



Mastering Maintenance

Bridge the Gap Between Theory and
Practice With Simulation Training

Mastering Maintenance: Bridge the Gap Between Theory and Practice With Simulation Training

In today's fast-paced landscape, the role of building engineers and maintenance teams has evolved significantly. To meet the increasing demands of building maintenance, it's essential to equip your teams with the skills and knowledge they need to succeed.

Investing in training or creating a culture around training is always a smart choice for a business in the facilities management space; however, there is no one-size-fits-all approach to training. The way maintenance teams learn is just as important as what they learn—everyone has different styles. When it comes to an effective maintenance training program, trainers must consider individual learning styles.

In many cases, there is a gap between learning the theory (theoretical knowledge) and putting that theory into practice (practical training and experiences). When you move to bridge that space between the two, you need to consider each individual's learning modality. How people use their senses to process information and learn increases comprehension and feelings of success.

In this whitepaper, we will take an in-depth look at learning modalities and tactics to consider when bridging the gap between theory and practice. We'll also reveal how digital and simulation training could become your secret weapon.





Getting to Know the Four Learning Modalities

Learning Modalities are different ways people use their senses to process information and learn. For example, depending on an individual's learning preference, the five senses—touch, sight, hearing, taste, and smell—transmit information differently to the brain. The brain then uses this information to process and learn from it.

Learning modalities are similar in that they all involve using different senses to learn information—to learn “theory.” They are different in that each style relies more heavily on the use of a different sense. So the way that someone retains information may improve significantly based on the way they are processing it. Most of us use all four of the learning modalities but may prefer one over others.

Let's take a look at the four different learning modalities to consider when you are bridging the gap between theory and practice:

- **Auditory:** Learners rely primarily on the sense of hearing and learn best by listening, repeating to a trainer, and engaging in discussions. In the Facilities space, these types of learners feel most confident talking through maintenance repairs rather than receiving written instruction and typically benefit most from on-the-job instruction.
- **Kinesthetic:** Learners thrive by doing and need the opportunity to move because they primarily learn through hands-on activity. Working on specific equipment in a lab setting or the field is often preferred by these types of learners.
- **Read/Write:** Learners rely primarily on reading and writing to process information. They may prefer reading notes, handouts, or textbooks—they may also benefit from note-taking. These types of learners thrive in a classroom environment and love written instruction.
- **Visual:** Learners primarily use the sense of sight and prefer to learn with visual aids, including charts, graphics, lesson outlines, slides, and guided simulations. They usually grasp information well when it's presented digitally.

When building engineers use their primary learning modality, they usually have an easier time comprehending the theory and retaining it through practice and repetition. The best training program targets multiple modalities and uses various avenues for learning, like video-based content, field instruction, and activities that engage different senses and skills.

But customizing training, especially at scale, is not an easy job—it's time-consuming, difficult to assess skill levels and core competencies, and likely requires many resources to be able to tailor content.

Online simulation training—a true-to-life virtual learning environment that mirrors real-life work and scenarios—has repeatedly improved learning outcomes and is a great addition to what you are doing to put theory into practice.

The Four Learning Modalities



AUDITORY



KINESTHETIC



READ/WRITE



VISUAL



What is Simulation Training?

Simulation training provides realistic opportunities for building engineers to engage in learning that [requires independent decision-making and mimics the results of their responses in a safe, controlled environment](#). This immersive training style provides learning that replicates real-world experiences and can be applied across many fields.

For example, highly skilled, hands-on workers like military personnel, surgeons, and aircrew have been using simulation training for years to improve their skills and to apply the theory they have learned in the classroom.

