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PROFESSIONAL SIMULATOR SYSTEMS

Content

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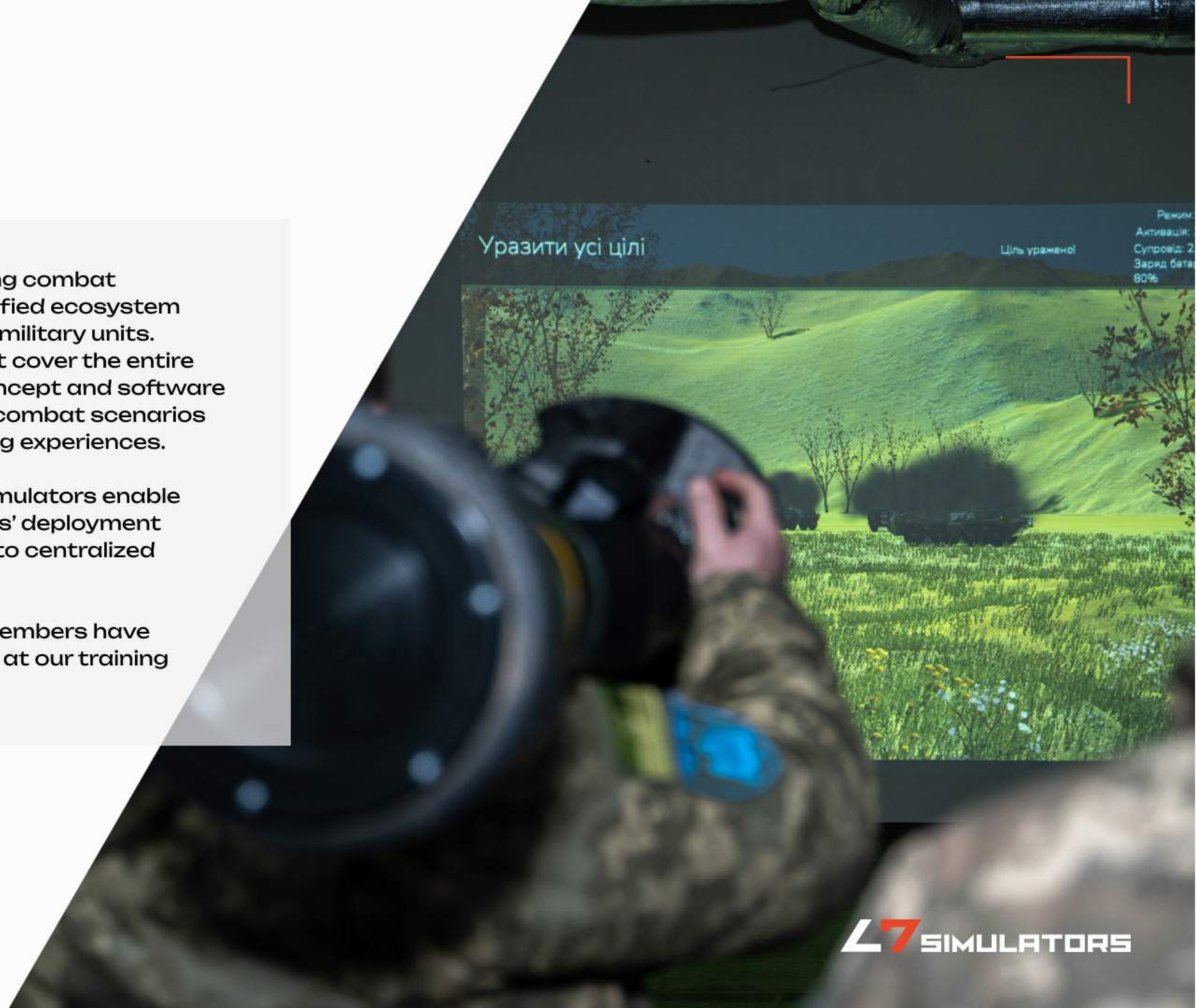
About us

Since 2019, our team has been developing combat simulation systems integrated into a unified ecosystem called "UNITS" to support the training of military units. We create comprehensive solutions that cover the entire simulator development cycle — from concept and software engineering to the physical modeling of combat scenarios — ensuring realistic and effective training experiences.

The mobility and compactness of our simulators enable training to take place directly at the units' deployment locations, eliminating the need to travel to centralized training centers.

Since early 2022, over 70,000 service members have completed advanced training programs at our training center — completely free of charge.



