SOLUTION BRIEF

Augmented Reality for Manufacturing

Digital. Flexible. Green.

Ensuring production uptime and supporting products in the field with a workforce that must deal with increasingly complex issues are challenging manufacturers like never before. Downtime felt throughout the supply chain and beyond impacts brand perception as well as bottom-line results. Just one hour of downtime can cost $300,000 to $5 million depending on company size.[1] Similarly, almost 21% of wasted time for maintenance workers is a result of traveling to different areas in a factory, with an additional 20% as a result of waiting for instructions.[2]

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With the need for efficiency, safety, and sustainability at an all-time high, how can manufacturers embrace digital transformation and create supply chain resilience while increasing speed to market?

Meet CareAR

CareAR is a Service Experience Management platform that allows manufacturers to reimagine their equipment repair, maintenance and support experience with AR-powered live visual guidance and instructions tailored for each interaction.

On-site technicians are guided by visual prompts while receiving remote, real-time assistance and guidance from off-site experts from their mobile devices, tablet, or smart glasses.

Field service technicians looking to fill a gap in knowledge, or a customer service rep sending customer instructions to assemble a device after unboxing can leverage personalized AR-based self-guided instructional sessions.

2D and 3D content with interactive guides increase a user's level of knowledge and enable self-solve and self-service experiences. Visual state detection powered by AI ensure each step is performed properly and consistently allowing for highly accurate outcomes.

Use Cases

Production Operations

Use Product Tours with 3D or 2D visuals and step by step instructions for self-solve and self-service experiences. Get remote, real-time visual assistance and guidance if needed.

OEM Product Support

Leverage state detection as validated work during customer driven self-guided experiences. Utilize visual remote support for initial set-up, proper use, maintenance, and troubleshooting.

Heavy and Complex Machine Service

Use self-serve visual instructions to drive worker confidence and job satisfaction. Employ visual remote support from off-site experts for troubleshooting and break-fix.

Benefits

Improve First Time Fix Rates

Visual expert guidance minimizes same issue return dispatch and improves resolution times.

Improve Uptime

Decrease equipment downtime through self-guided troubleshooting, maintenance, and repair experiences.

Maximize Productivity

Upskill junior technicians by connecting them with experts remotely and minimizing travel.

How it Works

CareAR® Instruct - Boosts self-solve and self-learning for frontline employees with step-by-step augmented reality graphical guidance. Hotspot focus engages users with contextual graphical guidance overlayed on actual objects within each user's smartphone or wearable device field of view.

Detect
3D computer vision object detection focuses attention

Guide
Step-by-Step AR self guidance enhances comprehension

Verify
State Detection auto adjusts steps based on motion

CareAR® Assist - Engage service technicians and customers with annotated augmented reality visual instruction from "see what I see" remote experts. Diagnose, direct and resolve by making experts immediately accessible to speed issue resolution.

See
View the service situation remotely from any location

Solve
Visually guide and collaborate for effective problem resolution

Save
Capture and share content in systems and with teams

Technical Requirements

mobile	iOS 11 or later (includes ARKit) Android 9.0 or later (includes ARCore)
desktop	Windows and Mac
smart glasses	Android 8 or later (includes Google Glass, RealWear, Lenovo)
network	Automatic video adaptation dynamically adjusts for bandwidth variation

Instruct Features

Step-By-Step Graphical Guidance
Engaging AR graphical guidance is contextually overlayed with animated motion on target equipment within each user's device field of view.

Create and Capture Content
Save images and video recording from live service sessions and store in the cloud for collaboration.

Content Enhanced
Additional 2D, video and MagicLens visualization can supplement each hotspot to enable users to self-customize for their learning style.

Assist Features

Anchored Annotations
Remote experts can guide with visual graphics that remain anchored to the intended location in real-time.

Engagement Agility
App or browser-based augmented reality remote assistance with SMS, email or join by code invite options.

Multi-User Support
Simultaneous Assist session participants without a limit ability for any concurrent Assist user to stream and annotate based on a host request permission.

Start Visually Resolving Issues Remotely With Enterprise Augmented Reality

Schedule a demo at: CareAR.com/demo

Sources:
1. https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/can-the-automotive-industry-scale-fast-enough
2. https://www.oliverwyman.com/our-expertise/insights/2021/aug/dealing-with-car-complexity.html

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