

Healthcare Spotlight: Enhancing Learning And Development With Mixed Reality

A COMMISSIONED STUDY CONDUCTED BY FORRESTER CONSULTING ON BEHALF OF META, APRIL 2025



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Executive Summary

The healthcare industry, including healthcare providers and life sciences organizations (medical devices, pharma/biotech), is embracing mixed reality technologies in training, onboarding, and learning and development (L&D) programs to improve patient experience.

Healthcare embraces mixed reality use cases like safety practice, simulations, visual models, and visualizations of medical procedures. Nine out of 10 healthcare firms orient employees to mixed reality learning in less than an hour, making learning realistic and helping employees retain the content.

Healthcare and life science leaders report high satisfaction with mixed reality learning and development programs, and many plan to expand use in the future to improve patient outcomes.



Healthcare And Life Sciences Firms' Critical Priority For The Year Is Improving The Patient Experience

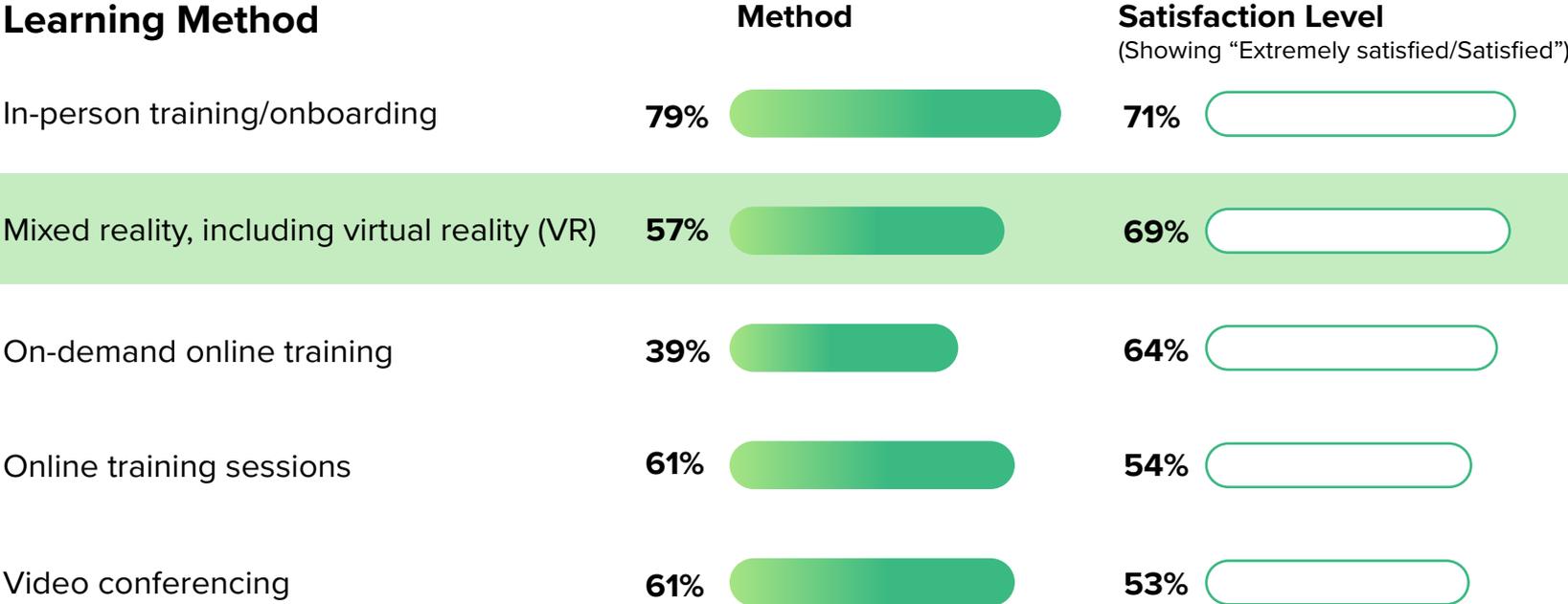
In addition, these organizations are prioritizing improving learning and development programs and growing employee productivity.

