

ASPERIO



SIMULATOR **CATALOG**

TRANSFORM THE WAY YOU TRAIN

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OUR PROMISE

With our simulators, you will experience the advantage of implementing simulators within your organization. You will be able to find the right kind of simulated tasks, experience the right kind of task progression, and the right way of evaluating simulated work. These achievements are due to comprehensive Performance Indicators that measure quality and technique on time basis. Data generated by our simulator can help your organization increase accountability, reduce legal liability, and overall improve your site operations.

By making sure that your new operators have learned good habits well enough before they can use your real equipment, the real seat-time training becomes safer, because mistakes happen more at the simulator. Our promises are:

- **Better**, because students are learning to do things right, at the simulator
- **Faster**, because your students reach their performance targets sooner. That means less wear on your equipment, leading to lower maintenance and repair costs
- **Cheaper**, by factoring “Better” and “Faster”

SIMSPRAY

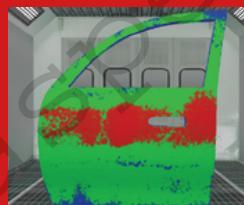
In partnership with VRSim 

Quicker, Safer, Cost Efficient, Spray Painting training transformed



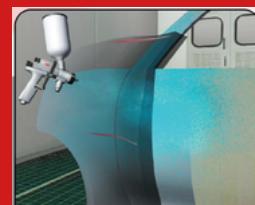
Realistic Painting

Pointed parts reflect coating quality and produce realistic defects.



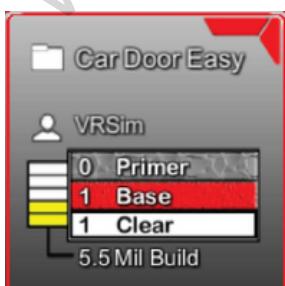
Coverage Map

View applied paint thickness vs target mil build while the student paints.



Add-On: Edge Blending

The Edge Blending module teaches the proper technique for spot and panel painting. Students learn to blend new and exiting paint with new projects and a specially designed visual cue.



Integrated Curriculum

Projects - Use the pre existing set or create custom projects and set performance parameters to focus on specific skills

Lesson Mode - Guide a student through a selected set of projects or a custom curriculum developed by an instructor

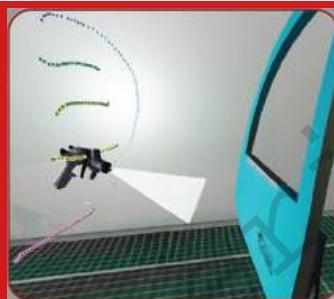
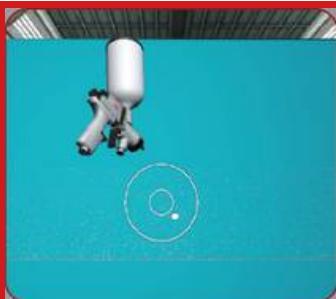
Objective Feedback - Coat scores include transfer efficiency, milbuild, correct technique and overall performance grades



Effective - Train quicker by prioritizing hands-on practice and improving technique development through objective feedback and detailed performance analysis.

Cost-Efficient - Use simulation to train more students in less time, avoiding cost of materials and time for part prep and clean-up. Student progress, material waste savings and system usage tracking ease administrative burden

Safe - Training with Asperio decreases training's negative impact on the environment and risks of personal harm



Paintometer		TOTAL
Time spent using Simspray	2h 34m 56s	12h 34m 56s
Painting		
Time spent painting	12h 34m 56s	12h 34m 56s
Total paint applied:	513.45 oz	742.24 oz
Total paint wasted:	513.45 oz	742.24 oz
Number of objects painted:	53	134
VOC emissions:	23 lbs	42 lbs
You've used enough paint to cover... The surface of the Earth!		

Visual Cues

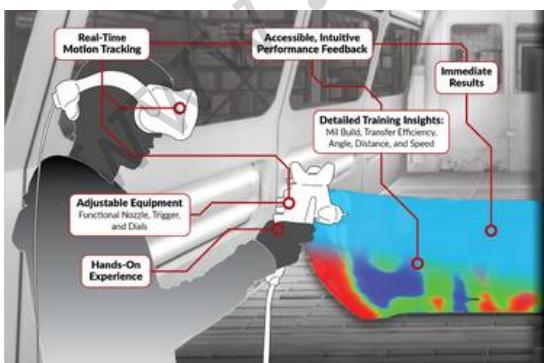
Real-time cues for painter's distance from the part, speed, and travel angle coach the student toward proper technique

Technique Tracking

View 3D lines showing gun distance from the part and travel speed for each pass. Angle, distance, and speed graphs highlight technique flows.

