individuals who live & work in San Fran, NYC, PDX, Seattle, Texas, Canada, UK
- Mix of professions, interests or life stage:
 - **Commercial:** working in medical, fashion, film, & architectural fields to understand potential commercial applications
 - **Gamers/developers:** Expected early adopters of technology
 - **AR/VR experienced:** frequent AR/VR use

Discussion Flow



KEY LEARNINGS & IMPLICATIONS

Key Learnings

2016 Findings

Slower Growth

Overall fewer new entrants to VR creation space. Hack-a-thon attendance now includes more experienced attendees, Meet-ups are smaller and attended by consistent membership. Many creators are leaving the industry, have found positions within bigger companies or reduced their efforts to part-time. Overall less time spent in a headset with lower than hoped for consumer adoption.

Challenges Remain

Self-organizing communities are still strong, while more organized support created for learning & mentoring. Access to money and equipment is still an issue for the majority. Tools & hardware have improved, but critical hardware and software improvements are still needed.

Marketing Hopes

AR is easier to understand and requires less equipment for consumers – many hope AR will lead to more VR growth. Marketing for ReadyPlayerOne film and hype around wireless hardware are the hopes for VR future in 2018 – we still haven't found that killer, mainstream use.

Diversity Challenge

Gender disadvantages become apparent as VR playing field becomes level in knowledge and skill – male dominated networks promote males over females (creating fewer opportunities & money). Several incidences in the industry were discouraging (i.e. Robert Scoble, UploadVR).

Consumer Response

Consumer adoption continues to be low, while enterprise applications are gaining traction. PSVR relatively successful – money continually pushed towards gaming.

Implications

1

Diversity Requirement

- Industry leaders must learn from diversity mistakes over 2017 and make efforts to be more inclusive
- This is more than a social issue – it is necessary to increase consumer engagement with VR products
- Launchpads are successful in reaching under-represented – but there needs to be choices made at every level of an org to bring in broader perspectives

2

Realistic Growth

- VR hype in late 2015 & 2016 created an atmosphere of excitement and inspiration – but when expectations weren't realized many companies and investors remained cautious or took a step back
- Mass consumer adoption will be slower until technology improves, price points decrease and new experiences are developed
- There are few get-rich-quick scenarios; VR is like nothing before it – implementation of new structures, guidelines and processes will take time

3

Success in 2018

- AR experiences will have an impact on VR as AR is easier to understand – but isn't always better than VR. It depends on the usage.
- Hardware & Software still have room for improvement, especially development tools
- Ultimately – consumers come for the experiences. VR is not just another gaming platform, but an entirely new method of experiencing culture. A diverse range of industry players will be critical to engaging gamers and non-gamers alike.

Results Summary

Creator Personas 2017

Creators are....

Coders



Games as a template
Convert existing games and
experiences to VR

Makers



Learn as they go
Little to no coding
background
Inspired by making

Story Tellers



Create new meaning
Little to no coding background
Bring film or journalism skills

Creators are exploring....

Empathy/Travel



Allow others to truly experience other lives and possibilities

Social/Live



Create new spaces for collaboration, communication and group live entertainment

3D Spaces



Convert existing processes in architecture, fashion design, etc.

Training



Low Incidence/High risk, high expense or involving full body communication

Sexual Health



Construct safe places for sexual interactions including porn

Medical



Enhance health & well-being, cure ailments, alleviate pain or stress

Retail/Marketing



Engage consumers in new ways of experiencing products

And games...

