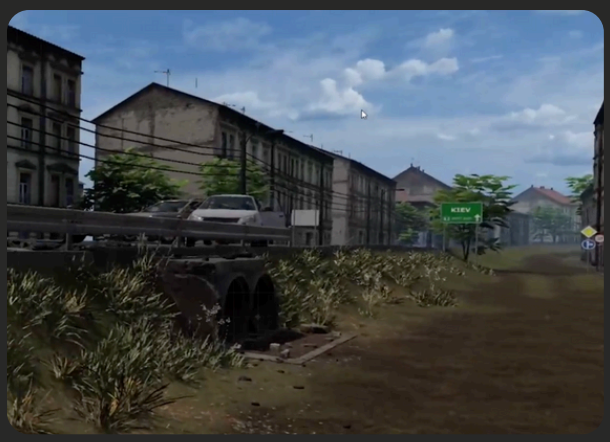
FLAIM

FLAIM Sweeper

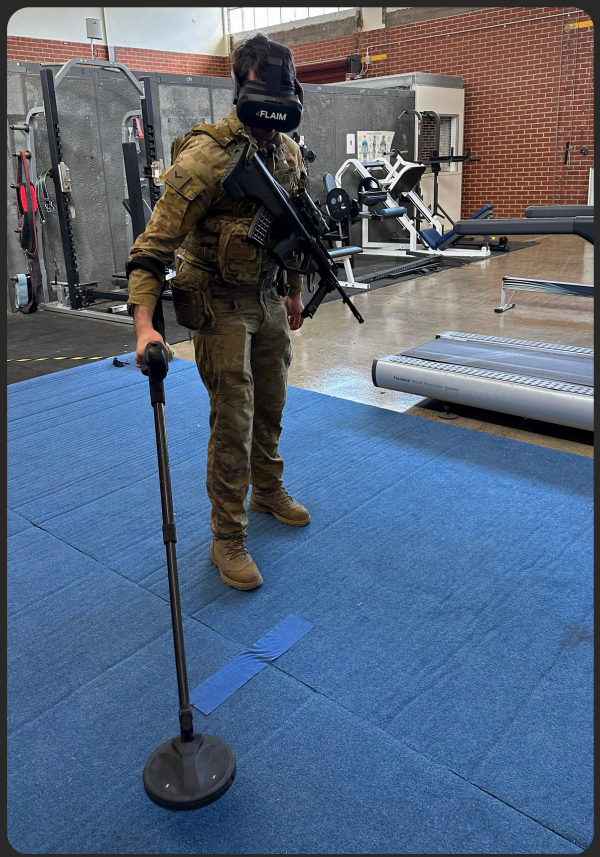
Immersive explosive hazard awareness training

FLAIM Systems has pioneered a safe and effective solution for counter-mine warfare and explosive hazard awareness training to support defence and humanitarian training requirements.

The FLAIM Sweeper integrates industry-standard mine detection equipment with fully immersive virtual reality, featuring high-fidelity virtual minefields and explosive hazard training in a compact, portable system for on-demand training, anytime, anyplace, in any weather.



Originally developed for the Australian Defence Force to train with the Minelab F3, the system is agile and scalable, compatible with other demining equipment to support global defence and humanitarian organisations. It enables training across any land-based terrain and environment.



By embedding haptic feedback into industry standard mine detection equipment, FLAIM Sweeper offers a kinaesthetic, feels-real training experience in a safe environment. Its 'reps and sets' approach helps trainees build procedural muscle memory and tactical skills, complementing traditional counter-IED field training.

The system's configurable scenarios allow trainers to introduce new threats and challenges, sharpening trainees' risk-awareness and achieving targeted training outcomes. Real-time performance feedback is collected and compiled into detailed After-Action-Review reports, enabling continuous improvement.

Highlights

Readiness without the risk

Prepare trainees in a safe and controlled environment to complement field training events.

Train anytime, any place

On-demand training facilitates frequent practice to enhance risk-awareness and technique.

