SOCOM Pilot At a Glance – Objective, Timeline, Key Outcomes.

Delivering a next generation, data driven training ecosystem that fuses immersive simulation, cognitive conditioning, and measurable performance analytics to elevated SOCOMs intelligence and decision dominance.

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United States Special Operation Command

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ABSTRACT

This white paper details a phased 12-month roadmap for the next evolution in Special Operations Forces (SOF) readiness—transforming training into measurable combat advantage. Designed to meet SOCOM's demand for cognitive dominance in intelligence and mission adaptability TAP fuses simulations, into a unified, data-driven training ecosystem.

The result is more than readiness—it's quantifiable decision superiority. By capturing decision speed, communication clarity, and composure under pressure. TAP provides SOCOM leadership with actionable performance intelligence that turns every training evolution into a competitive edge. Scalable, deployable, and built for the tempo of modern warfare, it ensures operators don't just train to standard—they train to overmatch.

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Executive Summary

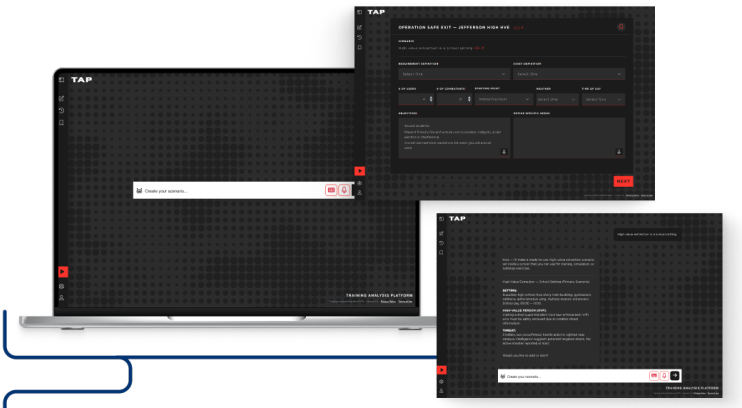
Special Operations Forces (SOF) thrive where chaos reigns—operating in the most complex, unpredictable, and high-stakes environments on earth. Success demands more than tactical skill; it requires instant judgment, cognitive endurance, and unshakable composure under pressure. Traditional training methods, while strong in WAR type games or marksmanship and field tactics, they fail to fully pull the data into a measurable after-action report to then replicate the training loop Train, Measure, Adapt, and Repeat to increase the psychological and decision-making intensity of real-world combat.

Zolon Tech, closes that gap with TAP™. AI-driven self-intuitive interface that accepts voice, text, or keyboard input. This multimodal interface enables warfighters to interact naturally with the system, requesting data, generating simulations, and receiving decision-ready outputs that enhance information dominance and situational awareness at the tactical edge.

In partnership with SOCOM we would move from the system-to-system training into the Data Driven revolution. We would work directly with the leading defense and simulation experts, to pilot a program for SOCOM to provide a measurable, repeatable, and cost-efficient pathway to decision dominance—transforming every training evolution into actionable data and every operator into a faster, smarter, and more resilient asset on the battlefield.

PILOT OUTCOME

Reduce scenario authoring time by 50%, Deliver cognitive metrics for every tactical sim iteration.



1. Virtual Reality (VR) / Immersive Training

TRAINING TYPE

Mission rehearsal, CQB, tactical decision-making, operator immersion

VENDORS

HAVIK · VARMED · VirTra · VIVE

2. Live-Virtual-Constructive (LVC) & Synthetic Environments

TRAINING TYPE

Integrated live/virtual exercises, terrain modeling, large-scale force-on-force simulation

VENDORS

LOCKHEED MARTIN · VT MAK · Bohemia Interactive Simulations

3. Tactical & Ground-Based Simulators

TRAINING TYPE

Vehicle, convoy, and route-clearance simulators; laser-based live training and urban combat scenarios

VENDORS

FAAC · SAAB · NOVA TECHNOLOGIES

4. Enterprise & Data-Driven Training Platforms

TRAINING TYPE

Centralized training ecosystems, readiness analytics, data integration, and system interoperability

VENDORS

OMNI FEDERAL · Collins Aerospace An RTX Business

Problem Statement

SOF operators don't just operate uncertainly, they own it. Every mission demands clarity under chaos, precision under pressure, and decision dominance when milli-seconds define success or failure. Yet even the most advanced training pipelines struggle to replicate the cognitive and emotional intensity of real combat.

