Cusmat's Immersive Skilling System for MHE Operations

To help Enterprises improve their

Productivity

Efficiency

Safety

At Cusmat

We leverage innovative **immersive technologies to help Industries bridge the skill-gap.**

Green Operator → **Train**

Screen
Identify Skill gap

Experience Operators → **Upskill**

Assessment

Analytics Engine

Dashboard
Generate Report

VR Skilling System (Software + Hardware)

Equipments covered in MHE Skilling Platform

Forklift

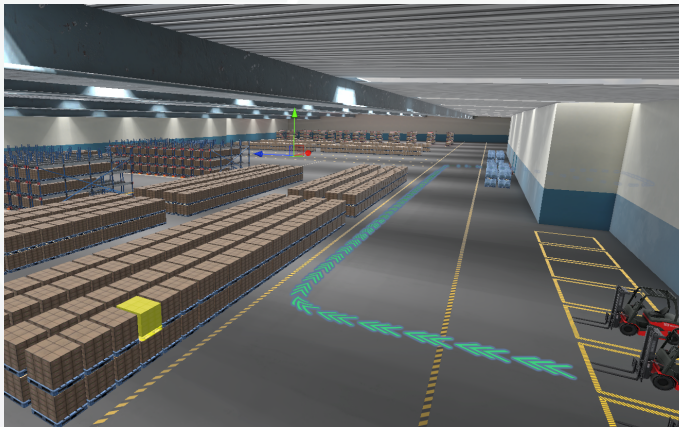BOPT

Reach Truck

Tugger

Problems solved

- Low tonnage handling
- Safety violations, Accidents and near misses
- Damaged goods/ wastage due to incorrect handling
- Skilling new operators in event of a demand spike
- Hot metal handling in Smelter

Metrics Impacted

- Cycle time%
- Reduction in collisions/ accidents
- Optimal path following
- Fork/ Pallet engagement
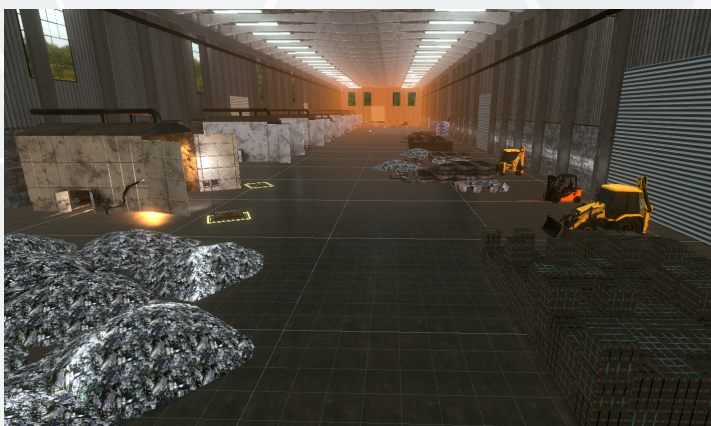
Industrial Scenarios Covered
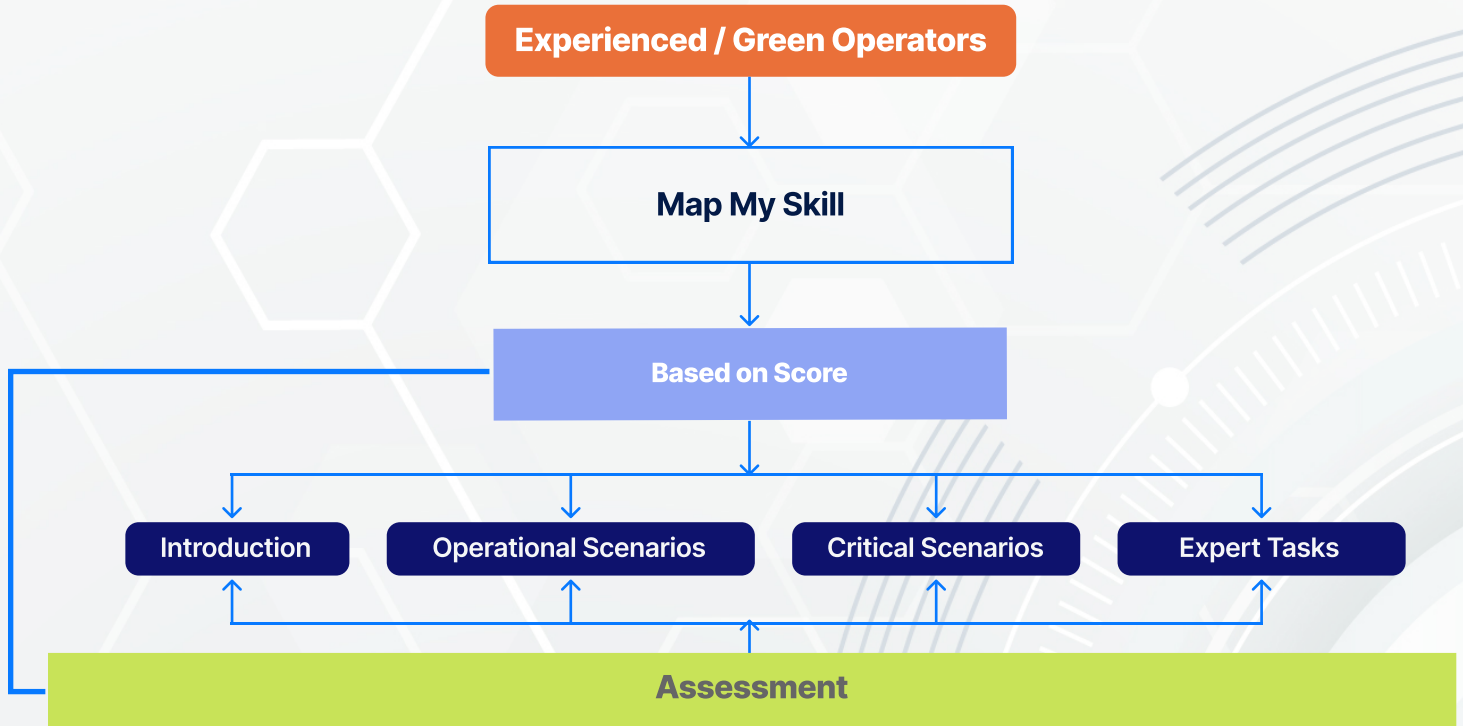
Warehouses and Fulfilment Centres