Integrate your hardware

FLAIM Sweeper can be scaled to integrate any industry standard mine detection equipment.

Who it's for

Defence

FLAIM Sweeper offers an advanced training solution tailored to the specific needs of defence counter mine operations. In military contexts, demining is often conducted under significant time pressure, focusing on rapid clearance of tactical routes and mission-critical areas. FLAIM Sweeper enhances operational readiness by simulating realistic environments, combining high-resolution virtual minefields with industry-standard mine detection equipment. This immersive training builds procedural muscle memory for combat engineers and counter mining specialists, preparing them to navigate the complexities of high-risk environments. The system allows for mission-aligned flexibility, ensuring that personnel can practice and refine their skills in both permissive and non-permissive operational scenarios.

Humanitarian

FLAIM Sweeper is designed to support humanitarian demining training by providing an immersive and safe environment for deminers to develop crucial skills in mine clearance. Humanitarian demining requires methodical, safety-first approaches, aiming for 100% clearance to international standards. FLAIM Sweeper combines virtual minefields with industry-standard equipment to deliver a realistic training experience. This ensures trainees, often civilians and ex-military specialists, gain procedural muscle memory while reducing the risks associated with real-world operations. With its adaptable scenarios and real-time feedback, the system enables organisations such as HALO Trust and UN-supported efforts to train effectively, enhancing the safety of both deminers and communities.

Why implement FLAIM Sweeper

	Safe onboarding	Skills acquisition	Skills retention
Learn	familiarise users with equipment and virtual environments, ensuring an understanding of the operational risks.	Learn key demining concepts, procedures, and tactics using virtual minefields. Trainees learn how to identify, approach, and clear explosive hazards with precision.	Reinforcement of foundational skills, revisiting core demining strategies, and operational best practices through periodic training refreshers.
Practice	Hands-on use of the equipment in a controlled environment, simulating mine clearance processes.	Practical exercises in simulated environments, focusing on the correct use of demining tools, situational awareness, and decision-making under pressure.	Repeated exposure to variable scenarios, incorporating additional threats and environmental changes to maintain proficiency.
Assess	Basic evaluation of the trainee's understanding of equipment usage and initial safety protocols, ensuring readiness for advanced training.	Continuous performance assessment through simulated scenarios with real-time feedback, focusing on procedure accuracy and response time.	Comprehensive assessment with After-Action Reviews (AAR), highlighting skills gaps, areas to improve, and offering targeted re-training where needed.

Train for environments that are too dangerous or difficult to replicate in real life

Environments

Train for a range of dangerous and complex training environments, including virtual training lane, tropical (jungle path) Pacific Islands and Eastern European (Ukraine).

Trainers can tailor the training by creating scenarios and explosive ordinance placement in real-time.

Solomon Islands

Ukraine

Reduce training costs
Deliver training without the need for administrative paperwork, medical support, logistics and additional resources.

Minimise your carbon footprint
Reduce the amount of travel required by trainees with on-demand, remote training.

Flexible training
Train all year around in a climate controlled environment regardless of the weather.

Enhance safety
A safe training solution for explosive hazard awareness and countermine operations, including route clearance, lane and area clearance and 5m/25m drills.

Boost cognitive retention with immersive learning*
- 4x faster to train than the classroom
- 275% more confident to apply skills learned after training

Capture real-time data
FLAIM Capture, FLAIM's cloud-based Learning Performance and Analytics Platform provides valuable trainee performance metrics for analysis and reporting.

Tailored training
Customise your training with the ability to add additional operational environments or develop specific explosive target sets.

