

ARTILLRY DATA BRIEFS

VR HEADSET INSTALLED BASE AND PROJECTIONS

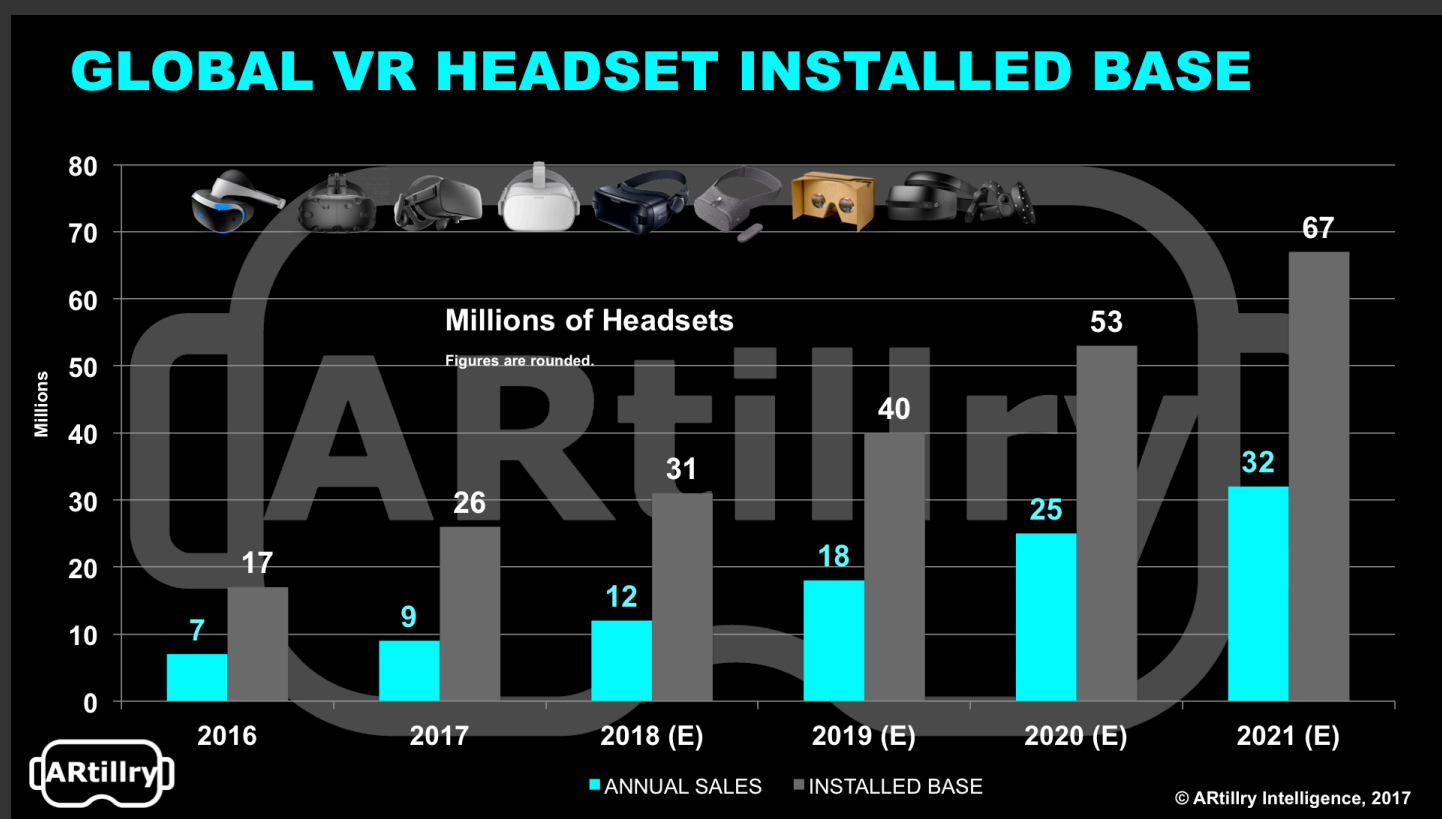
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VR headset sales are a key metric for the industry health. An installed base incentivizes content creators to build things, which in turn drives consumer hardware sales... which then incentives more developers — a virtuous cycle.

VR's slow start is because that cycle is hard to initiate without subsidies or loss-leader pricing (as Oculus Go will do). It's a classic chicken & egg dilemma. Meanwhile, where do we stand? ARTillry Intelligence data pegs VR's installed base at 26 million, growing to 67 million by 2021.

Here it's important to differentiate annual unit sales (a common metric) and installed base. The latter is cumulative so is generally larger, and is based on a two-year hardware replacement cycle. Meanwhile, unit sales were about 9 million last year, growing to 32 million by 2021.