Critical Priorities For The Year



Mixed Reality Is A Key Tool For Visualization And Learning And Development

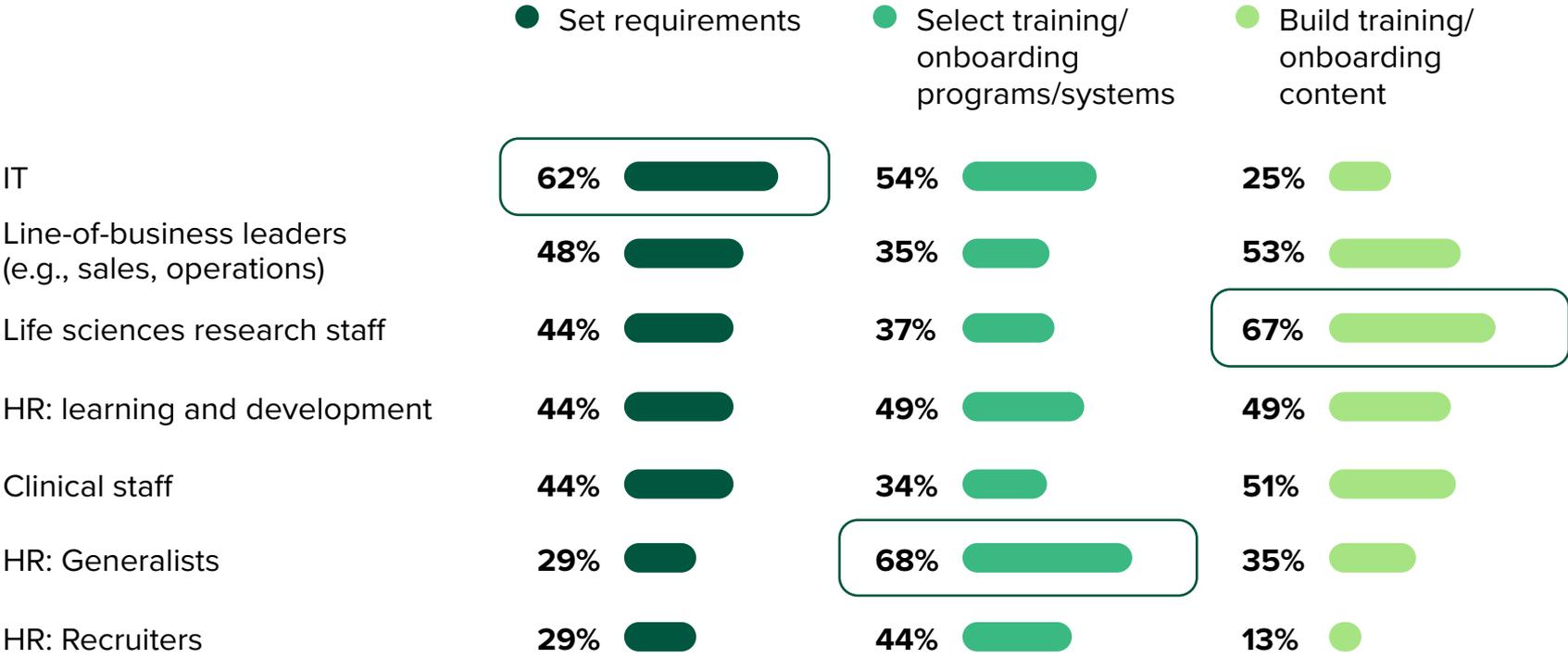
Mixed reality is emerging as a top choice as a learning and development method, with healthcare and life science leaders citing higher satisfaction rates on par with in-person training.



Base: 108 decision-makers involved in learning and development technology decisions in healthcare and life sciences organizations in North America and Europe
Source: A commissioned study conducted by Forrester Consulting on behalf of Meta, April 2025

Collaborative Teams Are Responsible For Each Stage Of Designing L&D Programs

“How are each of the following teams involved in designing training, onboarding, and learning and development programs/systems for your organization?”