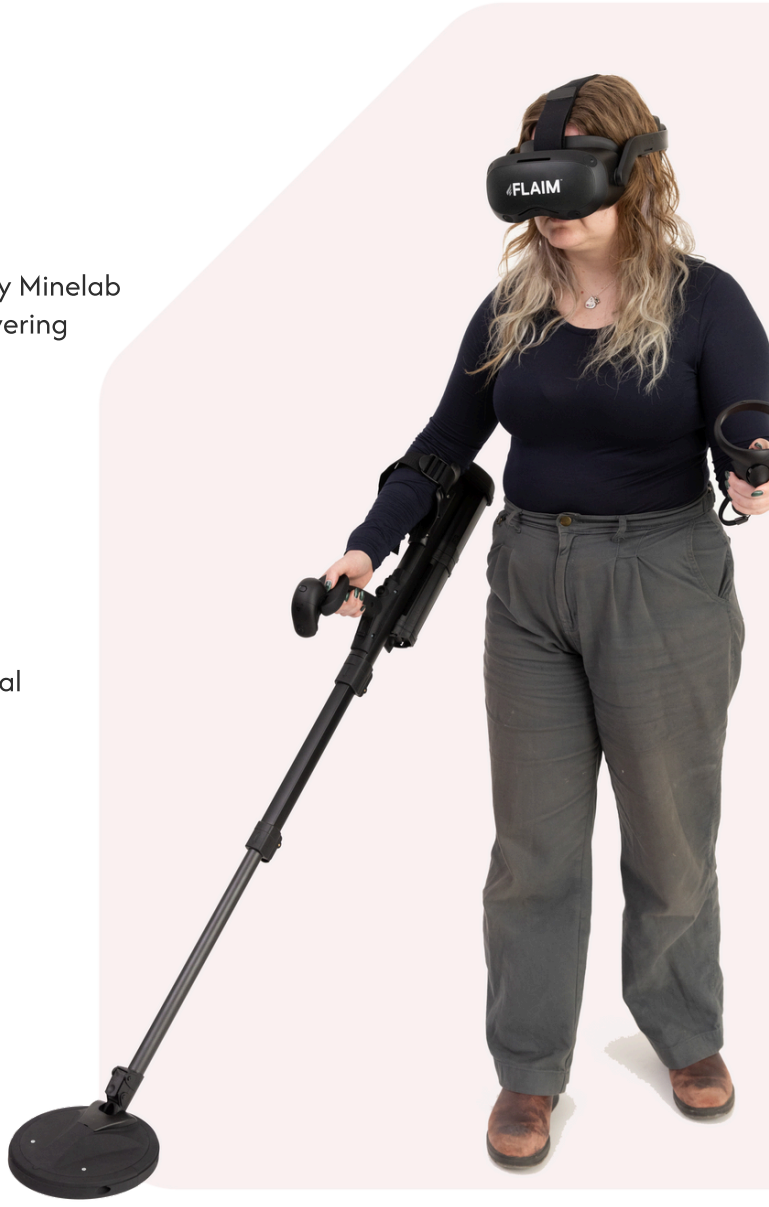
Lightweight and portable
The compact design (fitting into two Pelican cases) provides ease of transportation between locations.

Understand trainee stress response
Capture biometric data, including heart rate, temperature and respiration data.

How it works

The system replicates a handheld mine detector (currently Minelab F3) and monitors the movements listed below, whilst delivering tactile haptic feedback in relation to grass and terrain.

- Height above ground
- Sweep speed
- Overlap
- Cupping
- Magnetic signature
- Target detection



The audio replicates existing detection signal based on real time physics model to heighten the realism.