They use simulations to train and practice safely in a real-world environment. The 2022 U.S. Metaverse Survey by PwC found that virtual reality-trained employees were up to [four times more focused during training than their eLearning peers and 1.5 times more focused than their classroom colleagues. Plus, learners felt 275% more confident in applying skills after training.](#)

Interplay Learning has brought the same type of high-quality hands-on simulations and immersive learning opportunities to the skilled trades, giving trainers in the facilities maintenance space the opportunity to improve the performance and productivity of their workforce. When coupled with on-the-job learning, online simulation training for maintenance teams is highly effective because it teaches engineers and technicians to install, service, and troubleshoot equipment in field-like scenarios, while also providing trainers with accurate assessments of how well their learners are putting theory into practice.





Building Proficiencies with Simulation Training

Maintenance teams build both knowledge and cognitive skill sets when they use online simulation training. Grounded in theory, simulation training is a sound method for preparing teams for complex fieldwork. It allows engineers and technicians to take the theoretical knowledge they learned in the classroom or training lab and put it into practice in a simulated environment. This type of learning provides a powerful ‘flywheel effect.’

Originally adapted by [Jim Collins](#), the flywheel effect indicates that small wins build on each other over time and eventually gain so much momentum that growth happens by itself.

This concept can be applied when training facilities maintenance teams—especially when you complement theory with simulation training. It’s a cumulative process—step by step, action by action, training exercise by training exercise, turn by turn of the flywheel—that adds up to fantastic results and a closing of the gap between theory and practice.

Facilities maintenance companies that understand the simple truth that strong performing teams exist because of a heavy emphasis on continued improvement and the development of skills are the ones that see the most success. Building engineers and maintenance technicians can develop their skills as they move through various stages of training similar to how we must walk and then jog before we can run.

The Flywheel Effect-Adapted by Jim Collins

Small wins build on each other over time and eventually gain so much momentum that growth happens by itself





Here are three ways you can use Interplay Learning's online simulation training to help bridge the gap between theory and practice for your facilities maintenance teams.

#1—Learning to Walk: Training Mode

Before your maintenance teams can 'run' in the field, they must learn to walk. However, teaching new technicians with little to no experience in the field can be difficult. And depending on their learning style, teaching exclusively theory might not be feasible.

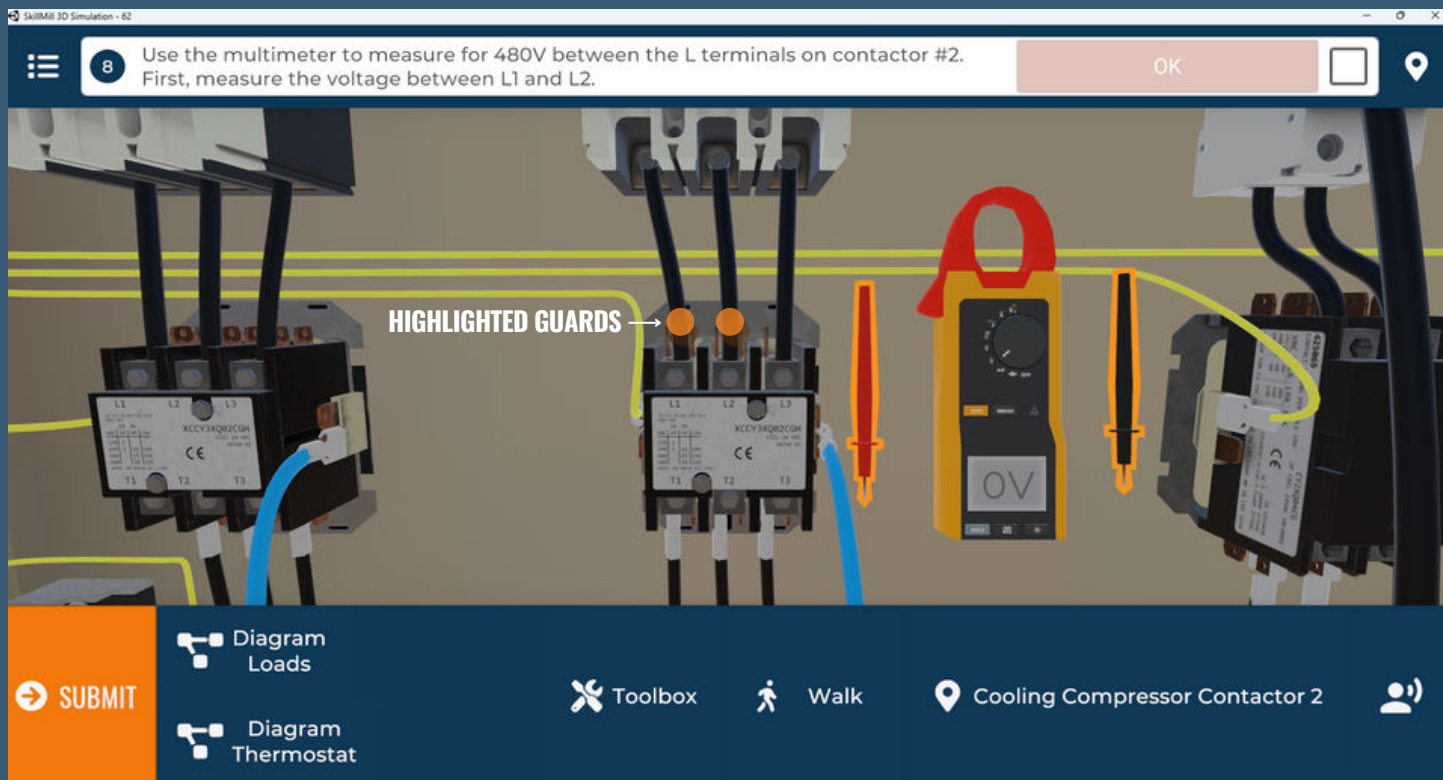
Simulation training can replicate aspects of the real world in an interactive manner that immerses learners in the learning environment. During the 'walk' training, learners are guided through diagnostic processes with step-by-step instructions. This process is similar to having a trainer with them in the field, showing them first-hand how to perform a technique.

