

ARTILLY DATA BRIEFS

CONSUMER AR REVENUES TO REACH \$14B BY 2021

4/16/18



Most people think of AR as smart glasses that overlay graphics and information in one's immediate field of view, a la Google Glass. And that's certainly a form factor being deployed in enterprise environments, as examined in January's ARTillry Intelligence Briefing.

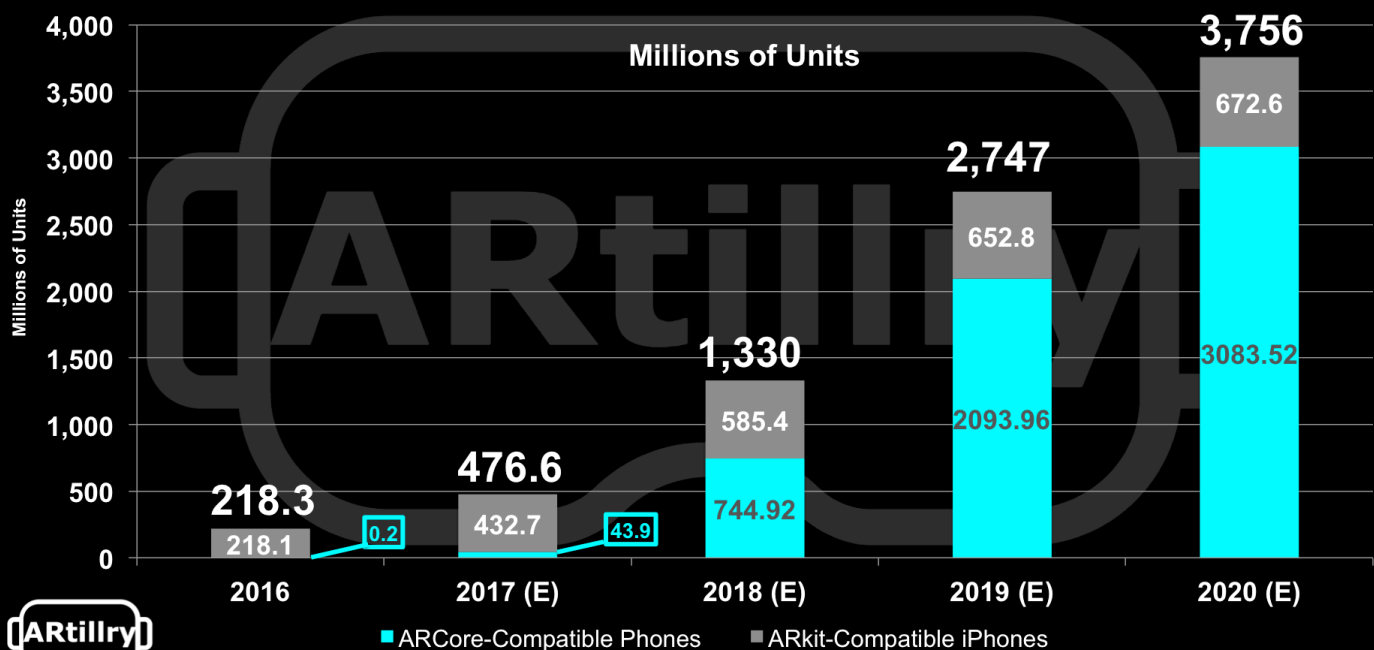
But it's also a form factor with long-term consumer potential. Intel projects consumer smart glasses to inflect around 2027 with 50 million annual unit sales, growing to 200 million by 2031. The thought is smart glasses' consumer utility could eventually parallel that of today's smartphone.

But until then, AR glasses don't pass stylistic requirements for consumer markets (size, weight, cost etc.). So consumer AR's near-term form factor is all about smartphones. You probably know the format: graphical overlays that interact with the world seen through your phone's camera.

Further positioning the smartphone as a vessel for AR is its ubiquity and permanence as a fixture in our lives. There are 3.5 billion of them. But how many are AR-compatible? There are 476 million today, growing to 1.3 billion by year-end, and 3.8 billion by 2021 – a meaningful installed base.

