Cusmat's Immersive Skilling Platform for Equipment Maintenance

To help Enterprises Improve their

Productivity

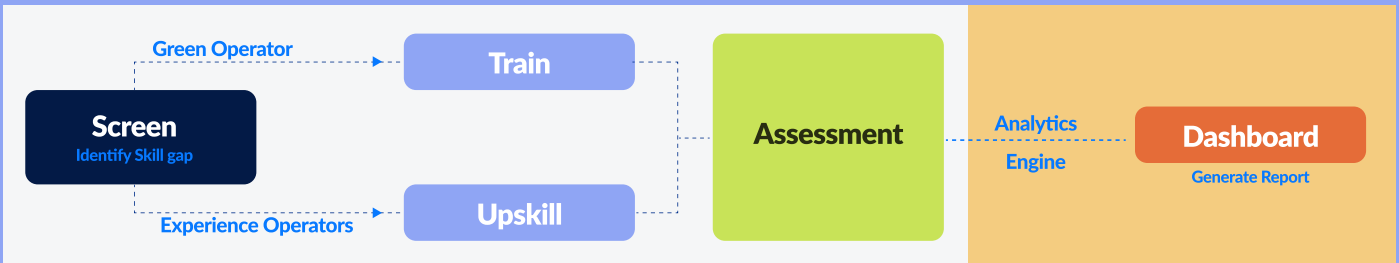**Efficiency**

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

Rock Breaker

Hydra

Loader

LPDT

Scaler

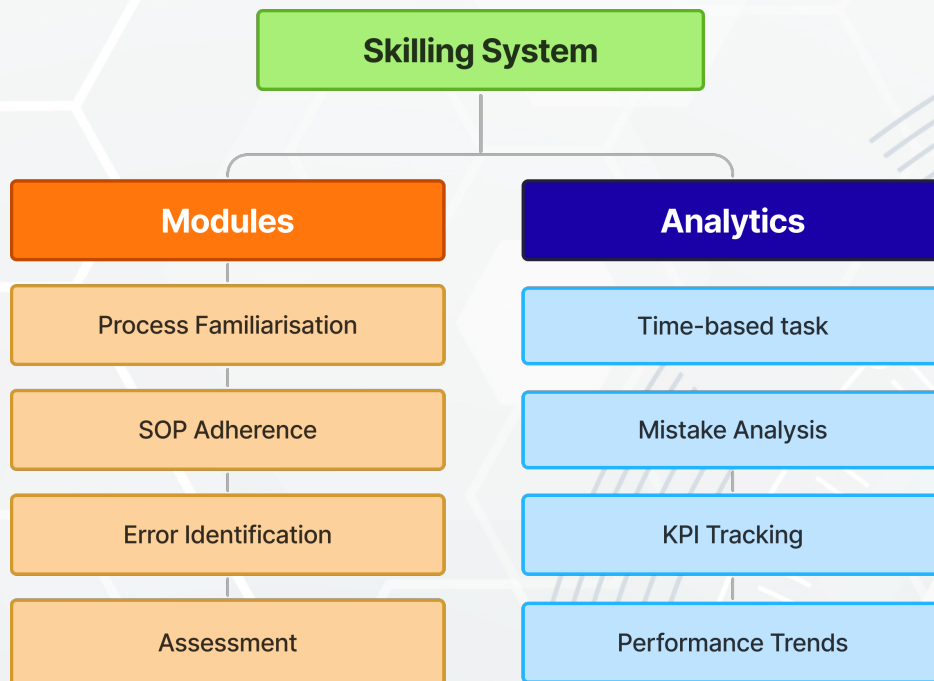# Enterprises leveraging our solution

VOLVO

TEREX®

SANDVIK

normet

vedanta

How it works ?

```
                    ┌─────────────────────┐
                    │   Skilling System   │
                    └─────────────────────┘
                              │
            ┌─────────────────┴─────────────────┐
   ┌─────────────────┐                 ┌─────────────────┐
   │     Modules     │                 │    Analytics    │
   └─────────────────┘                 └─────────────────┘
            │                                   │
   ┌─────────────────────┐         ┌─────────────────────┐
   │ Process Familiarisation │     │   Time-based task   │
   └─────────────────────┘         └─────────────────────┘
            │                                   │
   ┌─────────────────────┐         ┌─────────────────────┐
   │    SOP Adherence    │         │   Mistake Analysis  │
   └─────────────────────┘         └─────────────────────┘
            │                                   │
   ┌─────────────────────┐         ┌─────────────────────┐
   │  Error Identification │       │     KPI Tracking    │
   └─────────────────────┘         └─────────────────────┘
            │                                   │
   ┌─────────────────────┐         ┌─────────────────────┐
   │     Assessment      │         │  Performance Trends │
   └─────────────────────┘         └─────────────────────┘
```

