



ARTILLRY INTELLIGENCE BRIEFING

SMART MONEY: INSIGHTS FROM AR & VR INVESTORS

OCTOBER 2017

Table of Contents

EXECUTIVE SUMMARY	3
KEY TAKEAWAYS	4
THE VR/AR CLIMATE	5
PROOF POINTS	6
SEGMENTING AR & VR	7
COLLECTIVE R&D	8
SIZE MATTERS	9
THE MOBILE BASE	9
MOBILE VR	10
MOBILE AR	11
ENTERPRISE	13
TRANSFORMING WORK	14
ENTERPRISE CHALLENGES	16
SPEAK THE LANGUAGE	16
THE BRIGHT SIDE	17
CONTENT IS KING	18
GO LIVE	19
SOCIAL	19
WHAT TO BUILD	21
PLATFORM CHOICE	21
THE ART OF THE PITCH	23
FINAL THOUGHTS: A FUNDING CRUNCH	25
KEY TAKEAWAYS (REDUX)	26
ABOUT ARTILLRY	27
APPENDIX: INVESTORS CITED IN THIS REPORT	29
METHODOLOGY	30
SOURCES	30

Executive Summary

Investors are excited about AR and VR, just like most of the tech world is. But they see things through a different lens than the rest of us. Given risk profiles and often-higher stakes than other entities in the AR and VR landscape, they have additional layers of insight and consideration.

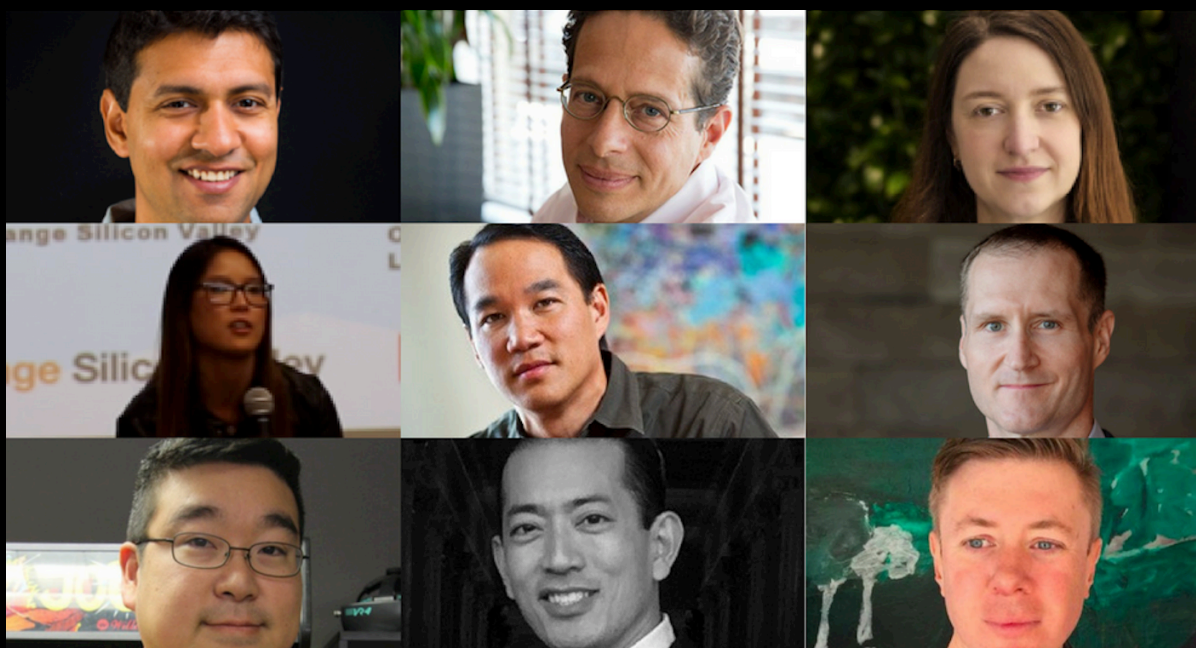
They also have perspective that's advantaged by depth and breadth. The former comes from the diligence they must apply to investment opportunities with individual companies. The latter comes from looking at several companies and sectors. This positions them to see things that others don't.