Paintometer

Realize cost savings - track system usage, parts painted, paint applied, paint wasted, and VOC emissions avoided.



For engaging training and quick results, train with Simspray

PORTABLE VERSION

SIMSPRAY GO

In partnership with VRSim 

Suitcase Sized, No Clean-Up, Paint Booth

Engaging, Effective, and Immersive Painter Education. Reduce paint and material costs while promoting core painter skills. Provide realistic training and drive hands-on skill development with SimSpray's lightweight and portable edition.



- HVLP Painter Training
- Performance Analysis
- Real-Time Scoring & Feedback
- Student Tracking
- 20+ Paintable Parts
- Integrated Curriculum
- Coverage Maps
- Realistic Paint + Defects
- Training Cues
- 3D Performance Visualization
- Plug and Play Setup



VR painting simulation with realistic paint, drips, and defects. Learn to paint with a diverse set of paint parts, multi-coat projects, and even create your own custom projects.

Teach, train, and recruit painters with SimSpray.

Help build and improve core painting and coating skills with immediate access to repeatable training exercises and instructive performance cues. Measure student progress with intuitive performance analysis and project reports.



- + Hassle-Free Setup
- + Realistic Paint + Defects
- + Customizable Projects
- + Professional-Grade HMD
- + Reliable Motion-Tracking
- + Suitcase Portability

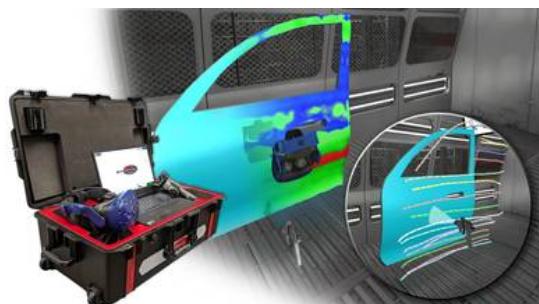
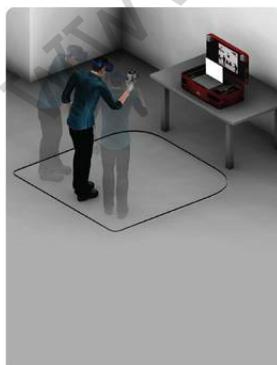
Simspray Go



SPESIFICATION

Display	15.6" HD Display (1920x1080)
Processor	Intel i5 9xxx series
Memory	16GB RAM
Graphics	GeForce 1660ti
I/O Ports	Input HDMI (occupied), Display Port (occupied), USB 3.0 (occupied) Output HDMI (for external display support)
Peripherals	SimSpray Spray Gun
HTC VIVE HMD	HTC VIVE HMD
Operating System	Windows 10 Home
Dimensions	2'9" h * 2'5" w * 1'd (about the size of checked luggage)
Weight	18,14 Kg

SIMSPRAY GO ILLUSTRATION





HEAVY EQUIPMENT SIMULATOR



What are you training for?



Our simulators are your best-in-class choice for skilling, upskilling, and reskilling academia, operator trainees and supervisor trainees in these area of interests:

- Construction
- Shipping Ports
- Logistics
- Cold Storage
- Vocational Schools and Training Facilities
- Factories
- Forestry
- Mining

Our Instructional Designs consider best in class practices from leading training professionals from around the world, along with certification guidelines from key standards organizations such as NCCER for construction equipment, NCCCO for cranes, and OSHA for forklifts.



CONSTRUCTION

Around Asia, the construction industry has been a key driver of economy and growth. Our simulators play part in the screening and training of operators. Whether it's about safety, control familiarization, extreme scenario simulation, our simulator helps everyone in your project to understand the basics of operating heavy construction equipment found on your site

Available Simulators:

- Tower Crane
- Mobile Crane
- Excavator
- Bulldozer
- Skid Steer Loader
- Backhoe Loader
- Forklift



MANUFACTURING

Material handling equipment (MHE), such as Forklifts, has a tightly-interwoven relationship with the manufacturing industry. MHE drives innovation in production and manufacturing, while also are critical for the transfer logistics of parts, pallets, and components in manufacturing warehouses, and evolves with the industry as needs arise or technology forces ingenuity for forklift machines. Our Simulator cuts down the learning time for forklift operators by giving them a head start to familiarize themselves with safety procedures, forklift controls and tricky situations that requires delicate navigation.

