

Increase Efficiency with Digital Thread Integration of AR with CAD & PLM



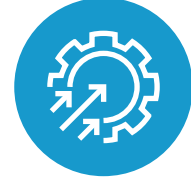
The Key to Unlocking Excellence for Frontline Workers

Augmented reality (AR) is a powerful tool that puts essential workflows right at the fingertips of frontline workers. And when integrated with other product solutions like Product Lifecycle Management (PLM) and Computer Aided Design (CAD), its value can be amplified even further by expanding applications and visualizations for existing product data.

According to Aberdeen, only 30% of AR solutions leverage existing product information from CAD and PLM to create AR work instructions. But when these systems are connected, AR solutions can:



Streamline set up and updates for work instructions.



Increase process and technician efficiency.

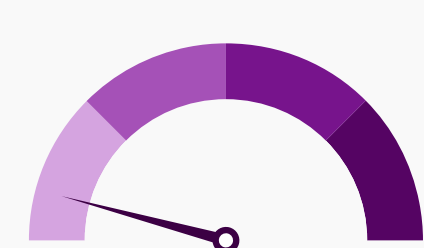


Establish continuous improvement for quality and costs.

Streamline Set Up and Updates for Work Instructions

With digital thread integration for AR and PLM/CAD, authors can easily pull product data from other systems when creating visual work instructions, which saves time, avoids unnecessary work, and improves scalability for building work instructions for thousands of variants and models without manual effort. By connecting product data with AR work instructions, updates to work instructions are automatically triggered when changes to the bill of materials or assembly/service requirements are made, ensuring frontline workers always have the most up-to-date instructions. These benefits lead to a faster time-to-market for organizations using AR with PLM and CAD versus those using AR without digital thread integration.

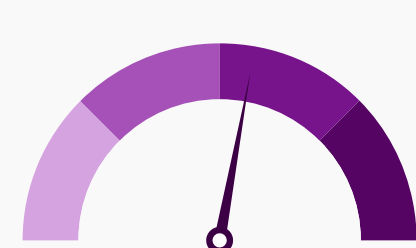
Compared to organizations who do not leverage existing product data from PLM and CAD for AR, those using AR connected to PLM & CAD experience:



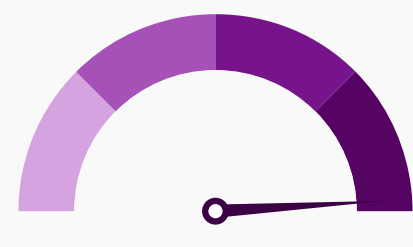
17.4%
more products that meet launch dates



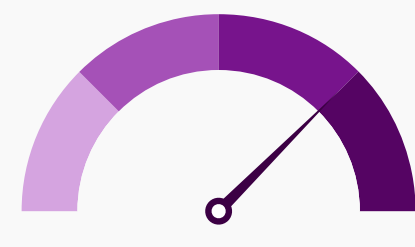
81%
faster development time
(from idea generation to prototyping, verification, and testing)



114%
faster manufacturing cycle time
(from sourcing to shipping)



193%
faster service time
(from on-site arrival to issue resolution)