ARtillery has ventured (excuse the pun) to capture that perspective in this report. We've spent much of the last year talking to investors, and attending/absorbing industry events where top investors speak. The result is a collection of insights, which we've synthesized into a categorized narrative.

Where do AR and VR investors see the biggest opportunities? What are their investment theses? What factors signal strong financial upside? What do they look for in a pitch? Finally, what can the rest of us take away from those insights in order to choose the right paths in AR and VR sectors?

These questions are tackled in the following pages, organized into sections that signify different areas of opportunity. Those areas include enterprise versus consumer approaches, high-end AR and VR versus more rudimentary (but scalable) mobile formats, and strategies around immersive content.

Investors we've spoken to have lots to say on these and other topics that will steer the course of AR and VR. Their credibility is stronger than many other industry voices, given not only unique vantage points mentioned above but another key factor: They're putting money where their mouths are.





Key Takeaways

- AR & VR have elicited considerable investor excitement and projections of smartphone-sized transformation.
 - We've witnessed a rise in AR and VR-focused investment firms (Presence Capital, The Venture Reality Fund, Super Ventures), and strategic investment (Comcast Ventures, Qualcomm Ventures, Intel Capital).
- More than \$4 billion in venture funding has been invested in AR & VR companies since 2012.
 - Magic Leap alone has received \$2 billion, which should signal caution, but we believe funding dispersion will even out.
 - AR companies have received the most funding, followed by consumer VR, enterprise VR, and VR games.
- Underlying tech has received the most funding recently, followed by video content, games and peripherals.
 - In this relatively early phase, building blocks hold a large opportunity, including haptics, processing and inputs.
 - All parts of AR & VR's collective spec sheet are underdeveloped, creating opportunities across the board.
- Addressable market is a big investment criteria, and is currently diminished by consumer VR's small base.
 - Consumer hardware ubiquity is marked by 100 million units. VR headset penetration is currently 17 million units.
 - Until consumer VR reaches ubiquity, enterprise and mobile AR hold nearer-term opportunities for scale.
- Mobile AR's benefits include volume penetration, portability, all-day access and frequency of use.
 - ARkit and ARCore create a half-billion AR-compatible smartphones today, increasing to 4.3 billion by 2020.
 - ARCore is advantaged by a lower-friction web AR approach. ARkit is advantaged by more structured revenue models.
- Enterprise AR & VR have more receptive buyers than consumer markets, due to a strong ROI case.
 - Enterprise AR & VR can benefit from the unit economics of SaaS pricing/packaging.
 - Successful enterprise execution is often found in entrepreneurs with vertical or industrial knowledge.
 - Success is also found in knowledge of enterprise software dynamics and business processes.
 - Warning signs of enterprise approaches include lack of customer diversification or recurring revenue potential.
- AR & VR content companies can be risk prone, and don't often see venture-sized returns or exits.
 - There can be longer-term value and recurring revenue outside of content itself, such as merchandising.
 - Broadcast-focused AR & VR companies can tap into the sector's scale and receptiveness to innovation.
- Social is thought by many to be AR & VR's eventual killer app, especially VR.
 - Social functions can make games and apps more multidimensional, with greater appeal for repeat usage.
 - Social can also amplify growth potential through viral marketing dynamics and network effect.
- After product, market and other aspects of business models are optimized, pitch tactics must equally be refined.
 - The art of pitching investors includes proper selection, "networking in," and streamlined talking points.
 - Key tactics are specificity, quantitative-focus (unit economics, market size, etc.) brevity, and humility.
- The consumer VR sector is experiencing a shakeout, meaning deceleration of new investments and a funding crunch.
 - This will impact existing players who will compete for a finite supply of follow-up investment rounds.
 - New entrants should model out spending levels, cash and the macro environment.
 - All players should build conservative to aggressive forecasting ranges and operate lean.