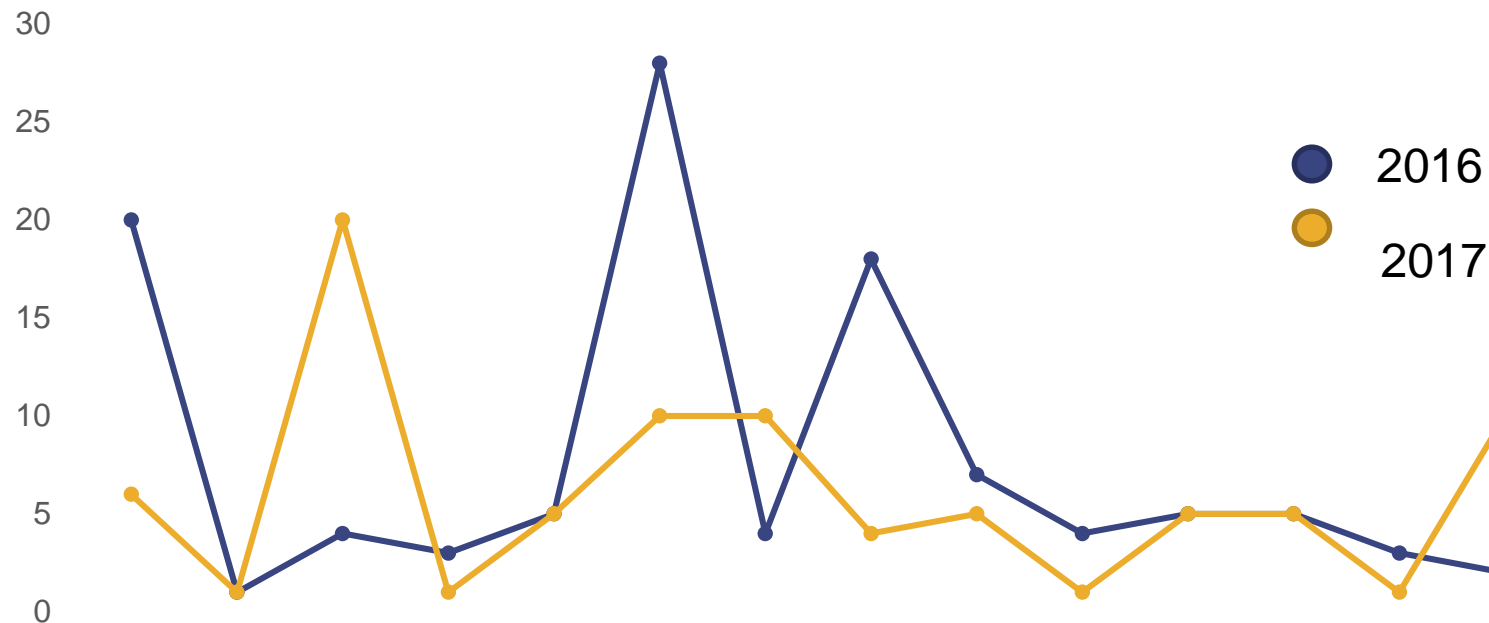
Reduced Headset Usage

Less Usage in 2017

Overall less time spent in a headset.

- Less time having to learn, solve problems, test, etc.
- Less excitement around newer experiences to try
- Distribution channels while familiar to gamers – not as common to non-gamers—it takes effort to seek out new content. Some experiences go unnoticed.

