

EBOOK

Augmented reality technology:

What's next in utility digitization



Contents

Page 1

An innovative technology takes off

Page 2

Enterprise AR emerges

Page 3

AR and the utility converge

Page 4

Implementing AR

Page 5

Unpacking adoption roadblocks

Page 6

Embracing utility digitization

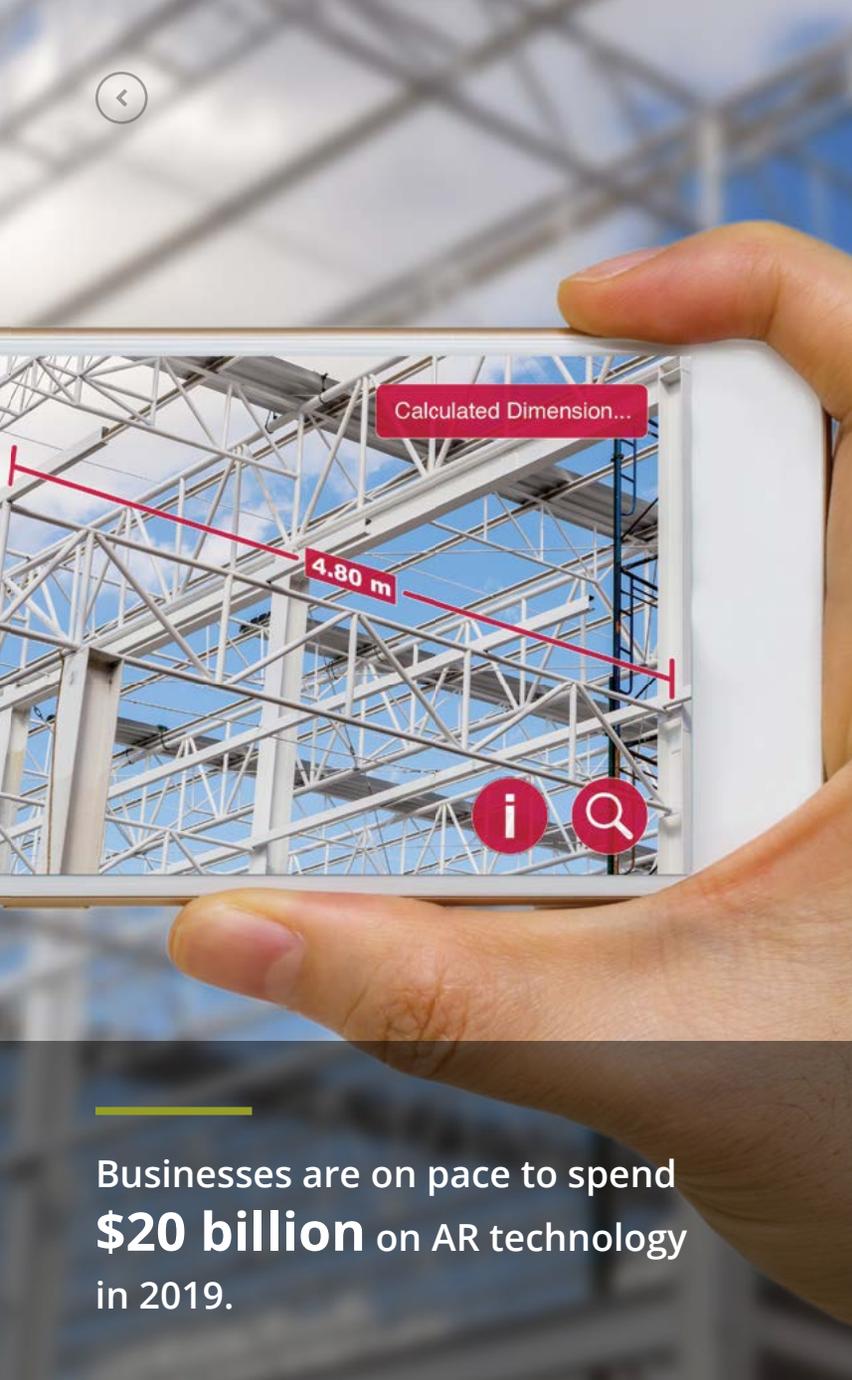


Page 1

An innovative technology takes off

Utilities nationwide have embraced digitization, pursuing information technology optimization efforts that could, among other things, cut their operating expenses by a quarter.¹ Augmented reality is among the IT innovations that stateside power providers are investigating — and for good reason. Early adopters like Boeing have seen significant operational benefits that have translated to the bottom line.²

While implementing advanced technology of this sort might seem daunting to utilities navigating the initial stages of digitization, executing this kind of high-level IT initiative is possible and could soon become necessary as customer volumes and expectations grow.



