

HOLOGATE HGXR



EXTENDED REALITY SOLUTIONS

SIMULATION | VISUALIZATION | TRAINING



**HGXR
EXTENDED
REALITY**



AI-Powered Extended Reality Solutions

Experience advanced XR solutions for training and simulation. HGXR turnkey systems include software, immersive content, and specialized hardware. Our pioneering development team excels in engineering and content creation, delivering high-quality, customized, reliable, and engaging experiences that harness the power of AI. Ensuring unmatched flexibility and impact.

XR tailored to your needs.

XR Solutions

Refine Responsiveness

Develop the skills and responsiveness needed to make the right decision even in high stress situations.

Cost Effective & Flexible

Save on travel and wasted resources and train anything, anywhere, anytime—this flexibility is truly a gamechanger.

Realistic & Safe

Recreate any situation in completely safe virtual environments, eliminating the risk of injury and damage to equipment.

Productive & Efficient

Enable a supercharged “learning by doing” process. Studies have shown that XR dramatically increases focus and retention rates.

EFFICIENT EFFECTIVE FLEXIBLE



Unlock Your Training Potential with XR

Study participants reported the following:

77%
experienced increased readiness.

97%
recognized advantages over existing training.

84%
found the training analysis efficient.

85%
gained enhanced understanding of critical situations.

FASTER LEARNING ~4x

INCREASED CONFIDENCE ~81%+

COST REDUCTION POTENTIAL ~80%+

Based on studies by PWC, HTC and by the German Army with HOLOGATE

Our Experience Your Benefit

Trusted Quality Trusted Partner

Defense, Law Enforcement, and Government Clients

We work closely with the military, police and enterprise partners, creating a new standard for training with our virtual reality systems. Our partnerships with industry leaders like MBDA and the Fraunhofer Institute enable us to integrate their innovations into our systems. We're actively working with the German Army University on stress research with biometrics and with the German Army on AI integration, driving advancements in both our military and police training.



10+ Years History with Corporate Clients

Founded in 2013, HOLOGATE seeks to transform immersive media for entertainment and enterprise. With a track record including projects for Audi, SAP, and Sony, we specialize in delivering top-tier immersive experiences. Collaborating with Hollywood and gaming brands, from Ghostbusters to World of Tanks, our cutting-edge systems captivate millions each year, showcasing the transformative power of VR.



Award-Winning Excellence and a Strong Partner Network

As XR pioneers, HOLOGATE boasts a strong partner network, granting us first-hand access to cutting-edge technology. A history of industry awards showcases the fusion of German engineering and innovation in our DNA.



A Visionary Team combining Engineering, Realtime Media and Military Experience



**Leif
Petersen**
CEO

Founder, with more than 20 years' experience in interactive and immersive media, 18+ years as successful entrepreneur.



**Robert
Fankhänel**
COO

15+ years' experience as an engineer, entrepreneur, German army officer and esports and gaming professional.



**Jan
Ottens**
CTO

15+ years' experience in XR and IT consulting, built on a career in media and military special forces.



20+ Million
Users to date

80+
Team

Company HQ
Munich, Germany

OUR COMPETENCE

HGXR offers extended reality solutions that seamlessly combines cutting-edge hardware and software to deliver XR at scale.

XR Software

Software engineering for advanced real-time simulation ✓
Multi-user networked simulations, scenario editors, analytics and AI integration

Experienced XR development team for all major XR headsets ✓
HTC, Apple, Meta, Varjo and others

AAA game quality 3D asset team for photoreal scenario creation ✓
Incl. environments, characters, vehicles, equipment

Digital twin creation including 3D scanning and photogrammetry ✓
Workflows for any type of environment or asset