The soldiers are trained using the «UNITS» system

Line infantry and motorized rifle units

Territorial defense and volunteer units

Marines

Airborne battalions and assault units

Air Force

National Guard of Ukraine

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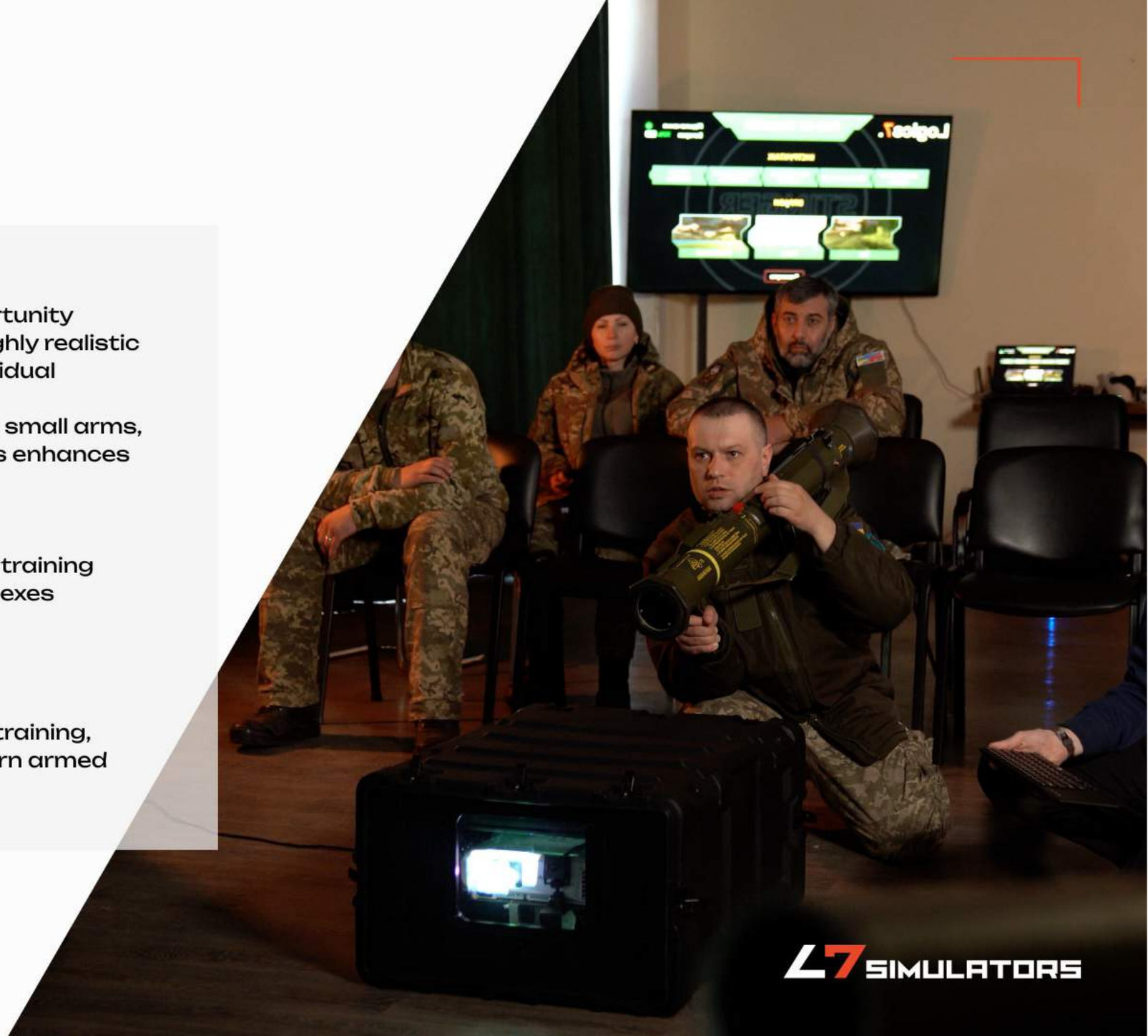
Ecosystem «UNITS»

The «UNITS» ecosystem is a combat simulator that provides military personnel with the opportunity to practice a wide range of tasks in safe yet highly realistic conditions. The ecosystem supports both individual and group training simultaneously, enabling the use of various types of weaponry, including small arms, grenade launchers, MANPADS, and ATGMs. This enhances the effectiveness of interaction, coordination, and adaptation to real combat scenarios.

