CLOSING THE SKILLS GAP:

AUGMENTED REALITY AND THE FUTURE OF WORK

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During an analyst panel at Vuforia Live,

experts examined the market drivers for augmented reality technology and the reasons AR is an inevitable component in the future of work. But what does incorporating AR actually mean for your bottom line – and how can it save your workforce? Guest speaker J. P. Gownder shares his in-depth assessment on the unique opportunities and measurable results that only AR can provide.







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Manufacturers and field service providers are facing shortages of skilled labor as their aging workforce retires. How do you see augmented reality being leveraged to help close the skills gap?



The skills gap and demographic change come up in so many conversations Forrester has with organizations in industrial, manufacturing, utilities, and related verticals. Augmented reality can be used as an aid to help bridge the gap.

Let's say that traditionally an organization wanted its most senior field service technicians out in the field with junior trainees along for the ride. That's costly because you're paying two people to conduct one job while doing on-the-job training. Let's also say that the senior field service technicians are retiring and stretched thin – a typical scenario.

By digitizing the work process, you can first capture the knowledge and actions of the senior field service technicians for use in training and on-the-job assistance. Now you can send junior technicians out into the field and augmented reality can help guide them through their work, leveraging the practices captured from more senior experts. But what if they still get stuck? You can use remote assistance, another augmented reality technology, to offer them 1:1 help from senior field service technicians, now stationed in a central call center... but only for part of that service visit and without making 2 people travel on-site.

Augmented reality helps transfer skills and knowledge while also offering deeper help through remote assistance in moments of need.











As you think about the future of work, what do you see as the biggest benefits for employees who work at organizations that have invested in AR?



A future of work strategy must help organizations drive key goals:

- Resilience in the face of systemic risks like the pandemic, climate change, By giving employees access to digital information and procedural guidance political risks, earthquakes, and other risk events. superimposed upon the real world, it allows additional employees to conduct tasks that were previously out-of-reach due to their lack of knowledge or skill. This, in turn, makes the workforce more resilient, as more employees can productively. pitch in on that work as demands or conditions shift.
- Adaptiveness to changing market conditions and customer demands. Creativity for employees, who have the ability to act on that creativity

"Employees equipped with augmented reality and remote assistance can adapt to changing circumstances more rapidly."

Augmented reality can help employees along all three vectors:

- Employees equipped with augmented reality and remote assistance can adapt to changing circumstances more rapidly. Perhaps they've gone out into the field to fix a piece of machinery, have found that the model number was wrong in the records, and they now have to fix a different piece of machinery. Augmented work instructions and remote assistance can help them still get that job done.
- Employees can be more creative with augmented reality at their disposal, finding new ways of doing work – then capturing that innovation to share with other employees, making them more creative as well.











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How should business leaders think about quantifying and measuring these people-focused benefits?



The good news is that augmented reality lends itself to a clear, measural business cases. Let's take the example of field service technicians. A consends customer service technicians into the field equipped with augmented reality tools – let's say using a head-mounted display to consume that c With this solution in place, field technicians can get help instantly from resperts to help them increase their success rate at repairs, tick off items from extensive checklists, and pull up schematics, videos, and detailed visits related to the issue in front of them.

For this example, we could quantify benefits (i.e. positive business impacts such as productivity or revenue gains):

A reduction in unnecessary site visits. With better work instructions, all with a call center staffed with experts on equipment from whom they are able to get live, real-time help when they're at customer sites, field technicians can increase first-time fix rates and eliminate the need for second expert to make a house call. As a result, we anticipate that these workers will be able to avoid X number trips annually by using augmen reality, with "X" to be quantified during the pilot and updated over time enabling better first-visit resolution rates and eliminating the need for up visits, we can also expect to reduce the number and cost of truck resolution.

able mpany nted content. remote	• A drop in administrative overhead. Additionally, technicians spend a measurable number hours a week on inspection and compliance tasks, determining whether equipment matches formal guidelines and filling out forms that provide an audit trail for activities performed, chores that the use of augmented reality cuts in half.
work	With these principles in mind, we could foresee and measure line items of quantified benefits such as:
cts,	 Increased productivity from hands-free enablement (via head-mounted display + augmented reality software)
long	 Reduced travel and cost avoidance of secondary truck-rolls Lower compliance costs
a	 Increased uptime for equipment (because it gets fixed faster) Increased customer satisfaction
nted	 Employee experience and engagement (and related issues like attrition)
follow- olls.	







For all the promise that augmented reality has to offer, there are many opportunities that have yet to be explored. In your opinion, what are the biggest areas of opportunity for augmented reality in the next 2 years?



Augmented reality adoption will continue to grow as decision-makers and employees become more familiar with the technology. Change management will become less cumbersome and many industrial organizations will be thinking "AR-first."

Over time, we can expect artificial intelligence to play a stronger role in augmented reality. Take the following example: Today, we use remote assistance to connect two or more experts. This is powerful, but it still requires 2+ people to collaborate on 1 problem. As we program stronger AI – using computer vision, better data sets, and step-by-step instructions - we can provide employees with clearer instructions and better guidance, lessening the need for remote assistance sessions. In 10 years, we might even expect AI to take the place of remote experts for 90% or more of those interactions. In other words, an intelligent agent takes the place of the remote expert to help a human with all but the hardest, longest-tail problems.

This fusion of artificial intelligence, better data, and augmented reality will play a key role in helping organizations equip employees with the technology that drives productivity and employee satisfaction.

STEP INTO THE FUTURE OF WORK

and discover how AR goes beyond knowledge transfer and remote assistance. Register and watch the Vuforia Live session Analyst Panel: AR Across the Value Chain to continue unpacking the enterprise-wide impact of AR technology.

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