In-Plant Logistics

Factories/Smelt shops

Now go forward and fully insert the scoop into the smelter. Ensure the scoop is aligned at the center of the smelter hole.

Menu

How it works ?

Experienced / Green Operators

↓

Map My Skill

↓

Based on Score

↓

| Introduction | Operational Scenarios | Critical Scenarios | Expert Tasks |

Assessment

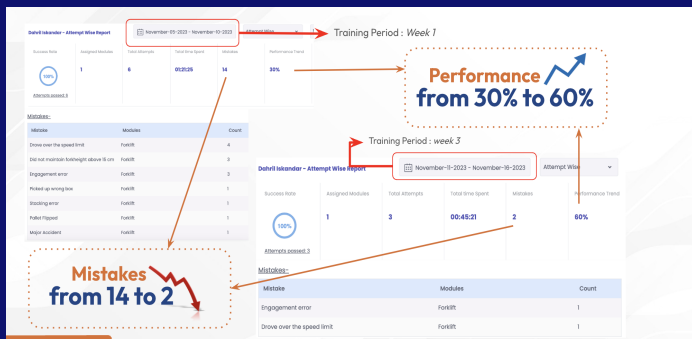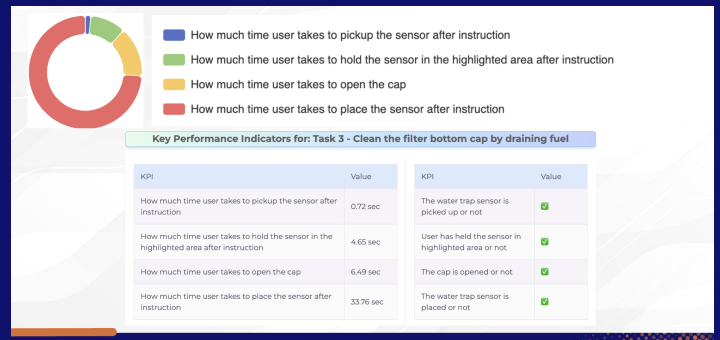
Embedded Analytics - Dashboard