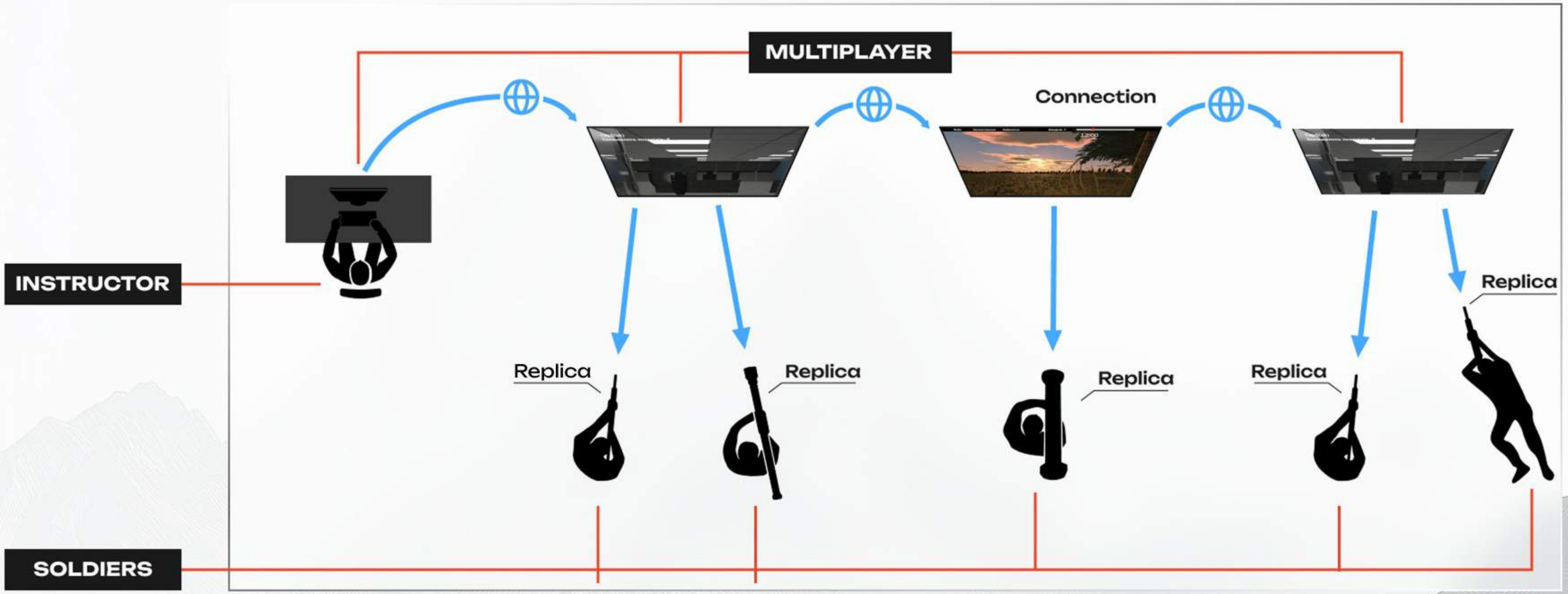
Depending on the type of weapon and combat training needs, the «UNITS» ecosystem's training complexes are divided into two groups:

- Laser-based technology
- Virtual reality technology

This approach ensures flexibility and effective training, adapting to the specific requirements of modern armed forces.

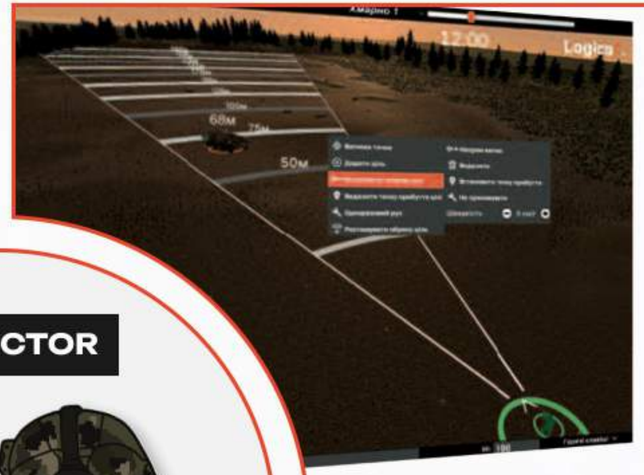


How does It works?



How does It works?

