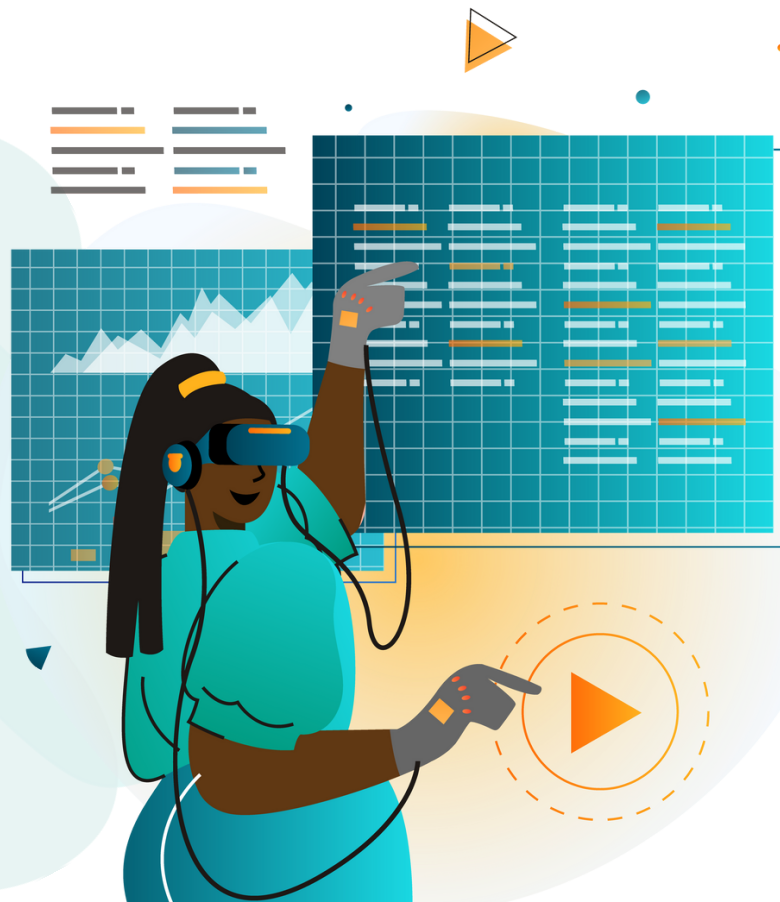




Roundtable
LEARNING

Comprehensive Guide to VR/AR Warehouse Training

Everything You Need To Know Before Integrating
VR/AR Into Your Warehouse Training Program



R WELCOME TO **THE FUTURE OF LEARNING**



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Welcome to Roundtable Learning's Comprehensive Guide to VR/AR Warehouse Training!

Executive Summary

The rising popularity of immersive experiences has left a lasting impact on enterprise training. Now, we bring this cutting-edge approach to the warehousing industry.

Discover the power of VR and AR and listen to how experiential learning is revolutionizing warehouse productivity. Explore the endless possibilities, hear awe-inspiring success stories, and uncover how XR training is optimizing warehousing efficiency. It's time to embrace experiential learning and elevate your training programs to a new standard of excellence.

Get ready to learn about the immersive journey that will change your thoughts about training forever.

Let's dive in!

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Introduction

The growing popularity of immersive experiences, from life-size candy museums to immersive art exhibits, shows how appealing these kinds of events can be. Let's be honest – who wouldn't want to go down a slide into a pool of sprinkles? These experiences capture our imagination, activate our senses, and leave a lasting impression to take back into the real world. XR training takes the same concepts and applies them to adult learning.

Virtual reality (VR) and Augmented reality (AR) training programs bridge the virtual and real world to deliver meaningful learning opportunities. As pilot programs launch left and right, it's clearer than ever that experiential learning is the future of corporate training.

Any native from the Midwest will agree that victories aren't born on the field. They are created during practice. XR training is helping organizations thrive by allowing their workforce to practice, hone their skills, and deliver wins on the work floor.

