

Cool Vendors in Frontline Worker Technologies, 2021

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Initiatives: [Digital Workplace Infrastructure and Operations](#)

The trend over the past couple of years of investments in frontline worker technologies yielding a very high return on investment has been “turbo charged” by the pandemic. I&O leaders looking to capitalize on frontline worker technologies should review these four innovative vendors.

Overview

Key Findings

- Organizations in all geographies have been forced by the pandemic to look at ways to eliminate human interactions by automating, running with “lights out” and reducing travel as much as possible.
- When a frontline worker needs to work in a home or a facility (e.g., a tech engineer performing an install or repair), the expectation of getting it right the first time is higher than ever. A second visit may not be an option from a cost, customer service or pandemic perspective.
- Travel restrictions introduced during the pandemic have forced many industries to get more creative about leveraging remote experts, as getting staff on location may just not be an option.

Recommendations

Infrastructure and operations leaders responsible for frontline worker technologies should:

- Augment the capabilities of remotely supporting frontline workers by leveraging technologies that are packaged “in a box” and do not require expert assistance to set up and use.
- Improve remote collaboration and accelerate workflows by delivering AR/MR experiences to smartphones, tablets and head-mounted displays.
- Limit in-person visits to customer sites by investing in technologies that enable remote expert guidance and allow workflows to execute with less manual intervention.

Analysis

This research does not constitute an exhaustive list of vendors in any given technology area, but rather is designed to highlight interesting, new and innovative vendors, products and services. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

What You Need to Know

Members of the workforce whose jobs make it impossible to work remotely – often referred to as essential or frontline workers – need more support than ever. To serve customers who prefer not to let support workers into their spaces, whether residences or places of business, technology must enable workers to limit presence into customer locations by delivering service successfully on the first physical attempt, or by providing curbside delivery and remote support. Many clients are also looking to increase automation to support processes without human intervention or touch. Travel restrictions also increase the demand for being able to examine, inspect and certify products or installations remotely (see Easy Aerial and ViewPoint Systems). The vendors in this research offer products and services that address these needs by enabling socially distanced inspection and service, and reducing iterations to speed workflows (see Instant Connect) and limit in-person interactions between workers and customers (see GridRaster).

Easy Aerial

Brooklyn, NY, U.S. (www.easyaerial.com)

Analysis by Nick Jones

Why cool: Easy Aerial provides a “drone in a box” solution intended to support frontline workers in a wide range of surveillance and inspection tasks outdoors with uniquely rapid deployment. The drone is stored in a ruggedized carrier that provides charging and communications services. The carrier can be installed locally, on a vehicle or at an unattended remote site. Carriers contain their own video and sensing capabilities. When activated, the box deploys the drone, which can typically be on station in about one minute. At the end of the mission, the drone returns to the box to be recharged. Drones can deploy from, and return to, moving vehicles. Easy Aerial provides several types of drones, including both quad- and hexacopters capable of carrying payloads of up to eight pounds (cameras are the most common payload). A differentiating capability is the option for tethered drones, which receive power from the carrier box and can stay on station for long periods (e.g., one day) at altitudes of around 100M for tasks like providing wireless base stations for emergency communications. Easy Aerial products are available for purchase or lease.

Challenges: Easy Aerial is a small company whose technology has a lot of potential in a wide range of applications. However, it shares many challenges common to small companies. The company will need to scale a lot (from its current level of about 60 staff) to reach its full potential. This poses operational, cultural and financial challenges. Easy Aerial has made two key executive appointments in 2021, bringing in a new COO and CRO who must grow the company without damaging its culture. Future steps, such as making the drones smarter and able to perform onboard video analytics will demand a technical shift to become more of an AI and software company. To scale quickly, Easy Aerial will also need to develop a channel strategy to scale sales and support for a worldwide client base.

Who should care: Easy Aerial is likely to be attractive to a wide range of military and civilian organizations needing drones for surveillance, inspection and communications purposes. Examples include supporting security staff that needs rapid visibility of incidents, or when organizations want to reduce the time to get visibility of an incident on large sites. Another use case is organizations that need to station remote drones for on-demand inspections of power lines, pipelines or railways, as well as planned periodic surveys of stockpiles. Another strong use case is mobile frontline workers, including first responders, with vehicles that need drone support for incidents or inspections.

