ism THOUGHT LEADERS IN CUSTOMER STRATEGY

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Mercedes-Benz XR/Metaverse Case Study

The Mercedes-Benz Group AG is a German multinational automotive corporation headquartered in Stuttgart, Baden-Wurttemberg, Germany. Founded in 1926, it is one of the world's car manufacturers. In 2023, Mercedes-Benz was the largest manufacturer of luxury vehicles in the world, having sold 2.5 million passenger cars and generated 150 billion Euros ($162 billion) in revenues. It currently has 167,397 employees globally.
In addition to manufacturing luxury vehicles, Mercedes-Benz AG also manufactures light commercial vehicles.

For car buffs, it is worth noting Mercedes Benz's created the first internal combustion engine in a self-propelled automobile around 1900. And at CES 2024, Mercedes-Benz showed their flying vehicle prototype – a real beauty! No surprise the company's slogan is "The Best or Nothing."

But before I introduce the Mercedes Benz field service case study, I want first to offer a primer on how Augmented Reality (AR) & Virtual Reality (VR) are being applied to today's $5 billion field service industry, including their many benefits.

AR/VR Are Transforming the Field Service Industry

Field service refers, quite literally, to the services a company's mobile service force provides when they are either on route to, or on-site at a client's project location. While VR is a key technology used to train field service personnel, AR technology is of particular value in the top 3 field service applications:

- **Perform equipment maintenance and repairs**: Field technicians use AR as an interactive visual aid by superimposing detailed diagrams and instructions over equipment in the field.
- **Provide Remote Assistance & Training**: Remote customers and expert technicians leverage AR technology to connect virtually, thereby allowing them to have the same view and collaborate anywhere in the world.
- **Perform field inspections and audits.** AR glasses provide checklists and other information to field personnel in real-time.

A great diversity of industries rely on field service to manage their resources. This includes, for example:

- Oil and gas companies working offshore
- The telecommunications and cable industry
- The in-home healthcare industry
- Utility companies
- Public sector transportation (such as trains and buses)

Regarding the benefits of AR/VR technology in field service, my colleague Tim Bajarin, who has extensive knowledge of field service management and technology, speaks about the following AR/VR benefits:

- Field service applications can replace bulky operator manuals and handheld devices with better user experience and hands-free operation abilities. This is because AR and VR devices make necessary information easily accessible in an immersive format that includes 3D illustrations, video-driven instructions, and real-time feedback when connected to an in-house technician.
- AR and VR-based wearable devices boost technicians' efficiencies by having their hands-free while in the field.
- Field service personnel receive a detailed digital visualization of the asset and the steps required to assess and repair the problem, thereby reducing time to train new staff.
- Top of FormLeveraging AR/VR in field service operations reduces the learning gap between newer and senior technicians or engineers, which enables real-time knowledge transfer between them.
- AR/VR devices can provide remote diagnosis and repair while minimizing travel costs and dependence on skilled technicians to be onsite.
- VR is an excellent way to onboard and train new field service technicians. Training employees is essential for any business that values a competent workforce able to efficiently follow procedures and processes. The implementation of AR/VR technology for the on-the-job training program can help in the fast development of skills and better retention of training information. This helps make the workforce more successful at providing concise customer service solutions.
- AR/VR improves the process of troubleshooting. It helps diagnose issues in less time. And when a field engineer requires help, the engineer can easily open a Remote Assist session with a senior technician whereby both are seeing the same scenario in the field.
- AR and VR are extraordinary tools that envelop individuals in an alternative, digital twin environment.
- The payback from applying AR/VR to field service can be significant. According to a report by Gartner, companies utilizing AR in field service management can expect a 20% improvement in first-time fix rates and a 10% reduction in overall service costs (source: Gartner, "Augmented Reality Delivers Business Value for Customer Service").

The role of AR and VR in field service is transformative, offering comprehensive benefits that range from operational efficiencies and cost savings to enhanced customer experiences and workforce empowerment. These technologies are not merely augmenting the current capabilities of field service personnel but are reshaping the industry's future, making immersive, efficient, and effective service delivery the new standard.