6 Base: 108 decision-makers involved in learning and development technology decisions in healthcare and life sciences organizations in North America and Europe
Source: A commissioned study conducted by Forrester Consulting on behalf of Meta, April 2025

Mixed Reality Makes L&D More Realistic, Safe, And Engaging

In healthcare and life sciences, mixed reality allows employees to engage with content in a low-risk and realistic way.

REALISTIC

75%

Agree mixed reality visualizations make training and onboarding more realistic

SAFE

76%

Agree mixed reality helps healthcare organizations train employees for dangerous situations in a low-risk environment

ENGAGING

77%

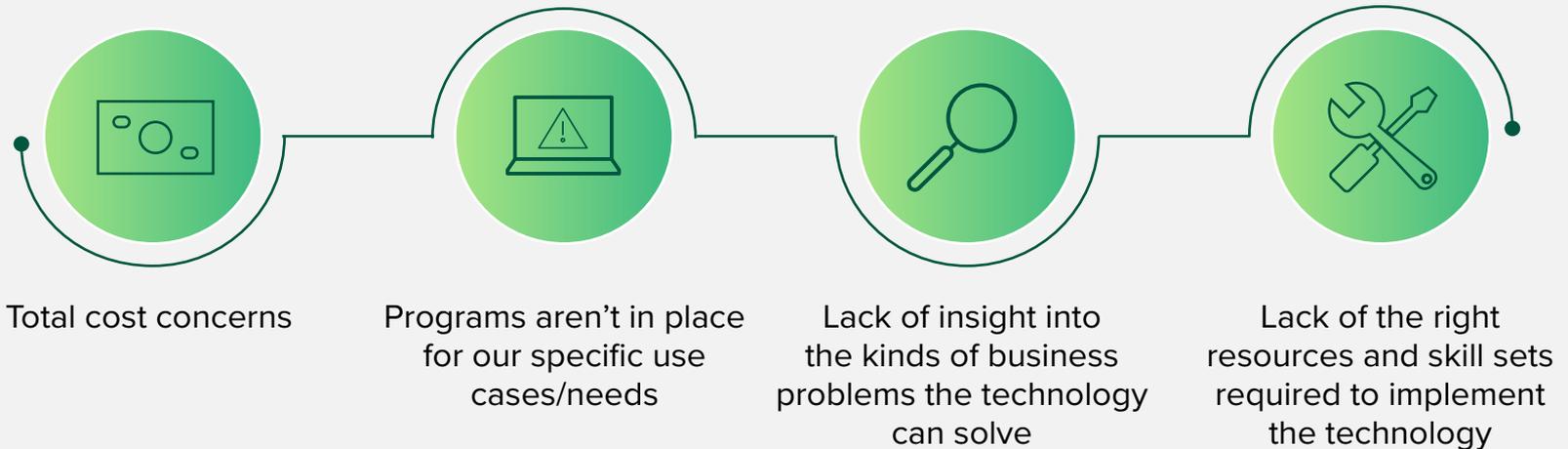
Agree mixed reality helps employees engage with content



