

ARTILLRY DATA BRIEFS

ARE ENTERPRISES GETTING SERIOUS ABOUT XR?

07/09/18

There's lots of talk about XR's potential to unlock enterprise productivity, cost savings and capability. And there are lots of market-sizing estimates (including ours) about how those opportunities will turn into real revenue and industry growth.

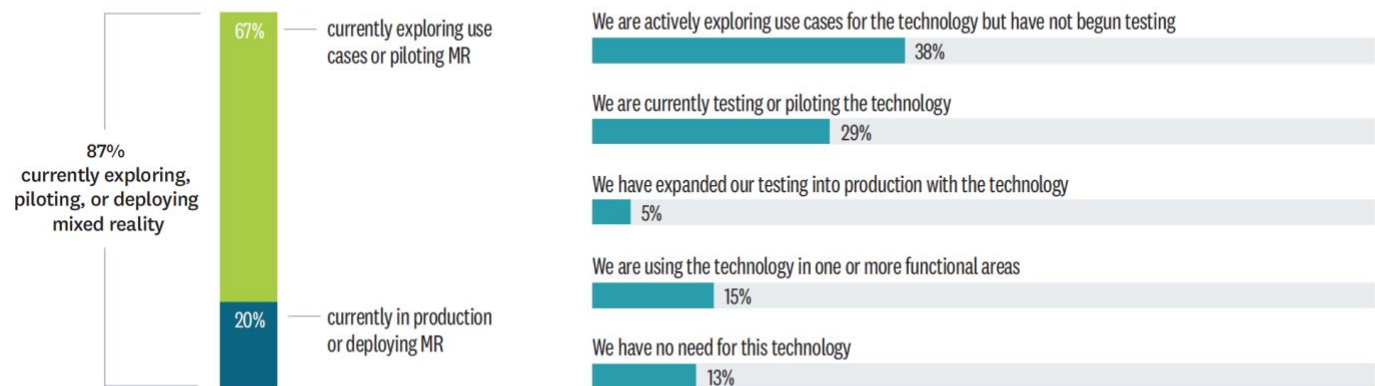
But before we get to that point, there's a typical process of industry education, acclimation and getting past adoption humps. The latter stems from typical organizational inertia: The ROI case could be rock solid, but it still takes a while to get multiple stakeholders to jump at the same time.

So where are we now and what do current market signals tell us? According to a recent Microsoft-sponsored Harvard Business Review survey of 394 companies (methodology and breakdowns below), adoption levels are more advanced than you might think.

Specifically, 87 percent of respondents are exploring, piloting or deploying AR or VR (collectively "mixed reality" in the survey parlance, given Microsoft's involvement). That includes 67 percent exploring or piloting use cases while 20 percent are in actual production or deployment.

BUSINESSES ARE READY FOR MIXED REALITY

To the extent that your organization is using or thinking about using mixed reality, how soon will any applications be in production?



SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, MARCH 2018

In terms of future looking adoption and growth, 65 percent of respondents believe AR and/or VR will be somewhat (35 percent) or very (35 percent) important in the next 18 months. These are strong signals, though "aspirational" survey results should be used with caution.

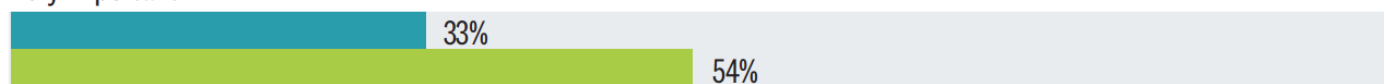
THE IMPORTANCE OF MIXED REALITY

Enterprises view mixed reality as imperative for business success.

Please rate how important mixed reality technologies are, or will be, in helping your organization achieve its strategic business goals in the next 18 months/three years.

