VR, Why Should You Care?

Virtual Reality Industry Forecast
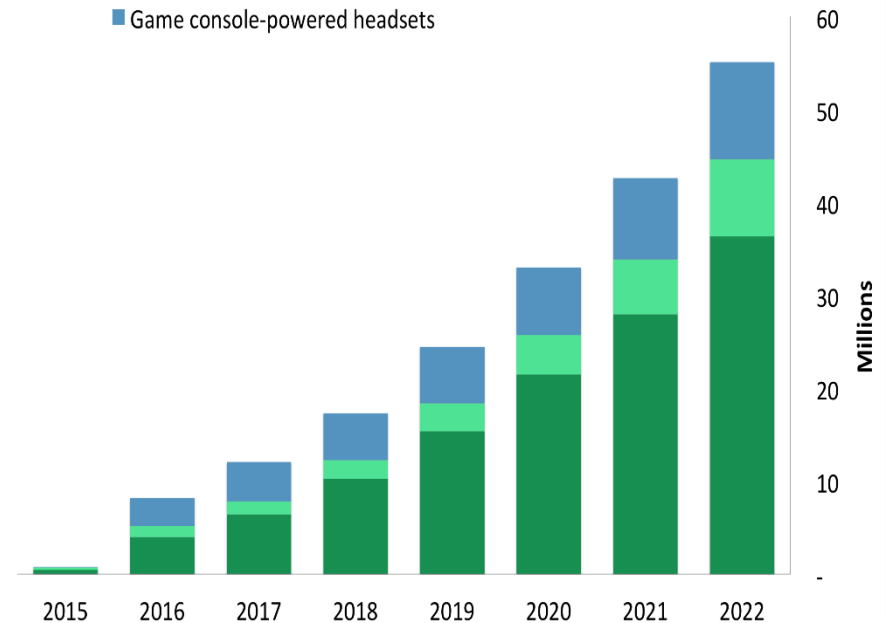
The VR industry will grow into a major global marketplace by 2021

$7.2B — 2017
$15.3B — 2018
$29.1B — 2019
$51B — 2020
$74.8B — 2021

FORECAST: Global VR Headset Shipments

By Category

- Smartphone-powered headsets
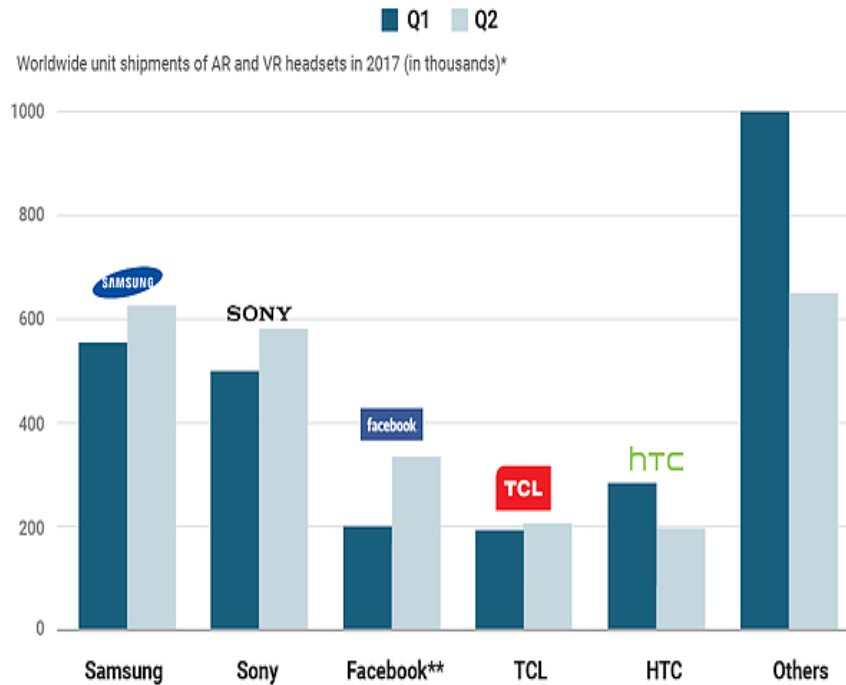- PC-powered Headsets
- Game console-powered headsets

Millions

60
50
40
30
20
10
-

2015 2016 2017 2018 2019 2020 2021 2022

BI INTELLIGENCE

Source: BI Intelligence Estimates

Have are we doing?