The ease of having off-the-shelf products is standardizing warehouse training practices by enhancing foundational skills for the incoming workforce. The interest in interactive art galleries and navigating replicas of hit TV show sets are all about enhancing everyday life. Why not deliver learning opportunities through the same platform? So, the question on everyone's mind is how to get started. Here's everything you need to know before integrating AR/VR into your warehouse training program.





New to VR?

If your organization is new to VR, there are now more accessible entry points to adopting this technology. With off-the-shelf training, organizations can integrate ready-made warehouse training to address foundational skills like picking, packing, forklift driving, and so much more.

The Fortune 10 started investing in VR early, so they will be the first to integrate off-the-shelf into their existing VR libraries. Rather than pursuing lengthy custom projects, getting started with VR now will help you catch up with the industry shift. [Off-the-shelf VR](#) is taking what the Fortune 10 made and turning it into a learning experience anyone can adopt.

Why all the hype about extended reality? When learning is rooted in experience, it transforms how people apply their knowledge. By giving learners a safe space to make mistakes, XR technologies deliver experiential learning that transforms employee performance. By engaging the workforce with XR training programs, learning has become a key ingredient to business growth.



Identifying Skill Gaps & Creating Learning Objectives

1

Focus On The Learner

As you identify what skill gaps exist in your organization, consider how many learners you have. If you have a large group, standardizing the learning experience in your organization is crucial. A scalable learning solution guarantees knowledge retention.

Another way to keep your eyes on your learners is to consider all their different learning styles into account. Depending on what skill gaps exist in your organization, it's important to design learning programs with the end user in mind. Working with instructional designers to apply principles of learning is ideal. Develop programs where users must think critically, fail in a safe environment, and then learn from their mistakes.

Appealing to all learners is an art form. The blended learning model pairs traditional learning with digital technologies to optimize the learning experience. By combining two modalities, one learning experience is used to reinforce the other. Blended learning leverages the strengths of each training modality in your program to cater to all learning styles.

2

Consult with SMEs

Subject matter experts (SMEs) are your powerhouse of knowledge. As invaluable members of the process, SMEs help guide your training program's path forward, and it's important to get them involved in designing your XR learning experience as early as possible.

SME collaboration is essential to the process of building out AR and VR training programs because they can ensure the development of a comprehensive training program informed by industry expertise. For example, SMEs know where people fail. They can point you towards





Identifying Skill Gaps & Creating Learning Objectives

unrecognized skill gaps and what areas of job training could help cultivate a new level of efficiency.

The scope of a project can take a dramatic turn if SMEs aren't involved from the start. Countless times, organizations make the misstep of pulling in their subject matter experts too late. The result? Drastic revisions that require more time and money spent. As a rule of thumb, SMEs should be involved as early as possible.

SMEs understand your audience better than you do. They know how to deliver messages about products, processes, and techniques. Before you develop your learning program, ask them all the questions! SMEs know how to make training content stick.

3 Select The Right Modality

[Creating clear learning objectives](#) involves selecting the right modality for training. Whether AR, VR, or opting for a blended training model – utilizing the best modality learner-centric training will give you the best results.

We've seen it time and time again. Organizations think they need one type of modality because it's hot off the press. While new and trending modalities might spark your interest, that doesn't mean it's what you need to deliver your training content. Selecting the right modality determines how effectively information will be conveyed to learners. Remember, this is about their experience.

eLearning is a great option for self-paced, asynchronous learning. If you have remote employees, eLearning is a cost-effective and convenient option for training. AR doesn't require on-site equipment and is well-suited for micro-learning and just-in-time learning. If you're looking for accessibility, scalability, and safe experiential learning, AR is a sound choice for your training program.

VR training can be used for large-scale operations, technical training (think operating large-scale machinery or stacking pallets), and soft skills that solicit emotional reactions from learners. Compared to other learning technologies, VR is the most immersive form of XR training.



Blended learning is the golden goose of corporate training. The blended learning model hones learning reinforcement and integrates modalities that complement each other. Think of it as a little of the old and a little of the new for a dynamic and multifaceted training experience. It will guarantee that every person in your organization has an impactful learning experience.