Available Simulators:

- Forklift
- Reach in Forklift



MINING

Modern mining equipment is increasingly complex, costly, and difficult to operate productively. As a result, proper operator training has become everyone's business. The fact is, it takes training to spot a truck and position it for loading under a full bucket. It also takes training to back up a truck just using mirrors under that bucket. Otherwise, your mining operations will suffer from lower productivity, higher fuel costs, increased tire wear, and more equipment maintenance and repair.

Available Simulators:

- Off-Highway-Truck
- Wheel Loader
- Mining-Truck
- Electric Rope Shovel
- Hydraulic Excavator
- Bulldozer
- Forklift
- Drill Operator
- Skid Steer



FORESTRY

Forestry is a significant employer providing work for about 2% of the total workforce - about 3.7 million jobs, sustaining at least 15 million Indonesians. Modern forestry equipment is increasingly complex, costly, and difficult to operate productively. In addition, there is increasing public support for better workplace practices and improved workplace safety, making operator certification a reality in some geographic areas. As a result, proper operator training has become a priority.

Available Simulators:

- Harvester Forwarder
- Hydraulic Excavator
- Bulldozer
- Wheel Loader
- Forklift
- Skid Steer Loader with forks



COLD STORAGE LOGISTICS

Cold Storage is one of the most demanding material handling applications. Operating within a cold storage requires unique skills which are different from normal warehouse operations. Our simulators help new operators get familiar with equipment controls, safety protocols, and efficient actions that would help them traverse narrow aisles crowded spaces. Complete with replica controls and dedicated learning curriculum to help maximize your operator's learning

Available Simulators:

- Forklift
- Reach in Forklift

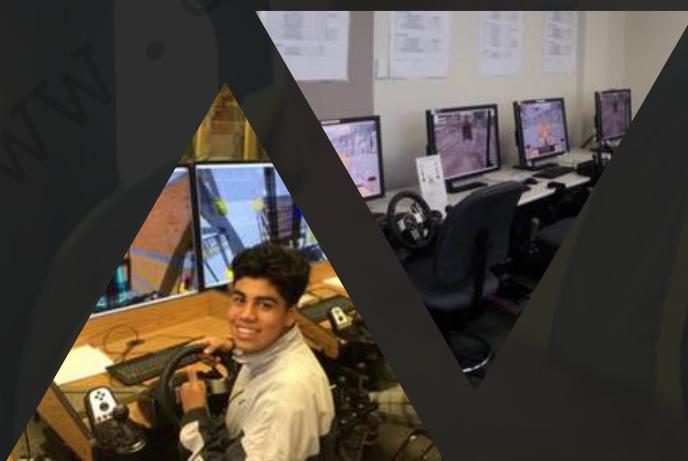


VOCATIONAL SCHOOLS

With the increasing needs for industry workforce, more vocational schools will pivot to a full experience, learning-by-doing institution. This transition will need to take account transforming the traditional way of teaching and learning to a more digitalized way of learning. Our simulators helps educational institutes provide accessible heavy equipment learning without owning and maintaining any actual heavy equipment. Our simulators also can be set up according to class size and the faculty's teaching pedagogy.

Available Simulators:

- Hydraulic Excavator
- Bulldozer
- Wheel Loader
- Forklift
- Skid Steer Loader
- Mobile Crane
- Tower Crane