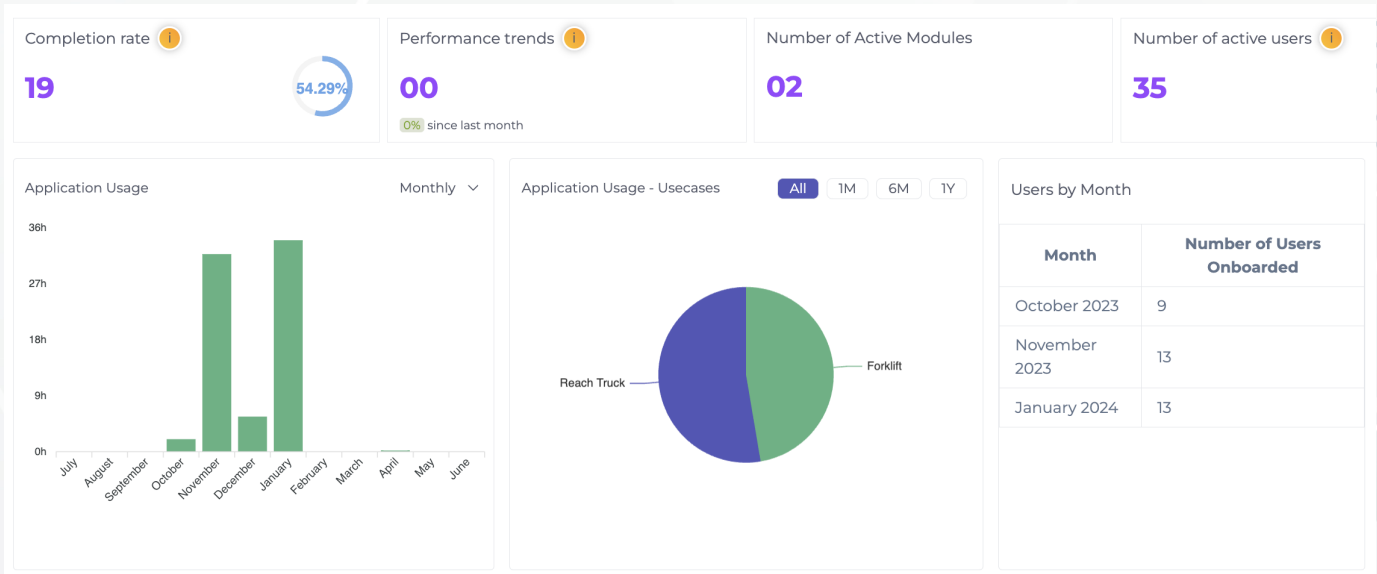## KPIs Configured to Identify skill gap

- Pallet engagement Error
- Stacking Angle and Speed
- Safety Metrics like (Over-speeding, Blending, etc)
- Ideal v/s Actual path
- Speed v/s Time graphs

