



BAGIRA

NORDEFECO ADL Conference

New Methodology for Mission Readiness

May 2023

INTEGRATING SIMULATION
FOR **MISSION READINESS**



Some of my personal take-aways from this conference

- › **Learning** is the process of acquiring new understanding, knowledge, behaviors, skills, values, attitudes, and preferences.
- › **Create** an environment that facilitates individual and collective learning.
- › **Enable** joint learning and form a social community of enquiry.
- › **Take into account** the individual prior knowledge and skills.
- › **Benefit** of multidisciplinary approaches to enhance learning.
- › **Ensure** teaching presence.
- › **Make** what is learned measurable and applicable in practice and assess the achievement of outcomes.
- › **Consider** your specific use case when deciding to invest in any learning technology.





Basic Infantry Skills for Mission Readiness (examples)

- › **Marksmanship:** proficiency in handling and accurately firing a variety of firearms
- › **Situational awareness:** knowing where you are, what is going on around you in order to make better decisions
- › **Tactical knowledge:** understanding and application of various military tactics, such as small unit movements, fire and maneuver etc.
- › **Teamwork:** working effectively as a part of a team
- › **Communication:** effectively using hand signals, verbal commands to coordinate with the members
- › **Physical security:** self-protection and team protection
- › **Combat lifesaver skills:** enhanced knowledge of providing first aid and emergency medical care
- › **Physical fitness:** maintaining high level of physical fitness to engage in combat situations



- > **Pedagogues, IT specialists and military experts working together!**
- > **45** training sites worldwide
- > Main activities in Israel and Western Europe
- > More than **170,000** trainees annually
- > **224** employees

Delivered international



CZECH
REPUBLIC



FINLAND



PERU



THAILAND



SWITZERLAND



UK





**PERFORMANCE
MANAGER**



**HOWITZER
CREW TRAINER**



**INFANTRY SKILLS
TRAINER
(BIST)**



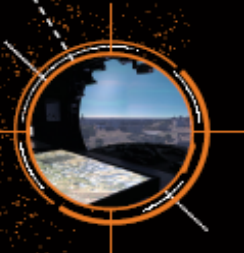
**FORCE ON FORCE
LIVE TRAINING
(MAGNET)**