Time Spent per Week in VR/AR



VR Creator Engagement Down

Fewer Creators in 2017

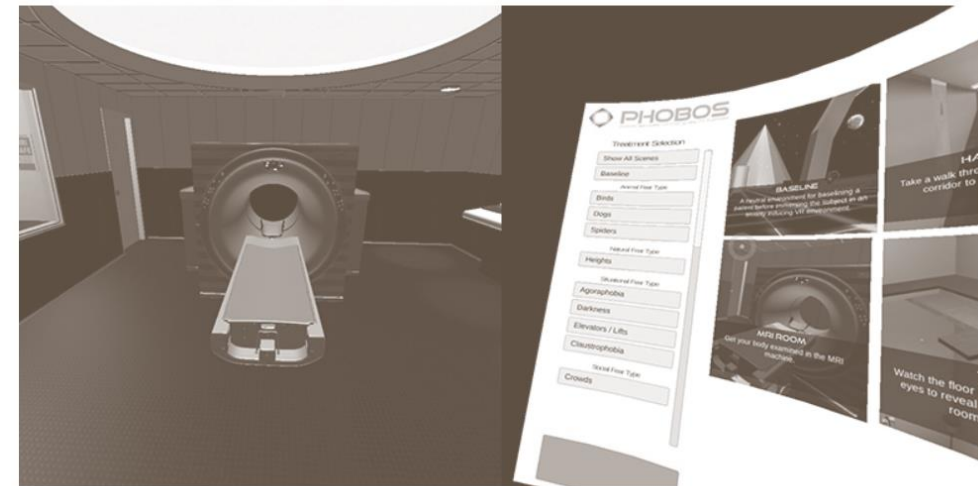
- *Slower than hoped for growth created a constraining of available cash.
- Many left the industry/community and are taking a wait and see approach
- Some moved to bigger companies (Google, Magic Leap, etc.)
- Several reduced their efforts to part-time

“I’m still working – but on the side. I’ve had a lot of success, but its not enough – I can’t make enough to go full time” ~Female, Maker

**Some are confident they will be working in this industry through 2018*

2016 Oculus Launchpad

Francisco A. Rojas, Ph.D., *PHOBOS*



Results Summary

Slower Growth

Realistic Expectations

Over Hyped to Slower Growth

2016 was about “hockey stick growth” – but 2017 met with reality – slower growth. No quick cash and the money is spent mostly in gaming or Magic Leap (who gets the lion share of VC investments)

“It was really unrealistic – and when {the industry} didn’t meet those predications, the internet went crazy – but I’m glad, I want us to be realistic” ~Female, Storyteller

**All perceived VR industry to be somewhat successful over the year 2017 – even though projections weren’t met*

VR headset market poised for hockey-stick growth

Michelle Clancy |



Fewer New Entrants

Fewer New People

As VR hype settles and focuses on AR, VR creators get more focused

- Hack-a-thon & conference attendees are more experienced & knowledgeable
- Meet-up creation slows, existing Meet-ups are smaller with more consistent membership.
- Reddit new subscribers slow, fewer posts (especially on trouble-shooting)

/r/virtualreality, /r/oculus, /r/htcvive peak in growth June 2016, slowing since

“Hack-a-thons last year had people with no experience – now groups meet to work on specific projects. We are all more knowledgeable.”

~Male, Maker



Find a niche or move on

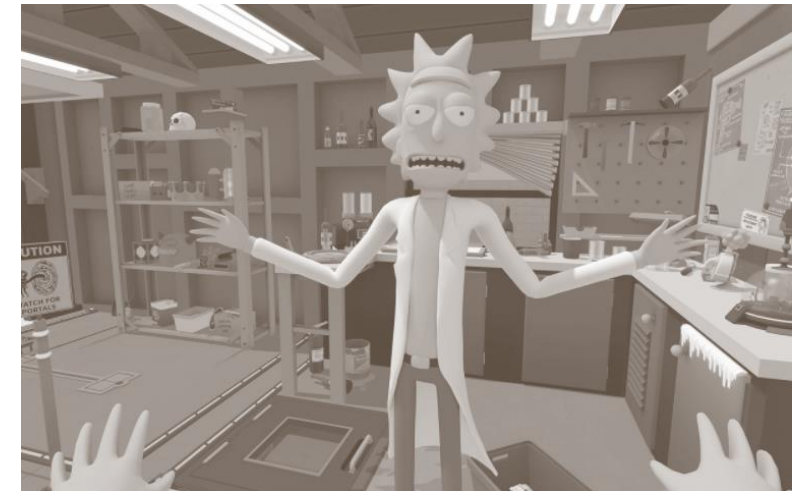
Finding Work

Finding funding is an issue for most, while some found success at bigger companies or with entrepreneurial funding paths.

- Experimental VR apps bought-up by bigger companies
- Some big players cut the VR cord– (CCP of EVE Valkyrie)
- A few creators forced to move operations to part-time
- Some jumped to AR as hype around Arkit-Apple & ARCore-Google grew.