XR Hardware

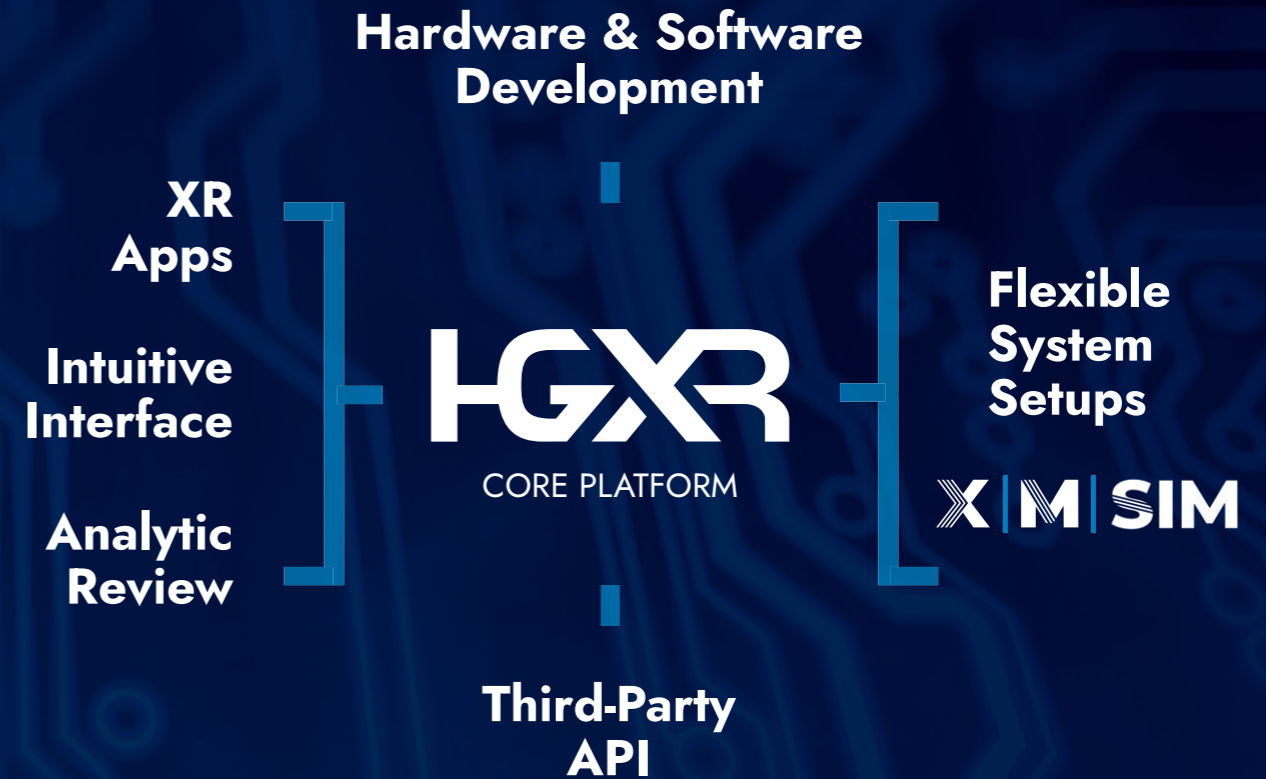
- ✓ **Simulation input weapons integrations with haptic recoil**
Small arms, long guns, SMG and more
- ✓ **Engineering and manufacturing of XR simulation input hardware**
Weapons, conducted energy devices (CED), handcuffs, flashlights, pepper spray and more
- ✓ **Integrations with shoulder mounted and other weapon systems**
Any input can be integrated into the simulation (e.g. mortars, IED, rocket launchers etc.)
- ✓ **Engineering and integration of motion simulators for XR**
Offering a wide range of flying and driving experiences

Next-Generation XR Framework

Experience the future with HGXR's modular, future-proof, open platform XR system. Our approach ensures compatibility with the latest technology and hardware, enabling seamless upgrades as XR capabilities expand.

Featuring user-centric interfaces, advanced analytics, and in-depth training reviews, our scalable framework caters to a growing user base and facilitates networked training experiences across multiple locations.

A truly versatile, scalable platform.





Ultra Flexible Mobile Systems.

The HGXR M system is the mobile multi-use solution to-go. Compact, easy to set up, and full of possibilities. Turn any room into a virtual multi-use free-roam arena within minutes to train, visualize and simulate everything imaginable.