**JOINT-FIRES
TRAINING
(JOBSS)**



**CBRN
SIMULATION**



**DIGITAL SANDBOX
(B-Scene)**



**NAVAL TACTICAL
TRAINING**



B-ONE
SIMULATION
FOR DEFENSE

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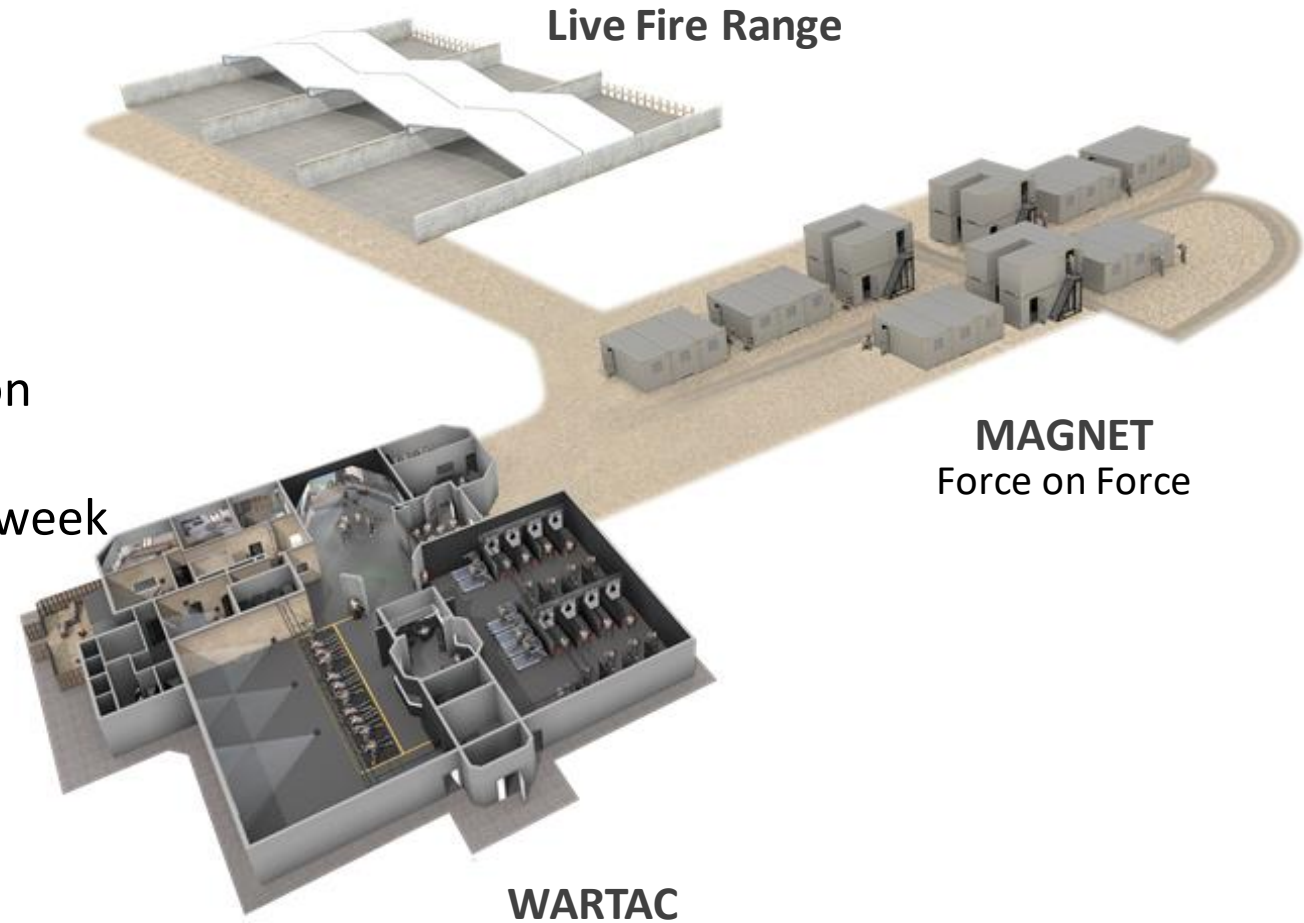
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WARTAC Warrior Readiness Training Center

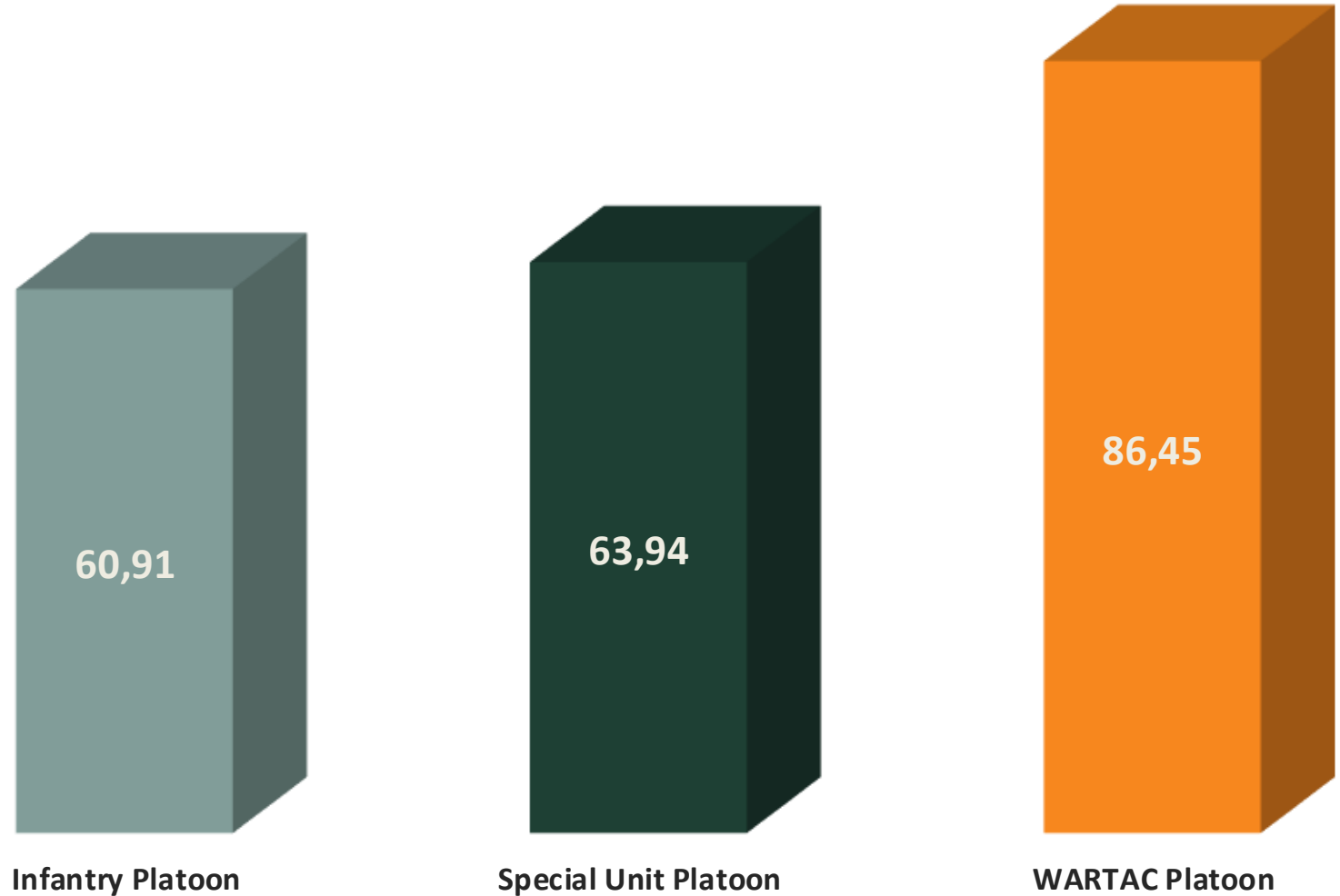
- **Full Mission Readiness in 24 days of training**
- Proven methodology for Home Base Training
- Company-level training across 3 facilities by platoon
- Training of fundamental soldier skills from the 1st week
- Real time performance measurement
- Capacity to train up to 200 soldiers