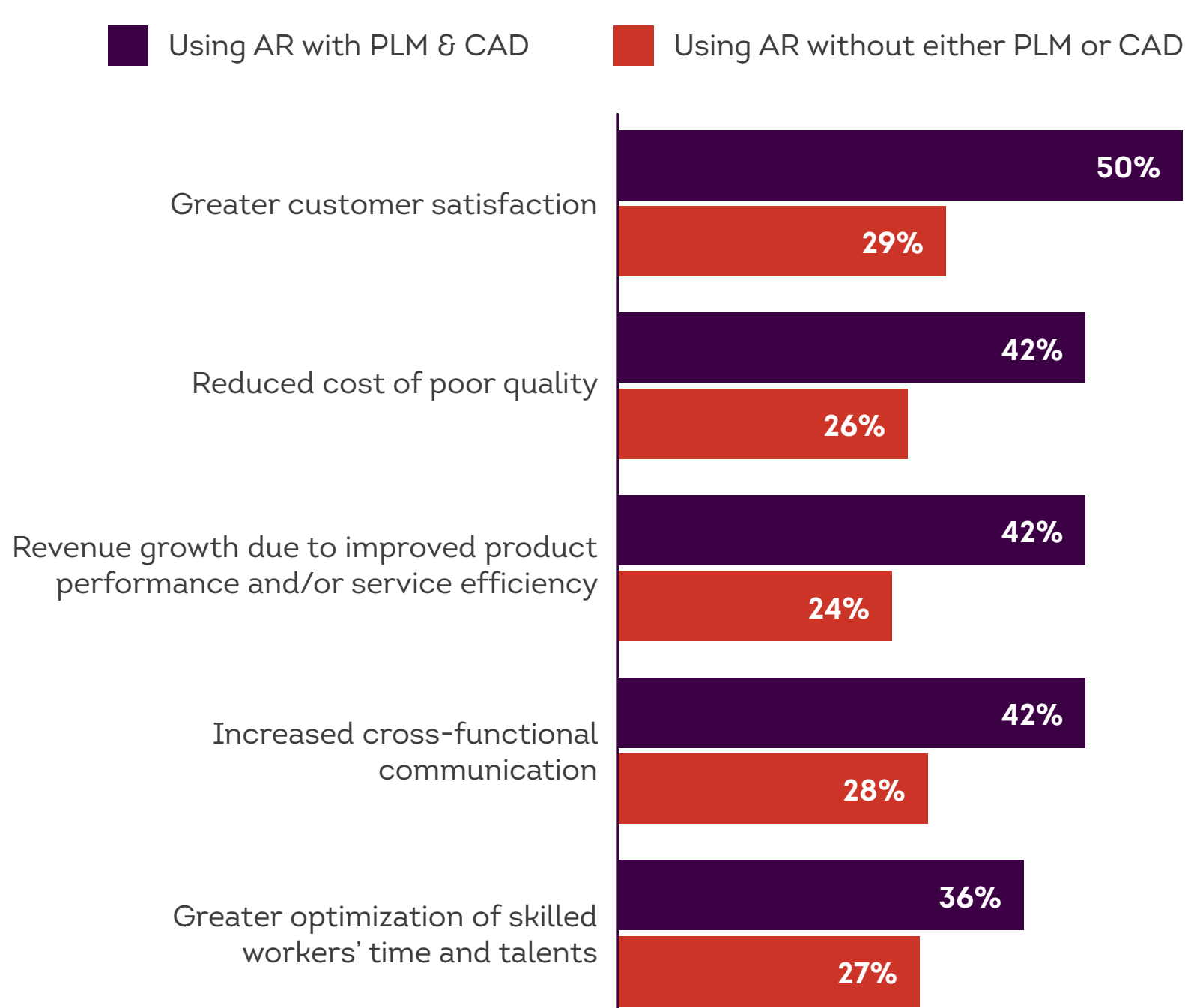


150%
greater annual improvement in data accuracy

Increase Process and Technician Efficiency

When AR is paired with PLM and CAD, the data available within the AR solution helps to upskill workers and leads to them getting the job done faster. Connected solutions for assembly, inspection, operations, and service lead to better communication, skill optimization, quality, customer satisfaction, and revenue. Organizations leveraging existing product data from PLM and CAD for AR experience significant benefits over those using AR in a silo.

Benefits of Leveraging Product Data from PLM & CAD within AR

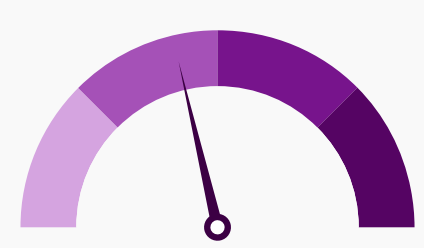


% of respondents realizing each benefit
Source: n=360, Source: Aberdeen, April 2023

Establish Continuous Improvement for Quality and Costs

Connecting AR to PLM and CAD provides solutions for continuous improvement strategies, enabling organizations to gather task-related information and feed the data back to product design and manufacturing teams. Organizations leveraging existing product data from PLM and CAD for AR experiences greater year-over-year improvements in a variety of cost and quality metrics, demonstrating the value a connected platform brings to consistently meet and exceed dynamic customer expectations.

Compared to AR users who do not have either PLM or CAD, those using AR with PLM and CAD experience:



86%
greater annual decrease in their cost of non-quality
(warranties, recalls, etc.)



54%
greater annual increase in profitability



150%
greater annual increase in operating margins



44%
greater annual increase in customer satisfaction



95%
greater annual increase in customer retention



102%
greater annual decrease in total cost per unit

Paired with PLM and CAD solutions, AR becomes a more powerful solution for frontline workers. Integration between these systems enables authors to re-use existing product data and instructions to create work instructions faster, at lower cost, and on a scalable level. Frontline workers benefit from access to up-to-date visual guides while they're working with products in real-time, leading to faster service times, lower costs, and increased customer loyalty.

Learn how top performers are driving results with connected AR, PLM & CAD solutions.