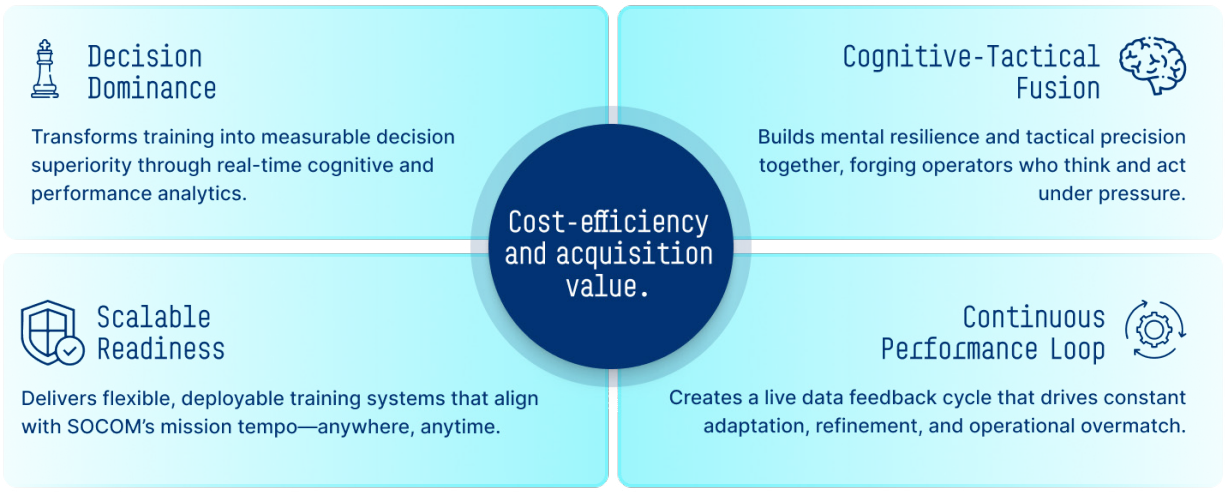
The current IT enterprise is made of systems of systems training frameworks that fall short in one critical area: data realism that drives readiness. SOCOM's fragmented training ecosystem creates a concrete operational risk: even with significant investment in advanced simulators and ranges, it still cannot objectively compare how teams perform across components, theaters, or vendor environments, or quickly pinpoint which cognitive skills—like threat prioritization, de-escalation, or cross-team communication—are lagging.

Because each training system logs data differently—SOCOM cannot consistently measure decision quality, communication efficiency, or cognitive workload across exercises, leaving leadership dependent on anecdotal feedback and instructor judgment instead of a common, data-driven readiness baseline.

SOCOM partners with vendors such as Lockheed Martin, Bohemia Interactive Simulations, V-Armed, HTC VIVE, and Havik to deliver cutting-edge virtual, augmented, and mixed-reality training environments. These simulations range from immersive mission rehearsals and tactical combat scenarios to large-scale live-virtual-constructive exercises with data analytics. The Problem is today's simulations often evaluates tactics, but not the underlying decision flow, communication efficiency, and cognitive resilience that define mission success in the field.

TAP delivers a modern GPT style interface to work with SOCOM on building the exact Mission Scenario layering on top of existing simulation systems. Once the scenario simulation is run and completed, TAP™ would then deliver the simulation report, and After-Action Reports from the Data and benchmarks determined by SOCOM. This is where data and AI can deliver decision dominance. Operators can continuously prompt and modify scenario simulations in real time—enhancing realism, boosting mission readiness, and accelerating adaptability across any operational landscape.