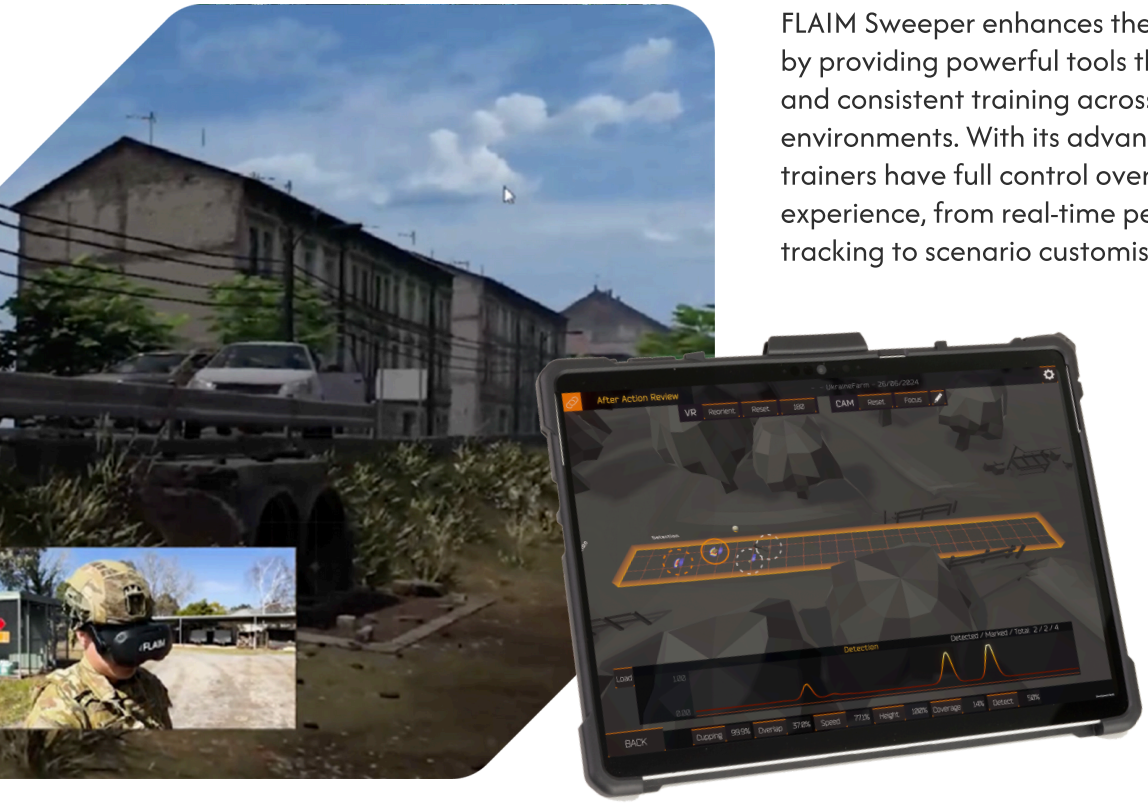
Biometrics are recorded in real-time, including heart rate, core temperature, and respiration data from the replica CBRN mask to inform the trainer of the trainee's stress-response.

The tablet enables trainers to develop scenarios and explosive ordinance placement in real-time. With live performance data, trainers can deliver data-driven After-Action-Reviews.

FLAIM Capture provides real-time data recording, analytics and reporting to highlight performance metrics and inform future training strategy.

* http://www.pwc.com/us/en/tech-effect/emerging-tech/virtual-reality-study.html

Empowering the trainer



FLAIM Sweeper enhances the role of the trainer by providing powerful tools that deliver scalable and consistent training across various environments. With its advanced technology, trainers have full control over the learning experience, from real-time performance tracking to scenario customisation.

What we've learned so far:

The following data is drawn from 59 surveys from the VIST roll out across 5 Army Engineer units in Australia