You can also use simulation training to pause learning and evaluate performance at any moment. This enables you to check in with your team and help them overcome challenges before they become problematic.

For example, let's say a maintenance technician is entering training mode for our [Rooftop Unit Troubleshooting](#) course. During simulation training mode, the technician is guided through the steps that need to be taken for troubleshooting a faulty contactor coil from beginning to end. Not only is there a detailed procedure guide, but we also highlight the areas in which they need to use their multimeter to measure voltage, remove panel covers, and set thermostats on and off. It's a perfect opportunity for maintenance technicians to learn the mechanics of a scenario and start to bridge the gap between theory and practice.

Rooftop Unit Troubleshooting Simulation: *Training Mode*

Includes detailed procedure guide and highlighted guards where learners need to interact.





#2—Starting to Jog: Challenge Mode

Once a maintenance technician has learned to walk in training mode, they can then pick up the pace to a metaphorical 'jog.' During the jog phase of learning, the training wheels aren't gone quite yet, but learners are applying the theory to a guided scenario.

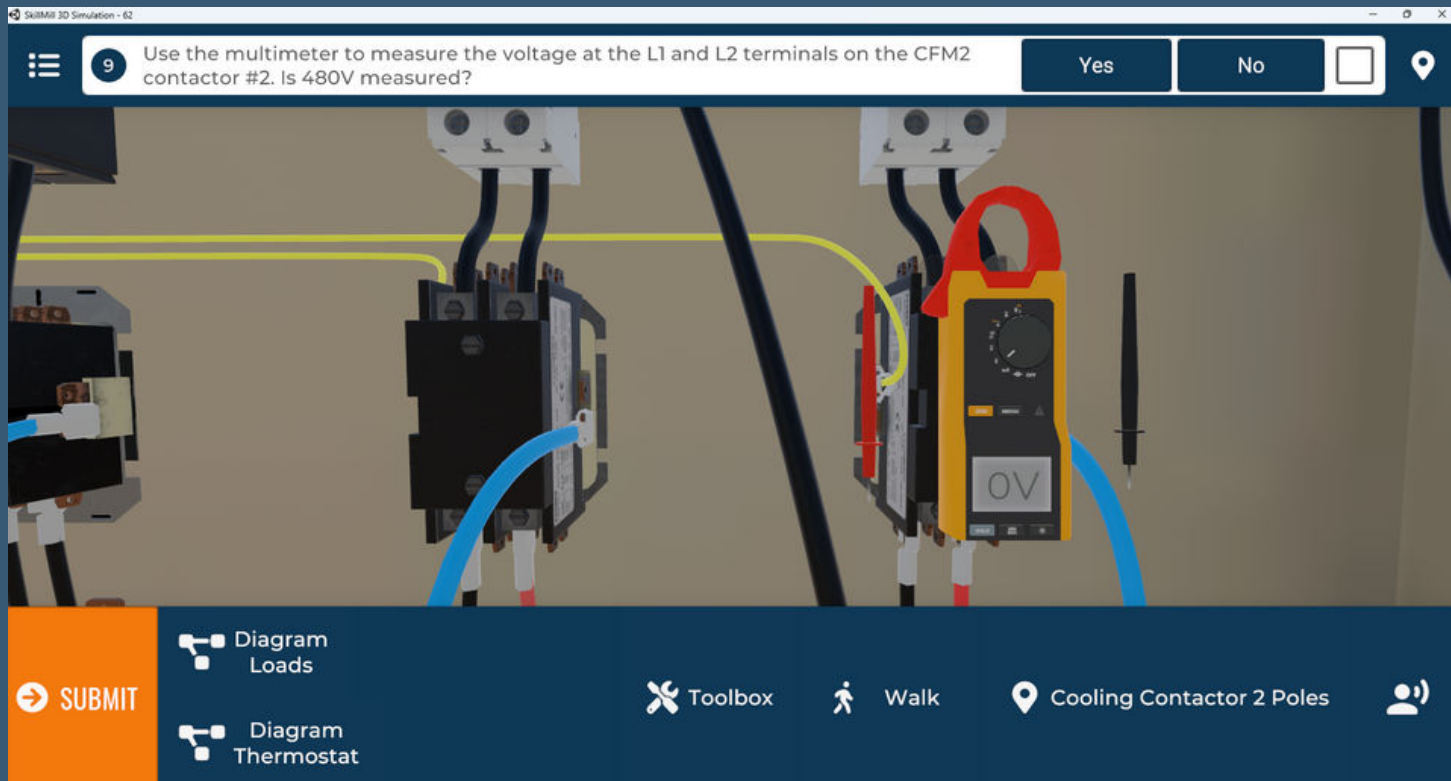
Simulation training enhances the learning journey by offering unlimited practice with online guidance in a safe environment. You can enhance learning and build repetition by pairing real-world, guided instruction with online, simulated procedure guides. By providing a secure and controlled environment, learners are able to experiment, make mistakes, and learn from their mistakes without suffering real-world repercussions.

In the challenge mode of Interplay's Rooftop Troubleshooting simulation, the maintenance technician still receives a step-by-step procedure guide for troubleshooting the faulty contactor, but the highlighted guards have been removed to allow the technician to make and learn from mistakes while relying on the training they received in the earlier training simulation.

For example, the procedure guide will state that the learner needs to measure the voltage between the L1 and L2 terminals on the CFM2 contactor of the rooftop unit, but it doesn't show the learner where those terminals are. It's like having a trainer looking over their shoulder, helping them if they get stuck, but only offering a little bit of guidance.

Rooftop Unit Troubleshooting Simulation: *Challenge Mode*

Includes detailed procedure guide, but highlighted guards have been removed.





#3—Picking the Pace up to a Run:

Assessment Mode

The training wheels are removed during the run phase, and there is no guided instruction. Assessment mode is where you pair theory with practice to test how learners have retained everything.