Whether it's AR, VR, or blended learning – knowing which modalities can deliver the results that would benefit your organization most should be top of mind. Ever heard the phrase, we learn more from our failures than our successes? What learners get wrong in training may be the key to developing proficiency in their roles. Consider which modality can help achieve this.

How VR Can Enhance What You Already Have

VR is more than a supplemental modality, it breathes life-like experiences into your training program with realistic job previews. Immersive learning enhances confidence on the job by reinforcing key concepts of training through sensory-rich experiences that activate the neural pathways in the brain. In sum – people remember the skills they practice in VR.

After having the opportunity to act out physical tasks in VR, organizations consistently report that feedback from VR learners is overwhelmingly positive. By integrating VR/AR into your existing training program, XR content acts as a learning reinforcement tool. For example, AR can deliver microlearning for just-in-time support. In a blended learning model, XR technologies complement existing modalities, like instructor lead training or eLearning, and reinforce essential learning objectives by physically going through the motions in an immersive environment.

By blending the digital and real world in your training program, you can establish a strong culture of continuous learning for multigenerational workforces. Enhance what you already have by pulling on the strengths of different learning modalities. Safety, soft skills, and technical skills are all best taught through blended learning programs.



What Makes AR So Effective

Augmented reality (AR) is an effective learning tool used by organizations across industries for everything from onboarding to performance support. By adding interactive digital elements to the real world, AR can be your ultimate training modality for technical skills and multi-step tasks.

Did you know AR is the most accessible form of XR? Most people are already familiar with AR, whether they know it or not. With more than a quarter of the US population using the technology every month, the average learner has already been exposed to augmented reality through social media and games, practically eliminating the usability learning curve. By leveraging existing devices like company tablets and employee smartphones, AR programs are easy to scale and get training into the hands of learners quickly. Scalability is a major appeal of AR because the required devices accommodate your entire business while revolutionizing your training program.

There are many essential uses for augmented reality, especially just-in-time training. By giving employees a tablet to utilize when they need a refresher, you empower them to take a proactive approach to their own knowledge gaps. Think of it this way – AR is an employee resource. AR enables on-demand training that keeps information readily available to close skill gaps.

AR programs can contribute to the social fabric of your company culture. Give learners a tour of your headquarters from a remote location or include a campus tour with memorable scavenger hunts to add an additional element of participation. These examples work to create a great first impression and invite new hires to co-create your company culture. The writing is on the wall, and it says retention.

Many AR training programs offer swift knowledge acquisition that caters to learner preferences. Did we mention that microlearning is among the top favored and trending learning methods in corporate training? AR microlearning activities and videos make training content easy to digest by delivering bite-size pieces of information.



What Makes AR So Effective

For technical skills, AR applications create optimal engagement by allowing learners to interact with 3D images. Whether augmented reality is deployed to help your workforce complete tasks, upskill, or simply refresh their knowledge, this form of XR training delivers effective learning outcomes.

Take a look at this example of how augmented reality can be used in this [engine training demo](#).

There Are Three Types Of AR

1

Image Target



Video, text, images, or 3D objects overlay a real-world 2D image.

2

Object Recognition



A digital 3D model is fixed to a real-world 3D object that can pick up and move the digital 3D model around.

3

Plane Detection



A digital 3D model is fixed to a real-world flat surface that is typically stationary, so users must maneuver around it.

AR's compatibility with everyday devices creates more opportunities to put interactive technology into the hands of learners. This scalable tool has a wide variety of uses, including experiential learning that helps employees retain knowledge and improve their performance. From retail to manufacturing, AR allows learners to practice step-by-step processes that bridge theoretical training concepts with the experience of performing them.

The potential of AR is steadily growing as more technology hits the market. Whether it's AR or VR, there's no question that integrating XR content into your training program will bring value to your organization. So, let's get specific. There are three notable areas that XR training can improve.



The Big Three:

Retention, Onboarding, & Safety

1

Retention

Turnover is the arch-nemesis of the warehousing industry. Despite the rising numbers of the warehousing workforce, fleeting new hires are like a wave quickly retreating back into the ocean. And what are you left with? Wet sand and yet another cyclical wave of turnover.