REPLICA



REPLICA

INSTRUCTOR

- Comprehensive weapon handling training
- Scenario-based tactical training
- Performance analysis

REPLICA

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Capabilities «UNITS»

- Flexibility of placement: **deployment is possible indoors starting - in spaces 30 m².**
- High throughput capacity: **up to 15 people per hour** (depending on the type of weapon and the duration of trainings).
- Mobility and compactness: the system can be **easily transported** in a standard passenger car.
- Rapid deployment: fully operational in under **10 minutes.**
- Wide range of weaponry: **supports various types of weapons in** a single training system for a second
- Compatibility with personal weapons: **the ability to integrate** through a special mounted module.

«UNITS» – An effective solution for modern combat training.

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Capabilities software

- **Easy creation of new training scenarios:** the instructor can quickly develop individualized training programs.
- **Flexible training conditions:** the ability to choose different terrain, weather conditions, seasons, and times of day.
- **Realistic targets:** a wide selection of static and moving targets, providing a variety of scenarios.
- **Shooting course:** includes firing small arms and **combat vehicles** according to the 2018 standards of the Armed Forces of Ukraine.
- **Performance analysis:** the system records and analyzes training results, providing feedback.

The software's mathematical model precisely simulates the shot trajectory, taking into account weapon ballistics, distance, wind strength, air temperature, and other critical parameters.

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Weapons models

PM

Fort

Glock

AK-74

AKM

AR-15

RPK

PKM

SVD

MG 42

Browning M2

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Analysis of training results

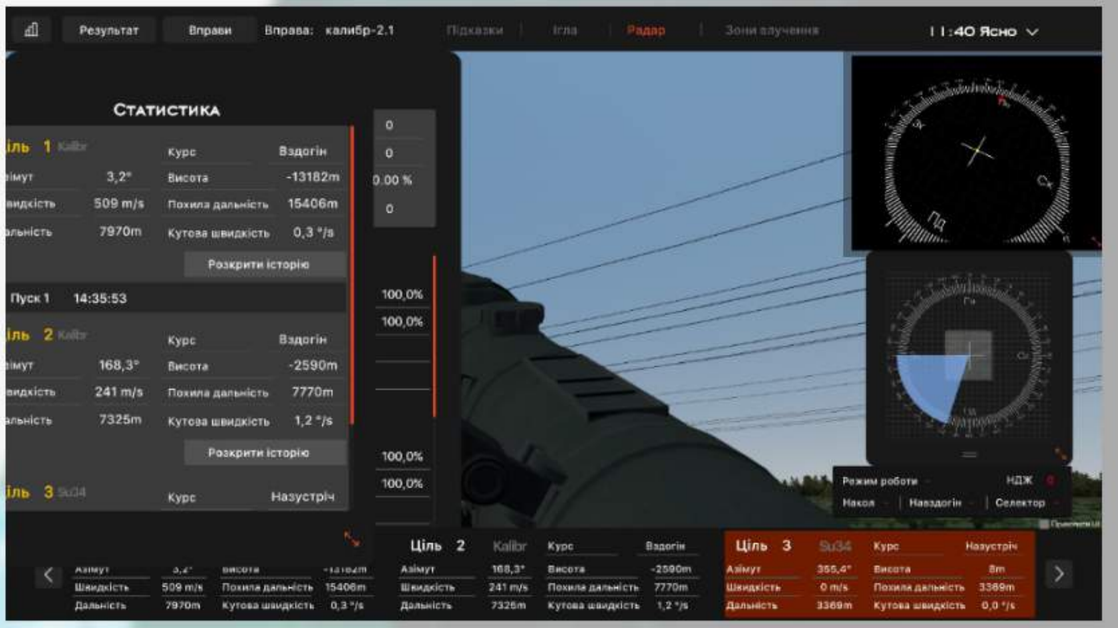
Our simulators not only provide a realistic recreation of combat situations, but also offer the ability to conduct a detailed analysis of each session's effectiveness.

The training complexes' software records key parameters including:

- Number of shots
- Hit accuracy
- Reaction speed
- Compliance with tactical algorithms

By gathering and analyzing performance data, each service member can track their progress, identify mistakes, and adjust their shooting technique.

The data collection system not only tracks individual results but also compares them over time, helping to enhance professional skills and boost service members' confidence in their actions on the battlefield.