Embedded Analytics Engine

Completion rate ⓘ
19   54.29%

Performance trends ⓘ
00
0% since last month

Number of Active Modules
02

Number of active users ⓘ
35

Application Usage — Monthly ⌄

Application Usage - Usecases — All 1M 6M 1Y

Reach Truck / Forklift

Users by Month

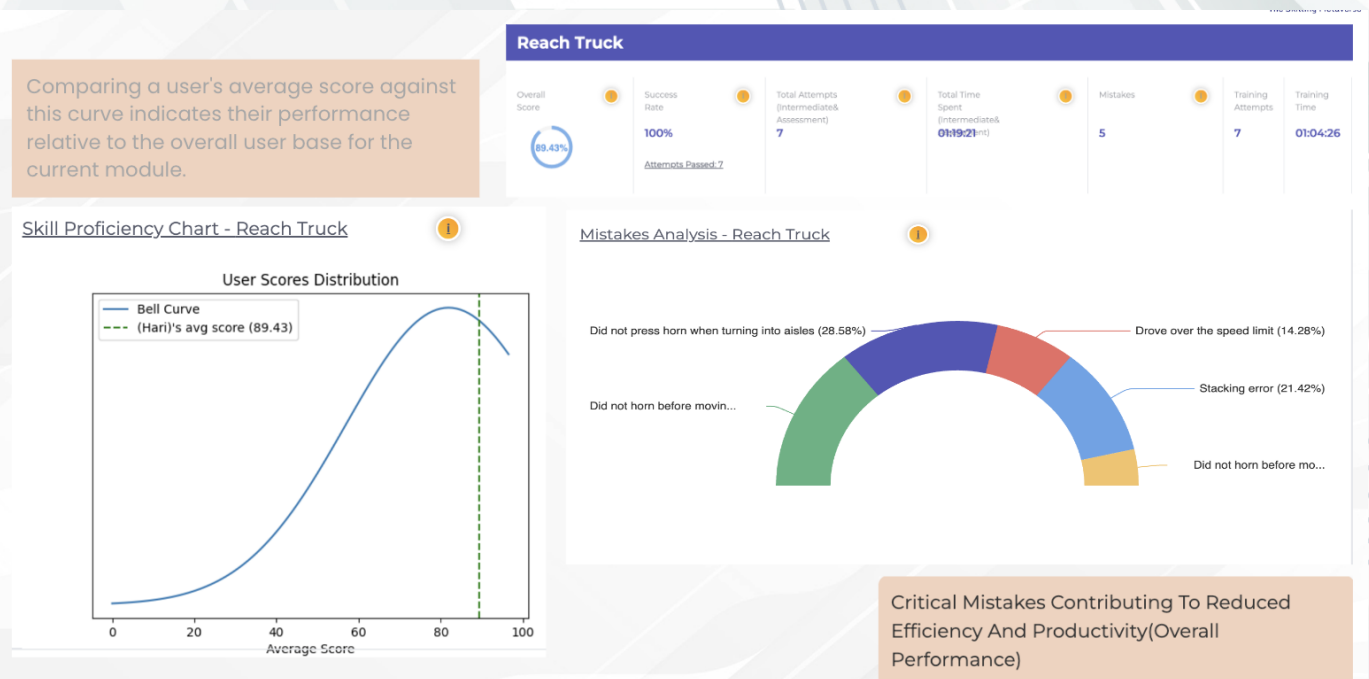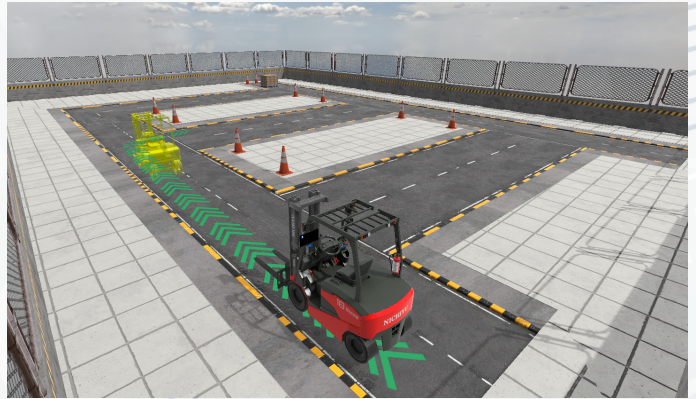| Month	Number of Users Onboarded
October 2023	9
November 2023	13
January 2024	13

Providing a centralised view and summary of all active users, modules, application usage, and performance trends.

Detailed user-report based on pre-defined KPIs

- **Comparative report** can be generated for multiple users to compare their strengths and weaknesses.