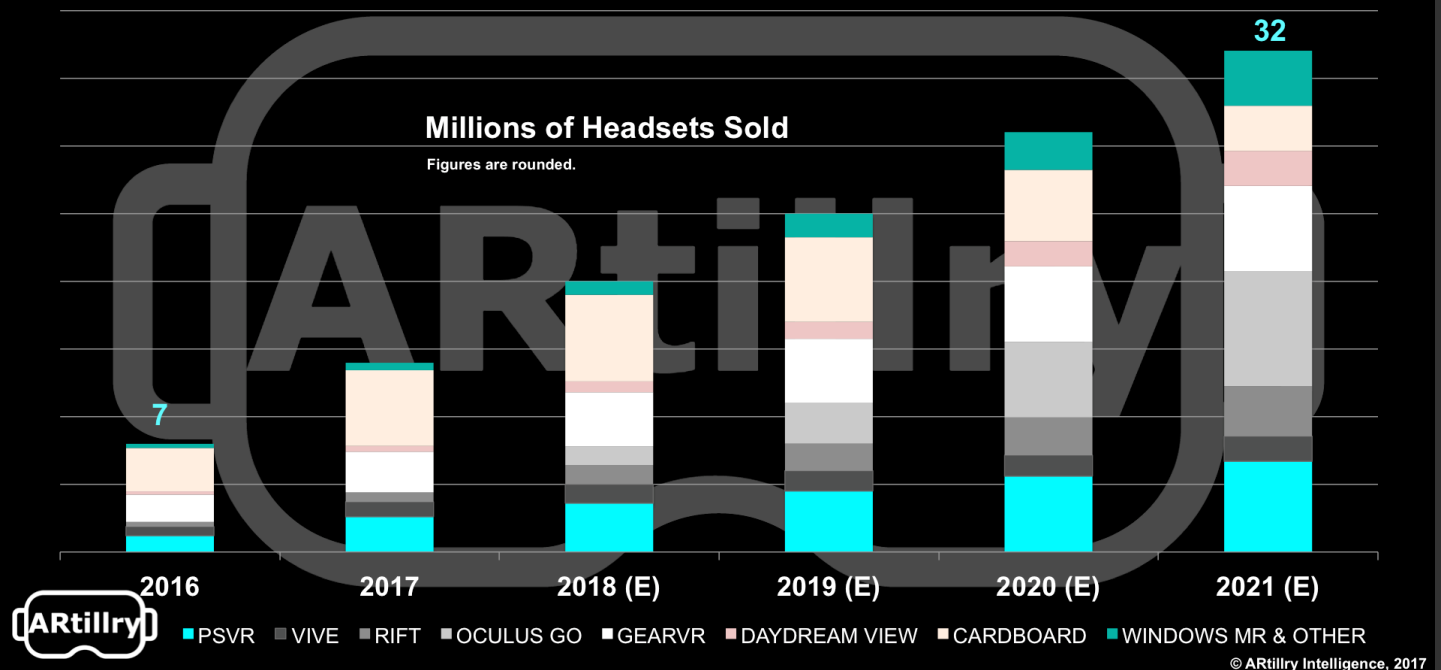
As we've examinedⁱ, the magic number for installed base is 100 million. History has taught us — most recently with smartphones — that base creates a robust ecosystem of content (per incentive) and supporting technologies. Once 100 million units is hit, things start to accelerate.

As for the breakdown of headset sales, cardboard currently leads, due to its low price. Gear VR is also well penetrated due to its tenure in the market. And PSVR has seen relatively strong sales because of the compatibility and installed base (about 60 million) of existing PS4's in the market.

Moving forward, we project big things for Oculus Go. As mentioned briefly above and broken down in our recent analysisⁱⁱ, it will apply loss leader pricing to build a longer-term platform strategy. That will have the by-product of giving VR sales the jolt it needs, and get that virtuous cycle turning.

GLOBAL VR HEADSET UNIT SALES

(SIMPLIFIED VIEW)



This can also be seen in VR headset pricing, which trends downward over time per Moore's Law. By 2021, the average price for a headset will be just above \$200. ARtillry Intelligence consumer survey data meanwhile indicatesⁱⁱⁱ that \$200 is a key price point, below which demand spikes.

These prices include bundled hardware like controllers and input devices, but don't include external tracking systems, PCs or gaming consoles. There will be much more to watch, most importantly, Oculus Go's impending release, likely at Facebook's F8 conference in May.

GLOBAL VR HEADSET PRICING TREND

(DETAILED VIEW)

AVG: \$392.29

Headset prices are averaged within any given year, due to fluctuations throughout the year. Pricing on bundled VR hardware is included (inputs and tracking equipment). Cost of PCs, consoles or mobile devices are not included.

AVG: \$343

AVG: \$321.29

AVG: \$281.29

AVG: \$247

AVG: \$216.14



2016

2017

2018 (E)

2019 (E)

2020 (E)

2021 (E)

■ PSVR

■ VIVE

■ RIFT

■ OCULUS GO

■ GEARVR

■ DAYDREAM VIEW

■ WINDOWS MR & OTHER

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About ARtillery Intelligence

ARtillery is a publication and intelligence firm that examines augmented reality and virtual reality, collectively known as XR. Through writings, data and multimedia, it provides deep and analytical views into the industry's biggest players and opportunities. It's about insights, not cheerleading.

Run by career analyst and journalist Mike Boland, coverage is grounded in a disciplined and journalistic approach. It also maintains a business angle: Though fun and games permeate VR and AR (especially the former) long-term cultural, technological and financial implications are primary.

Learn more at <https://artillery.co/about>



About the Author

Mike Boland was one of Silicon Valley's first tech reporters of the Internet age, as a staff reporter for *Forbes* (print) starting in 2000. He has been an industry analyst covering mobile and social media since 2005, and is now Chief Analyst of *ARtillery Intelligence*, covering emerging tech.

Mike is a frequent speaker at industry conferences such as VRLA, ad:tech and LeadsCon. He has authored in-depth reports and market-sizing forecasts on the changing tech & media landscape. He contributes regularly to highly read online news sources such as *TechCrunch*, *Business Insider* and the *Huffington Post*.

A trusted source for tech journalists, his comments have appeared in A-list publications, including *The New Yorker*, *The Wall Street Journal* and *The New York Times*.

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<https://artillery.co/about/disclosure-and-ethics-policy/>

References

ⁱ <https://artillery.co/2017/08/31/100-million-units-the-magic-number-for-ar-vr-ubiquity/>

ⁱⁱ <https://artillery.co/2017/11/15/th-dynamics-of-aggressive-vr-pricing/>

ⁱⁱⁱ <https://artillery.co/2017/11/20/data-point-of-the-week-is-200-the-magic-price-for-vr-adoption/>