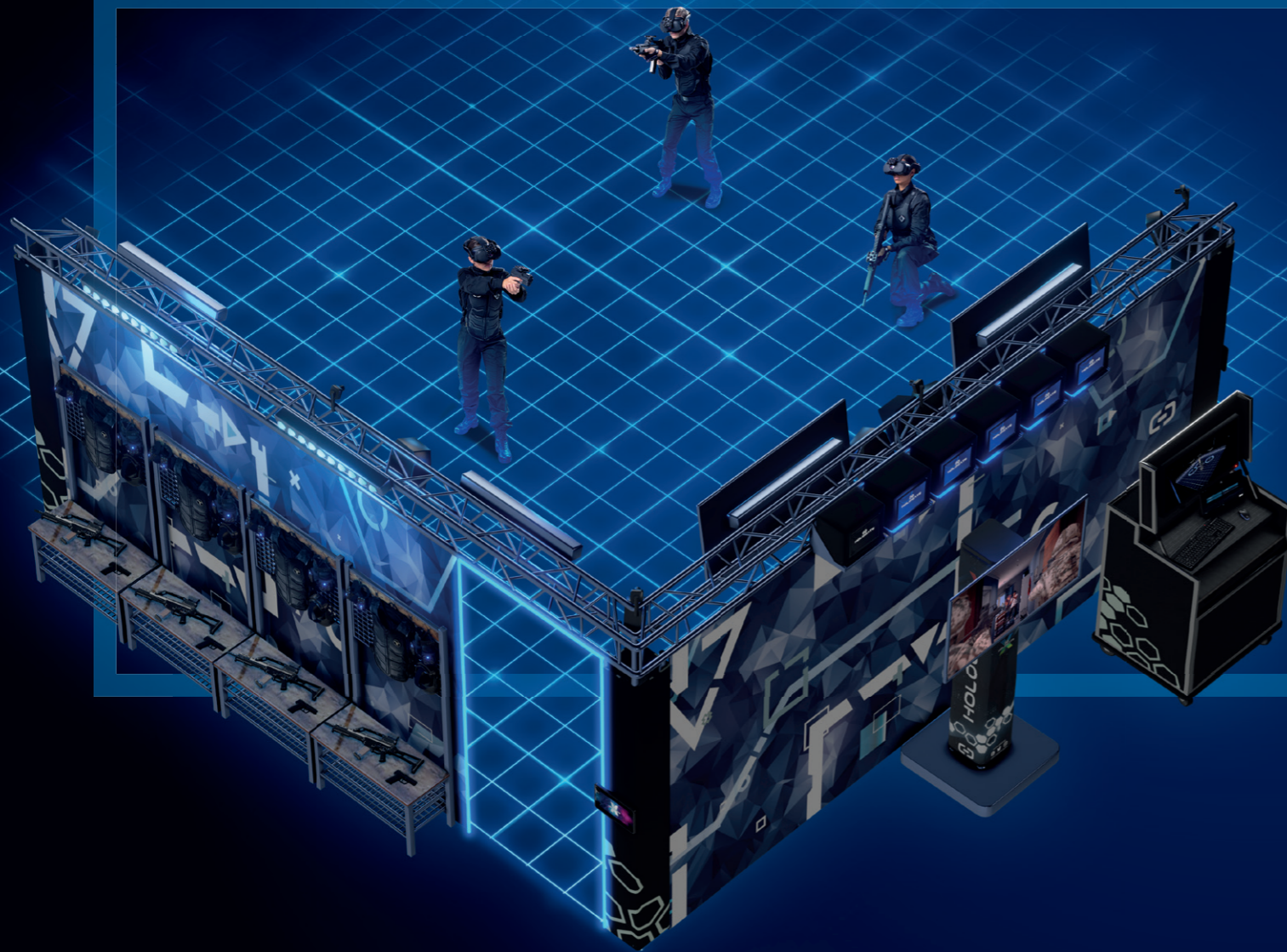
This setup is designed to move and fits everywhere you go. The compact system structure and the dynamic VR room size enable ultra-flexible use cases without any room restrictions.

Combine multiple systems to increase number of users.

Train anything, anytime, anywhere.

Dynamic virtual room size up to 1000m² / 10000 ft²

VR Free Roam



High-End Stationary Systems.

The HGXR X system revolutionizes the virtual experience. Featuring our proprietary hyper-reality technology that blends state-of-the-art full-body tracking technology, haptic feedback, and physical effects inside a high-fidelity immersive experience. Precise full-body tracking technology allows users to move, communicate and interact realistically in virtual reality.

Haptic vest, rumble feedback, and 4D Effects including wind, heat, and scent enhance the immersion dramatically. Hyper-real graphics and the integration of authentic equipment further intensify training and simulations.

Next-gen XR installation.

Dynamic virtual room size up to 1000m² / 10000 ft²

VR Free Roam



XR Flight and Driving Simulators

HGXR SIM motion simulators set new standards with specialized hardware and software solutions, delivering an incredibly realistic flying and driving experience. It trains pilots and vehicle operators in all maneuvers and scenarios, ensuring they are ready for any situation – all within a controlled, risk-free environment.