In assessment mode, maintenance technicians will want to master the [Rooftop Unit Troubleshooting simulation](#). There is no procedure guide and no trainer jumping in for guided help. Switching out parts to see what works will not lead to the successful completion of a simulation. It's the perfect opportunity for technicians to take what they learned in training and challenge mode and employ the diagnostic process without guided instruction.

Using online simulation training to help maintenance teams 'run' ensures learners have varied viewpoints, engages them as if they were in the field, and improves troubleshooting.

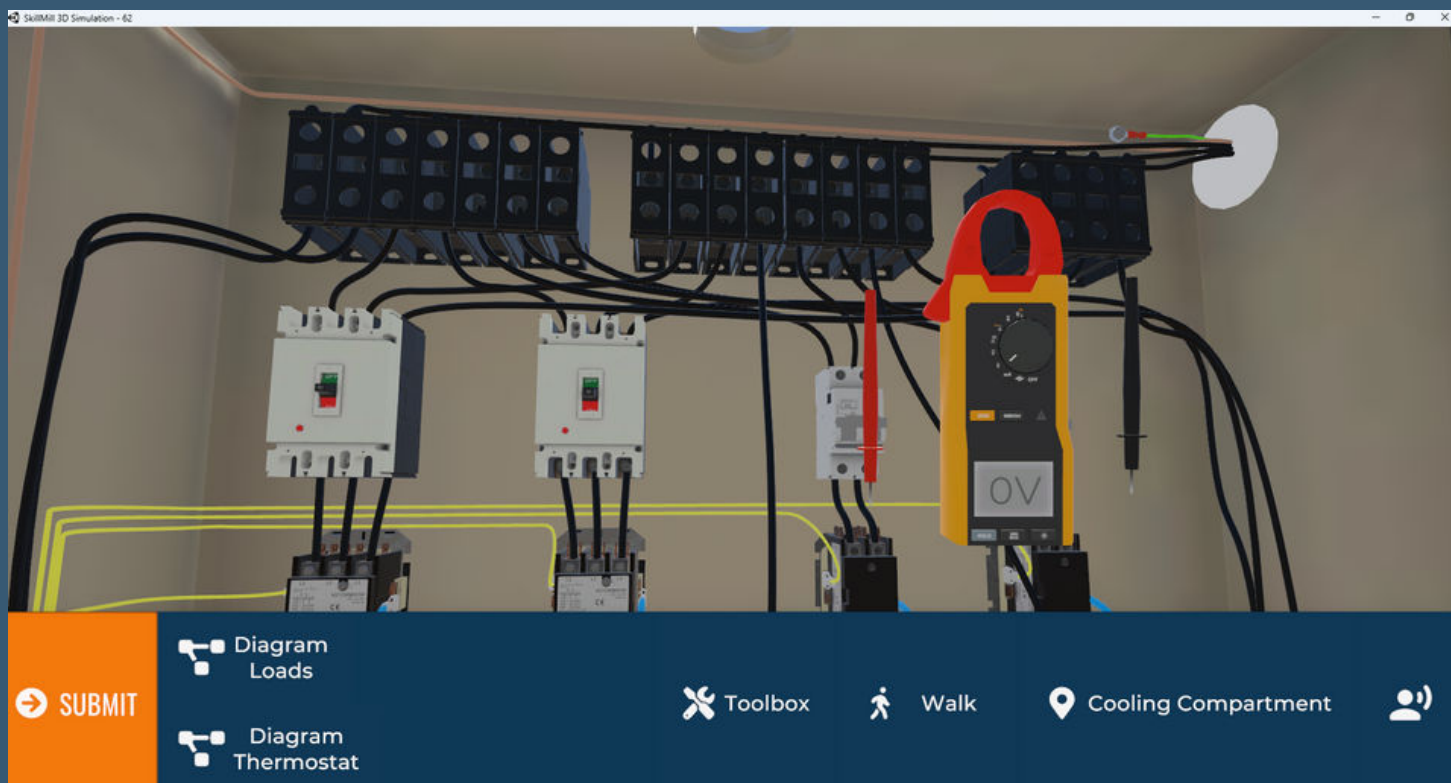
Reflection Phase

Once trainees have made their way through walking, jogging, and running, they reach the reflection phase. The reflection phase is a good opportunity for maintenance technicians and trainers to examine the progress that has been made through the various stages of training. By reviewing progress, feedback, and performance data from assessment mode, trainers will be able to see where there are gaps in skills and identify areas for improvement more effectively.

From there, trainers can deliver more effective, customized training to fill gaps and address problem areas quickly. When you take a more tailored approach to training, and choose to offer the right training to the right maintenance technician, you'll make them more productive and confident on-the-job.

Rooftop Unit Troubleshooting Simulation: *Assessment Mode*

The detailed procedure guide and highlighted guards have been removed from the simulation.





The Benefits of Online Simulation Training

Not only does simulation training make learning engaging and convenient for facilities maintenance teams, but it also gives trainers more time and resources to offer multi-modality training.

Here are some of the other ways that simulation training benefits facilities maintenance teams:



Custom Skill Development Pathways

Simulation training assessments allow trainers to analyze skill progression and tailor learning to individual skill levels, enabling teams to maximize productivity. Interplay has created expertly curated roadmaps that put learners in front of the most relevant courses, in the correct order, to provide the most complete journey to their training goals.



Enhanced Learning Journeys

Simulation training allows you to provide fun and engaging learning opportunities that can be done anytime, anywhere. Interplay Learning takes this training a step further and applies the science behind how people learn best, equipping them with both the knowledge and cognitive skills they need to solve problems in the moment.



Continuous Learning Opportunities