Within TAP™, we would design a powerful digital twin capability that enables real-time monitoring and side-by-side comparison of multiple simulations. The Training Analysis Platform (TAP™) eliminates traditional training limitations by bridging the gap between execution and cognition—preparing SOCOM operators to dominate in the most complex and demanding mission environments. Through its unified, data-driven simulation ecosystem, TAP empowers SOCOM to visualize performance, optimize readiness, and adapt mission parameters in real time



AI Data-to-Decision Dominance

Enhancing Tactical Training

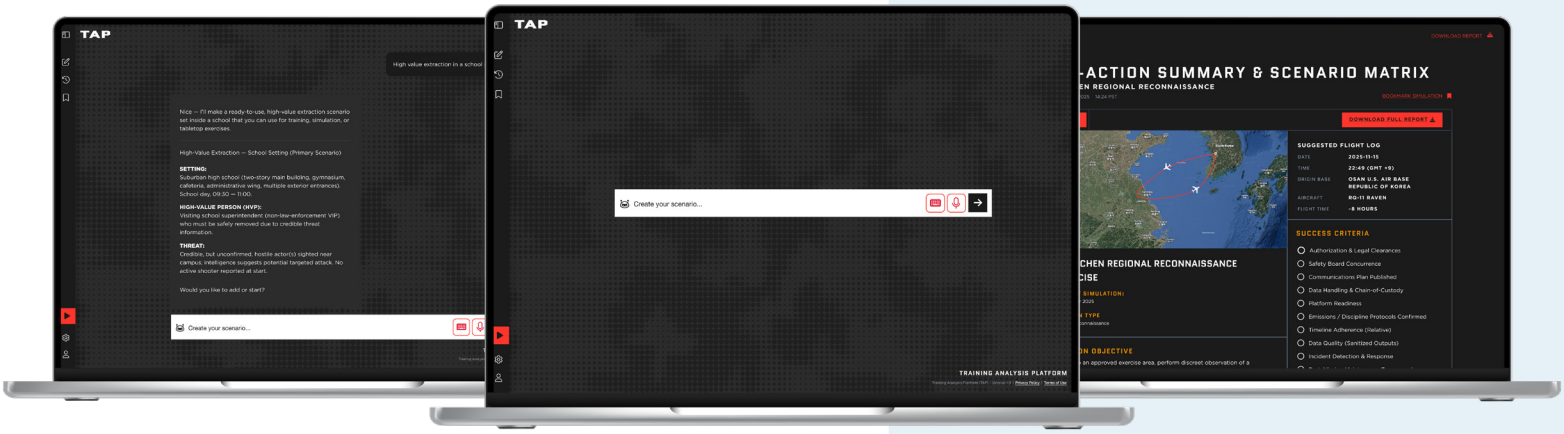
Zolon's approach for the **Training Analysis Platform – TAP™ is built on top of existing simulation training.**

The ecosystem delivers a modular, high-fidelity combat simulation platform engineered to push beyond traditional Tactical Training Programs —integrating the mental, physical, and tactical domains with the data into one seamless training continuum.

At its core, TAP™ combines:

- **Natural-language scenario builder** — a ChatGPT-style prompt interface to quickly define objectives, constraints, and variables for simulation training scenarios.
- **Digital Twin** — Real-time monitoring and side-by-side comparison of multiple simulations.
- **Simulation Statistics** — Summarizes mission results and recommendations with key performance metrics on awareness, movement, teamwork, and speed.
- **After Action Reports** — Document mission objectives, outcomes, success metrics, and performance insights to accelerate learning and enhance readiness.

Together, these elements create an **adaptive, data-driven training ecosystem** that mirrors the fog and friction of real-world combat while capturing every metric that matters. TAP™ empowers SOCOM operators to think faster, decide smarter, and execute with precision—building the **cognitive endurance, emotional resilience, and tactical dominance** essential for modern special operations.



Technical Concept

Architecture - Training Data Loop

The TAP™ architecture is composed of four interoperable subsystem layers:

User Interface Layer (AI Auto Assist Module): Provides seamless integration between operator and simulation, using natural language to initialize, parameterize, and control missions.

