ARTILLRY INTELLIGENCE BRIEFING

AR BUSINESS MODELS: THE TOP OF THE FOOD CHAIN, PART I
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Executive Summary

One of the factors that gives us confidence in the future of AR and VR (collectively XR) is the amount of investment being made by influential tech giants. That includes most of the major platforms and more notably, tech's "four horsemen." This group consists of Apple, Google, Facebook and Amazon.

But an important question is "why?" What are their motivations? The answer is different for each of these players, but one theme persists: They're each motivated to protect or grow core businesses. And they're finding ways that XR – especially AR in the near term – accomplishes that goal.

For example, Google has a vested interest AR-based visual search to boost monetizable search query volume. Facebook wants to keep us in its walled garden through visually-immersive content sharing like AR camera effects. It also sees VR as a prominent future modality for social interaction.

Similarly, Apple wants to make iPhones — where it makes most of its money — more attractive through AR apps and features. And Amazon has AR features that let shoppers visualize products in-home to boost e-commerce and reduce returns. It's all about more informed purchases through AR.

Why is all of this important? Answering the question of "why" can inform the "what" and "how," which have implications for the rest of us. Knowing where these players are headed and what their motivations are can help XR startups and investors align their strategies and product road maps.

With those strategic implications in mind, we set out to analyze and unpack the XR moves of tech's biggest players. In addition to those mentioned above, we'll cover key influencers such as Snap, Niantic and Microsoft. The end goal is a clearer picture of the top of XR's food chain.

In order to maintain focus, the scope of this report is primarily AR, and within consumer contexts. VR's has a different place on the immersive computing spectrum and a longer-term horizon to consumer scale. Still, we'll touch upon VR as it relates to tech giant investments and implications.

The following pages will examine these tech leaders' XR ambitions and actions, one by one. For each, we'll look at what they've done recently and where they're pointing next. More importantly, what does it mean for you, and what clues does it provide for XR opportunity spotting?

We'll start with Google and Apple in this first installment, followed next month by Facebook, Amazon and others.

Introduction: Follow the Leader

What are the leaders in today's technological landscape doing in AR & VR (collectively, XR)? More importantly, what does this mosaic of investment and innovation tell us about the trajectory and velocity of immersive computing? There are patterns and strategic takeaways materializing.

One place to start such an analysis is with the simple yet multi-dimensional question of "Why?" In other words what are the motivating factors that drive deep-pocketed tech giants to chase XR ambitions? Answering that question can reveal insights about aligning with XR market trajectory.

The answer to that question interestingly differs for most major tech companies. But on another level, the answers for each are similar. When looking at tech's "four horsemen," for example, each has XR motivations to protect or grow their core businesses and primary revenue streams.

For Google, it's all about search. Its "version" of AR is visual search such as Google Lens and Visual Positioning Service (VPS), which boost search query volume, albeit visually instead of text-based. This positions the increasingly popular and millennial-favorite smartphone camera as a search input.

Consider Facebook's core business: Its primary ad revenue correlates to the time we spend in its walled garden. So AR is a means to keep us in that environment longer through more compelling – and advertising-conducive – content to share with friends. Its "version" of AR is Camera Effects.

On to Apple, though it's increasingly diversifying into software and services, its core business is selling hardware. So most moves it makes are to make iThings more attractive to consumers. AR is no exception, as more immersive and visually-compelling apps, via ARkit, make iPhones sexy again.

The fourth horsemen, Amazon, is likewise making big XR moves, though perhaps the most shrouded in mystery. Its AR product visualization features engender more informed shoppers who buy more and return less: big factors for the margin-obsessed giant. And its Sumerian platform looms large.

And it doesn't end with the four horsemen. Microsoft, which could justifiably be a horseman, is making big moves in enterprise AR (Hololens) and consumer VR (Windows Mixed Reality). Snapchat is an early mover in mobile AR, as is Niantic which is in the midst of an ambitious AR platform play.

Altogether, this landscape has discernable patterns when viewed at different focal ranges. Our goal in the following pages is to do just that. We'll examine each of these players up close and by zooming out to examine macro-trends. The goal is a more informed perspective of the landscape.

In this first part of a two-part series, we'll cover Google and Apple. Next month, we'll pick up where we left off with an analysis of Facebook, Amazon as well as a bonus section that examines other key players. Those include Microsoft, Magic Leap, Niantic and Snapchat. There will be lots to discuss.

To read the rest of this report, subscribe to ARtillry PRO.
https://artillry.co/pro

About ARtillry PRO

ARtillry Intelligence has launched an intelligence vault containing data, insights and analyst access. Known as *ARtillry PRO,* it equips subscribers in XR sectors to make informed business decisions.

FEATURES
Original Research: Monthly reports and weekly briefs on XR data, opportunities and dynamics.
Curated Research: ARtillry analysts collect, analyze and filter recommended reading and data.
Conference Talks: We watch, select and summarize video from XR events.
Slide Bank: We assemble charts for your presentations and knowledge building.
Data Concierge: We'll help you find what you're looking for.
Event Discounts: We partner with the top XR events for subscriber discounts

UPCOMING CALENDAR
October: AR Business Models, The Top of the Food Chain, Part II
November: XR Global Revenue Forecast
December: 2018 Lessons, 2019 Predictions
January: AR Commerce: The Next Era of Shopping
February: Enterprise XR Strategies & Case Studies

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https://youtu.be/dFZVGE_UA8A

About ARtillry Intelligence

ARtillry 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://artillry.co/about**

About Intelligence Briefings

ARtillry Intelligence Briefings are monthly installments of VR/AR data and analysis. They synthesize original and third-party data to reveal opportunities and dynamics of VR and AR sectors. In addition to data, a layer of insights is applied to translate market events and raw figures into prescriptive advice.

More information, past reports and editorial calendar can be seen at:
https://artillry.co/artillry-intelligence/

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's been an industry analyst covering mobile and social media since 2005, and is now Chief Analyst of *ARtillry Intelligence*, and SF president of the *VR/AR Association*.

Mike is a frequent speaker at industry conferences such as AWE, VRLA and LeadsCon. He has authored in-depth reports and market-sizing forecasts on the changing tech & media landscape. He contributes regularly to 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*.

Further background, history and credentials can be found at:
http://www.mikebo.land/

Methodology

This report highlights *ARtillry Intelligence* viewpoints, gathered from its daily in-depth coverage of the XR sector. To support the narrative, data are cited throughout the report. These include *ARtillry Intelligence* original data, as well as that of third parties. Data sources are attributed in each case.

For market sizing and forecasting, *ARtillry Intelligence* follows disciplined best practices, developed and reinforced through its principles' 15 years in tech sector research and intelligence. This includes the past 2.5 years covering AR & VR exclusively, as seen in research reports and daily reporting.

Furthermore, devising these figures involves the "bottom-up" market-sizing methodology, which involves granular ad revenue dynamics such as campaign pricing and spending. For more on *ARtillry Intelligence's* market sizing and forecasting methodology, see the explanations at the following link.

https://artillry.co/artillry-intelligence/forecasts/methodology/

Disclosure and Ethics Policy

ARtillry has no financial stake in the companies mentioned in this report, nor was it commissioned to produce it. With respect to market sizing, ARtillry remains independent of players and practitioners in the sectors it covers, thus mitigating bias in industry revenue calculations and projections.

ARtillry's disclosure and ethics policy can be seen in full at:
https://artillry.co/about/disclosure-and-ethics-policy/

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