The reality is that keeping employees may be an even harder feat than attracting them to join your organization. So, let's shift our perspective. People tend to migrate to places where there are opportunities for growth. If you knew you were underperforming but lacked the resources to improve,

would you stick around? Turnover is largely connected to a lack of confidence and preparedness. The best way to combat the revolving door of employees is to invest in their skill sets.

On top of keeping your organization cutting-edge, VR training improves job readiness and accelerates time to proficiency. By investing in employee skill sets with the right training, your organization has better chances of retaining skilled labor. VR adds incredible value to your company culture by promoting employee development and prioritizing safety. Who wouldn't stick around for that?





The Big Three:

Retention, Onboarding, & Safety

2

Onboarding

Onboarding is the surest way to predict turnover and retention rates. It is also the mark of safe work habits. If your warehouse employs 1,000+ people, XR training will make a massive impact on your training practices.

While shadowing may have worked well in the 90s, on-the-job warehouse training lacks consistency. Instead of straddling the fence between expectation and reality, organizations are using VR onboarding training to address skill gaps directly, offering consistency in each new hire's onboarding experience.

VR onboarding training immerses new hires in realistic work environments, familiarizes them with equipment, and ensures that they can perform the critical functions of their role safely. Effective [onboarding](#) sets the tone for the employee lifecycle. VR/AR training provides a unique opportunity to make an impression that will last beyond the first-day jitters.

3

Safety

Without a safe working environment, an organization has an unpredictable future. The warehousing industry has a long history of exhausting efforts to combat disproportionate injury rates in comparison to other high-risk industries. Warehouses experienced the highest injury and illness rate involving days away from work per 10,000 workers in [2021](#) alone.

Navigating a warehouse doesn't have to be a remake of Minecraft. Warehousing safety risks are very real, but they can be easily mitigated with effective learning solutions.

VR allows learners to practice high-risk tasks in a safe learning environment. Imagine the relief of making a detrimental mistake without real-life consequences. Employees learn best from their own mistakes. VR training programs afford learners the chance to fail. Whether it is safe lifting procedures or identifying common hazards, VR creates safer, more efficient operations.



The Science Behind It

Any successful warehouse requires a competent workforce that is prepared and motivated to maintain productivity day in and day out. We've seen the common challenges that plague the warehousing industry. People are prone to autopilot when their job involves repetition. Injuries begin to occur left and right. Workers leave. Production lulls. Fortunately, VR hones the science of learning to address these pain points. So, what's the science behind it?

The process of learning depends on the brain's ability to create new neural pathways, otherwise known as neuroplasticity. VR training activates the brain through visual, audible, and physical stimulation. This is what makes sensory, experiential learning so effective.

Immersive learning impacts the brain on a neural level. So, how does cognitive neuroscience inform the way we deliver training? Given what we know about cognition, we design training programs to be learner-centric. By delivering programs that cater to the brain's preferences, we optimize learning outcomes with interactive technology like AR and VR.

AR delivers memorable microlearning that accelerates knowledge acquisition. In VR, learning is more immediate, tied to experience, and surprisingly – less abstract. Immersive learning is a rehearsal for the brain, improving confidence, familiarity, and memory. Traditional eLearning also still has a vital role in delivering self-paced information to remote employees and meeting adult learning preferences.

With multisensory XR training, learners improve skill accuracy through engaging programs that help them perform in their work environment more effectively. VR is the new standard in warehouse training. The unique capabilities of VR and AR create memorable onboarding experiences that help combat turnover and keep employees up to speed. XR training takes the mundane and turns it into magic.



Proven Results

Organizations looking to modernize their training programs are catching on to the lasting impact augmented and virtual reality programs can make. VR and AR training programs amplify learner engagement with interactive elements, bridging the digital and real world. By incorporating experiential learning, organizations are seeing real and faster results in their ROI.

VR and AR training statistics showcase impressive business benefits that stem from enhancing training programs with XR technologies. These technologies can be customized for special job roles and technical skills, giving employees training experiences that mirror the real world. In short, organizations save big when they optimize learning.