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«UNITS» Chain
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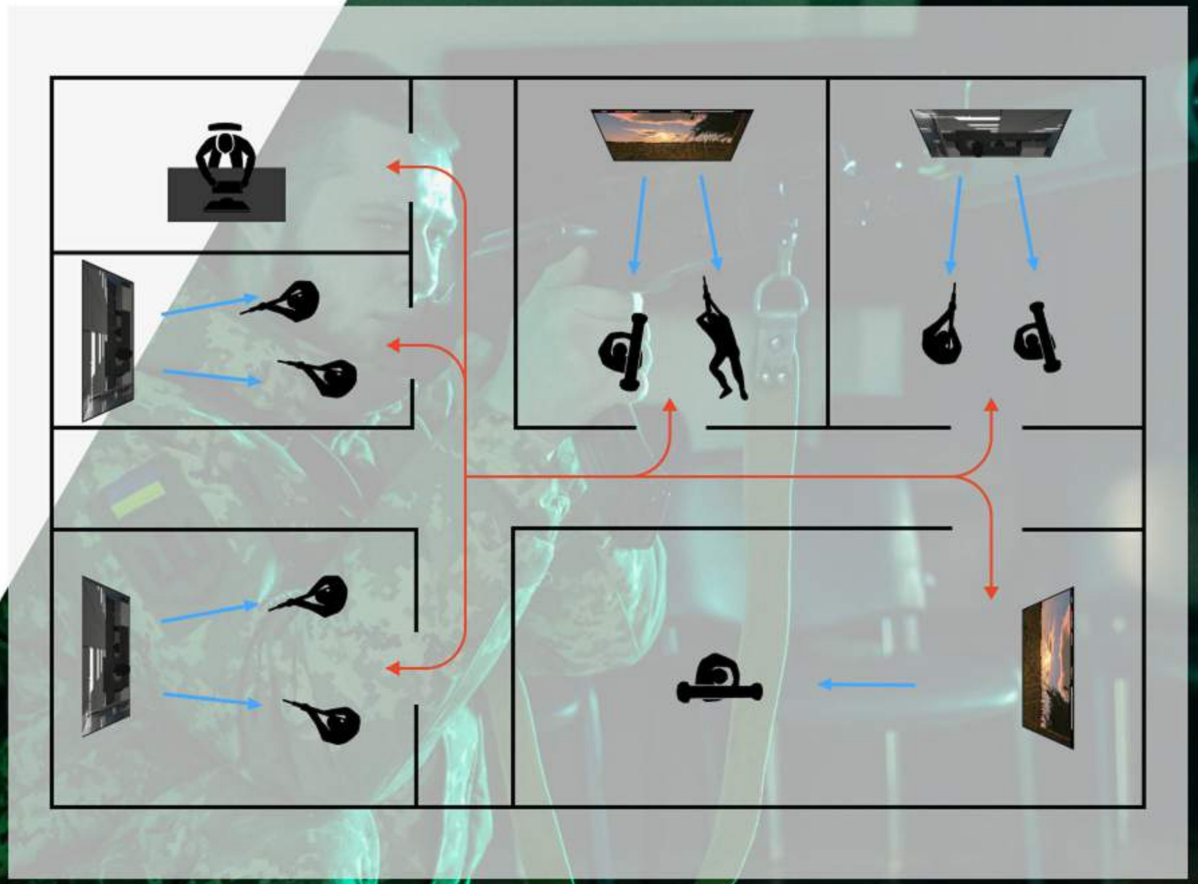
«UNITS» Chain

«UNITS CHAIN» - is a network architecture that enables simultaneous training in a single virtual combat environment. A key feature of this system is that it allows each participant to interact with others in real time, add new scenarios, and work on improvements and adapting to new tactical situations.

- The ability for a squad of up to 9 fighters with different types of weapons to operate together
- The instructor creates a group tactical exercise, while the commander independently decides on the placement of soldiers, their interaction, and priority objectives
- The ability to operate in various weather conditions
- Availability of different types of terrain
- Availability of different types of targets



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Simulators based on laser technology

The training complexes include:

- A multimedia case containing a computer, projector, and camera, ensuring mobility and rapid system deployment.
- Mock-ups or weapon modules with specialized electronic components and an integrated laser, accurately stimulate real firearms.
- A projection screen that displays realistic combat scenarios.