“Dev’s from my local VR meetup had their app bought out by Google – but our team just couldn’t get funded (medical based)”
~Female, Maker

Google Acquires Owlchemy Labs



Results Summary
Challenges Minimized in 2017

Knowledge Support Grows

Opportunities

Knowledge support & opportunities grow, but many still need help

- Self-organizing communities are key in offering members learning and mentoring opportunities
- Support grew from hardware manufacturers, VR specific venture capitalist funds and non-profits focusing on diversity.



“I’m no longer spending time figuring out how to do things in VR - and I taught some workshops over the year to help others along” ~Female, Storyteller

Technology Improves

Tools & Hardware

Gains made in technology, but improvements are still key to future growth

- Software tools became more integrated – streamlining development lifecycle and reducing learning curves
- Improvements in input control, cable assemblies and reductions in PC requirements relaxed constraints on consumer hardware
- Hardware is slightly more affordable
- *It is still a challenge to wear goggles on your face

Wireless Rift



“Everyone wants VR to be the holodeck – but the hardware just isn’t there yet” ~Male, Coder

Results Summary

Diversity Challenge

Gender Divide

Discrimination becomes apparent

Gender disadvantages become apparent as knowledge and skill equalize across creators

- Male dominated networks promote males over females
- Noticeably fewer opportunities, money and access to hardware for females and under-represented populations
- VR/AR continues to maintain a high percentage of female evangelists

“My social groups in VR started out more equal, it was refreshing to see so many women getting involved! – but this past year, I saw men get more opportunities and even more equipment” ~Female, Storyteller



Tumultuous Year

Tech World Tendencies

VR bro environment mirrors tech world

- Several incidences in VR continue to perpetuate sexual discrimination (i.e. Robert Scoble, UploadVR, Rec Room & QuiVR Incidents).
- Improvements made in Virtual Defenses to protect users in-world from harassment

UPLOAD



Robert Scoble,
VR tech
blogger,
accused of
sexual
misconduct

“In the end – it was the scandal that made me leave—it was really disappointing” ~Female, Storyteller

Empathy & Perspective

It's not all about
gamer guys

Gaming focuses on a relatively small niche of users, but VR has the potential to reach a broader range

- More perspectives are critical to building more inclusive experiences
- Most speakers at VR/AR conferences are still white guys
- 2016 Oculus Launchpad – 8/10 were men



Nonny de la Peña, CEO, Emblematic Group

<https://www.engadget.com/2017/10/02/nonny-de-la-pena-eugene-chung-the-engadget-experience/>

*“we need more women,
people of color, all from
diverse backgrounds to
really reach our potential
in this space” ~Male, Coder*

Results Summary

Consumer Response

Low Adoption

Low Awareness

Consumer adoption continues to be low with promising gains in PSVR

- Hardware price points remain relatively high
- Distribution channels are limited (Steam, Viveport, Oculus, Playstation Store, Film Festivals)
- 360Film, liveVR appealing but not readily available to casual/new viewers
- Content is mostly one-and-done, demos or zombie games (not as appealing to new non-gaming users)

“There seems to be a proliferation of under-average content” ~Male, Coder



YouTube VR
Google LLC Entertainment
Teen
Contains ads
This app is compatible with