Embedded Analytics - Dashboard

KPI Configured to Identify skill gap

- SOP Adherence
- Time taken to perform a task
- Tool engagement
- Error list

KPIs for Task 1 - undefined ⓘ
Combined task-based and boolean-based KPIs for Task Task 1 - undefined

| Task KPI	Task Value	Boolean KPI	Boolea
How much time user takes to reach the area after instruction.	22.29 sec	The user reached the highlighted area or not.	☑
How much time user takes to grab the socket wrench after instruction.	3.81 sec	The user grabbed the socket wrench or not.	☑
How much time user takes to attach the socket after instruction.	22.69 sec	The user attached the socket or not.	☑
How much time user takes to open the bolt after instruction.	10.45 sec	The user opened the bolt or not.	☑
How much time user takes to keep the bolt on tool cart after instruction.	6.82 sec	The user kept the bolt on tool cart or not.	☑
How much time user takes to keep the socket wrench on the tool cart after instruction.	3.49 sec	The user kept the socket wrench on tool cart or not.	☑
How much time user takes to click the button after instruction.	27.48 sec	The user clicked the button or not.	☑
How much time user takes to keep the cover on tool cart after instruction.	6.29 sec	The user kept the cover on tool cart or not.	☑
How much time user takes to keep the gasket on tool cart after instruction.	4.90 sec	The user kept the gasket on tool cart or not.	☑

Problems solved

- MTTR and MTBF
- Downtime
- Skilling new operators
- SOP adherence

Metrics Impact

- Repair time
- Tool engagement
- Error rate

# How Embedded Analytics Engine works ?
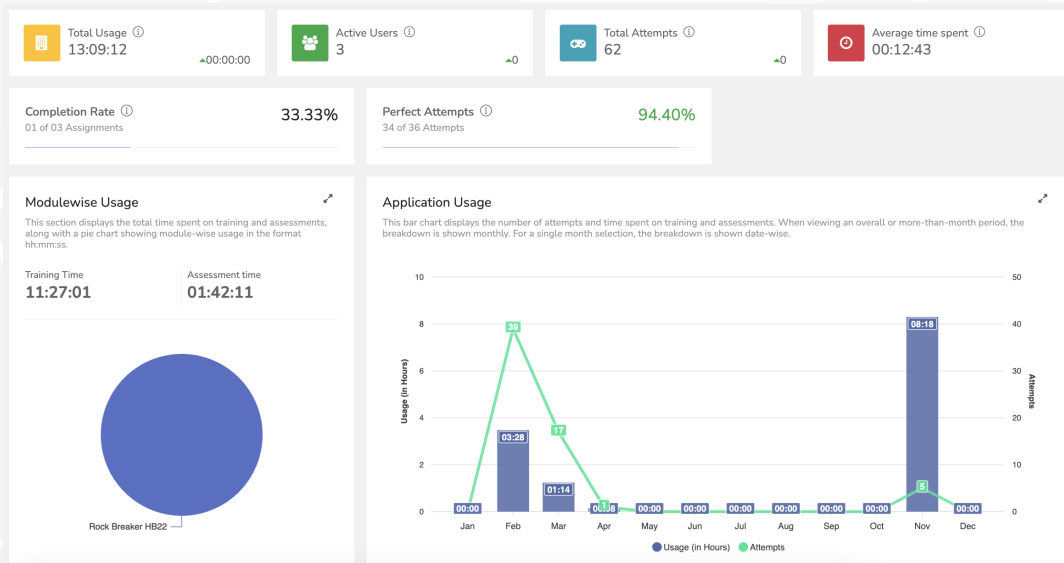
Providing a centralised view and summary of all active users, modules, application usage, and performance trends