Cutting Costs

The [2022 Training Industry Report](#) shows that among small, midsize, and large businesses, midsize businesses used VR training the most. The bright spot? Those same midsize businesses spent the least. Let's review for clarity. **Companies that used VR the most in 2022 spent the least.** The writing is on the wall: Organizations leaning into the capabilities of VR are the first to see the rewards. So, where exactly are they cutting costs?



Reducing Turnover

Onboarding with XR technologies can enhance an individual's entire trajectory of employment at your organization. **Learners are 275% more confident to apply skills after learning in VR, ensuring higher proficiency and reduced turnover.** With that level of retention, your organization's productivity will skyrocket while you save big on operational costs.



Performance Support

Organizational growth is dependent upon effective learning. As a go-to performance support tool, companies using AR have reported **46% reduction in time to complete tasks, and an average productivity improvement of 32%**. By providing a scalable resource to their workforce, organizations can cultivate thriving organizational efficiency.



Proven Results



Upskilling

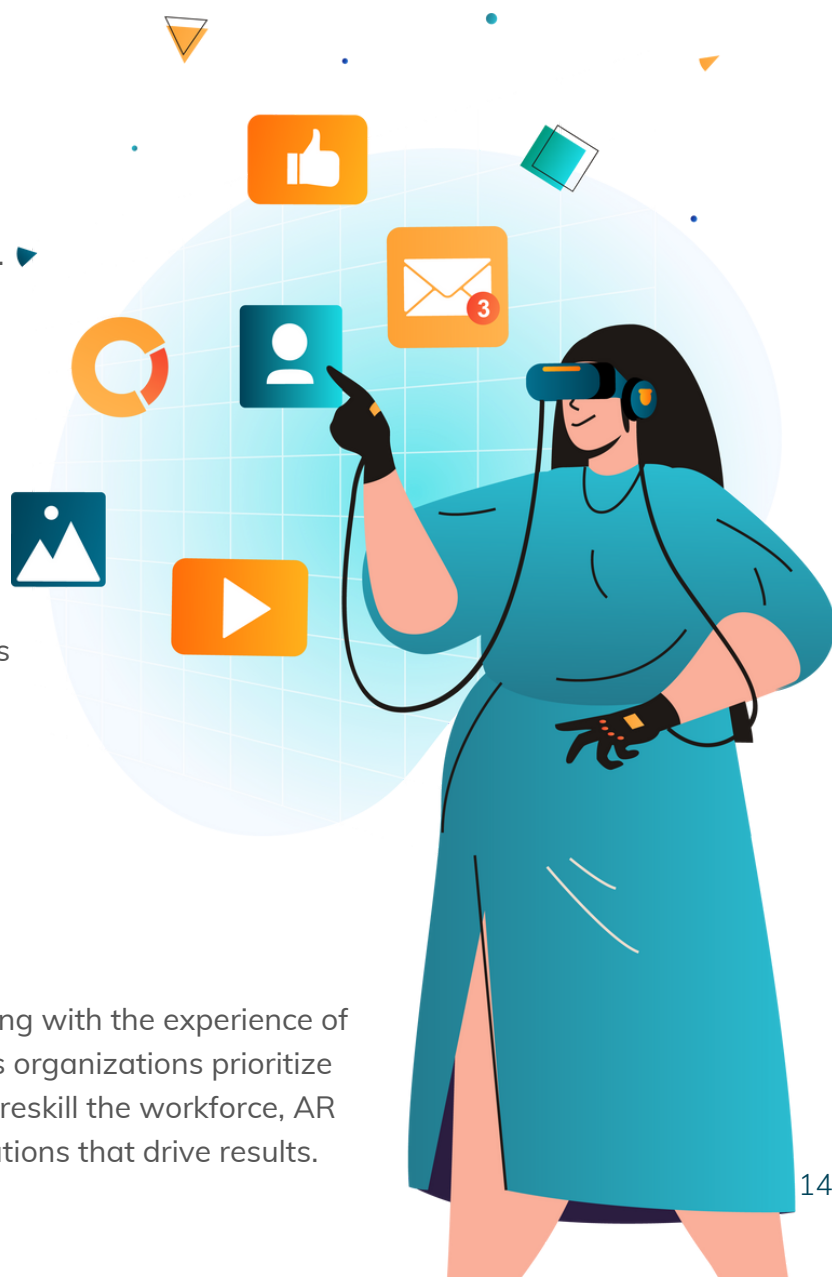
People retain information better when they train with extended reality. By investing in their skills, the workforce is more likely to stay in their roles after practical training experiences. A Gallup and Amazon [study](#) highlights that **48% of American workers would switch jobs for upskilling opportunities**. Aside from streamlined operations and workflow, organizations are saving on solid retention rates alone. XR training is more than just a training solution; it's an effective retention tool.



