



ARTILLYR DATA BRIEFS

VR ACHIEVES 10X FASTER DESIGN CYCLE

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XR's current stage of enterprise penetration is all about getting over adoption humps. And that's a process of education and countering typical organizational inertia. Though that continues to lumber forward (we predict a 2020 tipping point), the best accelerant is ROI proof points.

The latest comes from Bell Helicopter, which reports that its FCX-001 concept aircraft achieved 10x faster design cycles using VR, compared with its non-VR baseline. Specifically, the five-year design process was completed in six months using HTC Vives for design and review.

Project tasks that VR was able to streamline include the iterative process of draft drawings, pilot testing and focus groups. It also replaced time-consuming and static physical models in favor of CAD models that were imported to Unity for real-time testing and feedback loops.

**WITH PHYSICAL MOCK-UPS AND PILOT TESTS,
DESIGNING A HELICOPTER NORMALLY TAKES 5-7 YEARS.**

WITH VIVE, BELL WAS ABLE TO DESIGN THE FCX-001 IN LESS THAN 6 MONTHS.



So why is this significant? First, it's a clear ROI boost, given that time is money on expensive projects like helicopter design. But moreover, this is the biggest productivity delta we've seen yet in enterprise XR adoption. Most of the case studies we've seen have less than 2X gains.

In the industrial scenarios we've examined (mostly industrial AR assistance), the productivity delta is 15-99 percent in terms of completion time. The higher end of that spectrum comes from the impressive gains that Lockheed Martin achieved using Scope AR software on a Hololens.

Putting Bell Helicopter's reported figures in perspective, 10x is much greater than double-digit percentage gains. For example, converting percentages to multiples, 100 percent growth equals 2x. So 10x far exceeds the already impressive productivity gains seen in enterprise AR.



And this is exactly what enterprise XR needs. The higher the ROI, the greater ammunition to break through the aforementioned enterprise inertia. Even though the ROI case is validated in many cases for enterprise XR, organizational and cultural inertia are powerful forces.

This invokes Visicalc inventor Dan Bricklin's rule of thumb for disruption. From his pioneering work with spreadsheet technology, he believes that new tech has to be two orders of magnitude (100x) better to get over the adoption hump. The bar may not really be that high but point taken.

"You have to be two orders of magnitude — that's 100 times better — than what came before," he said at ARiA. "Doing a good-sized spreadsheet by hand took hours, but with an electronic spreadsheet, you can build it in minutes. That's night & day difference, not just a little better."

We'll keep our eyes open for proof points and case studies, including forthcoming examination of data that Scope AR presented at AWE Europe. It's all leading up to our predicted 2020 tipping point for enterprise AR. Like enterprise smartphone adoption, it will build slow then happen fast.



Video Companion

(click link to play)

<https://youtu.be/On6GStY430s>





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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