SIMULATOR LINEUP

Simulator Type	Simulator Lite	Simulator Pro	Simulator Replica
Image			
Description	Our Simulator Lite type is based on a classroom style of teaching, equipped with off-the-shelf controls (or custom-made controls) presented on a HD single desktop display with our simulator software running on a high-end PC unit and using the latest high-end graphic cards	Our Simulator Pro type is complete with a simulator base and complemented with replica controls (optional upgrade to authentic controls available). All in one system provides space to store required equipment (e.g. PC, Speakers, etc.), designed with portability, durability, and ease-of-use in mind	Our Simulator Replica type is the closest you can get to a real operating machine. Complete with cutting-edge LED Monitors, High-End Accessories, Authentic Controls, and personal branding
Degree of customisation	Low	Medium	High
Simulator Base	Basic classroom desk	*Simulator Pro Base (Customizable to requirement) (+\$) *n-Degree of Freedom Base (n-DOF automation Base) (+\$\$\$)	Actual Heavy Equipment with heavy modification (Customizable to requirement (+\$))
Simulator Manager Software	Included	Included	Included
Number of Screens	1 [Front View only] 3 [Front View, Left View, Right View] 4 [Front View, Rear View, Left View, Right View] *Consult with us to determine how many screens your simulator needs	1 [Front View only] 3 [Front View, Left View, Right View] 4 [Front View, Rear View] Left View, Right View *Consult with us to determine how many screens your simulator needs	4 [Front View, Rear View] Left View, Right View
Personalization (Corporate Branding)	Not Available	Not Available	Available
Price Range	\$	\$\$-\$ \$\$	\$\$-\$ \$\$
Available for	All Simulators	All Simulators exc. Tower Crane	All Simulators

Forklift Simulator	✓	✓	✓	✓
Mobile Crane Simulator	✓	✓	✓	✓
Hydraulic Excavator Simulator	✓	✓	✓	✓
Bulldozer Simulator	✓	✓	✓	✓
Mining Truck Simulator	✓	✓	✓	✓
Tower Crane Simulator	✓	✗		✓

FORKLIFT SIMULATOR

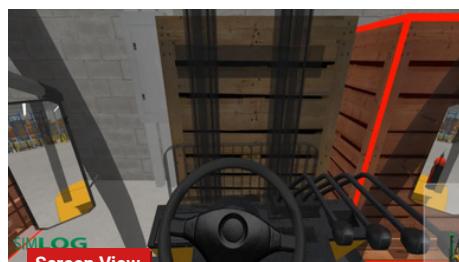
In partnership with Simlog 

Simulation Platform using modified Forklift with in-house
Customized replica controllers



Features

- Immersive Game Play to simulate real condition on Warehouse / Logistics
- Customize Map to Replicate Real Factory / warehouse Condition
- Scoring Log to Evaluate Improvement point
- Haptic Feedbacks as Option



MOBILE CRANE SIMULATOR

In partnership with Simlog 

Key Features

- Highly realistic simulation graphics and physics
- 14 Simulation Modules of increasing difficulty
- Lift planning Module that requires a solid understanding of load charts
- Signal Person training exercises
- 44 Performance Indicators to comprehensively evaluate the simulated work
- Configuration parameters for boom deflection, automatic swing brake, and different wind conditions



Mobile Crane Personal Simulator (Advanced Edition) puts trainees at the controls of a modern rough-terrain mobile crane equipped with a telescoping boom with deflection, a jib, and a realistic dashboard. The virtual worksite is set in a construction environment with a variety of loads and hook blocks for training.

Training efficiency is delivered through a modular Instructional Design that teaches real skills for productive and safe equipment operations. Advanced Edition features lift planning exercises that require a solid understanding of load charts and Signal Person training, i.e. learning to provide appropriate signals to the crane operator (to complete a lift), while at the same time teaching that crane operator to understand and follow those signals.

TEACH REAL-WORLD OPERATING SKILLS

14 SIMULATION MODULES OF INCREASING DIFFICULTY

- Controls Familiarization
- Hookblock Control 1 and 2
- Pole Topping
- Corridor Following 1, 2, 3 and 4
- Executing Lifts
- Pole Placement
- Concrete Pouring 1 and 2
- Pick, Lift and Place
- Signaling



Moving a concrete bucket along a three-part, "Z-shaped" trajectory



Signal Person Views

A fixed view of the lift area, with the crane, load, and target visible.
A dynamic view that follows the movement of the load

HYDRAULIC EXCAVATOR SIMULATOR

In partnership with Simlog 

Real Training Value in PC-Based Simulator

- Pre-screen trainees for operator aptitude
- Prepare students for real seat-time
- Upgrade skills to meet higher standards
- Promote the trade to aid recruitment

Simply install the simulation software and connect the USB simulator controls!



Hydraulic Excavator Personal Simulator puts students at the controls of a modern, sophisticated machine in interaction with an articulated dump truck. The virtual work site features dynamic terrain with life-like material.

Training efficiency is delivered through a modular Instructional Design that teaches real skills for productive and safe equipment operations in the field.