Businesses are on pace to spend
\$20 billion on AR technology
in 2019.

Page 2

Enterprise AR emerges

Businesses in virtually every industry have begun putting into place AR hardware and software. In fact, these early adopters are on pace to spend **\$20 billion on AR technology in 2019**.³ Why? Enterprise AR applications allow workers to access data-rich digital overlays that interact with the real world and create new operational capabilities.

As mentioned above, there are some prominent early adopters making material headway with the technology. Boeing technicians wear hands-free AR equipment during the airplane wiring process, accessing digital schematics that match the physical environment and allow them to move through assembly operations at a quicker pace. This approach has reduced wiring time by 30% and catalyzed a 90% improvement in first-time quality.⁴ Ford vehicle designers across five studios are also harnessing the power of AR and employing state-of-the-art sketch tools that have reduced the initial design process from months to weeks.⁵



Page 3

AR and the utility converge

Forward-thinking utilities are exploring all kinds of sector-specific AR use cases. For instance, the Electric Power Research Institute is working with multiple utilities, including industry giants such as Duke Energy and Consolidate Edison, to develop and deploy workable AR assets fit for the field.⁶ The EPRI-Duke Energy yielded AR glasses that allow linemen to view GIS data via interactive heads-up displays, making it possible for them to access just-in-time electrical device information and reference materials, all without taking their

eyes off the tasks before them.⁷ Con Edison is pursuing a similar deployment, providing field teams with AR gear that enables them to spot buried transmission lines and look through repair best practices.⁸

Utilities everywhere can pursue similar deployments, as well as AR-driven, real-time training programs wherein field crews can cultivate knowledge through scenario-based instructional sessions delivered via headsets.⁹