Detailed user-report based on pre-defined KPIs

- **Comparative reports** 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**
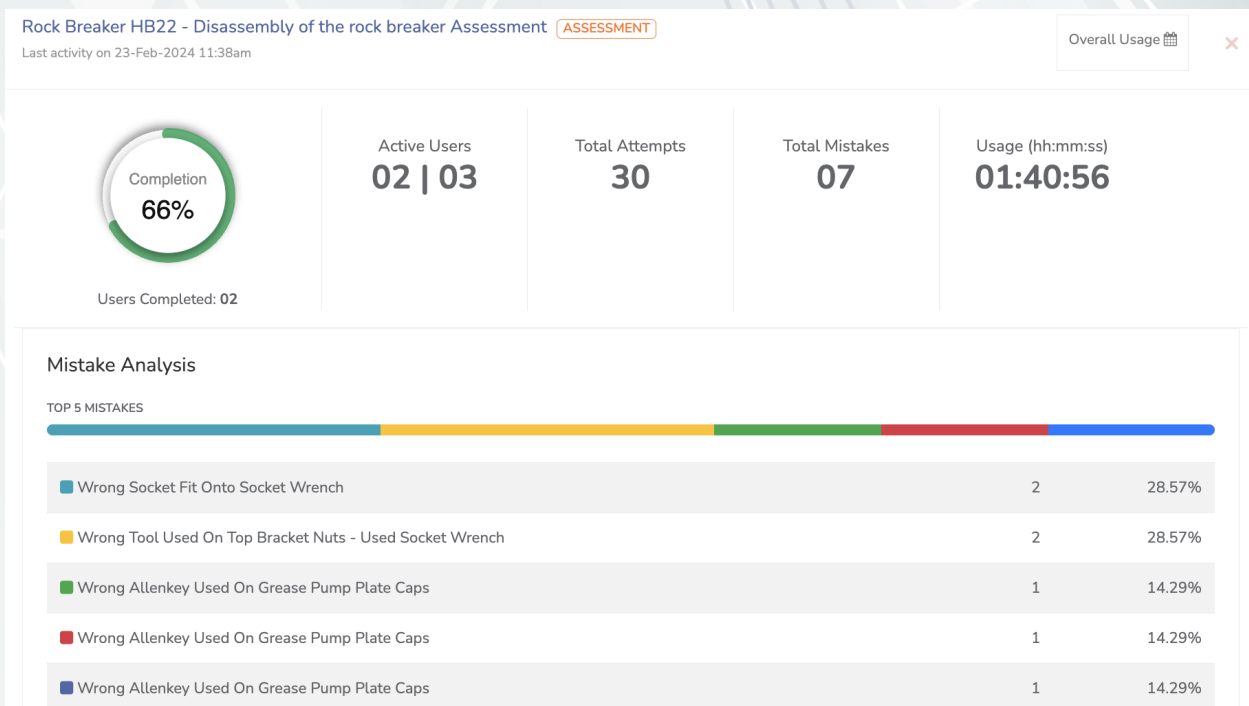
Simulation for all kinds of Scenarios
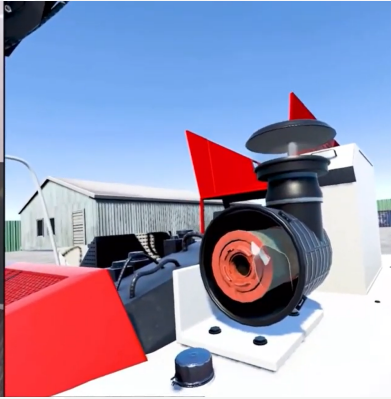
Visual and Pre-Ops inspection

- Chassis inspection
- Operator cabin inspection
- Under bonnet inspection
- Inspection of damages, flaws, cracks
- Safety related inspection while machine is operating
- SOP of Pre operation inspection

Engine Maintenance

- Introduction to Engine
- Top end removal: Valve covers, Distributor, valley pan.
- Valve disassembly: Rocker arms , cylinder head.
- Camshaft removal
- Bottom end disassembly: Oil Pump, Connecting rod/piston, main bearing, crankshaft.
- Lubrication
- Testing Levels
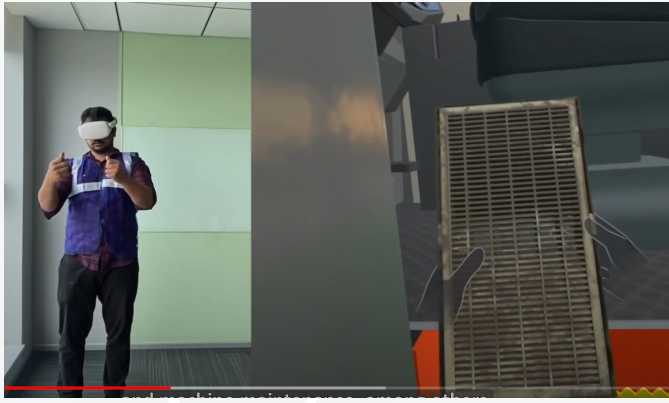
Repair and Servicing

- Introduction to the specific components, systems, and functions

- the complete 250-hour maintenance schedule, including all checks, replacements, and adjustments.

- Hands-On Practice with Maintenance Procedures

- Safety Awareness and Compliance:

- Advanced Maintenance Techniques:

- Performance Assessment and Feedback:

- Awareness of Environmental Considerations: