



**Scalable Training. Faster
Performance. Real ROI**

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As a leader in your organization, you're no longer training for basic comprehension. You are charged with ensuring that all teams can demonstrate a readiness to act in compliance with industry standards, can perform their tasks safely and consistently, and are ready to work efficiently and effectively as soon as possible—all within tight budgets.

Effective training has always had its challenges, but in today's climate, operating costs are skyrocketing, and the risk to your reputation is even higher.

When a technician misreads a calibration or a dispatcher hesitates in a crisis, the consequences ripple across operations, erode customer trust, and impact your bottom line.

You need a training strategy that keeps up with the complexity of the work and high-performance demands.

That's where simulation-based learning enters the conversation—not as a shiny new tool, but as a practical, high-ROI approach to upskilling that fits within real-world budget constraints. It's not just about saving money (though it usually does). It's about protecting revenue, reducing costly errors, and giving teams the space to practice—before real consequences are on the line.

If ensuring your team performs at its best when it matters most is important to you, then this guide is for you. Because training is no longer a side function, it's a direct driver of operational strength. And simulation-based training is helping innovative leaders rethink how it gets done.

What You're Already Paying For: Hidden Costs of Traditional Training

On paper, instructor-led sessions, job shadowing, and in-person demonstrations can look affordable. They are familiar and easy to account for in the budget. But, the hidden costs of traditional training are far more damaging than many organizations realize.

Let's say your operations team rolls out a new safety procedure. You print training manuals, fly in trainers, pull supervisors off the floor, and rent or tie up conference room space for live demos. Meanwhile, productivity stalls, inconsistency creeps in, and by the third session, each team has interpreted the material differently.

The costs can rise quickly. A 2024 report on Trainingmag.com found that the average small to medium-sized company spent \$774 per employee and provided 47 hours of training per year.¹ When you consider instructor time, materials, loss of productivity, and travel, it's easy to see how unseen costs begin to compound:

- ◆ Instructor time gets consumed by repetition. Teaching the same process to dozens of cohorts is expensive, especially when subject matter experts are pulled from revenue-producing tasks.
- ◆ Logistics create drag. Scheduling conflicts, equipment use, and physical space limitations create bottlenecks.
- ◆ Remediation is reactive. You don't realize a team misunderstood the process until mistakes occur in the field, resulting in overtime, rework, or worse, compliance failures.

In healthcare education, for instance, live skill check-offs consume lab space, single-use supplies, and faculty time. In retail, shadow-based training leads to inconsistent execution and increased error rates during customer-facing moments.

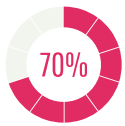
This means every time you repeat a demonstration, issue a remediation, or postpone progress due to lab or staff constraints, you're paying more than you realize, often without improving outcomes.

And that's where simulation-based training offers a clear, scalable alternative.



Simulation-Based Training Delivers Control, Consistency, and Confidence

Simulation-based training is not just a tech-forward upgrade to e-learning. It is a shift in how organizations deliver, manage, and optimize performance readiness.



*A 2022 Harvard Business Review article states, "Compared to training in a classroom setting, Buaria says this new approach "reduced the training time by 70%, saving over 2,000 working days of frontline managers' time." That's important in professional development, especially in functions like sales."*²

At its core, **simulation-based training provides real-world practice without real-world risk**. Trainees engage with complex workflows—customer escalations, emergency shutdowns, patient assessments, regulatory protocols via guided, interactive modules. These simulations are self-paced, repeatable, and include real-time feedback.

For example:

- ◆ A logistics coordinator can rehearse a scenario involving a misrouted shipment, choosing how to respond across branching outcomes.
- ◆ A utility technician can practice lockout/tagout procedures multiple times before touching high-voltage systems.
- ◆ A new hotel manager can navigate difficult guest conversations with integrated feedback—no need for a live role-play session.

These scenarios require more than knowledge. They demand confident decision-making and experience—skills that traditional formats rarely allow space to develop.

