

VR tactical drills with tracked rifle replicas

The challenge

A defence and security training academy needed realistic shooting and tactical training that did not depend on live ranges. Live drills cost ammunition, shooting facilities and travel. Tactical drills were hard to run the same way from one session to the next, and access to realistic hostile scenarios was limited. Traditional training also gave instructors little performance data on each trainee.

What we built

We built a VR shooting and tactical course with realistic ballistics and physics-based weapon handling. Trainees aim, fire, reload and manage recoil, with haptic feedback for handling and aiming. The course has three parts:

- **Shooting range.** Aiming, recoil control and trigger discipline, with firearms from handguns to sniper rifles, against moving and static targets in timed challenges.
- **Sandbag cover drills.** 360-degree awareness and cover-to-cover movement inside a circular sandbag position.
- **VIP extraction.** A team mission in a desert or urban setting, against enemy AI that reacts to the team's tactics in close-quarters combat.

Trainees can train alone or as a squad. After each drill they get instant feedback on accuracy, reaction time and tactical decision-making.

What changed

The academy can run the same drill as often as it needs, with no live ammunition and no live range. Every trainee faces a standard, repeatable scenario, so each person is measured on the same drill. Instructors have performance data to work from, not only what they saw.

Teams that want a scored debrief can add our AI Performance Report. It turns what the simulator records into one report per trainee, scored on accuracy, target identification, speed, handling, composure and scanning. With heart rate sensors, it also shows where stress slowed a decision. Reports come in Arabic and English, and an instructor reviews every score before it is shared.

At a glance

Sector	Defence and security training
Delivery	VR course: range, cover drills, team missions
Hardware	VR with haptic weapon handling
Feedback	Accuracy, reaction time and decisions

Planning something similar?

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