Boasting an impressive range of motion with one meter of lift and rotation across all axes, HGXR SIM can achieve a maximum tilt of 30 degrees. Coupled with a dynamic overload g-force of up to 2G, this extensive range prepares users for the physical demands of real-life challenges.

Mastering motion, ground and air.

XR Simulators: 1m vertical lift, $\pm 30^\circ$ range of motion

One Click. Countless Possibilities.

Our ready-to-use app library, crafted through our extensive collaborations with military and law enforcement agencies, reflects real-world challenges and is continuously updated with new content. Instantly accessible, it supports rapid transitions across a wide range of scenarios.

Specialized apps like HOLOFORCE Blue and HOLOFORCE Black include scenario editors for adapting or creating new scenarios.

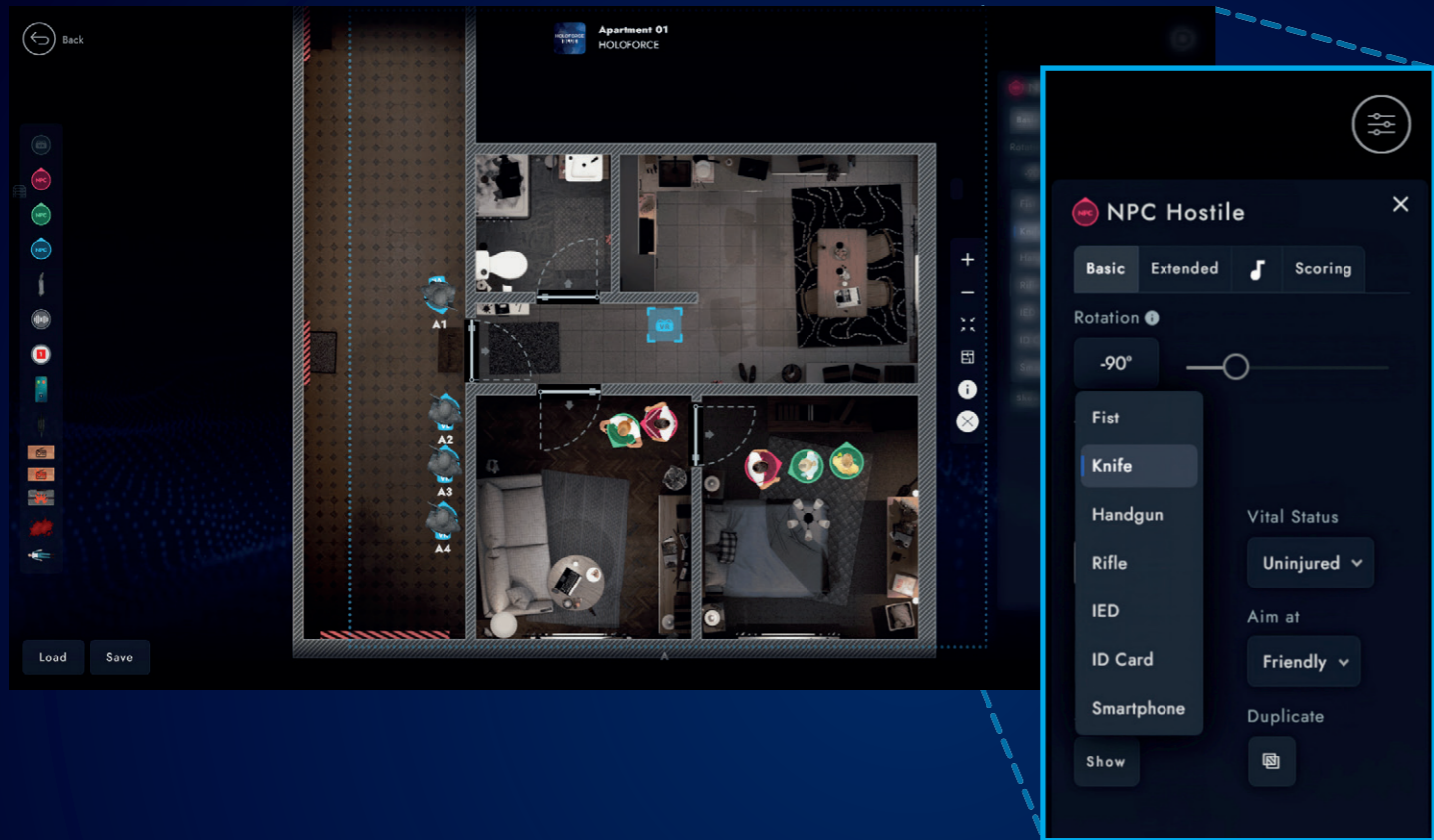
Need more customization? Partner with our in-house studio for tailored scenarios or integrate third-party solutions.