WARTAC Methodology – IDF Official Exam

- The IDF conducted an **exam** to evaluate the efficiency of WARTAC Training
- Compared WARTAC platoon with special unit platoon and infantry platoon
- Subjects tested: shooting capabilities, urban fighting and combat scenarios
- **Test results indicate significance in favor of the WARTAC Platoon**





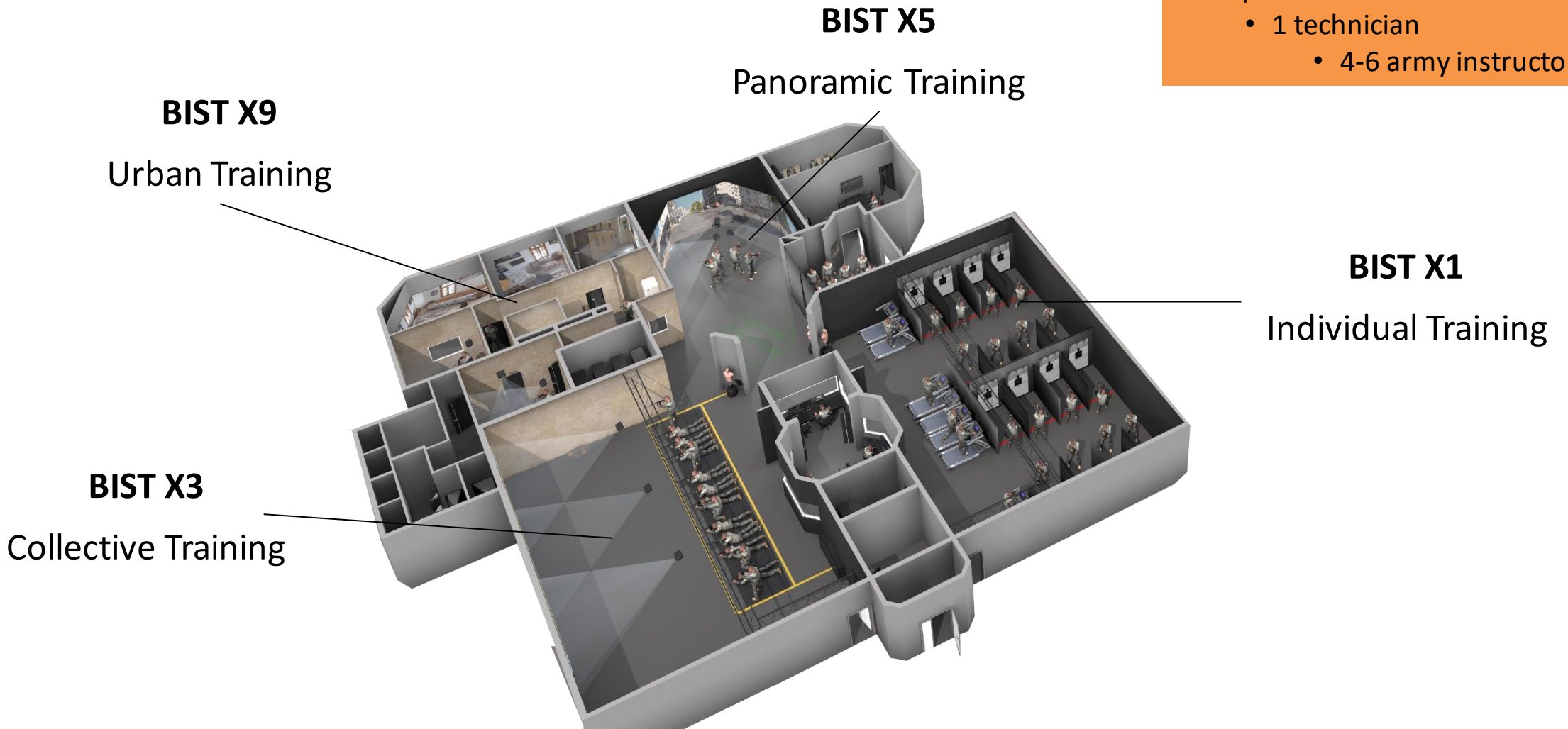
Significant Advantage to the WARTAC Methodology

