**Press contact:**
*Michele Moore*
*Tel.: +44 370 905 3408*
*Email: michele.moore@capgemini.com*

# Immersive technology has arrived: AR and VR set to become mainstream in business operations in the next 3 years

***New research reveals that immersive technology delivers better efficiency, productivity and safety for enterprises, and that augmented, rather than full virtual, reality will lead the way for business operations***

**Paris, September 7, 2018 – A new report by the [Capgemini Research Institute](#)[1] has revealed that enterprises are using augmented reality (AR) and virtual reality (VR) technologies to enhance their business operations. The report, "[Augmented and Virtual Reality in Operations: A guide for investment](#)" has found that 82% of companies currently implementing AR/VR say the benefits are either meeting or exceeding their expectations. However, a shortage of in-house expertise and insufficient back-end infrastructures are significant barriers to growth.**

The new report, which surveyed more than 700 executives[2] in the automotive, manufacturing and utilities sectors, with considerable knowledge of their organization's AR/VR initiatives, found that 50% of enterprises currently not implementing AR and VR will start exploring immersive technologies for their business operations within the next three years. These include using AR to remotely access real-time help from experts on a wearable or handheld device, and VR to train employees. Some 46% of companies believe the technology will become mainstream in their organizations within the next three years, while a further 38% think it will become mainstream in their organizations in the next three to five years.

**Organizations are seeing the benefits of immersive technology**
The report revealed that while AR is more complex to implement, organizations perceive it as more beneficial than VR. It highlights that AR generates productivity benefits thanks to streamlined workflows, citing examples such as, technicians at Porsche using AR glasses that project step-by-step bulletins and schematic drawings across the line of vision, while also allowing remote experts the ability to see what the technician sees to provide feedback. This solution can shorten service resolution time by up to 40%[3]. VR improves efficiency and safety, and helps manage complexities of tasks thereby boosting productivity. For instance, the report highlights that VR is used at Airbus to integrate digital mock-ups into production environments, giving assembly workers access to complete 3D models of the aircraft under production. This reduces the time required to inspect from three weeks to three days[4]. Additionally, according to the report, at least three in four (75%) companies with large-scale AR/VR implementations can attest to operational benefits of over 10%.

**Repair and maintenance, design and assembly form most implemented use cases**
The report found that across the automotive, manufacturing and utilities sectors, the most popular uses of AR and VR are repair and maintenance, and design and assembly. Between 29% and 31% of companies

---

[1] Capgemini's "Digital Transformation Institute" has been renamed "Capgemini Research Institute"
[2] Executives leading, monitoring, or actively involved in AR or VR activities in their organization
[3] Source: Porsche, "Porsche 'Tech Live Look' Pioneers Augmented Reality in U.S. Auto Repairs," May 2018
[4] Source: Airbus, "Virtual solutions provide real benefits for Airbus' Beluga XL development," February 2016

using AR and/or VR are using it for repair and maintenance, specifically to consult digital reference materials (31%), seek a remote expert (30%), digitally view components not in physical view (30%) and superimpose step-by-step instructions on work stations (29%). For design and assembly, companies using VR and/or AR are using it to view digital assembly instructions (28%), simulate product performance in extreme conditions (27%), visualize infrastructures from various angles (27%) and overlay design components onto existing modules (26%). For example, the report cites Ford's use of VR technology to identify, and then engineer alternative actions by humans captured by body motion sensors during assembling, which has resulted in a 70% drop in employee injuries and a 90% reduction in ergonomic issues[5].

**AR is seen as more relevant and widely implemented than VR**
The report revealed that two-thirds of all the organizations surveyed believe that AR is more applicable to their business operations than VR. While VR has been found to enhance a solo, immersive user experience that is isolated from the real world, AR connects the digital world to the real world, and therefore supports a number of breakthrough use-cases. Of companies deploying AR, 45% are implementing the technology, compared with just 36% of those companies using VR (the rest of the companies are still at the experimentation phase).

**US and China most aggressive investors in AR/VR**
The report found that companies in the US and China are currently leading the implementation race, with over 50% of companies surveyed already implementing immersive technology for business operations. Whereas over 50% of companies in France, Germany, the Nordics and United Kingdom are still only experimenting with AR/VR initiatives.

*"Immersive technology has come a long way in a short time and will continue to evolve. Faced with stiff competition from aggressive investors in the US and China, businesses need to streamline investment to seize the long-term growth potential this technology offers,"* said Lanny Cohen, Chief Innovation Officer at Capgemini. *"To drive the highest business value from AR and VR, companies need a centralized governance structure, proofs of concept that are aligned with business strategy, and to be able to drive innovation and employee change management."*

**Four key strategies to expand AR/VR initiatives**
The report identified a group of "early achievers" who are driving the most benefits from their immersive technology initiatives. Representing 16% of the total companies surveyed, these organizations are focusing on four key strategies to expand their AR/VR initiatives:

1. **Put a centralized governance model in place and build AR/VR awareness:** 78% of early achievers have dedicated central teams or innovation centers to manage the organization's overall AR/VR activities, compared with only 51% of other companies.
2. **Invest in upgrading talent to gear up for future adoption:** 93% of early achievers are investing heavily in agile, in-house teams of experts, compared with only 76% of the rest of companies surveyed.
3. **Focus on the right use cases that provide lasting value and support employees:** Finding the right use case and testing its applicability is one of the top three priorities for early achievers, whereas currently, the inability to identify a use case is a challenge for more than 50% of organizations.
4. **Prepare technology infrastructure to integrate AR/VR:** The report found that a lack of data and technology readiness are major barriers to AR/VR adoption. For enterprises, the need of the

---

[5] Source: The Detroit News, "Virtual Technology Streamlines Ford's Manufacturing," July 2015

hour is to ensure smooth AR/VR integration with their existing technologies as well as their culture.

A copy of the report can be downloaded [here](#).

**Research Methodology**
Capgemini surveyed 709 individuals with considerable knowledge of their organization's AR/VR initiatives at 709 companies. The research focused mostly on companies that are active in AR/VR with 603 organizations currently experimenting or implementing AR/VR. Seventy-three percent of organizations reported revenue of more than US$1 billion in FY 2017. This survey was conducted from May to June 2018.

**About Capgemini**
A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of 200,000 team members in over 40 countries. The Group reported 2017 global revenues of EUR 12.8 billion.

Visit us at [www.capgemini.com](http://www.capgemini.com). *People matter, results count.*

**About the Capgemini Research Institute**
The Capgemini Research Institute is Capgemini's in-house think-tank on all things digital. The Institute publishes research on the impact of digital technologies on large traditional businesses. The team draws on the worldwide network of Capgemini experts and works closely with academic and technology partners. The Institute has dedicated research centers in India, the United Kingdom and the United States.

Visit us at [https://www.capgemini.com/researchinstitute/](https://www.capgemini.com/researchinstitute/)