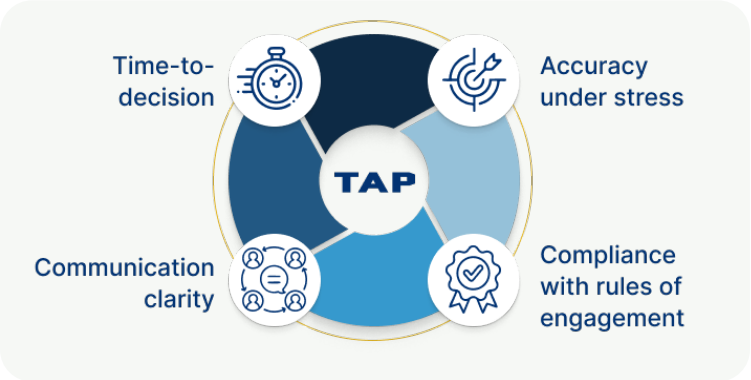
Simulation Core Layer: Manages the virtual environment's physics, weather, terrain, and asset behaviors, integrating modeling and simulation (M&S) feeds and live sensor data.

Data & Analytics Hub: Ingests, filters, and processes simulation results, driving real-time dashboards and continuously retraining AI models to improve accuracy and decision support.

Secure Cloud Infrastructure: A cyber-hardened, scalable backbone that enables both on-prem and cloud deployments, ensuring interoperability and resilience for tactical operations.

At the heart of the Training Analysis Platform (TAP™) lies the closed Training Data Loop — a relentless cycle to Train, Measure, Adapt, and Repeat.

Each virtual training scenario already captures metrics — we want to turn those metrics into



This will feed directly into a powerful After-Action Review (AAR) reports with synchronized playback, digital twin to run multi simulations playback and take those data outputs metrics and identify performance gaps, optimizing training efficiency and accelerating intelligence and combat readiness to elevate SOCOM's decision dominance.

Moving towards AI Workflow and Orchestration

The future of TAP™ would be integrating AI reasoning agents directly into the simulation setup, execution, and after-action phases. During scenario initialization, the AI Auto Assist Agent interprets mission intent and configures assets, terrain, and objectives automatically. During execution, the AI dynamically adjusts parameters "on the fly," orchestrating the simulation in real time. Following completion, TAP™ conducts a closed-loop analysis—feeding results into its reasoning models for adaptive learning, report generation, and scenario refinement.

FEATURE	LEGACY DOD M&S	TAP™ WORKFLOW (AI-DRIVEN)
Scenario Definition	Manual scripting	AI-assisted, metadata-based
Simulation Execution	Pre-scripted	Dynamic, adaptive, question-based
Analysis	Manual AAR	Automated dashboards + cognitive evaluation
Interaction	GUI-heavy, technical	Conversational (AI co-pilot)
Adaptability	Static	Real-time AI intervention
Metadata	Implicit	Explicitly defined, reusable templates

TAP™ will have a metadata-driven modeling approach that ensures environmental parameters, assets, and objectives are explicitly defined at initialization, enabling rapid reuse and traceability across mission templates. This design achieves faster scenario generation and more accurate after-action insights compared to current DoD simulators such as JCATS, OneSAF, or JSAF.