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Simulators based on laser technology

At the request of the Armed Forces of Ukraine, samples of modern Western-produced anti-tank weaponry were developed, including:

Nlaw

Carl Gustav

AT4

Matador

Simulators based on laser technology

Example of the interface during training

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Simulators based on VR technology:

Stinger, Igla, Piorun

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Simulators based on VR technology:

STINGER, Igla, and Piorun MANPADS training complexes with VR technology consist of a mock-up launcher, a massdimensional mock-up of the tube, a massdimensional mock-up of the cooling battery (both functional and nonfunctional samples), a VR module that replaces the standard sight, a specialized computer, a 65-inch demonstration screen on a stand, a storage stand for the complex, and a transport case.

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Simulators based on VR technology:

The simulator is based on VR (virtual reality) technology, which provides a fully immersive effect in a virtual reality environment. The virtual world is displayed through a VR headset. The operator sees the combat environment in 360°, and a three-dimensional model of the weapon is rendered in the virtual world, fully mirroring the operator's movements with the weapon.

The two-way connection between the launcher and the computer allows the instructor to monitor the operator's actions and review exercise results in real time.

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Simulators based on VR technology:

Simulators for mobile fire teams

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Training complexes for mobile fire teams are designed to train personnel in engaging aerial targets using various types of machine guns. The training takes place in a virtual environment (VR) via an innovative hardware and software system that accurately replicates the ballistic characteristics of the weapons and the realistic behavior of targets such as UAVs, helicopters, and missiles.

Browning M2

DShKM

MG 42

NSV

KPV

Maxim

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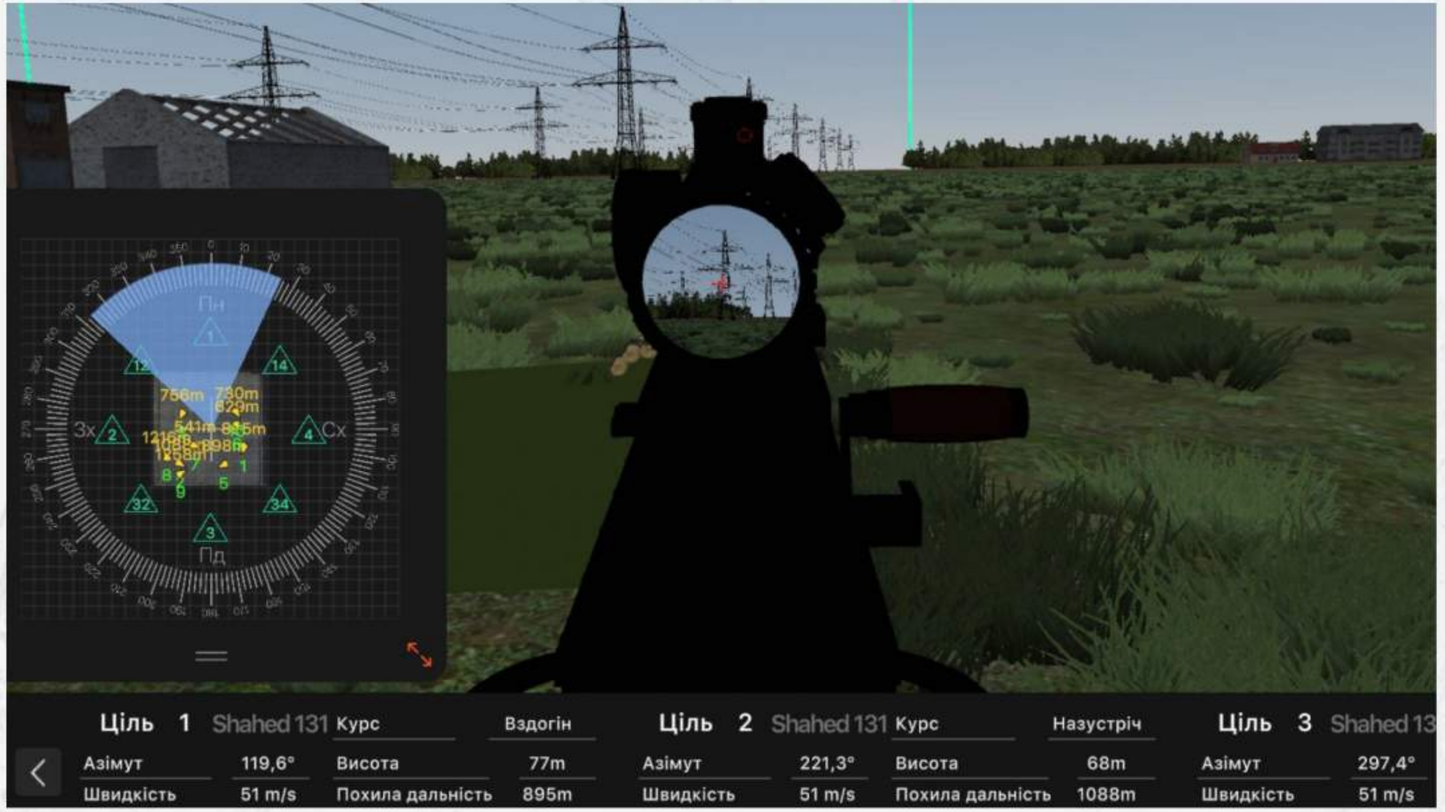
Simulators based on VR technology:

Example of the soldier's interface during training



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Simulator «Dronobiy»

The "Dronobiy" pump-action shotgun training complex is an interactive firearms training simulator.

Using the "Dronobiy" Complex, the combat work of a shooter repelling an FPV drone attack is simulated.

The "Dronobiy" Complex is a training tool designed to address the tasks of preparation, training, and skill acquisition in shooting a pump-action shotgun at attacking FPV drones.

The complex is intended for honing shooting techniques and is used for individual, sequential training on combat procedures and firing with various types of ammunition.

Integrating the 'Dronobiy' Complex into Defense Forces training programs will boost personnel confidence and enhance their individual protection on the modern battlefield.

Glasses

Gun

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Simulator «UNITS SAPPER»

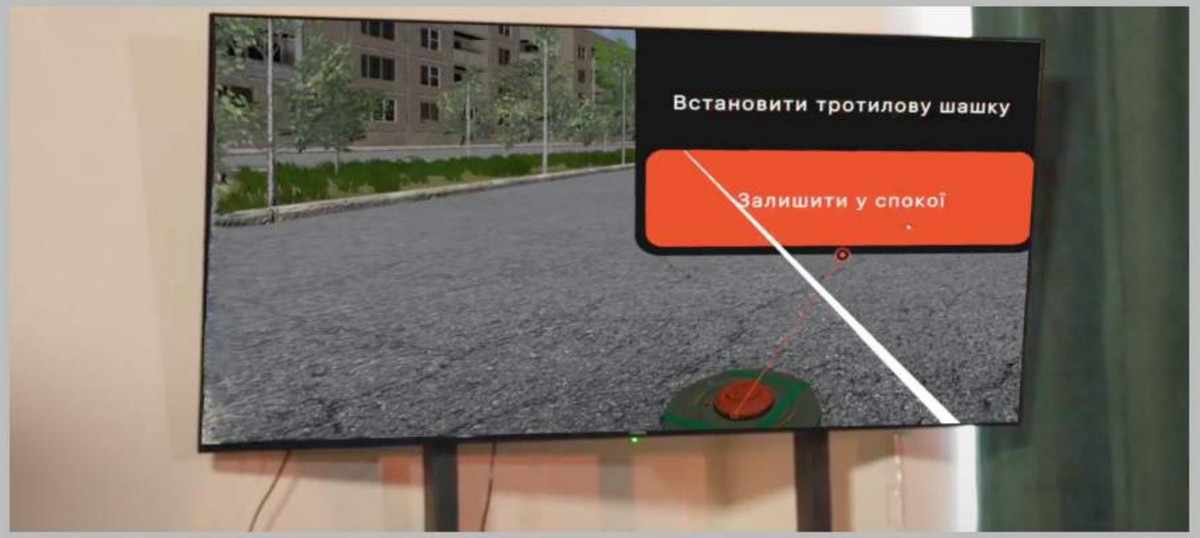
The VR simulator is designed to train military personnel, sappers, and demining specialists in detecting, identifying, and neutralizing explosive devices (EDs).

The system simulates various types of mines, grenades, tripwires, and improvised explosive devices (IEDs), allowing all stages of their neutralization to be practiced in a **safe virtual environment**.

- Detection and identification of various types of Mines and ED
- Practicing procedures for handling explosive devices.
- Recognition of booby traps and minefields.
- Operating under time constraints where rapid decision-making is required.
- Adjusting actions with the help of instructors or an automated assessment system.

Glasses

Control Console



Advantages of such a simulator.:

- Safe training with no risk to life.
- The ability to repeatedly practice various scenarios.
- Realistic simulation of actual combat situations.
- An automated system for analyzing and assessing trainees' performance.
- Flexibility in customizing training complexity and scenarios.