WHO LEADS THE VIRTUAL REALITY RACE?

Q1   Q2

Worldwide unit shipments of AR and VR headsets in 2017 (in thousands)*

NOTE: * excluding simplistic headsets that do not have technology built in, e.g. Google Cardboard
** Facebook acquired Oculus VR, maker of the Oculus Rift virtual headset, in March 2014

VR software and services revenue
2016: $0.3B | 2017: $1.3B

$97M | $403M
North America

$82M | $335M
Europe

$124M | $430M
Asia

$17M | $62M
Latin America

$11M | $38M
Rest of world

SuperData Research VR Data Network, February 2017

Why Virtual Reality?

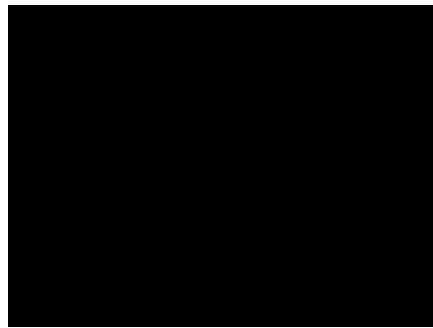▸ Diminishing Return – Hitting the Growth Limit

Display

CPUs, GPUs & APs

Telecommunication

Why Virtual Reality?

- New UX – Saving Cost & Time

Be Anywhere

Do Anything

Be Anything

Time

Space

Changes VR will bring

What are the challenges?

- Relatively Low Consumer Adoption

Reasons that US Internet Users Are Not Interested in Owning a Virtual Reality Headset, by Age, March 2017
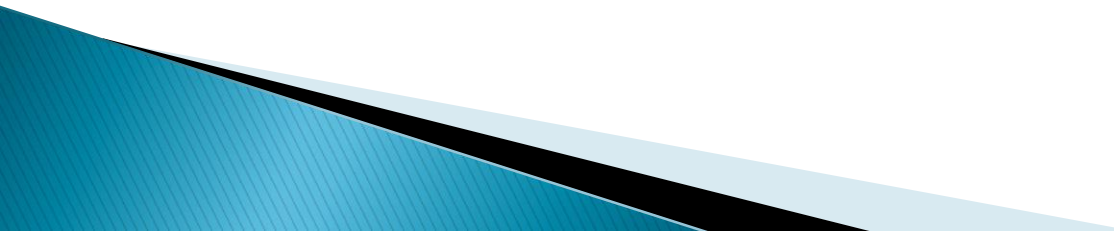
% of respondents in each group

	18-24	25-34	35-44	45-54	55-64	65+	Total
Just not interested	43%	39%	53%	54%	51%	67%	53%
Too expensive	65%	52%	46%	51%	32%	32%	43%
I've heard it causes motion sickness	22%	19%	20%	14%	8%	11%	14%
Lack of content	22%	19%	14%	12%	9%	6%	12%
Poor quality of content	5%	5%	4%	3%	2%	3%	3%
Other	3%	8%	5%	5%	20%	12%	10%

Note: n=926 ages 18+
Source: Thrive Analytics, "Virtual Reality Monitor: 2017 Wave I - Highlights," May 10, 2017

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www.**eMarketer**.com

What You Should Consider

- Quality of Experience

  ◦ 90+ Frames Per Second

  ◦ Display Resolution

  ◦ Lens Specification (Magnification – FOV)

  ◦ Network Latency and Data Transfer Rate

  ◦ Sensor Latency and Accuracy

IEEE P3079 Working Group

- Reducing Cybersickness caused by VR

  ◦ Hardware Guideline

    - Display, Lens, Sensor, Network Specifications

  ◦ Software Guideline

    - Content Creation – Best Practice Guide

    - Human Factor Analysis