Simulation training makes it easy to flip the classroom and provides consistent and ongoing opportunities for maintenance teams to apply theoretical knowledge in practice scenarios. Trainers can assign foundational courses for techs to take before onsite or field instruction—leaving them with more time for deeper learning.



Low-Risk Environments

Simulation training creates field-like experiences without the risk to maintenance technicians or equipment. Maintenance technicians practice in safe, “real-world” scenarios where they can learn hands-on and improve troubleshooting skills in a no-fail environment.



Consistent, Scalable Training

Simulation training allows trainers to scale easily and drive learning consistency across various locations and devices. Through Interplay, they can assess the skill levels of all of their technicians and utilize customized learning pathways and simulations to drive scalable growth.



Effective Training That Drives Results

Simulation training helps trainers improve troubleshooting capabilities by helping their maintenance team develop both the knowledge and cognitive skills they need to diagnose and troubleshoot more effectively, which in turn, improves job-time efficiency and reduces third-party outsourcing costs.



Tapping Into Interplay's Simulation Expertise

As the skills gap continues to grow, so does the competition for skilled labor. And with the number of maintenance jobs far outpacing the number of qualified workers to fill them, more and more pressure is put on trainers to develop their team from the ground up. As businesses look for new ways to create engaging training that bridges the gap between theory and practice and tackles multiple learning modalities, simulation training continues to be one of the most powerful when it comes to driving results.

Interplay's simulation training paired with our unique learning methodology helps maintenance technicians develop and retain cognitive processing skills to more effectively solve problems in the field. We have designed our simulation training to equip teams with the knowledge they need and the skills required to bridge the theory-practice gap, leading to a more confident, efficient, and strong-performing workforce.

Interplay Learning's immersive online and VR training platform for HVAC, plumbing, electrical, and more, includes expert-led video courses, hands-on 3D simulations, skills assessments, and custom learning paths to develop and upskill maintenance teams, helping them be job-ready in weeks, not years.

Learn More About How Interplay Learning's Online Simulation Training Can Help You Bridge the Gap Between Theory and Practice

Contact: sales@interplaylearning.com