Proof of Concept Detailed Results

- **Close range reaction time**
 - › WARTAC Platoon had the highest average score in all parameters:
 - › First bullet release (reaction time)
 - › Total shooting time (shooting consistency)
 - › Hits amount
- **Combat Scenario**
 - › WARTAC Platoon had the highest weighted score:
 - › Engaged and successfully hit a greater number of targets with exceptional accuracy.
 - › Most professional, using cover points effectively and managing ammunition in the best possible manner
- **Close Quarters Battle**
 - › WARTAC fighters were better trained, less surprised, and adapted themselves more effectively to the training exercises

Operation

- 2 operators
 - 1 technician
 - 4-6 army instructors



Training Methodology



Smart Targets

Live Fire



Indoor Trainer

Virtual



MAGNET LTS

Live



Smart Krav Maga

Live



Smart Fitness Centre

physiological monitoring



Smart Medic Sim

Live



Additional simulators

Spike, mortars etc.

B-One

Training Management Tool

B-One Performance Manager

SQUAD TACTICAL VIRTUAL TRAINING



- Virtual, indoor, infantry skills trainer
- Trains individuals and groups:
 - Marksmanship training
 - tactical shooting exercises
 - Armored vehicle crew and maneuver unit training
- After Action Review (AAR) and debriefing stage.
- Includes any kind of company weapon



BIST 3X - Flat



VIRTUAL INFANTRY TRAINING - PANORAMIC SCREEN

 5 TRAINEES

 INDOOR

 DROP KIT FOR REAL WEAPONS

- Virtual, indoor, infantry skill trainer
- Enables the simulation of complex scenarios with panoramic view
- Includes cognitive training and tactical shooting exercises
- Uses real weapon with drop kits
- Free movement in the training zone





BIST 5X - Panoramic



VIRTUAL INFANTRY TRAINING - PANORAMIC SCREEN

 **5**
TRAINEES

 **INDOOR**

 **DROP KIT FOR
REAL WEAPONS**

- Virtual indoor training system
- simulation in an urban area for individuals and units.
- Special display Systems and exposure cameras
- Uses real weapon with drop kits
- Free movement in the training zone



