

MST-M™: AI-ENABLED MEDICAL SIMULATION ECOSYSTEM FOR DISTRIBUTED TRAINING READINESS

From execution to sustainment—MST-M™ (Medical Simulation Training-Mobile) delivers a fully integrated, AI-enabled medical training ecosystem that connects simulation, performance analytics, and logistics into a continuous readiness loop.

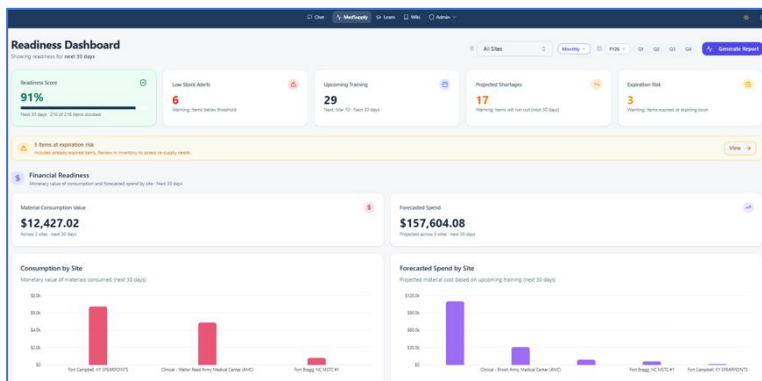
EXECUTE → CAPTURE → REVIEW → ANALYZE → FORECAST → SUSTAIN

Traditional medical training systems generate data—but not actionable insight. Performance is reviewed after the fact, logistics are managed separately, and readiness gaps remain difficult to quantify.

MST-M™ bridges that gap and transforms training execution into real-time readiness intelligence. By synchronizing simulation data, performance metrics, and logistics consumption, training is no longer a standalone activity—it becomes a measurable, data-driven input to operational readiness.

THE MST-M™ DIFFERENCE

- ✓ **Vendor-neutral integration** across manikins, sensors, MR systems, and training devices
- ✓ **Edge-enabled architecture** for austere, disconnected, and distributed environments
- ✓ **Synchronized multi-source data fusion** (video, events, physiology, instructor input)
- ✓ **AI-driven insights** linking performance → readiness → logistics
- ✓ **Closed-loop training lifecycle** (not just execution or AAR, but full sustainment)



IMMERSIVE TRAINING ENVIRONMENT CONTROL



Audio/Video



Sound Effects



Light Effects



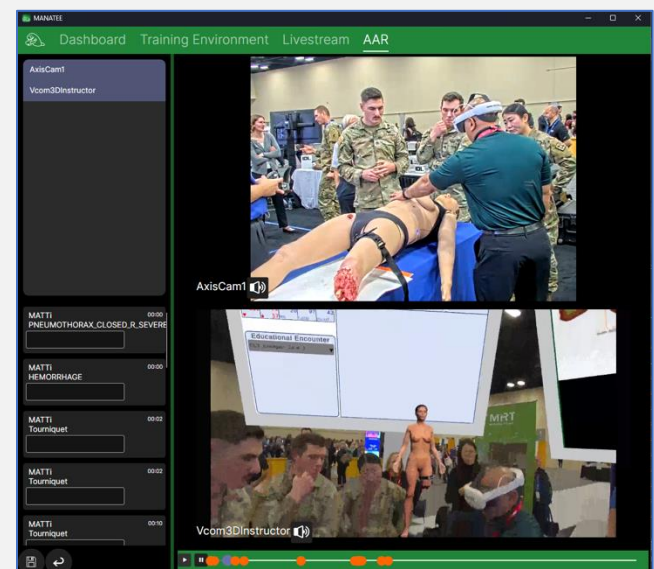
Smoke



Scent

MST-M™ is built to scale—adapting from minimal, deployable setups to fully immersive training environments. Its

modular architecture allows cameras, sensors, and environmental effects to be added or removed as needed, enabling flexible configuration while maintaining synchronized data capture and system performance.



CASE STUDY: FROM DISCONNECTED TRAINING TO AI-ENABLED READINESS — REAL-TIME AAR + PREDICTIVE LOGISTICS ACROSS DISTRIBUTED SITES

Traditional medical training environments operate in silos. Simulation, AAR, and logistics systems are disconnected. Instructors manually review video, track performance subjectively, and have little visibility into supply consumption or future shortages.

Integrated Training Workflow

1. Execute Training Scenario

Using **MANATEE™**, instructors control immersive environments (lighting, sound, smoke, scent, and manikin states)

2. Capture & Synchronize Data

SENTINEL™ aggregates video, device telemetry, and instructor inputs into a unified timeline

3. Automated Analysis & Review

E-AAR™ + **MAIKO NextGen** generate: Multi-camera synchronized playback, AI-assisted performance insights, event tagging and intervention tracking, and structured, re-playable AAR outputs

4. Link to Logistics & Forecasting

SimOps™: Tracks real-time supply consumption, maps usage to scenario execution, and forecasts future Class VIII needs

Result: A fully integrated, AI-enabled training ecosystem that transforms fragmented processes into a continuous readiness loop.

Training data is captured, analyzed, and operationalized in real time—enabling instructors to focus on performance, not administration.

Impact:

- ↓ AAR generation time (hours → minutes)
- ↑ Training assessment consistency
- Real-time visibility into supply usage
- Predictive identification of shortages

This is the MST-M difference: An integrated ecosystem that connects:

- Training execution
- Performance assessment
- Logistics forecasting

...into a single, data-driven workflow.

FROM TRAINING EXECUTION TO OPERATIONAL READINESS: END-TO-END CAPABILITIES

Phase	Capability	System
Execute	Scenario control, immersive environment effects	MANATEE™
Capture	Multi-source data ingestion (video, sensors, events)	SENTINEL™
Review	Multi-camera synchronized playback	E-AAR™
Analyze	AI-generated performance insights & scoring	MAIKO NextGen
Forecast	Scenario-driven supply consumption modeling	SimOps™
Sustain	Training progression & personalized learning	Learn™

OPERATIONAL ADVANTAGES OF MST-M™

- **AI-Driven After-Action Review:** Automated AAR from synchronized data. **Cuts review time (hours → minutes) and improves scoring consistency**
- **Training-to-Logistics Integration:** Links training execution to Class VIII consumption. **Enables predictive resupply and prevents shortages**
- **Distributed & Edge-Enabled Architecture:** Operates in austere, disconnected environments. Supports rapid deployment across distributed sites
- **Unified Data Fusion:** Combines video, manikin, and event data into one timeline. **Delivers accurate, data-driven performance insights**

This is more than simulation — it’s a closed-loop system that connects training, performance, and logistics to drive measurable readiness outcomes