

# DRIVER TRAINING SIMULATION SYSTEM

Redefine Driving Proficiency





# LEADING-EDGE SIMULATION TRAINING

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ST Engineering offers state-of-the art driving simulators to the public security, logistics, transport, and defence sectors.

Developed to meet industry operational and training needs, our suite of driving simulators provides high-fidelity and realistic virtual training experience across various vehicle types, for driving skill refinement, reflex enhancement, and adherence to safety protocols crucial for passengers, road users and business operations.

The driving simulators can be deployed for individual and fleet training.

# WIDE RANGE OF TRAINING PLATFORMS

Our range of simulation training platforms caters to different training objectives and budgets. Being highly configurable, multiple vehicle cabins can be interchanged on a single trainer unit to optimise utility. Multiple simulators can also be linked, so that fleet training can take place in the same virtual environment.



**Motor Vehicles**  
(Cars/Motorcycles)



**Passenger Vehicles**  
(Buses/Coaches)



**Military Vehicles**



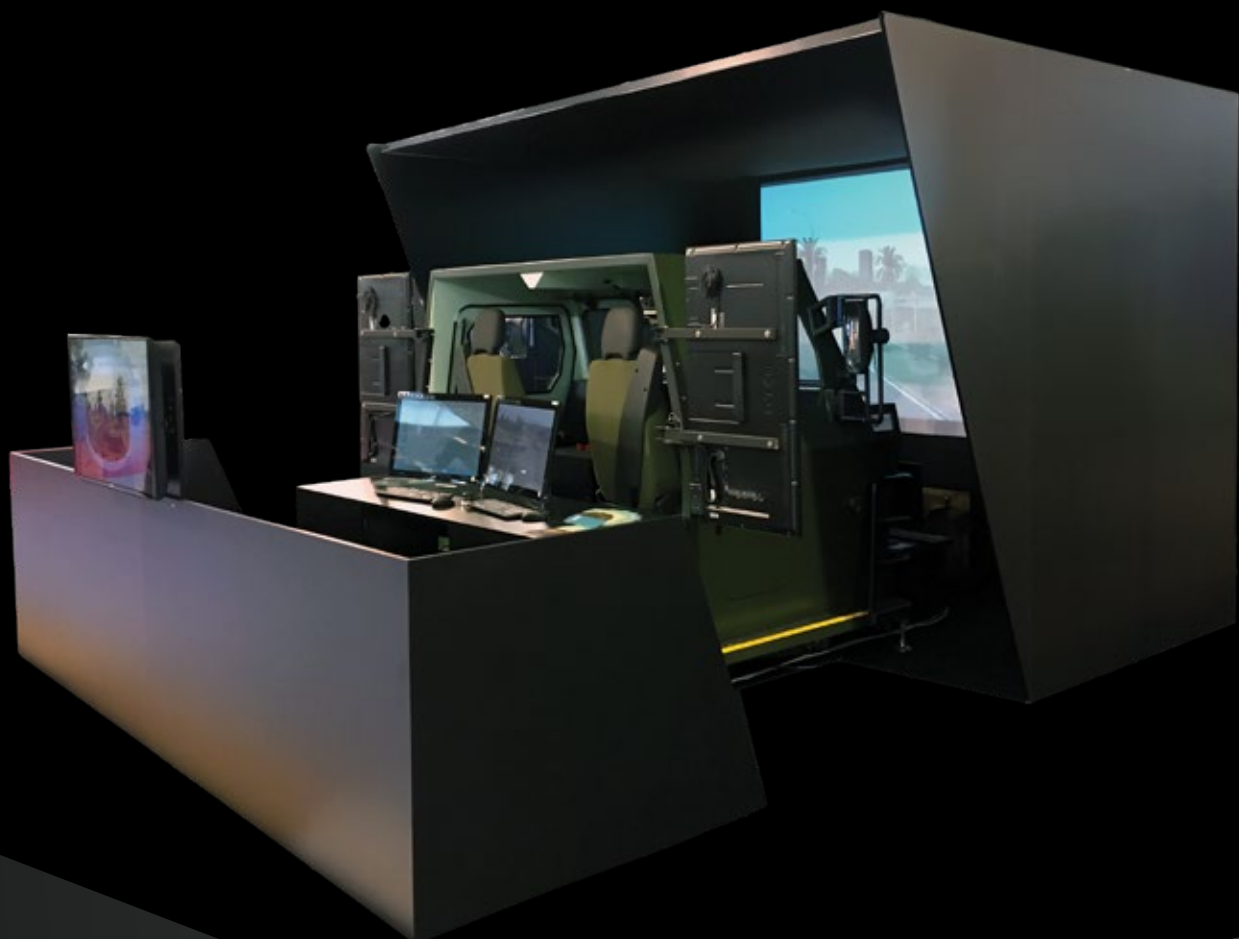
**Heavy Goods Vehicles**



**Articulated Vehicles**



**Police, Fire & Emergency Response Vehicles**





## Mixed Reality (MR) Driving Trainer

The MR driving simulator immerses the learner in the driving environment, with full 360 degree views from the driving cabin. Highly portable, this system helps organisations accomplish their training objectives with a minimal space footprint.



## Compact Driving Simulator

The compact driving simulator provides learners with a realistic training experience. It integrates a modified cabin, real driving controls coupled with a 120/180 degree field of view. The mobile trainer offers a cost-efficient option without compromising the driving performance and experience.

# Full-Scale Motion Driving Simulator

The full-scale driving simulator delivers a highly realistic virtual training experience. Learners get to familiarise themselves with the actual controls and vehicle's blind-spots from the driving cabin.

It comprises:

- Full-size vehicle cabin
- 180/ 270 / 360 degree field of view
- Real vehicle controls (steering wheel, accelerator & brake, gear shifter, instrument panel, in-cabin switches)
- Full surround sound system

## Optional:

- 3 to 6 Degree Of Freedom Motion Platform
- Integration with vehicle on-board equipment



# KEY FEATURES

## 1) AI-powered Scenario Generator

- Design and deploy scenarios in a virtual terrain with real-world locations modeling
- Create unique scenarios with a large variety of interactions between scenario objects