INSTALLED BASE OF ARCORE AND ARKIT

Global Handsets Compatible with ARCore or ARKit



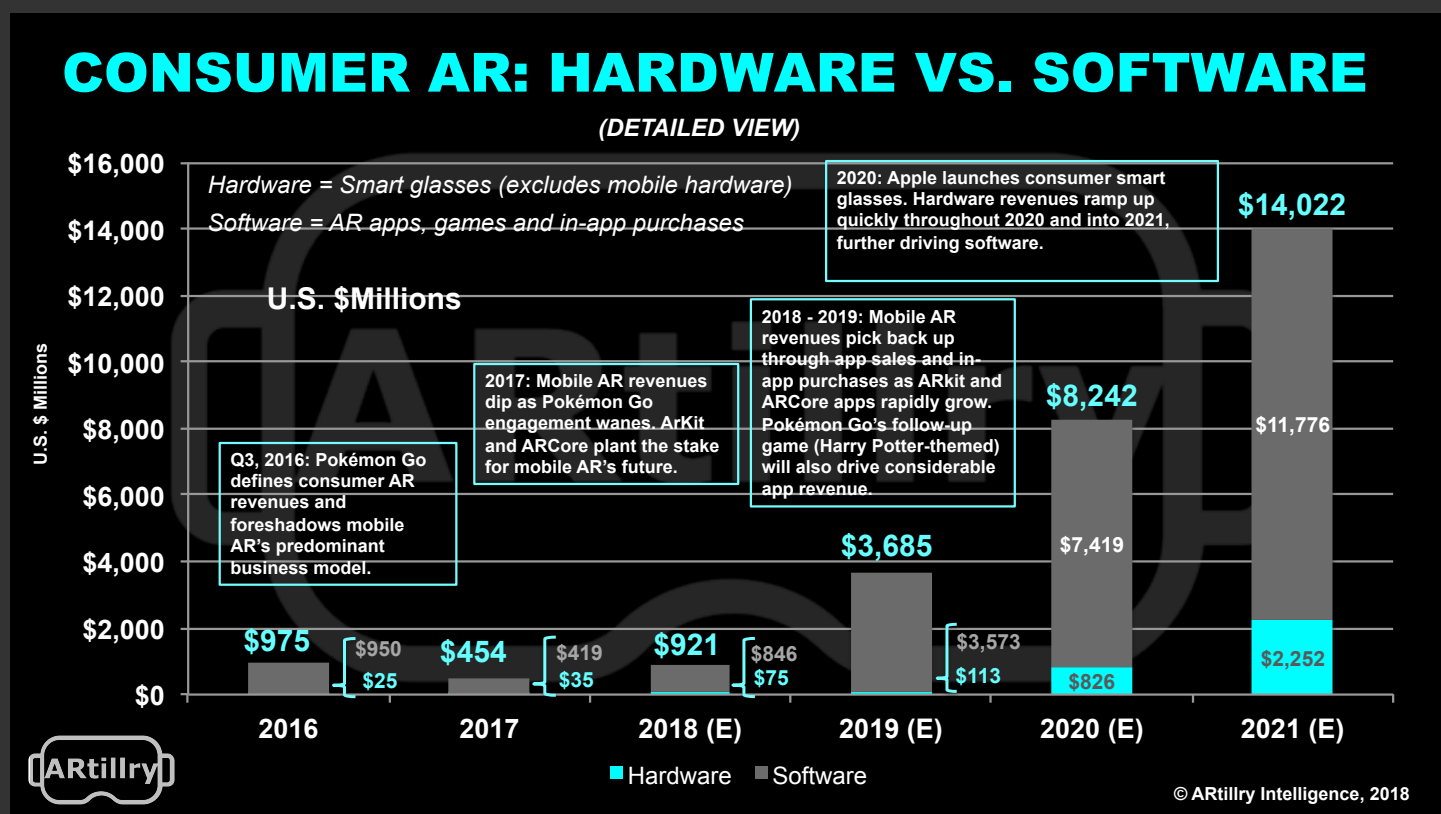
This volume is mostly due to ARKit and ARCore, which apply software to make AR possible on previously un-compatible hardware (such as standard RGB cameras). Between the two, ARCore has a minority share, but will eclipse ARKit, due to Android's larger installed base.

Beyond unit penetration, how does consumer AR stack up in dollars? We project it to grow from \$975 million in 2016 to \$14.02 billion in 2021. These figures include smart glasses, though it's important to note that mobile dominates near-term revenue, for reasons explored earlier.



Segmenting mobile's share, it's represented by the software portion of our consumer AR projections (see breakdown below). This is because smartphone hardware (e.g. iPhone sales) isn't counted in our forecast because it's an already-existing and ubiquitous consumer purchase.

Therefore, near term opportunity for mobile AR is in software. That broad designation includes several things, including premium app sales, in-app purchases, micro-transactions, and others things. These are broken down further in last month's Intelligence Briefing, and the video below.



Zeroing in on just that software portion of consumer AR revenues, it will grow from 950 million in 2016 to 11.8 billion in 2021. After 2020, AR hardware will start to grow in share, as smart glasses become more viable for consumer markets including cost, style, battery life and other specs

This could include Apple's rumored smart glasses in the 2021 time frame. It will also include AR glasses in niche or enthusiast areas like cycling, skiing and other sports/recreational areas. Notice that these are areas where glasses or goggles are already worn, forcing less of a behavioral shift.

But until then, the consumer AR sector will be dominated by mobile, with most of the strategy and differentiation happening in software, rather than hardware. But it also faces some challenges and is off to a slow start. In fact mobile AR today resembles iPhone apps ten years ago.



In other words, the sector is underdeveloped in capability, standards, consumer demand and other factors. But that also provides lots of headroom for growth. We'll continue to see experimentation in the coming month's as XR players compete for AR's first true killer app, and that \$14 billion.

Video Companion: AR App Strategies

(Click URL to Open)

https://youtu.be/2fsyMHqR_Vw



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*.

Further background, history and credentials can be found at:

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





Contact

Questions and requests for deeper analysis can be submitted at:

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