● IN 18 MONTHS ● IN THREE YEARS

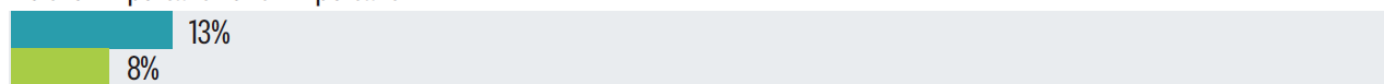
Very important



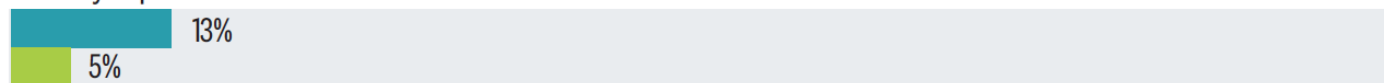
Somewhat important



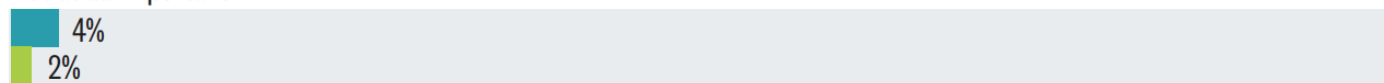
Neither important nor unimportant



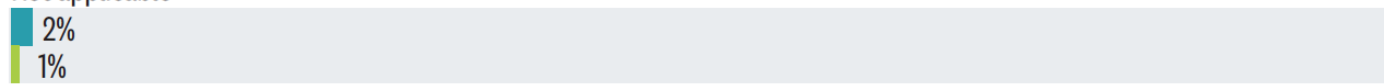
Not very important



Not at all important



Not applicable



SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, MARCH 2018

Drilling down to specific use cases, the XR-assisted job functions most identified were corporate or customer facing, as opposed to the industrial productivity applications we've examined. This could have something to do with the sample (methodology and sample breakdown is below).

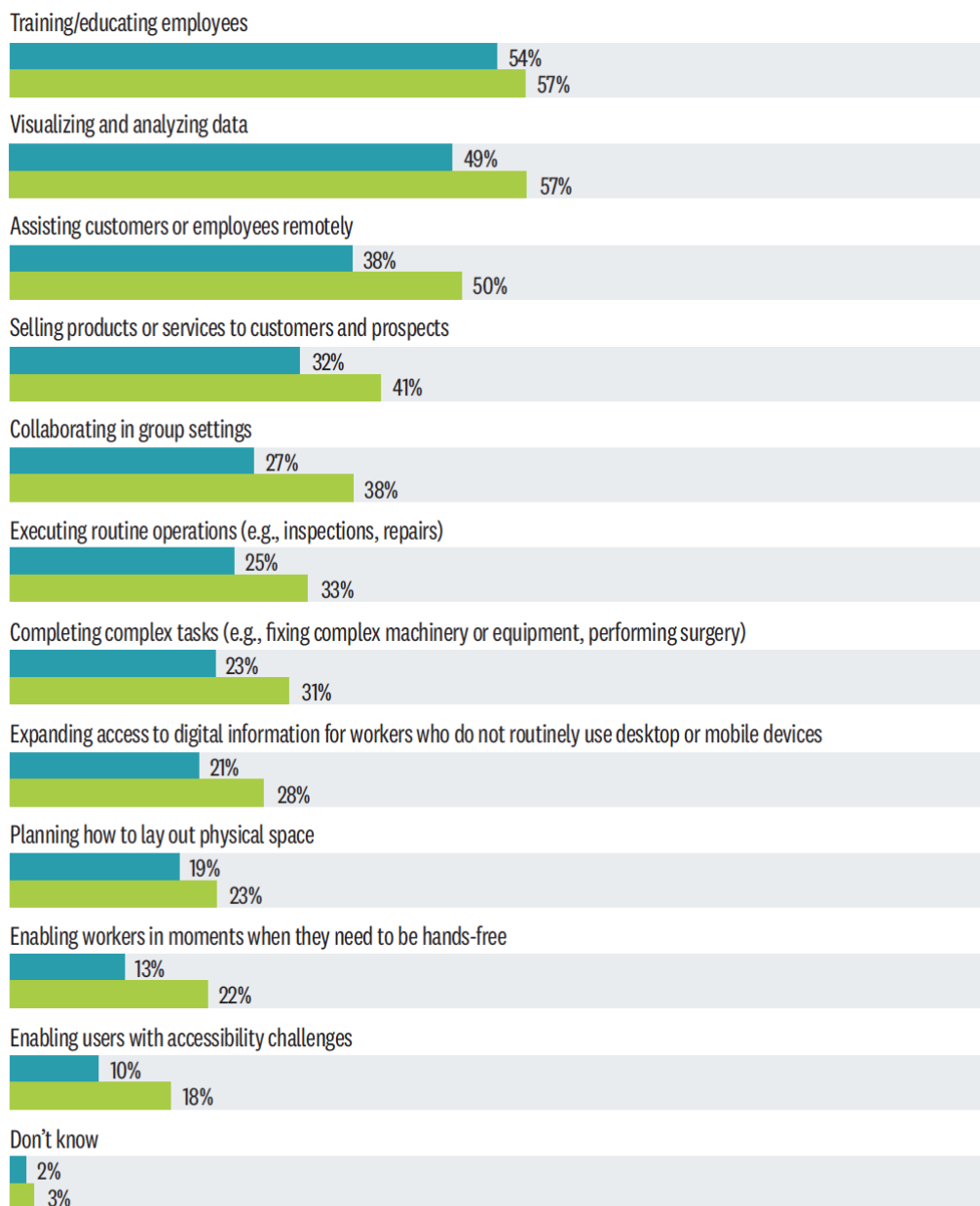
Specifically, employee training was identified with the greatest potential, followed by data visualization, customer assistance, product sales and collaboration. The report doesn't segment "mixed reality," (glossary below) but some of these applications seem more VR than AR.