Mercedes Benz Leads the Way in Its Use of AR Field Service Technology

Let us now turn our attention to Mercedes-Benz's foray into VR/AR technology. In 2020, Mercedes-Benz embarked on a journey to redefine automotive field service by leveraging AR to enhance its service technicians' efficiency, hasten problem resolution, and diminish the environmental and cost implications of service-related travel. This initiative responded to the increasing complexity of modern vehicles, which now incorporate vast arrays of digital and computerized systems. At the time of the launch, Mercedes Benz announced its intention to roll out this AR technology to all 383 dealerships across the US.

To help achieve this goal, Mercedes Benz chose to collaborate with Microsoft's HoloLens 2 headset and Dynamics 365 Remote Assist technologies. Here is how it works: Service technicians put on the HoloLens 2 headset to visualize complex 3D models and receive immediate guidance from remote experts. This setup not only expedites the diagnostic and repair processes but also enables on-the-spot training and support, thereby enhancing service quality and customer satisfaction. The technology allows for immersive, mixed-reality experiences where technicians can interact with digital overlays of vehicle components while accessing remote

assistance. This has drastically reduced the time it takes to resolve issues – from days to mere minutes, thereby significantly improving operational efficiency and customer service turnaround times.

With HoloLens 2 and Dynamics 365 Remote Assist, a problem that might have taken days of phone calls and emails to sort out, now can be resolved with a 10-minute conversation. Mercedes Benz service technicians save a lot of time not having to go back and forth with subject matter experts, uploading information, asking questions, and waiting for a response. Instead, Merecedes Benz dealerships can get cars back to the owners – diagnosed, fixed, washed, and ready to roll – in a fraction of the time it used to take, which has a significant impact on the dealership's ability to provide excellent customer service.

Mercedes-Benz collaboration with Microsoft also helped Mercedes Benz to reduce its carbon footprint by reducing travel required to support dealership service centers by 35 percent to 40 percent.

Mercedes Benz's use of AR for field service represents a significant leap forward in automotive service technology. This initiative not only enhances service efficiency and reduces environmental impact but also sets a new standard for customer service in the automotive industry. For those wishing to see Mercedes Benz's AR service technology in action, I encourage you to visit ISM's award-winning XR/Metaverse Center, and read the Mercedes Benz article; the video is embedded in the article.

Looking Ahead: Mercedes Benz's Plans to Expand its Use of VR/AR Technology

Mercedes Benz's venture into AR with Microsoft to deliver enhanced service technology is just the beginning of Mercedes Benz's broader strategy to incorporate digital innovation across its service and sales operations. Beyond immediate service benefits, Mercedes Benz envisions leveraging AR/VR technology for diagnostic paths, virtual training, and enhancing customer interactions on the sales floor. This approach aligns with Mercedes Benz' goals for quality, innovation, and sustainability, including its commitment to achieving carbon neutrality. As Mercedes Benz continues to explore and expand its use of AR, it underscores Mercedez Benz's position as a leader in technological innovation and further reinforces its simple yet powerful slogan: "The Best or Nothing." Hopefully at CES 2025, we will all witness the Mercedes Benz flying car take flight!

My Metaverse business partner, Tim Bajarin, and I are keen to assist enterprises at each step of the way to ensure their successful entry into the Metaverse. To read about additional automotive (e.g., BMW) and related Metaverse case studies, I strongly encourage you to visit ISM's award-winning Metaverse Resource Center – www.ismguide.commetaverse-resource-center – where in addition to gaining access to more than 300 Metaverse case studies, more than 300 Metaverse articles, and more than 100 Metaverse videos, you can download ISM's new '8 Steps to Do Business Successfully in the Metaverse' White Paper, download ISM's New 'VR Training Guide for the Enterprise,' learn about and sign-up for ISM's complimentary 2-hour Metaverse Executive Bootcamp, and more.

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