- ✓ **Utilize** our existing app library and adapt to your needs
- ✓ **Develop** customized content with our in-house studio
- ✓ **Integrate** third-party applications

HOLOFORCE
BLUE

HOLOFORCE
BLACK





Tailor Your Training.

The Scenario Editor, combined with a diverse range of maps and environments like critical infrastructure, urban environments, buildings and many more, empowers you to create fully customized training sessions that are as dynamic and realistic as real-world situations. With a simple drag-and-drop interface, you can place and modify NPCs, as well as objects like walls and doors. You can even set the weather or time of day, giving you complete control over every detail. NPCs can be allies, enemies, or even animals, with behaviors that can be pre-defined or controlled in real-time. This flexibility allows you to craft tailored, immersive scenarios that align perfectly with your training goals.

- ✓ **Drag-and-drop simplicity:**
Design and customize training scenarios effortlessly using an intuitive interface.
- ✓ **Diverse maps & environments:**
Choose from different environments indoors and outdoors to match specific training objectives.
- ✓ **Dynamic characters & behaviors:**
Control NPCs and their actions in real-time or pre-define their behavior.
- ✓ **Realistic environments:**
Enhance simulations with fully customizable objects, surroundings, and environmental conditions like weather and time of day.

SCENARIO EDITOR



Seamless Weapon & Gear Integration

Achieving the highest level of realism in training scenarios is crucial for effective preparation. For this purpose, our systems provide a wide range of weapon and non-lethal equipment integrations. This allows trainees to experience authentic handling, recoil, and engagement, ensuring they develop the skills needed to confidently face real-life situations.

Replica Firearms & Gear Integration:

Integrate realistic replicas for authentic handling and immersive scenarios.

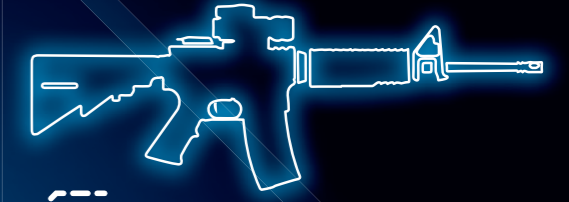
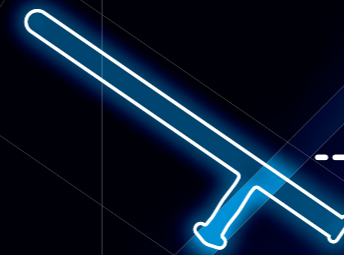
- ✓ **Simulated guns:**
With Blowback Systems or Electric Recoil Systems
- ✓ **Non-lethal options:**
Conducted energy devices, pepper spray, batons, and more
- ✓ **Tactical gear:**
Flashlights, handcuffs, night vision
- ✓ **Feedback:**
Haptic vest, shock belts

Real Firearms Integration:

Enhance training realism by incorporating your real weapons into our XR systems.

- ✓ **Blowback systems:**
Recoil simulation using gas or air-based systems.
- ✓ **Blank Firing setup:**
Provides safe firing mechanisms using blanks.

Contact us!
Explore how we can integrate your weapons into our systems.



EQUIPMENT

HOLOFORCE
| 3 | 4 | 5 |

Law Enforcement & Security XR Training

In the high-stakes world of law enforcement, making split-second decisions under intense pressure is not just a requirement; it's a matter of life and death. Every operation can have far-reaching consequences. In these critical moments, there's no room for error. Responsiveness is key.

HOLOFORCE BLUE XR software is meticulously crafted to cater to the unique needs of law enforcement professionals and the challenges they face in the line of duty.