12 SIMULATION MODULES OF INCREASING DIFFICULTY

- Controls Familiarization
- Excavator Positioning
- Raking the Green
- Over the Moon
- Bench Climbing/Descending
- Trench Crossing
- Single-Pass Dig and Dump
- Trenching
- Trench and Load
- Bench Loading with Truck Spotting
- Bench Loading with Truck Spotting - Boulders
- Ramp Building

TEACH REAL-WORLD OPERATING SKILLS



Trench Crossing using Boom Jacking



Truck spotting with an interactive, articulated dump truck

AUTOMATIC PERFORMANCE MEASUREMENT

For each Simulation Module, comprehensive Performance Indicators measure the quality and productivity of students' work. The simulation software automatically tracks and reports Simulation Results. Students can train unsupervised and learn at their own pace!

OBJECTIVE SIMULATION RESULTS

237 Performance Indicators are precisely measured, including:

- Execution time
- Truck loading accuracy
- Maximum tilt angle while bench climbing/descending

BULLDOZER SIMULATOR

In partnership with Simlog 

Real Training Value in PC-Based Simulator

Key Features

- Pre-screen trainees for operator aptitude
- Prepare students for real seat-time
- Upgrade skills to meet higher standards
- Promote the trade to aid recruitment

Simply install the simulation software and connect the USB simulator controls!



Bulldozer Personal Simulator puts students behind the controls of a medium-sized Bulldozer as they experience the reality of a typical construction site. The virtual work site features dynamic terrain with life-like dirt pushing and spreading.

Training efficiency is delivered through a modular Instructional Design that teaches real skills for productive and safe equipment operations in the field.

TEACH REAL-WORLD OPERATING SKILLS

10 SIMULATION MODULES OF INCREASING DIFFICULTY

- Controls Familiarization
- Bulldozer Positioning
- Boulder Control
- Backfilling 1
- Backfilling 2
- Slot Dozing
- Spreading



Mastering the use of the hoist control for dumping



Truck loading by the interactive Electric Rope Shovel

AUTOMATIC PERFORMANCE MEASUREMENT

For each Simulation Module, comprehensive Performance Indicators measure the quality and productivity of students' work. The simulation software automatically tracks and reports Simulation Results. Students can train unsupervised and learn at their own pace!

20 Performance Indicators are precisely measured, including:

- Execution time
- Surface height variability
- Volume of material backfilled into trench
- Dozing depth variability

MINING TRUCK SIMULATOR

In Partnership with SimLog 

Real Training Value in PC-Based Simulator

Key Features

- Pre-screen trainees for operator aptitude
- Prepare students for real seat-time
- Upgrade skills to meet higher standards
- Promote the trade to aid recruitment

Simply install the simulation software and connect the USB simulator controls!



Mining Truck Personal Simulator puts students at the controls of a modern, sophisticated heavy-hauler with life-like driving dynamics in interaction with a built-in Electric Rope Shovel. The virtual mine site features challenging driving scenarios with various slippery driving conditions, and interactive dumping and loading zones.

Training efficiency is delivered through a modular Instructional Design that teaches real skills for productive and safe equipment operations in the field.

TEACH REAL-WORLD OPERATING SKILLS

10 SIMULATION MODULES OF INCREASING DIFFICULTY

- Controls Familiarization
- Corridor Driving 1
- Corridor Driving 2
- Corridor Driving 3
- Mine Site Driving 1
- Mine Site Driving 2
- Dumping
- Loading
- Complete Haul Cycle 1
- Complete Haul Cycle 2



Mastering the use of the hoist control for dumping



Truck loading by the interactive Electric Rope Shovel

AUTOMATIC PERFORMANCE MEASUREMENT

For each Simulation Module, comprehensive Performance Indicators measure the quality and productivity of students' work. The simulation software automatically tracks and reports Simulation Results. Students can train unsupervised and learn at their own pace!

OBJECTIVE SIMULATION RESULTS

36 Performance Indicators are precisely measured, including:

- Execution time
- Incorrect use of truck functions
- Positioning time for loading/dumping
- Number of collisions between truck and berm

TOWER CRANE SIMULATOR

In Partnership with SimLog 

Real Training Value in PC-Based Simulator

- Pre-screen trainees for operator aptitude
- Prepare students for real seat-time
- Upgrade skills to meet higher standards
- Promote the trade to aid recruitment

Simply install the simulation software and connect the USB simulator controls!



Tower Crane Personal Simulator puts trainees at the controls of a modern freestanding top-slewing tower crane with trolley jib. The virtual worksite is set in a typical construction environment and features terrain with a variety of loads and hook blocks for training.