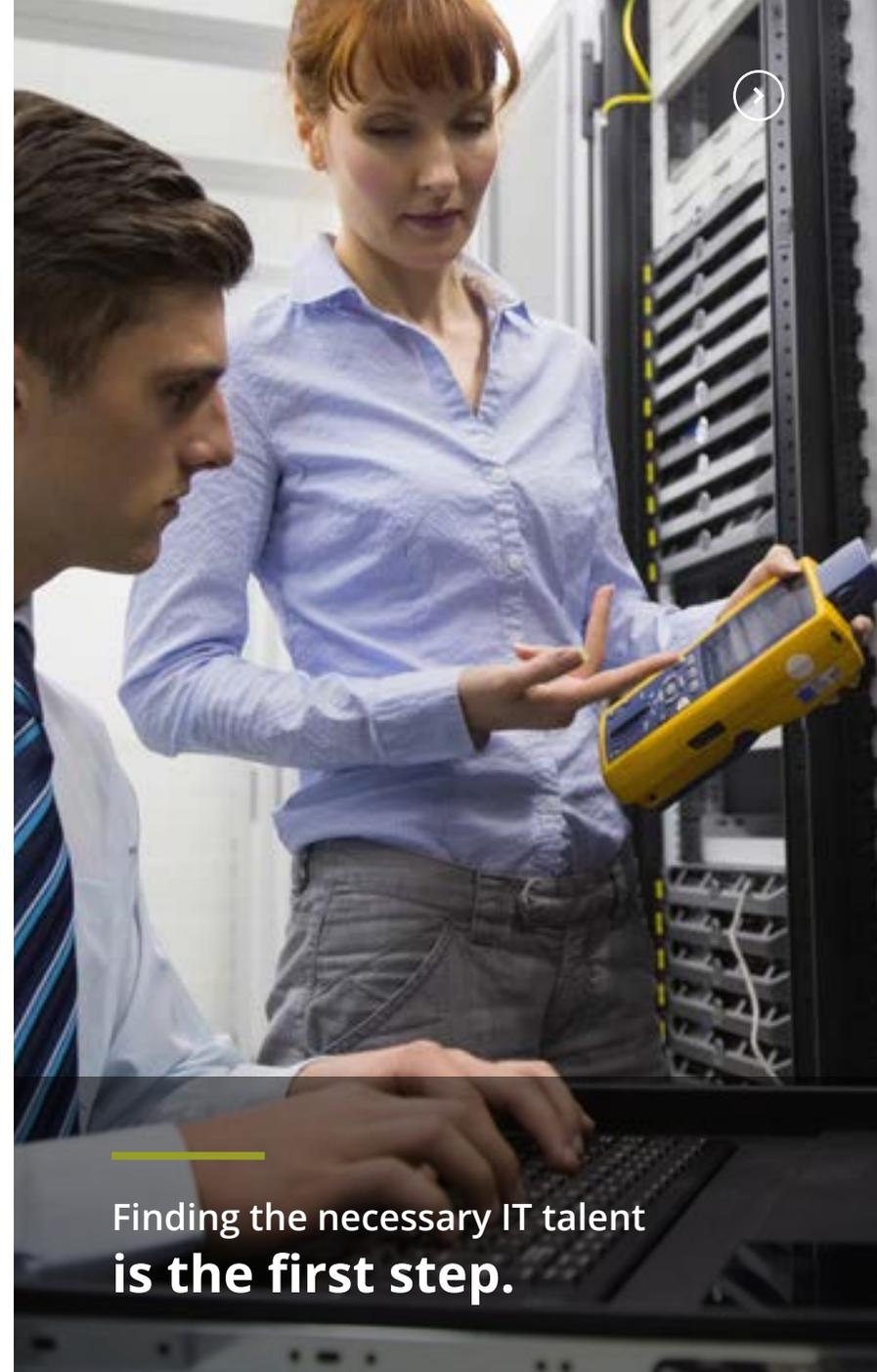


Page 4

Implementing AR

While seemingly complex on the surface, AR implementation can be accomplished without surrendering significant budgetary bandwidth or coordinating massive IT adoption initiatives. As mentioned before, a good number of organizations have successfully navigated this path. **How?**

Finding the necessary IT talent is the first step. Adopters either handle the development and deployment of AR technology in-house or contract external experts. That said, most go the latter route due to the fact that true AR expertise is scarce.¹⁰ Pinpointing a revenue-building use case is next, as fairly strong cost reductions or efficiency gains are needed to justify implementation. Training is the final phase. In the end, AR solutions only work when users have the knowledge they need to operate them.



Finding the necessary IT talent
is the first step.



Outage management systems are one of the most suitable applications for AR software and hardware.

Page 5

Unpacking adoption roadblocks

There are, of course, some potential roadblocks that utilities pursuing AR implementation can encounter — namely, the absence of reliable IT infrastructure and data sources. To get the most out of the technology, utilities must put into place complementary systems that support AR gear.

Outage management systems rank among the most useful solutions for utilities intent on putting into place AR software and hardware. These platforms make it possible for electric companies to cultivate centralized data repositories that can hold information collected via AR-equipped linemen and provide real-world outage insights for use in scenario-based training exercises administered with the technology.



Page 6

Embracing utility digitization

While still relatively alien to most enterprises, including utilities, AR technology is quickly moving into industry-standard territory. In fact, **AR solutions could be as common as smartphones by 2025.**¹¹ With this in mind, utility companies should seriously consider implementing AR, as it has the potential to transform field and customer service operations. And those power providers that are in the earlier phases of the digitization journey might think about looking into the IT infrastructure components that make AR implementation possible.

Here at dataVoice International, we develop and deploy OMS solutions designed for utilities of all sizes that are embracing digitization and the various enterprise innovations associated with it.

Connect with us today to learn more about our product and service offerings, and how they can help your utility move forward. >



**dataVoice
International**

datavoiceint.com

2220 Bush Dr. McKinney, TX 75070

972-390-8808

¹McKinsey and Company, "How Utilities Can Speed Up Their Digital Transformations," 2019. | ²Capgemini, "Augmented and Virtual Reality in Operations," 2018. | ³International Data Corporation, 2018. | ⁴Boeing, "Boeing Tests Augmented Reality in the Factory," 2018. | ⁵Motortrend, "See How Ford Uses Virtual Reality to Design Cars," 2019. | ⁶Power Technology, "Why Augmented Reality Will Increase Safety and Efficiency in the Utility Sector," 2019. | ⁷EPRI Journal, "The Future of Energy Will be Augmented," 2018. | ⁸Green Tech Media, "Augmented and Virtual Reality Will Help Build the Utility Workforce of the Future," 2016. | ⁹Deloitte, "Augmented Reality and Wearables for Digital Utilities," 2018. | ¹⁰Harvard Business Review, "A Manager's Guide to Augmented Reality," 2017. | ¹¹Perkins Coie, "2019 Augmented and Virtual Reality Survey Report," 2019.