Platforms like **SimTutor Author** and **SIMTICS** make this possible without costly hardware or elaborate onboarding. **They allow teams to simultaneously build technical skill and judgment, enabling more confident decision-making on day one.**

Where traditional training relies on physical materials and a trainer, simulation-based platforms allow learning to happen consistently across shifts, sites, and time zones—an absolute necessity in modern, multi-location workforces.

What Do We Mean By “Simulation-Based Training”?

Simulation-based training is a learning method that places employees or students in realistic, interactive scenarios allowing them to practice skills, make decisions, and learn from mistakes before entering real-world situations.

Think of it as a flight simulator, but for any role where timing, accuracy, or judgment matters. Classic applications are typically used in medical settings or other high-stakes job training environments, but modern platforms offer an affordable and impactful learning modality in all scenarios. We did a deep dive into how simulation-based training is used in manufacturing, for example, and explore several examples of industries and roles throughout this guide.

In essence, simulation-based training allows people to rehearse what they'll face on any job—in a safe, repeatable environment.

There are multiple modalities:

- ◆ **Virtual simulations**, such as SimTutor Author & SimTutor's SIMTICS, deliver browser-based modules that are accessible from anywhere, making them ideal for procedural learning and decision-making.
- ◆ **Hybrid simulations** combine online practice with live skill assessments or lab components.
- ◆ **Scenario-based tools** mimic real-world complexity with branching paths and error recognition.

Because simulation is **repeatable, scalable, and consistent**, it provides a uniform baseline of training across locations and cohorts, a critical component for maintaining operational quality and safety, regardless of the application.



What Those Who Aren't "In the Know" Say

"It's too expensive."

Reality: While the initial investment may be more tangible, simulation often reduces long-term expenses related to materials, instructor time, travel, and repeat training. A solid calculation of existing costs versus your improved strategy reveals a strong ROI. (More on that soon!)

"It replaces instructors or mentors."

Reality: Simulation supports instructors by handling repetitive foundational content, allowing them to focus on high-touch coaching, performance analysis, and individualized support. This is valuable in a corporate setting, but even more impactful in post-secondary education, where faculty shortages are driving lower acceptance rates.

"It's only effective in clinical or high-risk industries."

Reality: Simulation is now successfully used across various sectors, including customer service, utilities, hospitality, and finance, wherever decision-making, timing, and consistency are crucial to competitive success.

"It's not as good as hands-on experience."

Reality: Research shows that simulation improves retention, judgment, and skill transfer to real scenarios—especially when combined with post-scenario debriefs.³

“It takes too much time to implement.”

Reality: Cloud-based solutions like SimTutor and SIMTICS can often be deployed in days or weeks, with minimal hardware or IT overhead.

“It won’t work for our unique workflows.”

Reality: Many simulation platforms offer customizable content, branching scenarios, or integrations with internal SOPs—ensuring relevance to your exact processes.

“Employees won’t take it seriously.”

Reality: Well-designed simulations are interactive, scenario-based, and often more engaging than static eLearning or manuals, especially when paired with performance data and instructor feedback. It’s an active learning experience, typically welcomed over lecture and workbook approaches.



Time ROI: Learning Without Lost Hours

“Ok, but can we afford to improve training right now?”

The better question is this: **“Can we afford not to?”**

While most organizations initially adopt simulation to enhance performance, the long-term benefits lie in time savings and waste reduction, which ultimately translate into actual cost savings.

If we focus on time as an asset, every minute an employee is in training is a minute they aren't generating value—or worse, a minute that your high-producing trainer isn't driving high-value outcomes.

Training time is not “free.” Whether it's onboarding a new hire or rolling out a process update, every hour someone spends learning is an hour they're not contributing to operations. And every hour a manager spends repeating a process is time they're not optimizing their team or solving strategic problems.



A 2010 study published in Simulation in Healthcare found that “simulation-based training reduced total training hours while maintaining or improving competency...instructors used the time saved for advanced coaching, and learners progressed more quickly with fewer remediation cycles.”⁴

Simulation-based training solves for this in several ways:

- ◆ **Learners move at their own pace.** No waiting for the next class or the trainer to be available.
- ◆ **Trainers focus on high-value coaching.** Platforms like SimTutor reduce repeat instruction by delivering procedural training digitally—freeing up experts to focus on debriefs, mentoring, or performance support.
- ◆ **Remediation becomes efficient.** Instead of scheduling extra sessions, learners re-engage with simulations independently until they meet competency standards.