- Providing visibility into **performance trends** and tracking **improvements in user skills over time.**

- A **scoring system** that can be configured based on technical skill/process **Key Performance Indicators (KPIs)** that aid in tracking operator skills and their **impact on operations (Productivity, efficiency and safety) and business.**
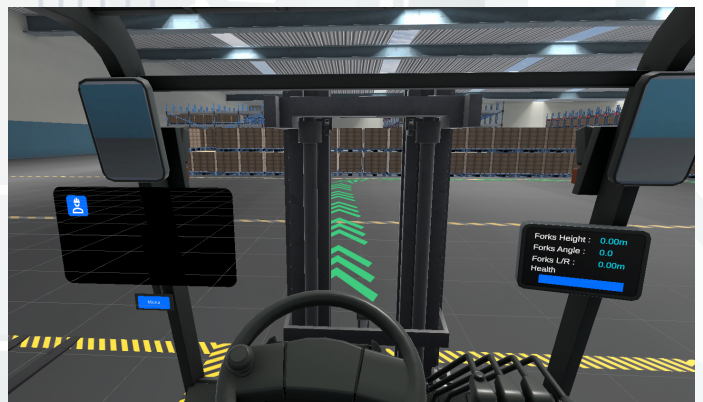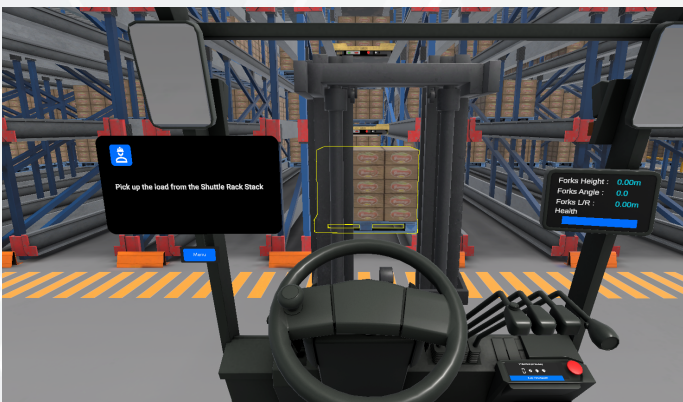

Comparing a user's average score against this curve indicates their performance relative to the overall user base for the current module.

Reach Truck

Overall Score	Success Rate	Total Attempts (Intermediate& Assessment)	Total Time Spent (Intermediate& Assessment)	Mistakes	Training Attempts	Training Time
89.43%	100% Attempts Passed: 7	7	01:19:21	5	7	01:04:26

Skill Proficiency Chart - Reach Truck ⓘ

User Scores Distribution
— Bell Curve
--- (Hari)'s avg score (89.43)

Average Score

Mistakes Analysis - Reach Truck ⓘ

Did not press horn when turning into aisles (28.58%)
Drove over the speed limit (14.28%)
Stacking error (21.42%)
Did not horn before movin...
Did not horn before mo...

Critical Mistakes Contributing To Reduced Efficiency And Productivity(Overall Performance)

Simulation for all kinds of Scenarios

Basics:

- Introduction to equipment and controls
- Driving and turning'
- Navigating through traffic and Pedestrians
- Lifting Loads
- Understanding of load balancing

Operational :

- Handling Different types of loads
- Loading and unloading from designated spots - Rack Stacking
- Loading and unloading from designated spots - Block Stacking
- Loading and unloading from truck
- Loading and unloading in narrow spaces

Critical Operations

- Loading and unloading using different types of attachments (Double deep, push and pull)
- Manoeuvring loads through - obstructed path, rough surfaces and inclined ramps
- Loading and unloading from Heights

For cast houses and smelting floor :

- Scoop stacking / positioning / Charging
- Block/ladle/Bundle Handling

Accidental Scenarios :

- Oil Spill
- Hot metal Spill
- Charging Mistake
- Collision and toppling of loads.

Product Categories

Topics covered	SkillEdge Start	SkillEdge Plus	SkillEdge Pro
Introduction to Machine	✓	✓	✓
Basic driving controls	✓	✓	✓
Compliance & Safety	✓	✓	✓
Loading/ Unloading	⊗	✓	✓
Load/ Weight balancing	⊗	✓	✓
Following the Path (Simple/ Complex)	⊗	⊗	✓
Cycle time reduction	⊗	⊗	✓
Emergency scenarios handling	⊗	⊗	✓

Thank you

🌐 www.cusmat.com

🏠 91st Springboard ITPL Main Road, Mahadevapura,
5th Floor Trifecta Adatto, 21, Garudachar Palya
Bengaluru, Karnataka, 560048, India