*Key takeaways are also highlighted throughout the main body of this report.
See appendix for a full list of investors quoted in this report, and their portfolio companies.*



To read the rest of this report, subscribe to **ARtillry Insights**.

<https://artillry.co/subscribe/>

About ARtillry Insights

ARtillry Intelligence partners with the VR/AR Association to deliver a research package. Known as *ARtillry Insights*, it will equip subscribers in AR and VR sectors to make informed business decisions.

FEATURES

Original Research: Monthly original reports examining opportunities and dynamics of VR and AR.

Curated Research: ARtillry analysts collect, analyze and filter recommended reading and data.

Indexed Intelligence: Archived reports and multimedia assets, all in one place.

2017 EDITORIAL CALENDAR

June: The State of Virtual Reality (published)

July: Tech Giants Tackle AR (published)

August: VR Usage & Consumer Attitudes (published)

September: ARCore & ARkit: The Acceleration of Mobile AR (published)

October: Discussions & Takeaways from AR & VR Investors (published)

November: AR & VR Revenue Forecast & Strategic Outlook

December: 2017's Biggest Lessons for AR &VR

COST

VR/AR Association Members: **\$39/month**

Non-VR/AR Association Members: **\$89/month**

<https://youtu.be/WTruV4arTI0>



About ARtillry

ARtillry is a publication and research firm that examines augmented reality (AR) and virtual reality (VR). 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://artillry.co/>





About Intelligence Briefings

ARtillery Intelligence Briefings are monthly installments of VR/AR data and analysis. They synthesize original and third-party data to reveal the dynamics of VR and AR sectors, and their opportunities.

In addition to data, a layer of insights is applied to translate market events and raw figures into prescriptive advice. This takes form in a narrative story arc, grounded in market figures.

Questions and requests for deeper analysis can be submitted at:

<https://artillery.co/contact/>

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, covering emerging tech.

Mike is a frequent speaker at industry conferences such as VRLA, ad:tech and LeadsCon. He has authored in-depth reports on the changing tech & media landscape including social networking and mobile. 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*. Mike was previously a San Francisco-based journalist for business and technology print publications, such as *Red Herring*, *Business 2.0*, and *Mobile Magazine*.

Note of Disclosure

ARtillery has no financial stake in the companies mentioned in this report, nor received payment for its production. ARtillery's disclosure and ethics policy can be seen at:

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

Appendix: Investors Cited in This Report

The following links provide greater detail about the investors mentioned in this report, and their portfolio companies

Comcast Ventures

<http://www.comcastventures.com/companies>

Super Ventures

<http://www.superventures.com/>

Orange Silicon Valley

<http://www.orangesv.com/>

Canvas Ventures

<http://www.canvas.vc/portfolio/>

Founders Fund

<https://foundersfund.com/portfolio/>

Presence Capital

<https://www.presencecap.com/#portfolio>

Venture Reality Fund

<http://www.thevrfund.com/#portfolio>

Loup Ventures

<http://loupventures.com/>

Betaworks

<https://betaworks.com/fund/#investments-div>

Methodology

ARtillery follows disciplined best practices in market sizing and forecasting, developed and reinforced through 15 years in research and intelligence. It also follows best practices in journalistic reporting (see disclosure and ethics policy above).

This report focuses on insights gathered from investors. Quotes have been captured through direct conversation and events that ARtillery attended (e.g. panel discussions). The context and environment of each captured quote are specified throughout this report.

To support the narrative, data are also cited throughout the report. These include ARtillery original data, as well as third parties. Data sources are attributed in each case.

More about ARtillery's market-sizing credentials can be found here:

<http://www.mikebo.land/forecasting>