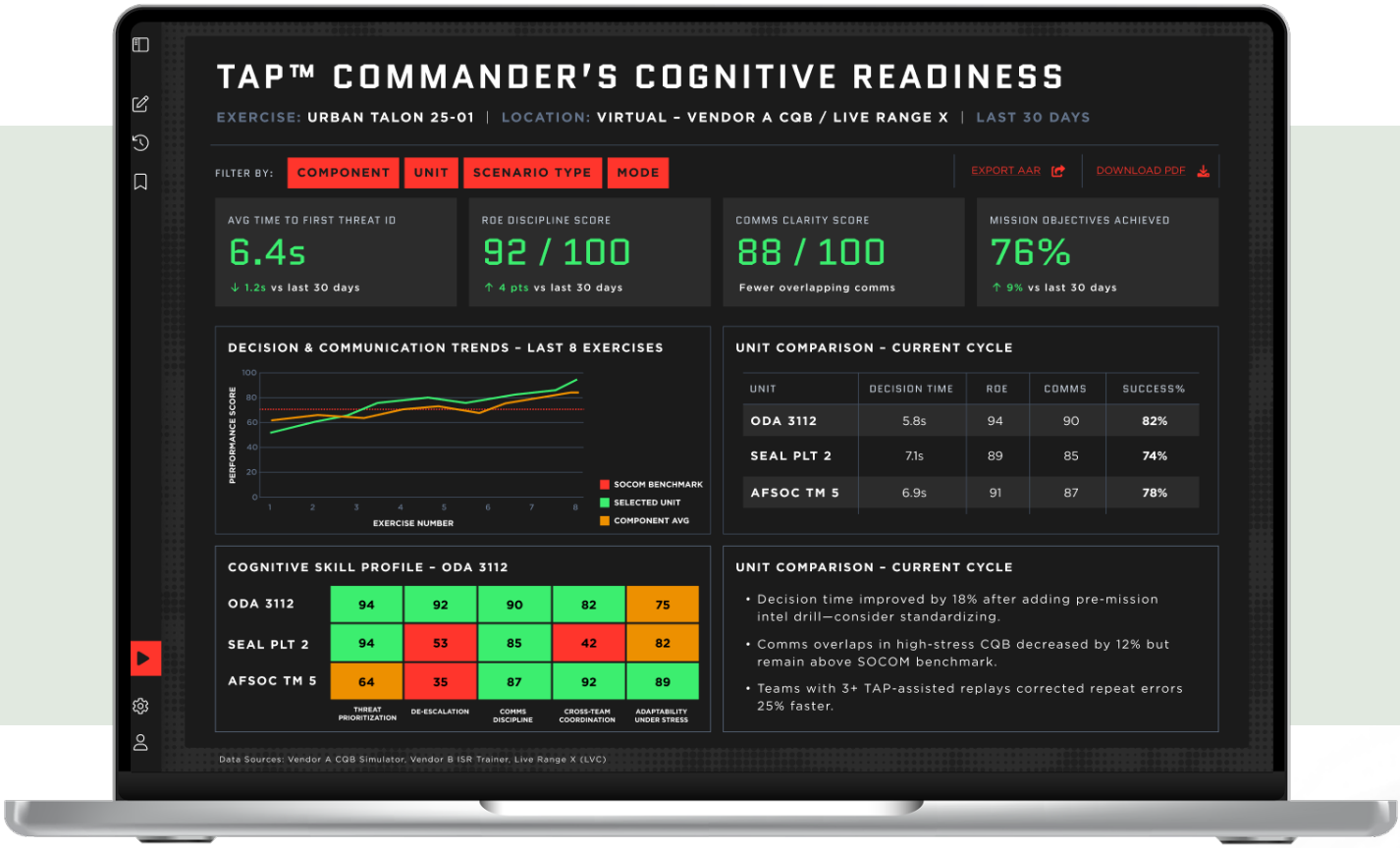
TAP always keeps instructors in control.

No unsupervised pass/fail; AI provides recommendations only.

All AI decisions traceable via metadata.

Performance Metrics – Quantifying Readiness

The **Training Analysis Platform (TAP™)** delivers what SOCOM values most—**quantifiable readiness** and **decision dominance** under pressure. Through advanced performance analytics, TAP™ translates every training evolution into measurable combat intelligence, providing commanders with precision metrics that reveal how operators think, react, and lead in the fight.



These insights align seamlessly with SOCOM's readiness and assessment frameworks, transforming subjective training outcomes into **objective, repeatable performance data**. TAP™ turns every repetition into a **measurable operational asset**, empowering leadership with the analytics needed to refine tactics, sharpen decision-making, and sustain the cognitive edge that defines special operations excellence.

Operation Integration Pathways

The **Training Analysis Platform (TAP™)** is built for seamless integration into **SOCOM's existing training and readiness architecture**, enhancing—not replacing—current programs. Its modular design and data-driven backbone align with **joint-force readiness**, ensuring interoperability across components, commands, and mission sets.

