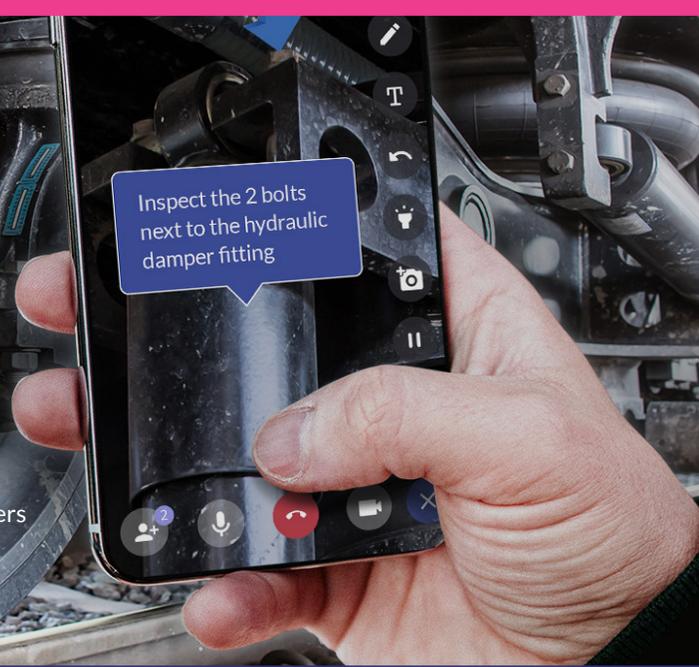


CASE STUDY

Multi-Modal Logistics and Transportation

This CareAR customer is one of the largest multi-modal transportation companies in North America. Its Railway system is among the top transporters of inter-modal freight in North America. It also hauls bulk cargo, including enough coal to generate about 25% of the all the electricity produced in the United States.



The Challenge

The confluence of increasing downtime costs and further reduction of locomotive electrician and mechanical talent, have put intense pressure on locomotive commissioning processes and knowledge capture. These issues coupled with global supply chain and market conditions have increased operating costs and impacted profitability. The impact of locomotives not pulling freight has left farmers, ranchers and manufactures unable to get products to market. The economic impact is so severe that the Service Transportation Board has increased its inspections of maintenance operations across all modal sectors and is requiring railroads to change their practices. Recent studies of intermodal transportation systems in the United States have shown that downtime costs range from \$1,050 per hour, to over \$2,400 per hour (Levitt et al, 2021). This situation has been exacerbated by the acute and continuing shortages of journeyman and master technicians whose hands-on expertise is often required to resolve complex electro-mechanical problems and improve mean time to repair (MTTR).

The Solution

This innovative inter-modal transportation company knew their MTTR was impacting their ability to put locomotives back into service quickly. They also recognized that enabling apprentice and journeyman level technicians to access SME expertise was key to sustained performance improvement. Using CareAR they were able to leverage expert know-how from virtually anywhere to enable their technicians to troubleshoot and resolve issues that are unique to locomotives in their fleet and improve MTTR.

In early 2022, the company conducted a pilot deployment of CareAR® Assist among its maintenance sites to resolve 20 common incidents. The results achieved are impressive:

52%
MTTR Improvement

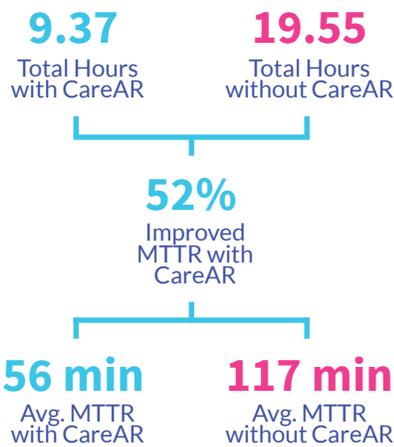
100%
Problem Resolution Rate

72%
Apprentice Know-How Improvement

Benefits at a Glance

Resolution Time

- Overall MTTR improved 52% on average with a SME using CareAR to facilitate diagnosis and resolution
- Apprentice level electricians confirmed they were able to resolve issue well beyond their experience level



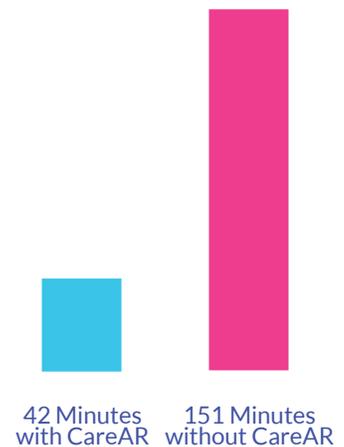
Diagnostic Capability

- 100% of scenarios with the use of CareAR were diagnosed and resolved
- 40% of scenarios without the use of CareAR were diagnosed and resolved
- 60% of scenarios without the use of CareAR went undiagnosed and unresolved



Remote SME

- Apprentice capability to diagnose and resolve faults was on average 72% improved with a SME using CareAR to remotely facilitate resolution



About CareAR

CareAR, a Xerox company, is the Service Experience Management (SXM) leader. We make expertise accessible instantly for users through remote, live visual augmented reality (AR) and AI interactions, instructions and insights as part of a seamless digital workflow experience. CareAR sets the benchmark for the SXM category by bridging skills gaps, accelerating knowledge transfers, providing greater operational efficiencies, and enhancing customer outcomes and safety. Learn more at [CareAR.com](https://carear.com).

Ready to change the way you do work with augmented reality?

Schedule a demo at [CareAR.com/demo](https://carear.com/demo)