Training efficiency is delivered through a modular Instructional Design that teaches real skills for productive and safe equipment operations in the field.

TEACH REAL-WORLD OPERATING SKILLS

6 SIMULATION MODULES OF INCREASING DIFFICULTY

- Load Control 1
- Load Control 2
- Executing Lifts
- Steel Erection
- Concrete Bucket Placement
- Form Following



Positioning girders at target positions as part of steel erection



Mastering load movement by positioning concrete buckets at target positions

AUTOMATIC PERFORMANCE MEASUREMENT

For each Simulation Module, comprehensive Performance Indicators measure the quality and productivity of students' work. The simulation software automatically tracks and reports Simulation Results. Students can train unsupervised and learn at their own pace!

OBJECTIVE SIMULATION RESULTS

10 Performance Indicators are precisely measured, including:

- Execution time
- Maximum height error
- Maximum lateral distance error
- Fatal Error when Load Chart capacities are exceeded

HOW OUR SIMULATORS CAN HELP YOU

IT'S ABOUT GETTING FROM ZERO TO ONE, AND FROM ONE TO ONE HUNDRED

As we progress towards the future of Indonesia, we imagine the vast opportunities of growth in multiple industries that would result in a surge of job demands. With the abundance of population in need of a job, simulators can help them attain skills that they never had before by helping new operators understand their strengths and weaknesses before working at their chosen fields. Furthermore, simulators can also help experienced operators acquire effectiveness and efficiency when running their machines, resulting in a more productive work environment with reduced cost. Our philosophy, "from zero to one, from one to one hundred", reflects on how businesses can produce better workers at a reduced cost by using our simulators.

Not convinced? Here are some other benefits that you can get from our simulators:

Make better hiring decisions by double checking basic skills quickly

When hiring new employees, businesses usually discover the true state of qualification the candidate has during on the job activities while using real equipment or company asset. Most of the times, these will result in work inefficiency as the new employee is hindered by inexperience. Worst of all, CVs that these employees submit to your HR representative may be filled with exaggerated competencies and responsibilities.

Double checking operating skills, before hiring, is easy to do with our simulators. Your HR team can simply compare simulation results with target values established by your operator supervisor. Since candidates do the same simulation, it will be easy to track which operators will excel at which activities.



Implement as a Pre-screen for employee promotion

Operating heavy equipment requires a combination of eye and hand coordination, depth awareness, and spatial perception. Our simulators will let you evaluate these requirements continuously without having to book real heavy equipment, which is important when you are taking account of your employee's skills as a factor of employee promotion.

Bring new visibility to your company

Give your company new visibility in your community at regional events, even job fairs, with a unique simulator-based presence.

Better prepare new operators for real seat-time

Watching videos of equipment at work or sitting beside an experienced operator in the cab isn't that effective. The tenet "acquiring skills is all about learning by doing" is still relevant anywhere, even in operator training. Training using the controls of real equipment is expensive, as it results in unnecessary costs. Equipment damage, availability, emissions are some of the risks pertaining real equipment training. Also, there is the problem of details, because your worksite may use different brands or models of equipment.

Our simulators gives you the choice of "generic", which uses standard controls, or "custom", which uses controls specific to a brand or model that you have. Our simulators teaches core skills that are applicable cross brands and cross models. No more waiting for the right type of equipment to be available to train.

Help experienced operators refresh their skills

At many companies, people aren't using the available heavy equipment every day as they might have holidays or paid time off. Our simulators help them regain their feelings and confidence in their operating skills. Refreshing operator skills is also important for those who are getting ready to substitute your regular operators if they are unavailable for the job.

Monitor progress onsite and offsite

If you are part of a large corporation or are a large company that have multiple offices and sites, it would be an HR nightmare to track training data from all of those places. Fortunately, our simulation manager helps your HR department by keeping every data generated by our simulators, indexed by users, within a secure database. With our viewer software, you can also peek into how your other branches are doing their training.

Reveal bad operating habits, fix them, and develop better ones

An experienced operator keeps doing the same mistakes, be it small or big, until suddenly there's an incident or a real accident. With our simulators, prepare your operator better by learning what their bad habits are through simulated training and get them corrected with multiple hours on our simulators.



"Heavy Equipment Operator Certificate" ("HEOC") program at Southern Maine Community College (SMCC), US



Forklift Simulator (Replica Model) at Vocational Training Center in Indonesia



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