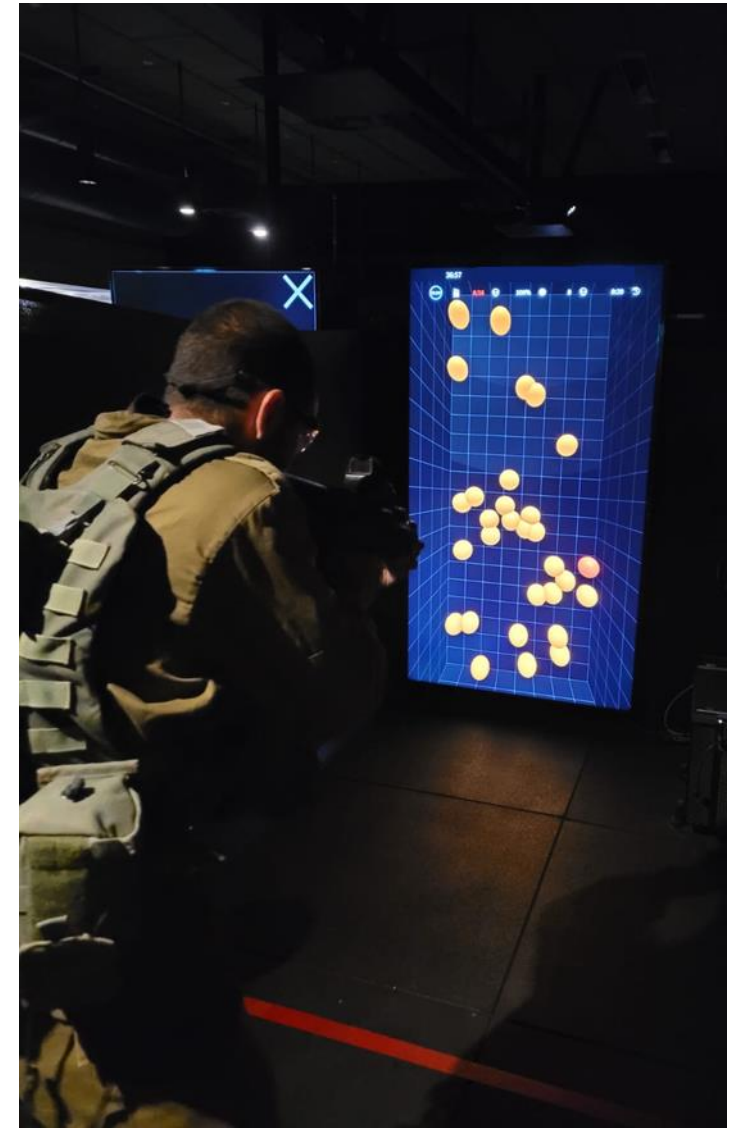
INDIVIDUAL WEAPON SKILLS DEVELOPMENT

-  10 PERSONAL STATIONS
-  INDOOR
-  DROP KIT FOR REAL WEAPONS

- Individual training system that enables to train the follows:
 - Weapon operations
 - Engagement skills
 - Cognitive skills
 - Decision making
- Adjustable training program.
- Uses real weapon with drop kits
- Free movement in the training zone