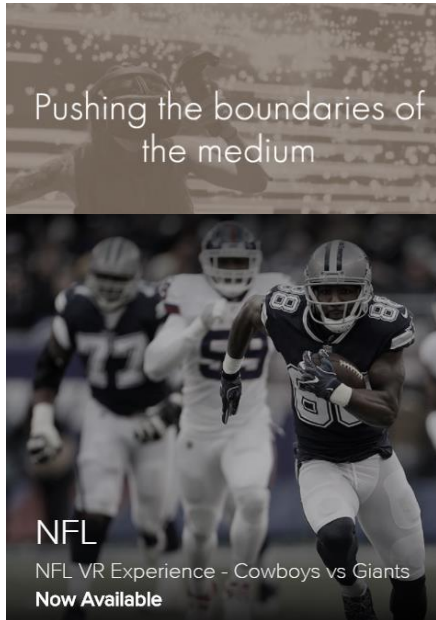
Social & New Perspectives

Social Spaces

Experimental social experiences have broad appeal to non-gamers

- Instead of focusing on new ways communicate (VR Skype) – they provide a space to gather
- Physically demanding experiences appealing for some (full body tracking for gestural communication)
- Live events provide new ways of experiencing familiar activities (NFL, NHL, NBA, Musical events, etc.)

TheWAVEVR Live DJ events



NEXTVR Live Sports

“Most engaging VR {for me} is VR Arcades, live events, concerts, films— these are more social, physically demanding experiences” ~Male, Maker

PSVR & Mobile

Gaming Gains

No surprise that gaming finds a foothold

- PSVR has been relatively successful in terms of purchase and broadening awareness
- There is mixed opinion on the demographic that finds PSVR most appealing.
- Requires ownership of Playstation 4 & PS4 camera to work



“PSVR has been relatively successful in getting kids & teens aware of VR, but it’s not the next Nintendo”

~Male, Coder

Training Makes Sense

Training

Enterprise, medical tools and training VR/AR experiences are gaining traction

- Low-incidence/high-risk, expensive or dangerous environments benefit from VR environments
- Buyers need to be educated on all aspects of hardware, software and usage
- New managing bodies (VRARA, IEEE) evolve to monitor quality & develop standards in these areas

“My clients {in low- incidence, high-risk training in VR} still need to be hand-held and I have to educate them. But once they get it – it’s a perfect match.” ~Male, Coder



Successful Examples

Most
Mentioned

VR Arcade experiences

- Ghostbusters

Social/Live Experiences (lack of players/participants hinders growth)

- The Void – DJ concert experience
- The Wave
- Rec Room
- Live NBA games

VR Films (360)

- Pearl
- Allumette
- Welcome to Aleppo

Exploring 3d Spaces

- Google Earth VR
- Tiltbrush – less appealing over time – “it feels childish now”
- Real Estate / Airbnb

Work / Training / Medical

- 3d Architecture
- Flying / high-risk / expensive or dangerous environments
- Dementia, Autism, PTSD, Yoga, Surgery training
- From sexual health to pornography – sex sells on VR

Results Summary
Hopes for 2018

Build Awareness

Marketing

Many look to marketing to build awareness and increase consumer adoption

- ReadyPlayerOne movie releasing in 2018 could be inspiring or disappointing
- As big brands take on VR in 2018 the hope is these usages will trickle down to consumers

Walmart trains in VR



*“Demoing {my app} in person
is THE key to product success
– I need to put it in front of
people because they haven’t
seen anything like
it...well...except real life”
~Female, StoryTeller*

It's Still Content

What to do with it

Long-term VR growth isn't gaming

- Most VR experiences are still games - hoping to build on gamers as early adopters
 - Most believe the value of VR is social 3d spaces with opportunities to experience new perspectives and environments
 - Many existing experiences are copies of non-vr experiences and don't use the technology to its advantage
-

Another zombie shooter



“we still need to land that content formula that can replicate to scale – its not gaming” ~Female, Coder

Hardware

Headsets

Price points will come down and technology will improve

- Majority believe new entrants to the VR headset market will continue to drive prices down and awareness up
- Improvements most looked for in 2018: Headsets need to be cheaper, lighter, include inside-out tracking, with fewer to no dependence on an external PC



“I think these are coming along – but - Wireless – inside out tracking – 6dof - we really need these improvements – and also lower prices” ~Female Maker

AR Hype Begins

Easy to understand

AR is easier for consumers to understand, requires less equipment and they have been using AR apps for awhile (i.e. Pokémon go)

- Most in the VR industry are still committed to VR for its specific usages and appreciate AR for its specific use
- Many hope recent AR hype and attention on AR, will spill over to VR

“I have so much work in AR, clients wanting to make an AR app, but it doesn’t always make sense, they just jump on the bandwagon” ~Male, Coder



BACKUP

2016 RESULTS SUMMARY

2016 Findings

Content Creation Challenges

Self-organizing communities are taking the place of organized support. Money, Support, Finding a path within game development and SDLC is needed.