Instant Connect

Chicago, Illinois, U.S. (www.instantconnectnow.com)

Analysis by Leif-Olof Wallin

Why Cool: Conventional push to talk (PTT), walkie-talkie style communication, service has been around for decades and has been an intrusive experience, in which far more people than the intended recipients had to listen to frequently irrelevant discussions and sometimes “wait in turn” to talk. Instant Connect adds the flexibility to create talk groups on the fly. Users can create talk groups by dynamically selecting and adding participants into a talk group. Alternatively, creation of talk groups could be automated to include multiple users in proximity of a certain location that is unique for that particular point in time – thus creating a temporary talk group focused on a specific task. Instant Connect can create a single talk group with users connected on different technologies, including smartphones, such as an LTE network, a Wi-Fi network, any other IP-network and legacy radio solutions – as well as in-app support for IP Telephony. Users also can transmit across multiple talkgroups when needed. In a first-responder scenario, in mining, defense and oil and gas, different constituencies can migrate to IP technology when it’s suitable from a technology and budget perspective, while still maintaining communications with other groups still on legacy radio technology.

Challenges: Integrating vendors of legacy radio technology using proprietary APIs and technology is a major undertaking/investment, as some of these vendors may be protective of their current customer base and deny access to integration documentation. Another challenge is forging the appropriate partnerships, as IP-based PTT is an over the top (OTT) service, taking the network owner out of the equation.

Who Should Care: Companies that would benefit from creating dynamic talk groups to complete a specific task or mission – increasingly in an automated fashion – should evaluate Instant Connect. Also, loosely coupled organizations like municipalities, where participants may choose/budget to move to new IP-based technology at different points in time but still need interoperability with organizations staying on legacy technology, could potentially benefit from the service.

GridRaster

Mountain View, CA, U.S. (<https://gridraster.com>)

Analysis by Tuong Nguyen

Why Cool: GridRaster provides a platform for enterprises to deliver accurate remote, unique low-latency renderings of high-quality 3D assets onto the physical world using virtually any mobile device in a scalable way. This allows a frontline worker to access large, complex models such as CAD or BIM via a mobile device – including smartphones, tablets and head-mounted displays. Moreover, the model can be anchored to a physical object and spatially oriented (six degrees of freedom), enabling others to view and collaborate on planning and design.

Challenges: Gartner expects that the augmented reality/mixed reality (AR/MR) market won't reach maturity for five to 10 years. Mega vendors like Microsoft and Google are also showing signs of entering the market. Use cases and, more importantly, smartglasses analyses are still being calculated for AR/MR experiences. Currently, organizations are seeing value in less sophisticated AR experiences – such as procedural tasks using simple, text-based checklists – and situational video for remote video support situations with limited overlays like telestration, and non-complex files like jpegs and pdfs.

Who Should Care: This platform benefits IT leaders in industries and business units (e.g., in aerospace, defense, automotive and industrial design, that want to leverage AR/MR experiences to improve collaboration while using complex, 3D content (CAD, BIM). GridRaster's technology can speed-up workflows that may require multiple iterations for planning and design.

Viewpointssystem

Vienna, Austria (<https://viewpointssystem.com/en>)

Analysis by Leif-Olof Wallin

Why Cool: Viewpointssystem has a solution that is both hardware- and cloud-based, which makes it easy to consume, deliver and manage out-of-the-box. The hardware piece is a pair of smartglasses that is also certified as safety goggles, connected to a small mobile computer unit and packaged into a shock-proof case for shipping. This allows a relatively unskilled local person to perform a remote inspection or certification in a very pandemic-safe way. Organizations can also buy a kit and store it on location for remote support when needed. The cloud service enables a remote expert to see exactly what the remote person sees and shows what they're looking at. The session can also be recorded (in the cloud or on the device) for compliance or training purposes.

Challenges: The hardware is relatively expensive and may have to be subsidized to make the value proposition attractive. Add to this the recurring monthly service charge, monthly cost for the cloud component and the investment in R&D that needs to be written off, and finding the right pricing model could be a challenge. Another challenge is forging the appropriate partnerships for different vertical use cases to accelerate growth.

Who Should Care: Companies that need to provide remote expert guidance and surveillance/certification can benefit from being able to perform activities without having experts traveling to the location. Local personnel will be used and directed to perform the activity. In certain use cases, there is also the benefit of saving the video feed as proof of delivery, or proof of properly performing the procedure or training purposes.

Recommended by the Authors

[Hype Cycle for Frontline Worker Technologies, 2020](#)

[Technology Investments for Frontline Workers Will Drive Real Business Benefits](#)

[Transform Frontline Worker Computing With a Product-Oriented Focus](#)

[Emerging Technologies: Top Use Cases for Enterprise Augmented Reality](#)

[Use Wearable Technology to Enhance Frontline Worker Productivity: Field Service Management](#)

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