Safety

Improved safety is one of the leading outcomes that organizations feel right away. In high-risk industries, XR training delivers experiential learning that allows employees to train without harming themselves or their equipment and learn from their mistakes. In VR, simulated consequences increase employee awareness and attention to safety hazards. In AR, just-in-time training helps employees troubleshoot learning curves to avoid injury. Who doesn't want a safer work environment?

XR training combines eLearning with the experience of human-to-human training. As organizations prioritize their strategies to upskill and reskill the workforce, AR and VR are proving to be solutions that drive results.





Success Stories

Amazon

VR training addresses safety better than any other learning modality. When an Amazon warehouse needed to bridge a training gap on their robotics floor, they opted for a VR training safety program. This program was designed to train employees to safely enter the robotics floor, perform maintenance within a hazardous environment, and get production back up to speed as quickly as possible.

With products zipping around the warehouse floor at light speed, the intricate robotic environment requires employees to know how to get onto the floor, safely navigate, locate the

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Going onto the floor it made me feel more comfortable in that knowing what I'm doing.

- Amazon Employee



robot, and troubleshoot without injury. By giving learners a place to practice troubleshooting any obstacle that may occur, they can react faster to real challenges when on the job.

This VR experience delivered necessary safety training and also worked to prevent turnover by acting as a realistic job preview, giving new hires the opportunity to experience what a day in the life looks like. At the same time, this training highlights the priority of upskilling, which Amazon continues to provide to advance employees' careers.



Success Stories

Cox Communications

Cox Communications saw an opportunity to raise the standard of their training programs. While servicing on-site, technicians are susceptible to physical injury, liability risks, and technical hazards. As the largest private broadband company in America, Cox made training for safety risks associated with on-site installations a priority. Cox Communications focused on ensuring employees complete annual safety training, but they believed an immersive experience could further reinforce the adherence to safety protocols and help keep their employees safe on the job. Roundtable developed an immersive program where learners encountered risks at random and utilized training procedures to recognize and counter them.

The goal of the training program was to provide a high-impact VR training experience for field technicians that improved their ability to train for dangerous safety scenarios in an engaging and effective manner. The VR training program provided an immersive learning experience that focused on electrical safety and other prominent risks on the job.

Learners walked through every step of an on-site installation in this program, from customer service and interaction to utilizing their foreign voltage detector before any related tasks. This VR field service training allowed employees to train in a realistic environment and learn from their mistakes.

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The field safety course will enable us to truly train electrical safety in an engaging and uniform manner across the country for the first time ever.