Technology Obstacles

Most felt challenges would be resolved over time, but included clunky hardware & software tools

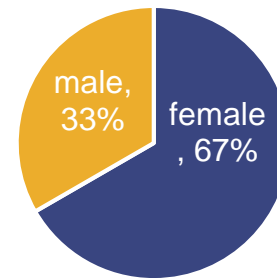
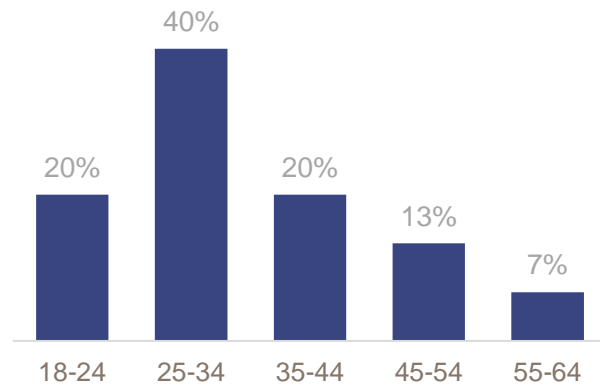
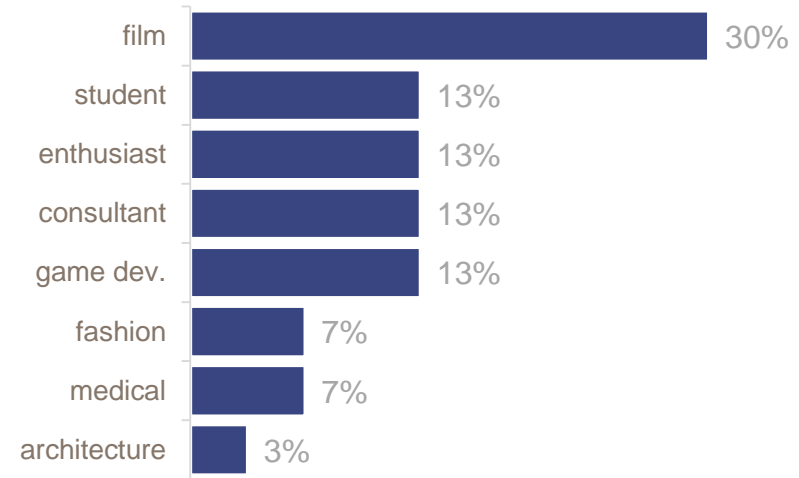
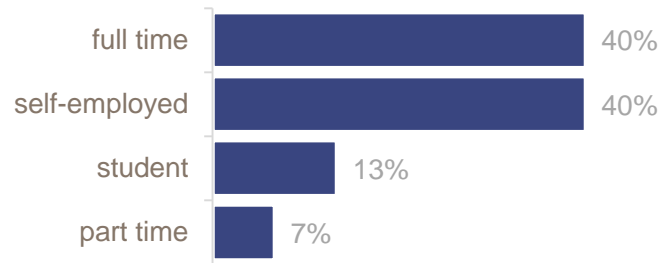
Monetizing VR

Consumer expectation of free apps doesn't pay the bills, distribution channels differ from smartphone apps