UNTAPPED POTENTIAL

Companies have identified a range of mixed reality use cases.

Which of the following use cases for mixed reality technologies have been identified by your organization? Which of the following aspects of work have the greatest potential to be improved?

● IDENTIFIED USE CASE ● GREATEST POTENTIAL



SOURCE: HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, MARCH 2018

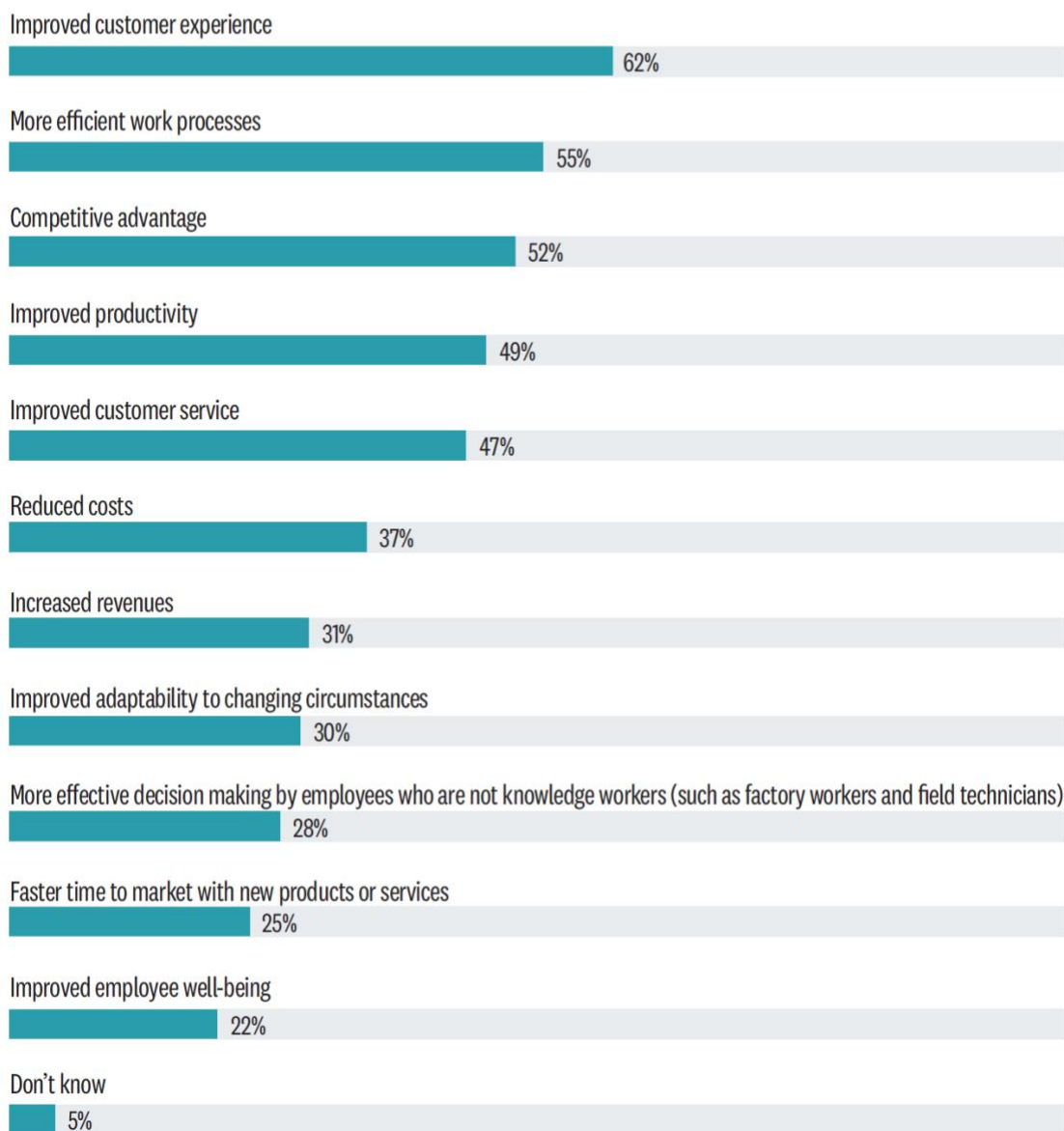


In terms of high-level ROI goals, the results again tend to favor corporate or customer-facing functions. Improved customer experience scored highest, followed by rather ambiguous goals like “more efficient work process” and “competitive advantage.”