In practical terms, that means a five-day onboarding cycle can be reduced to three. Or, instead of needing four hours of classroom time to teach safety reporting, a team member can complete a 30-minute module with integrated scenarios and feedback, then walk into a live environment ready to perform.

Saving time isn't just a scheduling win; it's a direct boost to productivity. When teams ramp up faster, they contribute sooner. And when instructors spend less time repeating the basics, they focus on coaching that drives performance.⁵ Simulation-based training replaces downtime with accelerated outputs that contribute to profits.



A Leaner Cost Structure and Tighter Fiscal Control

ROI isn't just about savings. It's about the value returned for every dollar spent. This is where simulation-based training becomes a truly compelling business case.

Direct Cost Reductions:

Fewer consumables.

In healthcare and technical trades, hands-on practice requires use of gloves, gauze, IV kits, or tool sets. When learners first engage through simulation, they transition into the real-world phase faster, needing fewer repetitions and therefore less supplies.

Lower equipment downtime.

In industrial and aviation environments, taking equipment offline for training can result in missed production targets or more frequent maintenance instances. Simulation keeps machines in service and performing.

Reduced travel and classroom costs.

The need for centralized locations, instructor time, lodging, and travel all disappear when training transitions to a digital format.

Indirect Financial Gains:

The financial value of simulation-based training isn't limited to what you save on supplies or instructor time. The effects ripple across your organization. Simulation platforms provide control over how quickly people ramp up, how consistently they perform, and how effectively you can track—and improve—outcomes at scale. These indirect gains often go unnoticed on paper, but their impact on profit and loss performance is undeniable.

Faster onboarding = earlier revenue contribution.

A representative who ramps up in three weeks instead of six gets to quota faster. A nurse who passes check-offs after one simulation attempt instead of 3 frees up faculty time and lab space.

And a platform that scales along with your growth has a compounding impact on the budget. Once licensing is in place, the **cost per learner drops as headcount grows**, giving you consistent per-capita spend across departments or locations.

Fewer errors = lower remediation and compliance costs.

Missteps in regulated industries lead to write-offs, claims, or audit risk. Simulation reduces variance, thereby improving operational safety and reducing costs.

Performance tracking delivers powerful, proactive insights.

Platforms like SIMTICS provide real-time analytics, enabling organizations to **track performance, identify gaps, and predict workforce readiness**, thereby adding a layer of control to the training strategy.

Simulation-based training doesn't just save you money. It makes your organization more adaptable, more consistent, and better prepared for what's next

- ◆ Regulation changes can be disruptive, but simulation platform content can be updated immediately—no reprinting, no re-training the trainers.
- ◆ When you open a new location, training scales without delay.
- ◆ If turnover spikes, you don't scramble—you plug in new team members with a proven, measurable onboarding path.

And, when your board or executive team asks for training ROI, you don't have to guess. You have platform data, performance outcomes, and time-to-competency analytics.

That's not just scalable—it's risk management and profit protection.

Industries Seeing a Clear Financial Impact

Simulation-based training has a measurable impact across a growing range of industries. Here's where it's already making a difference:

Public Safety

EMTs practice critical trauma protocols through high-fidelity simulations, reducing field errors and cutting down costly in-service retraining.



Fire departments implemented trauma and tactical simulations to prepare responders for low-frequency, high-risk calls. Simulation eliminated the need to tie up apparatuses or run mock drills on live streets—cutting fuel and staffing costs by over 15%.⁶

Aerospace & Aviation

Technicians rehearse diagnostics and safety checks on virtual aircraft systems, helping reduce downtime and avoid multi-million-dollar maintenance delays.

Energy & Utilities

Line workers train on simulated grid failures or transformer issues, mitigating risks that would otherwise require large-scale drills or offline infrastructure.