97%
of users find it easy or very easy to operate

92%
of users are satisfied that the audio is realistic

4.45*
average rating for replica F3 detector realism

91%
rate the VR walking experience as effective

88%
rate it as very or extremely effective for real-life preparation

85%
report increased confidence in mine sweeping post-training

100%
of trainers & trainees found the visual After-Action-Reviews helpful

76%
would highly recommend the FLAIM Sweeper to their colleagues

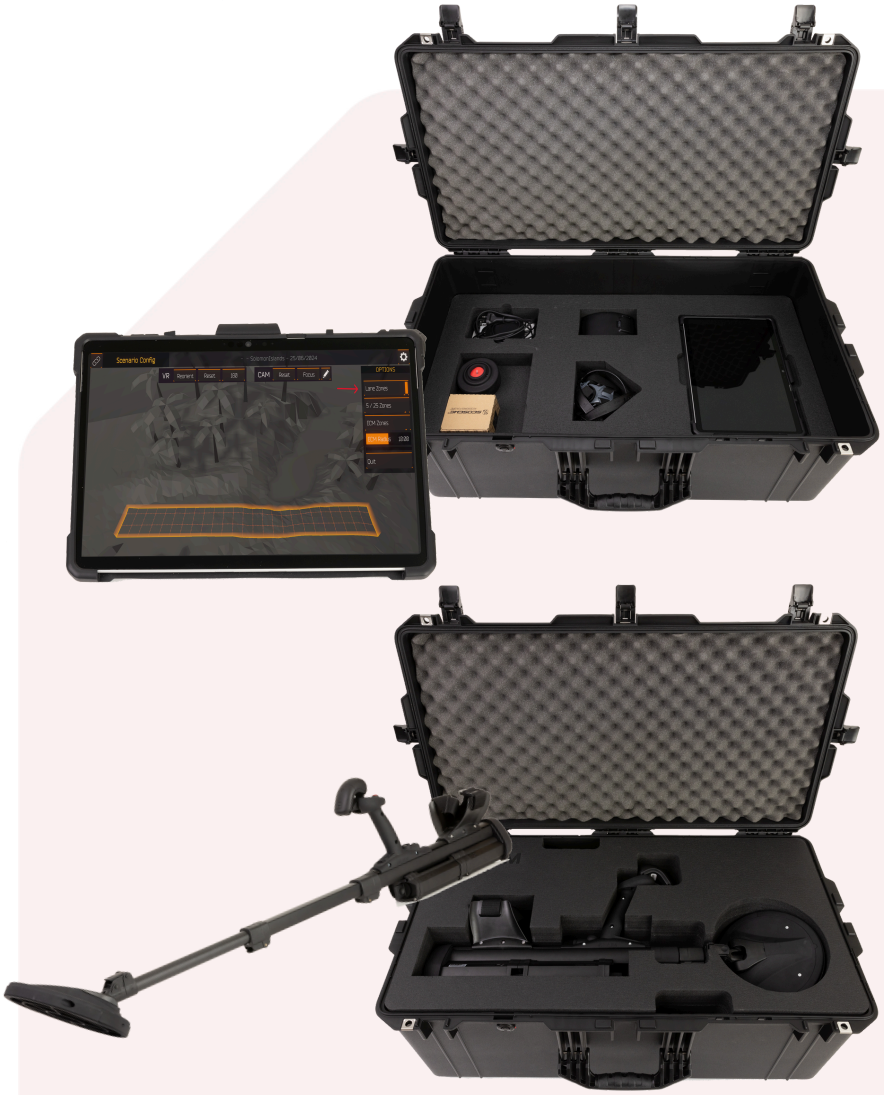
What's in the box

Case 1: control case

1x Power supply
1x AUS power cable
1x Keyboard
1x VR Headset
1x VR Headset battery
1x Controller
1x Headset charging cable
1x USB-C Y-Splitter cable
1x USB-C to USB-A cable
1x Removable foam layer

Case 2: detector case

1x Detector
1x Detector Tracker
1x Tablet
1x Tablet charging cable
1x Tablet power supply
1x Respirator filter
1x Half Facemask
1x VR Headset backup battery
1x Heartrate monitor
1x Heartrate monitor charging base
1x HDMI cable



FLAIM is trusted by:

CINTAS · RelyOn Nutec 360° Safety · serco · ventia · BAE SYSTEMS · ABU DHABI CIVIL DEFENCE AUTHORITY · ADNOC · Xcel Energy · Australian Government Department of Defence · BHP · saudi aramco · CFA

FLAIM at a glance

Customers	Systems deployed	Countries	Languages	Immersive scenarios
400+	1,000+	45+	28	150+