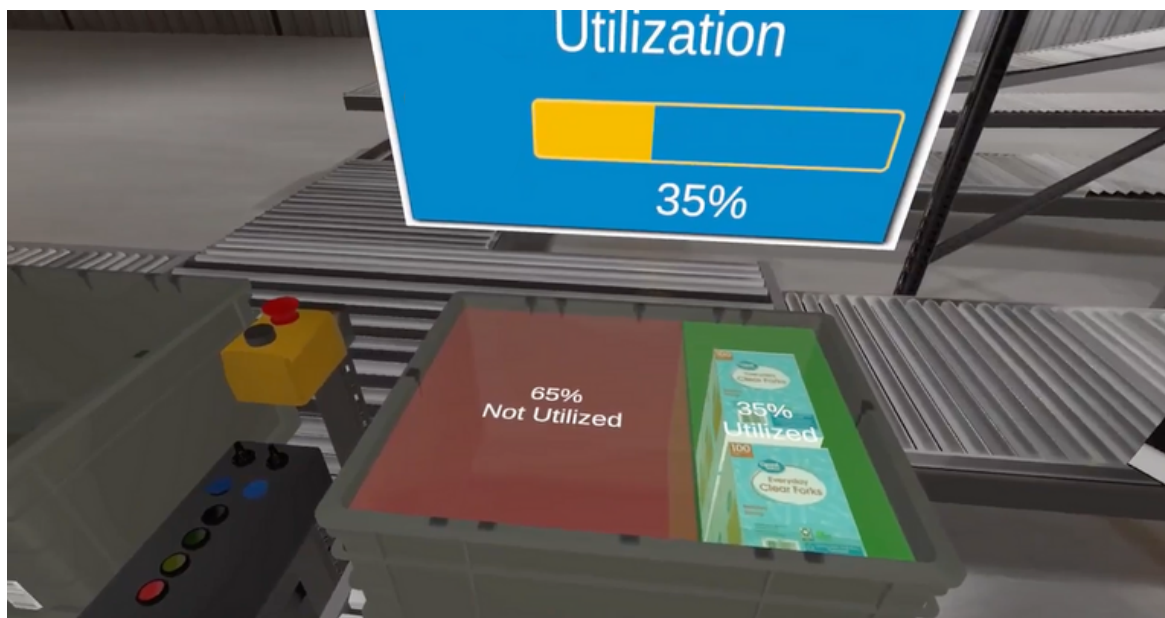
The program included real-life consequences like haptic feedback vibrations to represent electrical currents and a sandbox experience of navigating potential risks in and outside the home. Each detail illustrated scenarios associated with installation, including muddy boot marks on the hardwood floor if a user forgot boot covers.

The results of the Field Service VR training were overwhelmingly positive. 100 percent of participants reported that the VR course validated or increased their understanding of safety topics and skills covered in the course, with field techs experiencing a 49 percent confidence boost in understanding foreign voltage detection and an average 25 percent confidence boost overall. After experiencing the course, 100 percent of new hires said they wanted to see more virtual reality experiences included in their learning programs at Cox Communications.



Success Stories

Fortune 50 Retailer



Order-filling is a demanding process requiring employees to be efficient with time and strategy. One of the most well-known Fortune 50 retailers decided to use VR training to optimize their decanting process.

In this application, learners were immersed in a virtual warehouse environment and tasked with decanting products in a timed simulation.

Challenged to sharpen their critical thinking skills, users were able to physically pivot within the VR space as they filled a tote.

Tote too full? Have products been mixed that pose a hazard risk? Learners were notified as many times as needed

to correct their errors with physical action, each alert redirecting them on how to navigate the 3D dimensional space.

Post-training, employees are equipped to transfer their practice to a real-life warehouse with a clear idea of the physical and mental demands of their role.

The success rate at which employees decant products from inventory into a tote has proven to have a butterfly effect. With greater efficiency, fewer shipments are saving this organization tremendously. One less tote may mean one less truck, and it all starts with better practices on the work floor.



Let's Get Started!

Proper timing yields powerful results. Now that you've heard the success stories and learned everything you need to know about the technology, jumping into a partnership with the first VR content vendor you see might cheapen the goals you've set for your organization. We can feel your excitement, but it's important to vet potential partners. This checklist will help guide your organization toward adopting XR training with a strong objective for success.

Finding The Right XR Content Partner Checklist:

- Review their portfolio on their website
- Research case studies
- Explore their social media channels
- Find reviews and ratings
- Research pricing information

Better habits lead to better performance outcomes, and the future of your organization relies on the collective knowledge of your workforce. Now that you've learned about the capabilities of AR and VR, it's your turn to start the conversation and share what you know: extended reality training is shaping the future workforce!

When you select the right vendor, your organization will be able to confidently deliver learner-centric training that prioritizes the user experience and delivers memorable content. It's time to get started!

With AR/VR training, your employee's largest source of

**KNOWLEDGE IS
EXPERIENCE.**



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