- Powered by AI tools to assist with rapid scenario brainstorming and generation



AI-powered Scenario Generator



Roads, landmarks and signages



Simulated vehicular and pedestrian traffic

## 2) Realistic Training Experience

- Terrain, traffic rules, lights and signages that's customised to your locality
- Immersive and relevant traffic conditions



Accurate driving cabin replica



Integration of actual vehicle controls


### 3) Realistic Vehicle Controls and Dynamics

- Driving cabins equipped with functional controls including switches, gear controls, steering wheel and dashboard display panels
- Enhanced realism through high-fidelity vehicle physic modelling for true-to-life performance

### 4) Comprehensive Assessment and Training

- Objective assessment platform for instructors to monitor and assess driving performance
- Records and captures driver's adherence to rules, response to emergency situations, failures and driving techniques

**Assessment Report**

Driving Training Simulation System 

Simulation Exercise Result

Training Information		Training Outcome	
Driver Name	John Doe	Result	Full
Driver ID	12345678	Risk Profile	High Risk
Vehicle	Model	Accident Rate	0%
Date and Time of Test	2023-10-27 10:30 AM		
Test Scenario	Urban		

Sl. No.	Rule Description	Time of Occurrence
1	Collision	11:20:45 AM (00:00:00)
2	Clipping of Pedestrian/ Cyclist	11:20:45 AM (00:00:00)
3	Hard acceleration	11:20:45 AM (00:00:00)
4	Clipping of Pedestrian/ Cyclist	11:20:45 AM (00:00:00)
5	Clipping of Pedestrian/ Cyclist	11:20:45 AM (00:00:00)
6	Clipping of Pedestrian/ Cyclist	11:20:45 AM (00:00:00)
7	Clipping of Pedestrian/ Cyclist	11:20:45 AM (00:00:00)
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**Training Information**

- Trainee details
- Training details

**Training Outcome**

- Training Result
- Trainee's Assessed Risk Profile (High/Medium/Low)
  - Data Analysis of trainee's driving behaviors, high violation risk factors (eg. Collision, speeding, harsh acceleration, braking, sharp cornering, etc.)
- No. of violations during training

**Violation List**

- Details of violations during training
- Bookmark features to link to 3D training playback video
- Able to view the violation in multiple camera angle views

13 | Co-confidential

Automated Driving Evaluation Assessment System, an intelligent assessment system that tracks both the driver's simulator driving performance for targeted training.



**ST Engineering Training & Simulation Systems Pte Ltd**  
[www.stengg.com](http://www.stengg.com)  
[trainingsimulation@stengg.com](mailto:trainingsimulation@stengg.com)

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