Realistic Weapons / Peripherals:

- ✓ **Firearms** Small arms, long guns, SMG
- ✓ **Non-lethal** Conducted energy device (CED), pepper spray, baton
- ✓ **Tactical** Flashlight, handcuffs, night vision
- ✓ **Feedback** Haptic vests, shock belts, scent, wind, heat

Train any Scenario:

- ✓ Use of force decision making
- ✓ Active shooter response
- ✓ Urban and residential scenarios
- ✓ Communication and negotiation
- ✓ Traffic stops simulation, ID checks



HOLOFORCE BLUE

HOLOFORCE
BLACK

Modern Military Training

In today's ever-changing warfare landscape, traditional military training struggles to keep up. HOLOFORCE BLACK software, integrated into HGXR training systems and developed in partnership with the German Army, provides a dynamic and secure learning environment tailored for military and defense personnel.

Integration of Weapons / Peripherals:

- ✓ **Firearms** Small arms, long guns, SMG
- ✓ **Anti Tank / Air** Heavy weapons
- ✓ **Non-lethal** Conducted energy device (CED), pepper spray, baton
- ✓ **Tactical** Flashlight, handcuffs, night vision
- ✓ **Feedback** Haptic vests, shock belts, scent, wind, heat

Integration of Hyper-Realistic Scenarios:

- ✓ **Close Quarter Battle** Assault trainer, room clearing, single and in team
- ✓ **Anti Air / Anti Tank** Drones, heavy weapons integrated scenarios
- ✓ **Military Law Enforcement** Active shooter, terrorist incidents, ID checks



HOLOFORCE BLACK

CASE STUDY HOLOFORCE BLACK:

German Army XR Training

More efficient. More effective. More flexible.

Project Detail

Client: German Army (WTD)

Scope: Training, Simulation, VR

Systems: HGXR X&M, HGXR SIM

The German army needed a new modern training approach. A solution that improved quality, scope and review of military training, made it more realistic, interactive, and flexible while reducing overall cost.

Leveraging our pioneering HOLOFORCE BLACK software, HGXR crafted a bespoke VR training ecosystem for the German Army. This advanced platform, a fusion of free-roam VR and high-fidelity simulations, was introduced in 2020 to elevate the Army's training capabilities. It integrates realistic physical interactions, haptic feedback, and authentic weapon replicas with recoil simulation to create immersive training scenarios, streamlining the training process and setting new benchmarks for military preparedness.

- ✓ Cost effective, safe XR training
- ✓ Highly flexible - train a wide range of scenarios
- ✓ Review and analyze individual performance
- ✓ Ultra realistic customizable training scenarios



HOLOFORCE BLACK



MBDA
MISSILE SYSTEMS

Weapon System Training

Integrating weapons systems like the MBDA Enforcer Anti Air and Anti Tank shoulder launched weapon system enables users to master handling and deployment – seamlessly bridging the gap between virtual simulations and real-world effectiveness.

Weapon system users gain skills to execute their missions reliably, efficiently, and effectively, achieving accuracy across diverse operational conditions, day and night, with a high first-hit probability.

Integrate any weapon system, at any time



HOLOFORCE BLACK



After Action Review

Following each training session, our system captures comprehensive data and analytics. This enables analysis of all movements and actions, including the weapon's aim and direction of fire, thanks to the system's ability to capture the entire training session in 3D. Retrace the action from different perspectives, as many times as needed, until learnings fully manifest.

- ✓ Conduct in-depth assessments of individual and team performance
- ✓ Identify specific areas of improvement
- ✓ Monitor progress over time with precision
- ✓ Analyze data anytime, from every perspective





IGXR

Platform Features

X | M | SIM

Continuous Development and Optimization

- Asset Library
- Scenario applications
- Scenario environments
- Scenario builder extensions
- Extension on AAR
- Hardware and software updates
- AI Integration

Scalable Training Area Up to 1000m ² / 10000 ft ²	✓
Full-Body Tracking Every body movement tracked in real time for realistic immersion	✓
VR Headset Streaming Highest audio / visual performance	✓
Low Latency Zero motion sickness	✓
After Action Review Quick and efficient performance analysis	✓
Scenario Editor Adapt and create bespoke training scenarios tailored to your needs.	✓
Integrated Weapons Small arms, long guns, SMG, Conducted energy device (CED) and more	✓
Immersive Effects Haptic vests, shock belts, scent, wind, heat	✓
Extensive App / Scenario Library Different scenario configurations	✓
Third-Party API Integrate third-party hardware and software	✓
Interoperability (Offline) Connect systems via network	✓
Remote Support Online and on-site	✓
Offline Capability For situations with restricted or no network access	✓

Experience the future of training

✉ mail@hgxr.com


Read more:



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