The pace of digital transformation is accelerating, and for many companies, a key technology driving this change is augmented reality (AR). Understanding the key use cases and benefits of AR will be crucial to the success of many companies moving forward.

**Leveraging Augmented Reality to Enhance Training, Improve Service Outcomes, and Boost Frontline Worker Collaboration**

November 2020

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**Introduction**

Augmented reality (AR) is a technology that places digital information into our view of the real world to drive a range of process-enhancing experiences. Many industries were ready to take a closer look at AR heading into 2020, with plans to embrace the technology in the coming years. Then the COVID-19 pandemic hit. As firms large and small moved to adapt to the new reality, including employees working from home and mobile workforces dealing with lockdowns and health risks, many found AR technologies could help address the immediate challenges they were facing.

Seemingly overnight, interest in AR use cases such as knowledge capture, employee training, "see what I see" videoconferencing, and digital work instructions skyrocketed. Companies that had slated AR projects for some future date quickly recognized that the technology would be a key component of their pandemic-driven digital transformation. Savvy firms recognized their knowledge gap and quickly moved to embrace partners that could help them ramp up the technology.

One of the critical early acknowledgments of these companies was that while smart glasses may be necessary for some AR use cases, a considerable percentage of the jobs to be done could be accomplished using the mobile devices that many organizations had already deployed to their employees. By leveraging the smartphones and tablets they had distributed to their workforce — and using the integrated cameras and sensors of those devices — companies could quickly ramp up AR applications and services to drive a wide range of use cases.

It has been often repeated that COVID-19 has driven a rapid acceleration in digital transformation, and in the case of AR technologies, this is absolutely the case. In the space of less than a year, many companies have fast-tracked AR adoption, and the results have been astoundingly good. As the world looks ahead to the next normal, these companies will be well-positioned to leverage that knowledge and experience to build upon their AR success stories. In this document, we explore some of the key use cases, benefits, considerations, and trends around AR so that you are better equipped to embrace this critical new technology to help your own company succeed.
Key Use Cases

The enterprise-specific use cases for AR continue to grow at a rapid pace as more companies leverage the technology, more developers create applications and services, and more end users embrace the technology. That said, three well-defined and widely employed use cases have shown clear benefits and return on investment for the companies using them:

» **Training new employees and upskilling the existing workforce.** AR has proven its worth across a wide range of verticals in terms of both knowledge capture and knowledge transfer. The technology makes it possible for experienced workers to create interactive demonstrations of work processes that may not be documented elsewhere in the company.

» **Faster, more efficient service calls using virtualization tools.** AR can help employees in the field by making it easier for them to find the right technical documentation to complete a job. In some cases, that documentation might be a simple digital asset such as a blueprint for the machine they are servicing. In others, it might be a network-connected machine that is generating real-time data not visible to the naked eye, or it might be step-by-step work instructions digitally overlaid on the machine itself.

» **"See what I see" videoconferencing and guidance with remote experts.** A critical early AR use case has been to give frontline workers access to videoconferencing, a tool that has proven very impactful for regular work-from-home employees. In this case, when workers in the field encounter a challenge they cannot resolve, they contact a remote expert. That expert sees what the frontline worker sees and helps guide that person through the steps to complete the job.

Benefits

The benefits of AR are many. Let's focus on those associated with articulated use cases.

» **AR can lead to faster onboarding of new employees or reskilling of existing employees, and it has been shown to drive better knowledge retention than more traditional methods of training, including manuals, lectures, and even video courses. AR enables a company to leverage its existing digital assets to drive more seamless training activities. The use of the technology is often seen as a positive differentiator for companies competing for young talent.**

» **AR provides employees with access to needed information at the right time in the right place. This can drive a wide range of process efficiencies, a higher rate of job completion, higher employee satisfaction, and — most importantly — cost savings.**

» **"See what I see" videoconferencing can be a game changer for organizations looking to leverage experts who are no longer in the field or who are needed across geographies. It can also create frictionless collaboration among frontline workers to help speed job resolution.**
Considerations

Very few organizations have extensive knowledge or experience around AR. That means it is important to think through the following considerations carefully before moving ahead:

» Choose a trusted enterprise partner with AR experience that can guide you through the process. Be sure to establish key, measurable metrics for success. Focus on solving specific problems and avoid the scope creep that often occurs when people inside your organization begin to see the value that AR can bring.

» Consider the process of content creation and how your company can use its existing 3D assets to create digital twins that can drive a wide range of AR-based processes.

» Focus on how you will integrate AR into your existing processes and systems. Do not expect management or employees to embrace systems that fail to leverage existing, working applications. Consider how you will capture and leverage AR analytics from the start.

» Don’t rush into buying new hardware, especially smart glasses. In many instances, you can leverage existing mobile devices to get an AR program off the ground. For many organizations, smartphones or tablets will be the only devices they ever need. Other organizations will require smart glasses, especially if their employees need to work hands-free. If you start on mobile devices, make sure to plan for a future state that includes head-mounted devices.

Trends

IDC’s 2020 AR/VR Spending Guide forecasts spending on AR hardware, software, and services to grow from about $615 million in 2019 to $1.7 billion in 2020, on its way to more than $4 billion in 2021. Technology providers continue to ramp up their support for the technology, with new smartphone and tablet vendors adding new hardware features such as light detection and ranging (LiDAR) that enhance AR capabilities. A wide range of vendors also continues to introduce more affordable and feature-rich smart glasses designed for the enterprise. Meanwhile, enterprise-focused providers continue to roll out more robust software and services that allow companies small and large to embrace AR more easily and cost effectively. One of the key technologies to watch is the AR Cloud, a map of the real world that enables geographic AR experiences with pinpoint accuracy.

Conclusion

AR is no longer a technology that is coming soon. It is here now and growing fast. Companies that continue to put off investment in the technology will quickly find themselves lagging behind competitors that have embraced the technology and are already iterating fast to better leverage their existing digital assets, hardware, and systems. The time to act is now: Find a trusted enterprise partner and begin the work.
About the Analyst

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Tom Mainelli manages the Device & Consumer Research Group, which covers a broad range of hardware categories, inclusive of both home and enterprise markets, as well as IDC’s growing consumer research practice. The device research includes PCs, tablets, smartphones, wearables, smart home products, thin clients, displays, and virtual and augmented reality headsets.

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"AR Supports Businesses and Customers"

The global pandemic upended business as usual across all industries. As social distancing and working remotely took hold, companies accelerated the need for technology to support everything from onsite repairs to training employees. Augmented reality (AR) brings the right technology at the right time. Whether your company needs temporary remote assistance during this time of disruption or ongoing support for a dispersed workforce, AR can empower your customers and employees. It allows employees to be more efficient by utilizing real-time learning and guidance remotely through collaboration, while also keeping them safe by limiting unnecessary travel. AR tools combined with agent-assist technologies can also bring fast, self-paced technical support to your customers' homes and hands.

Visit CGS on the web to learn more about our Teamwork AR solution (here).