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Simulator «UNITS AIR»

The simulator provides training for crews specializing in reconnaissance, “bombers,” and FPV drone operators. It supports the main types of controllers, including the TX-12, TX-16, and TARANIS, and is compatible with open-source flight controller firmware such as Betaflight and ArduPilot.
The system can work with five of the most common types of quadcopters and three types of fixed-wing drones (“wings”), simulating flights in various weather conditions and on any terrain. It is also possible to model scenarios of lost connection, the impact of electronic warfare (EW), and other types of interference.

Control Panel

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«CITADELE»

Multimedia classroom for educational institutions

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«CITADELE» training classroom

This specialized product is designed to support training, practice, and skill development in marksmanship as part of the “Defense of Ukraine” curriculum in general secondary education institutions

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«CITADELE»

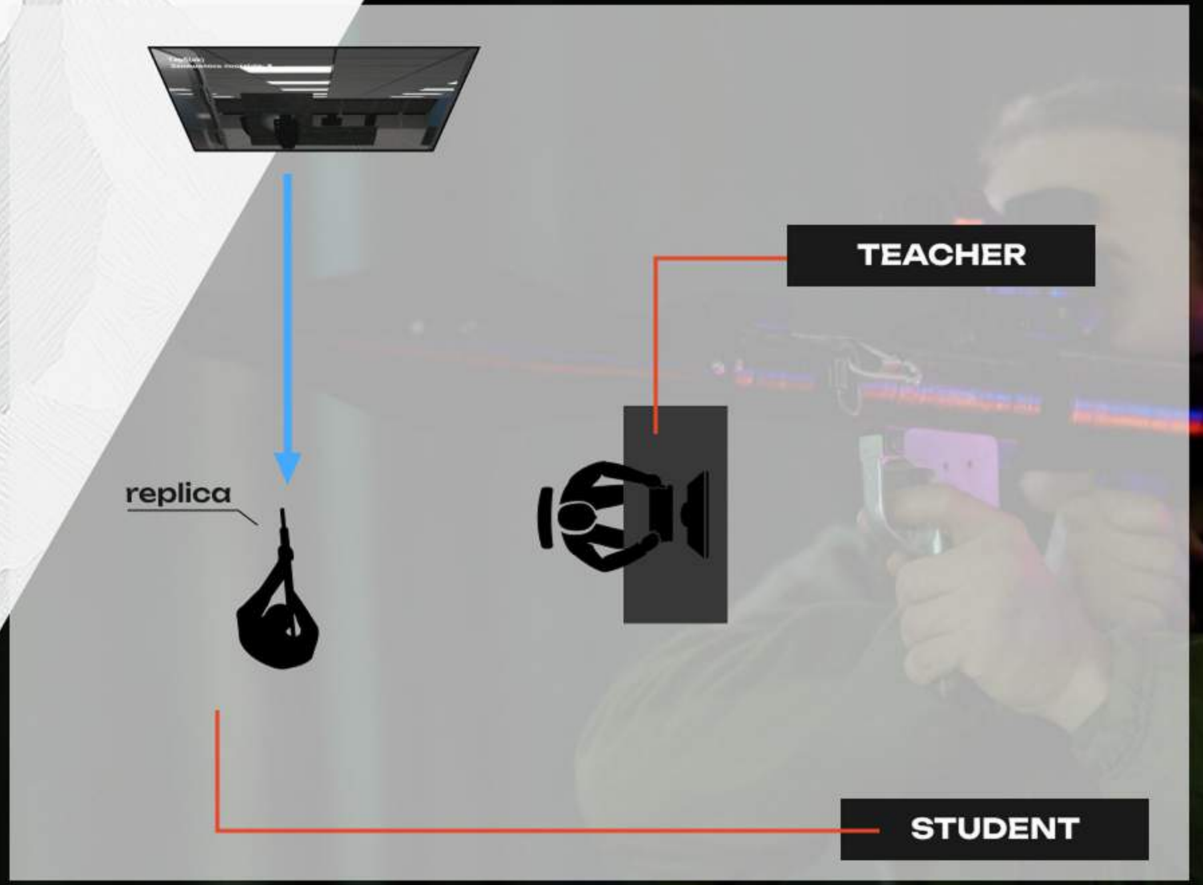
Glock

AK-74

Rifle

RPG-7

RPG-26



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Scan to visit the website

Scan to view letters of appreciation

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Weapons models

M-72 LAW

RPG-22

RPG-26

RPG-7

RPV-16

AGS-17

NLAW

Matador

GP-25

Carl Gustaf

AT-4

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