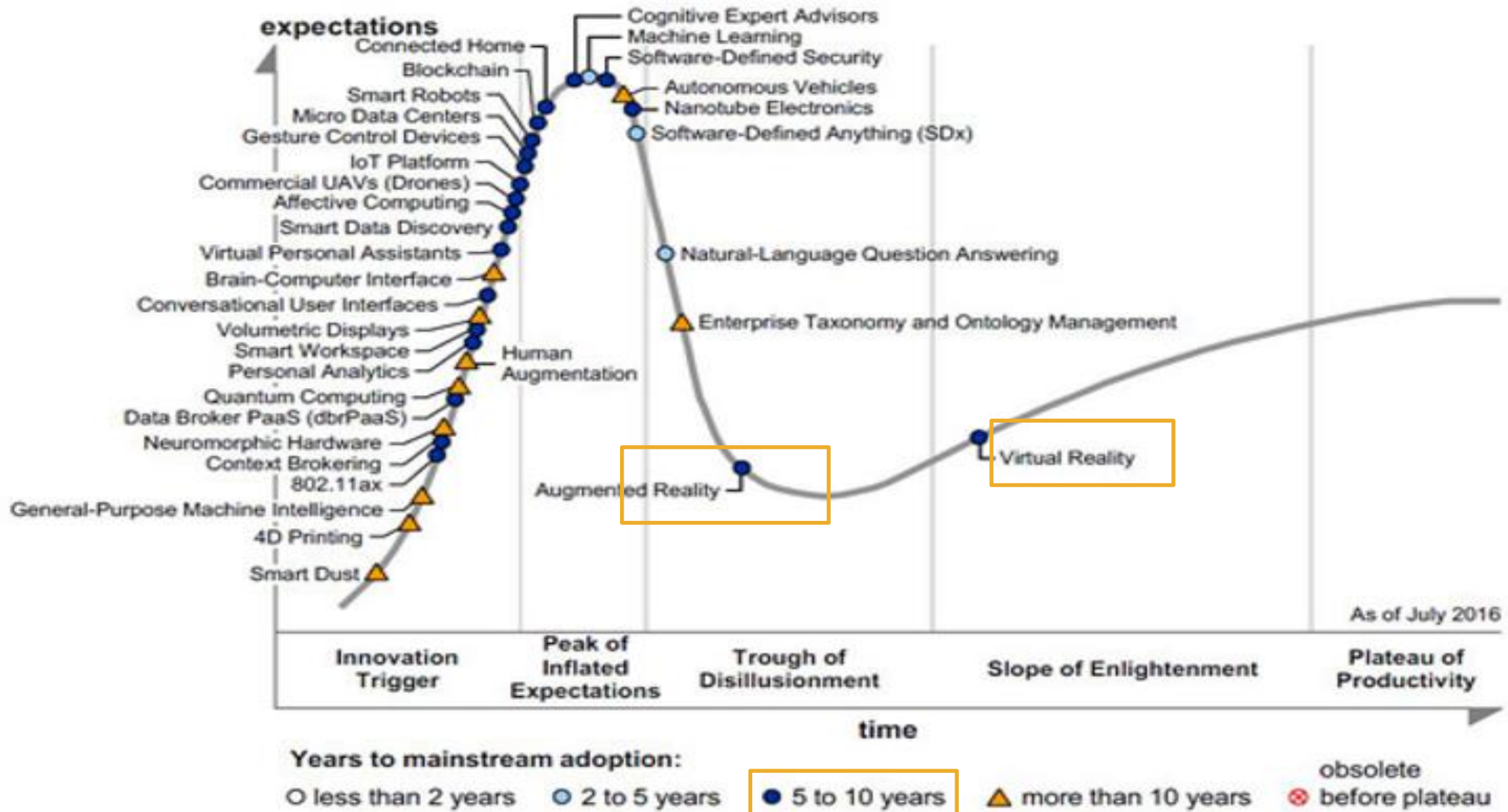
Consumer Response

Grass root effort inspires early adopters while commercialization, lack of curation & hype is ineffective for mass appeal