Mixed Reality Adoption Hurdles

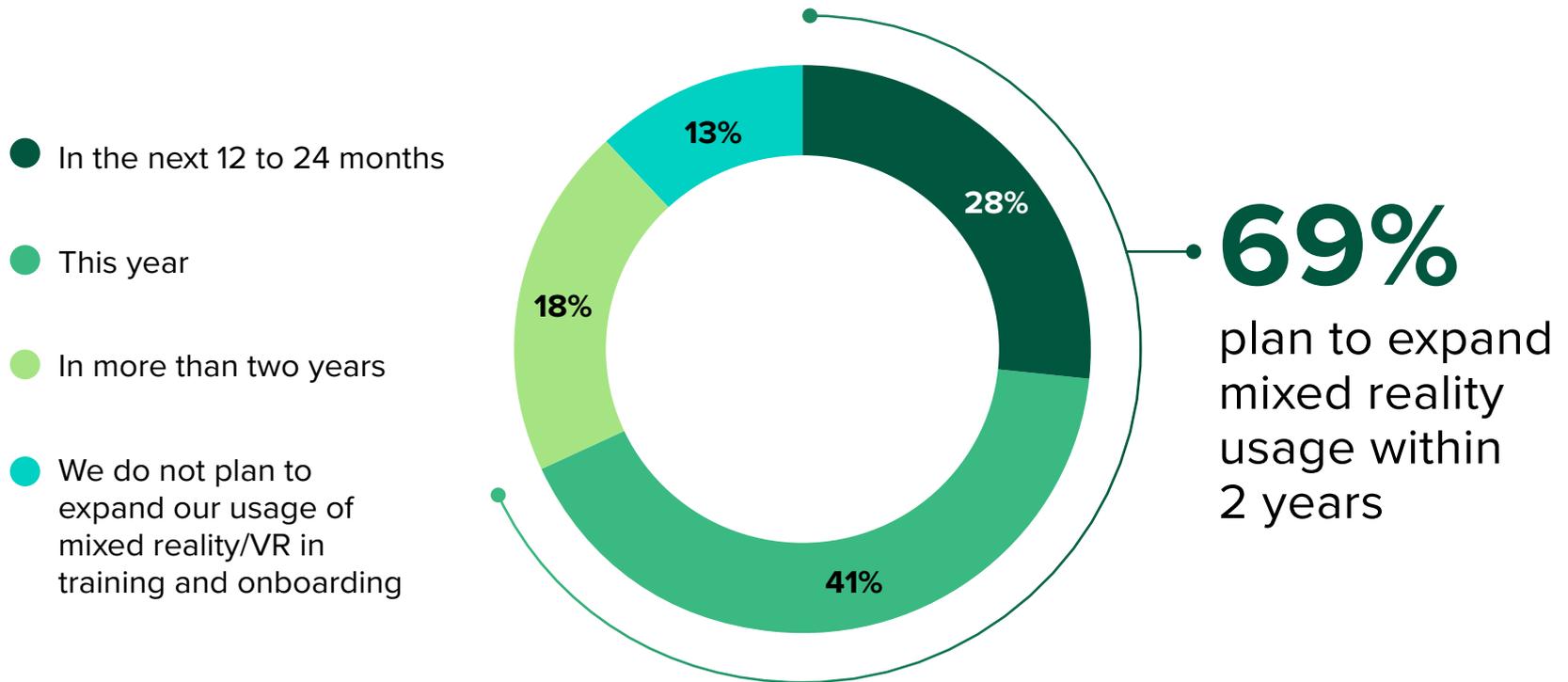
Healthcare companies must invest to overcome adoption barriers. However, they are challenged by cost concerns and competing priorities on budgets. Thinking through how mixed reality can solve business problems is a critical step.

“Which of the following barriers, if any, do you anticipate your organization will face/ has your organization faced in deploying mixed reality solutions?”



Despite Challenges, 69% Plan To Expand Mixed Reality Use Within Two Years

“When does your organization plan to expand mixed reality usage?”



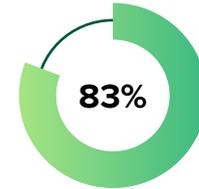
Mixed Reality Can Solve Future L&D Needs

Healthcare and life sciences firms are currently integrating mixed reality into many of their L&D use cases, such as safety practice and simulations, testing and compliance for employees and visual models, and instructions for specific tasks.

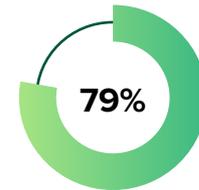
As they look toward the future, the breadth of use cases is expected to grow in many areas including those focused on collaboration.

79% Agree mixed reality will play a bigger role in future learning and development efforts

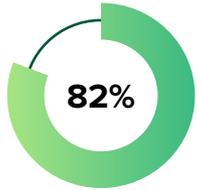
Future Use Cases For Mixed Reality



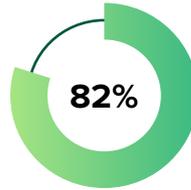
Collaborative planning for medical procedures



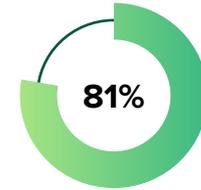
Visualizations of scientific, medical, and pharmaceutical research