TAP™ in a pilot program would develop into a Full Operational Capability (FOC) to build on the full spectrum of SOCOM training priorities, from **mission rehearsal, intelligence ISR, CQB certification to leadership development and decision dominance training.**

THE RESULT

A **plug-and-play capability** that enhances operational tempo, standardizes performance metrics across commands, and delivers a unified picture of operator readiness—**anywhere SOCOM trains, prepares, or fights.**

A funded R&D pilot under Operation Integration Pathways challenges SOCOM to take the risk—and lead the next Data/AI evolution in operator readiness. TAP™ would mature into a Full Operational Capability that advances mission rehearsal, ISR integration, CQB certification, leadership development, and decision-dominance training. With SOCOM's leadership we can co-develop new cognitive metrics, AI-driven adaptive scenarios, and mission-focused analytics—creating a plug-and-play ecosystem that redefines how SOCOM trains, thinks, and wins.

Implementation Roadmap

A phased implementation ensures scalable adoption and measurable outcomes, aligning with **SOCOM procurement best practices and acquisition readiness frameworks:**

PHASE 0	PHASE 1	PHASE 2	PHASE 3
Pilot Program	**Integration**	**Expansion**	**Full Operational Capabilites**
0–3 MONTHS	3–6 MONTHS	6–12 MONTHS	12+ MONTHS
Validate TAP™ cognitive performance metrics in a single controlled vendor training simulation environment.	Incorporate TAP™ data analytics, digital twin and assessment tools into existing SOCOM vendor training simulation pipelines.	Deploy TAP™ simulation systems across multiple SOCOM components and commands.	Establish a continuous readiness model with live data capture, digital twin, after action reports, and performance feedback.

Phase 0 Pilot Program:

Duration: 90 days total, with 2–3 weeks of setup/integration, 4–6 weeks of training runs, and 1–2 weeks of analysis and reporting.

Operators: 16–24 SOF operators (e.g., 2 teams / troops / detachments) plus 4 instructors.

Scenarios:

- 3 core scenario templates (e.g., urban CQB assault, hostage rescue, high-threat clearance, ISR overwatch)
- Each scenario run 6–10 times per team, with variations in threat density, ROE constraints, and time pressure.

Training Modes: Initially virtual-only on one vendor's simulator, with options to record a small number of LVC or live range events for comparison.

Conclusion

Zolon wants to work with SOCOM to deliver more than a training platform—we want to deliver a **combat advantage**. The **Training Analysis Platform (TAP™)** transforms repetition into readiness, turning every scenario into a measurable step toward decision dominance. Built for SOCOM's operational tempo, TAP™ fuses **immersive realism, cognitive conditioning, and precision analytics** to forge operators who don't just react—they anticipate. With TAP, SOF units **train harder, decide faster, and fight smarter**—because in today's battlespace, readiness isn't enough—**overmatch is the mission.**

Zolon Tech

ABOUT ZOLON TECH INC.

Zolon Tech delivers secure, cloud-native data platforms and AI-driven solutions to Federal, Defense, and Special Operations communities. Our Training Analysis Platform (TAP™) delivers a next-generation, data-driven training ecosystem that fuses immersive simulation, cognitive conditioning, and measurable performance analytics to elevate decision dominance. TAP accelerates mission readiness by enabling real-time discovery, decision intelligence, and edge-aware analytics within a single, zero-trust framework.

- ISO 9001
- ISO 27001
- CMMI Level 3 (Development & Services)
- AWS Advanced Consulting Partner | Microsoft Solutions Partner
- Cleared personnel supporting 24×7 secure operations

Zolon Tech combines technical innovation with mission expertise to strengthen national security, enhance cognitive performance, and modernize training ecosystems. Our team builds secure cloud-native data platforms and proposes a 90-day TAP™ pilot focused on CQB/ISR training metrics to demonstrate measurable gains in decision speed and communication clarity.

We look forward to partnering with SOCOM to advance decision dominance, operational readiness, and mission success.

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