A RANGE OF BENEFITS

Companies expect mixed reality to improve productivity and customer satisfaction.

Thinking of your ideas or plans to use mixed reality, which of the following business benefits do you anticipate from your investment?





Despite some of the ambiguity and possible bias from survey sponsor Microsoft, these are strong demand signals if accurate. Moreover, a good portion of the survey sample was middle management and below — a key constituency for real deployment.

The way enterprise adoption usually plays out is through top-down deployment and bottom-up adoption. Then a tipping point comes, after which adoption accelerates. We saw a similar cycle with enterprise smartphone adoption, albeit driven more by bottom-up demand (think: BYOD).

For XR, we're projecting that tipping point to come around 2020. But pinpointing the timing is a game of constantly monitoring the current pace of adoption and other industry signals. Surveys like this are helpful but only as one tile in a larger mosaic.

The report's glossary and methodology are below for more context.

MIXED REALITY GLOSSARY

AUGMENTED REALITY

The layering of digital content onto physical reality, enabling users to see both at the same time through a smart display such as glasses, a headset, or a mobile device.

VIRTUAL REALITY

A fully immersive, occluded experience in which users interact with digital objects and environments instead of with the physical world.

MIXED REALITY

A spectrum that represents the blending of the physical and digital worlds, spanning from augmented reality at one end to virtual reality at the other. Like augmented reality, it can be experienced on a variety of devices, including head-mounted displays, PCs, and mobile devices.



METHODOLOGY AND PARTICIPANT PROFILE

A total of 394 respondents drawn from the *Harvard Business Review* U.S.-based audience of readers (magazine/newsletter readers, customers, HBR.org users) completed the survey.

SIZE OF ORGANIZATION

ALL RESPONDENTS' ORGANIZATIONS HAD 250 EMPLOYEES OR MORE.

52% 10,000 OR MORE EMPLOYEES	10% 5,000-9,999 EMPLOYEES	37% 250-4,999 EMPLOYEES
---	--	--------------------------------------

SENIORITY

16% EXECUTIVE MANAGEMENT/ BOARD MEMBERS	47% SENIOR MANAGEMENT	28% MIDDLE MANAGEMENT	9% OTHER GRADES
---	------------------------------------	------------------------------------	---------------------------

KEY INDUSTRY SECTORS

20% TECHNOLOGY	13% BUSINESS/ PROFESSIONAL SERVICES/CONSULTING	11% MANUFACTURING	10% HEALTH CARE/ PHARMA/ LIFE SCIENCES	8% BANKING/FINANCIAL SERVICES AND EDUCATION	OTHER INDUSTRY SECTORS WERE REPRESENTED BY 6% OR LESS EACH
--------------------------	--	-----------------------------	--	---	---

JOB FUNCTION

13% GENERAL/EXECUTIVE MANAGEMENT	11% IT	11% R&D/INNOVATION/ PRODUCT DEVELOPMENT	8% SALES/BUSINESS DEVELOPMENT/ CUSTOMER SERVICE	7% EACH ENGINEERING, HR/TRAINING, STRATEGIC PLANNING	OTHER FUNCTIONS WERE REPRESENTED BY 6% OR LESS EACH
---	------------------	---	---	--	---

REGIONS

47% NORTH AMERICA	30% EUROPE, THE MIDDLE EAST, AND AFRICA	18% ASIA/PACIFIC	5% REST OF WORLD
-----------------------------	---	----------------------------	----------------------------



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:

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



Disclosure and Ethics Policy

ARtillery has no financial stake in the companies mentioned in this report, nor was it commissioned to produce it. With respect to market sizing, ARtillery remains independent of players and practitioners in the sectors it covers. It doesn't perform paid services or consulting for such companies, thus mitigating bias — real or perceived — in market sizing and industry revenue projections.

ARtillery's disclosure and ethics policy can be seen in full at:

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