Safety-practice training, simulation, and testing for compliance and ongoing skill-building for tenured employees



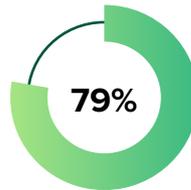
Collaborative scientific, medical, and pharmaceutical research



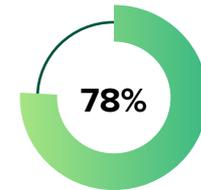
Visual models and instructions for specific tasks, regardless of employee tenure



Telemedicine, remote collaboration between physicians



Visualizations of inspection and maintenance workflows for medical equipment



Collaborative training experiences with multiple personnel

Implementing Mixed Reality Into L&D Programs Improves Patient Experiences And Outcomes

“Which of the following benefits do you anticipate or have you realized as a result of implementing mixed reality/VR in your training and onboarding programs?”

Top 10 Benefits Of Mixed Reality

- 1 Increases in patient experience metrics
- 2 Improvements in patient outcomes
- 3 Fewer medical errors/higher quality of work
- 4 Faster time to productivity for onboarding workers
- 5 Alleviating burnout through faster training and empathy experiences
- 6 Higher rates of employee and patient safety/lower rates of safety incidents
- 7 Improved employee experience
- 8 Larger addressable market of potential employees
- 9 Better management of healthcare workflows
- 10 Increases in worker productivity

Healthcare And Life Science Leaders Agree That Mixed Reality Reduces Patient Risk While Improving Employee Experience And Retention



“What impact do you anticipate mixed reality/VR in training and onboarding will have on each of the following business metrics?”

79%

Positive impact on employee experience

75%

Positive impact on reducing risk

73%

Positive impact on growing employee retention

Key Recommendations

Mixed reality for learning, onboarding, and training offers employees in healthcare and life sciences a strong opportunity to improve learning outcomes. Both clinical and laboratory settings include a great number of in-person, physical processes. Simulating facilities, procedures, processes, and even research can help employees learn the ropes more quickly, generating “muscle memory” as they simulate usage. Leaders in healthcare and life sciences should consider the following when considering mixed reality for their learning, onboarding, and training efforts:

Build your business case on the value to patients and customers. In healthcare settings, mixed reality learning programs can increase both the accuracy and empathy of how clinicians operate. For example, a learning module that runs through detailed steps of a clinical procedure can help doctors and nurses onboard faster. A mixed reality simulation that puts a clinician into the shoes of a patient with Alzheimer’s disease can help them gain deeper empathy and understanding of the condition. For life sciences, mixed reality learning means developing solutions for end customers more quickly and accurately. In both instances, you can achieve measurable value.

Track key performance indicators, then iterate and expand. Key performance indicators for mixed reality include higher quality of work, increases in worker productivity, higher employee retention, and lower rates of safety incidents. Tracking these KPIs and comparing them to alternative forms of training can help you identify areas in which mixed reality strongly outshines other channels. This is crucial to building a business case for expanding mixed reality training programs to other areas of your workflow and organization.

Align the appropriate resources when developing mixed reality solutions.

Building successful mixed reality training solutions is a team effort. A mix of IT, clinical staff, life sciences research staff, and HR pros must convene across the acquisition, development, and deployment of mixed reality.

Methodology

In this study, Forrester conducted an online survey of 108 leaders in IT, business, healthcare, and human resources at large healthcare and life sciences firms in North America and Europe. The study began and was completed in March 2025.

Demographics

HEALTHCARE/LIFE SCIENCES SECTOR	
Healthcare provider (including hospitals)	23%
Life sciences: Medical devices	21%
Life sciences: Pharmaceutical, biotechnology	19%

COUNTRY	
Canada	23%
US	21%
United Kingdom	19%
France	15%
Spain	12%
Germany	10%

JOB TITLE	
IT leader	30%
Business leader	25%
Healthcare leader	24%
HR leader	21%

COMPANY SIZE	
1,000 to 4,999 employees	41%
5,000 to 19,999 employees	38%
20,000+ employees	21%

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[The State Of Extended Reality, Forrester Research, Inc., Jan 21, 2025.](#)

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