After implementing simulation for grid diagnostics and transformer training, one provider cut incident-related downtime by 22%. That translated into fewer penalties from state regulators and greater service uptime.

Measurable Outcomes That Matter: Calculating the ROI for Simulation-Based Training

Simulation platforms like SimTutor Author and SIMTICS don't just train—they track. Built-in analytics give learning leaders visibility into:

- ◆ Which learners completed which modules
- ◆ Where they struggled and where they improved
- ◆ Which teams are ready to move forward
- ◆ Where gaps in content or delivery exist

However, we recognize that you must justify more than just performance and efficiency gains. Investing in simulation-based training requires measurable returns that go beyond culture and retention.

The good news is that platforms have become more affordable, and the ROI isn't difficult to measure. The key is aligning the proper inputs with the outcomes that matter most to your operation.



Cost Reductions When You Switch to Simulation-Based Training

Time-to-Competency	One of the most immediate gains from simulation is faster onboarding or upskilling.
Reductions in Material and Equipment Costs	Simulation dramatically lowers the need for consumables and training-specific equipment usage.
Estimate Error Reduction	Errors are expensive. Whether it's a misfiled order, a safety violation, or a failed patient interaction, they cost time, money, and your reputation. Simulation helps reduce those by offering realistic practice with feedback before anyone steps into a live situation.
Instructor/Trainer Hours Recovered	Live training is labor-intensive. Instructors, managers, and senior staff are often pulled from high-value tasks to deliver foundational skills.
Assess Scalability and Avoided Costs	Simulation-based platforms like SimTutor or SIMTICS allow you to scale without duplicating effort or hiring additional staff.
Factor in Revenue Increases	Simulation-based training and video learning platforms allow employees to test their skills and receive feedback from managers, which can be applied to positions that earn revenue for your organization.

Final ROI Equation:

$$\text{ROI (\%)} = (\text{Total Annual Gains} - \text{Simulation Investment}) \div \text{Simulation Investment} \times 100$$

Example:

If you save \$5,000 in time, \$5,000 in materials, \$2,500 in reduced error handling, and add \$12,000 in revenue, against a \$10,000 simulation license:

$$\text{ROI} = ((\$24,500 - \$10,000) \div \$10,000) \times 100 = 145\% \text{ ROI in Year 1.}$$

When Training Works Better, The Business Gets Stronger

Simulation-based training is no longer just for high-risk environments. It's for any organization that needs people to **think critically, act confidently, and perform consistently, without risking margin, safety, or compliance.**

It saves time. It saves money. But more importantly, it helps teams get better and perform stronger.

If you're responsible for ensuring your people perform well in the moments that matter, then simulation-based training is one of the clearest and most controlled ways to protect that performance.

Ready to see how simulation-based training can drive ROI in your operation?

Book a SimTutor or SIMTICS demo and explore how simulation can improve readiness, reduce training waste, and deliver scalable performance gains across your workforce.

 simtutor.com

 info@simtutor.com

Works Cited

1. Training Industry Report (2024)

Training Industry Report 2024. Training Magazine, 2024.
<https://trainingmag.com/2024-training-industry-report/>.

2. Using Simulations to Upskill Employees

Edmondson, Amy C., and Deborah Ancona. "Using Simulations to Upskill Employees." Harvard Business Review, Nov. 2022,
<https://hbr.org/2022/11/using-simulations-to-upskill-employees>.

3&4. Simulation-Based Team Training in Healthcare

Weaver, Sallie J., et al. "Does Team Training Work? Principles for Health Care." BMJ Quality & Safety, vol. 19, suppl. 2, 2010, pp. i34-i43,
https://qualitysafety.bmj.com/content/19/Suppl_2/i34.

5. SCIRP References Page

"References Papers." Scientific Research Publishing,
<https://www.scirp.org/reference/referencespapers>.

6. Simulator Training Saves Lives and Money

"Simulator Training Saves Lives & Money." FAAC Incorporated, 6 Nov. 2019,
<https://www.faac.com/blog/2019/11/06/simulator-training-saves-lives-money/>.