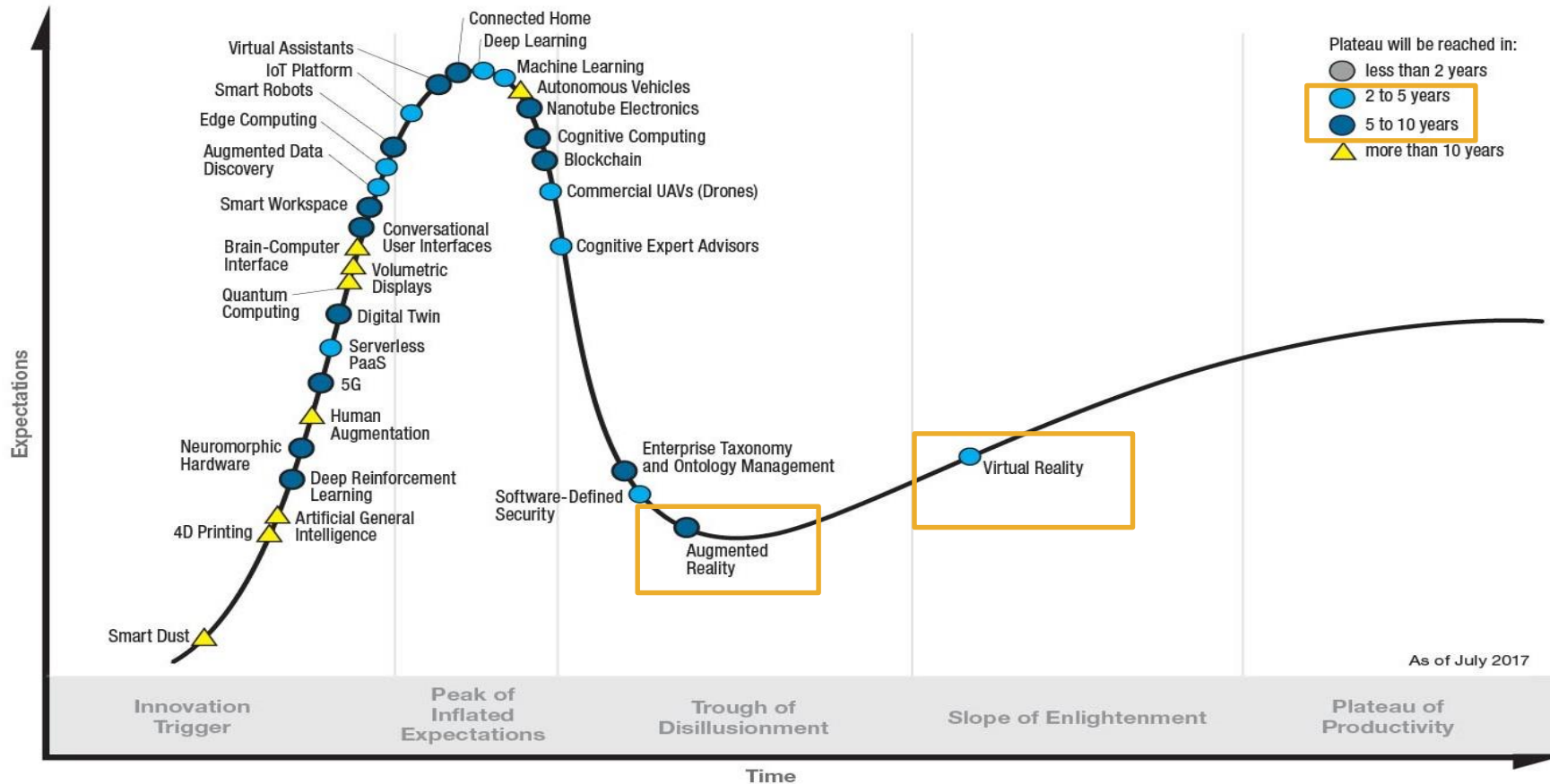
Demographics 2016



Gartner's Hype Cycle 2016



Gartner's Hype Cycle 2017



gartner.com/SmarterWithGartner

Source: Gartner (July 2017)
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Do you have a burning question?
We would love to partner with you to find
the answers....

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