BIST PANTHER 1X



USE OF FORCE SMART BOB DUMMY



PERSONAL
STATION



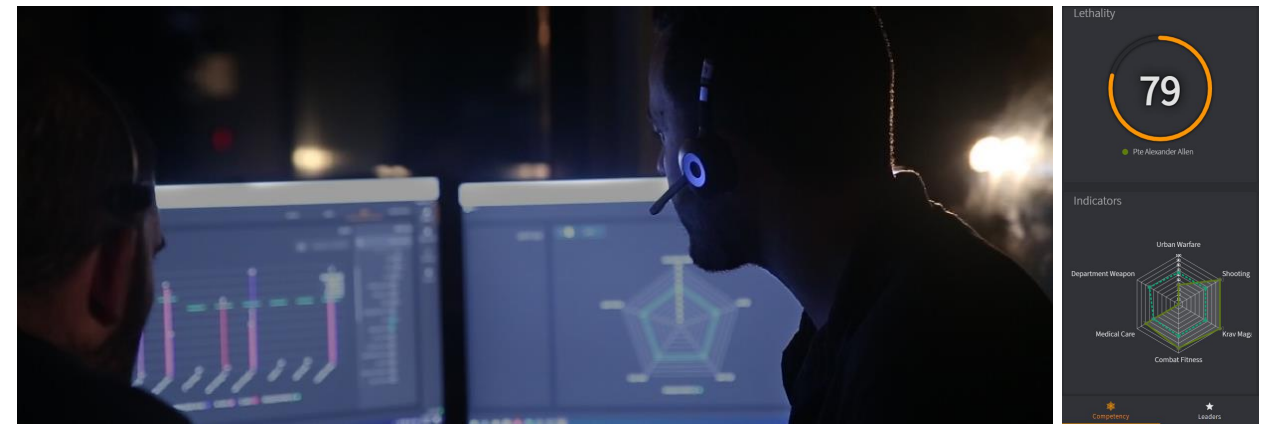
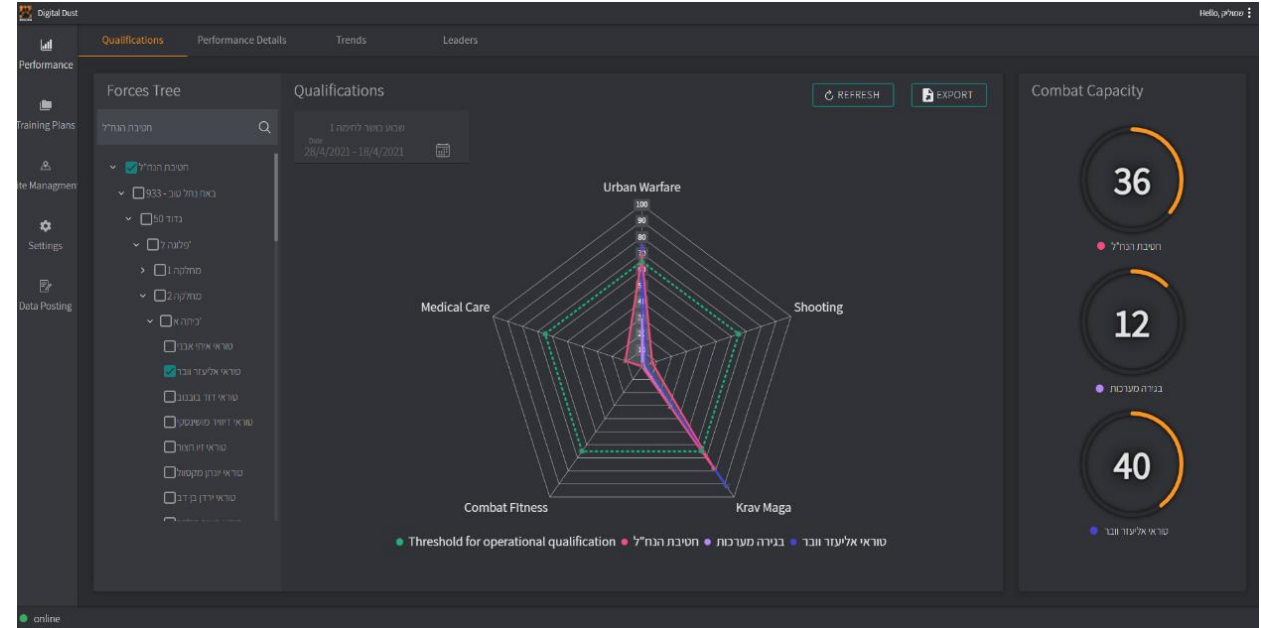
INDOOR

- Based on a smart sensitized BOB dummy (mannequin)
- Analyzes and present the combat quality of the trainee
- Measures the intensity and the rhythm of the hit
- Real time display of the time and status.
- Increases heart rate in between BIST exercises



TRAINING EFFECTIVENESS MANAGEMENT SYSTEM

- Real-time performance review
- Every action measured
- Big data web-based application
- Train the mass individually
- Operates on a desktop and on a mobile device / phone
- Can integrate with any local training systems or any external devices



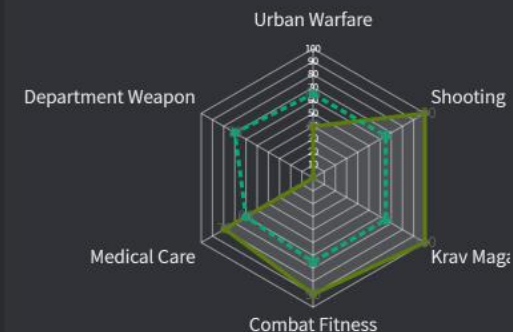


Lethality

79

Pte Alexander Allen

Indicators



Urban Warfare

Shooting

Krav Maga

Combat Fitness

Medical Care

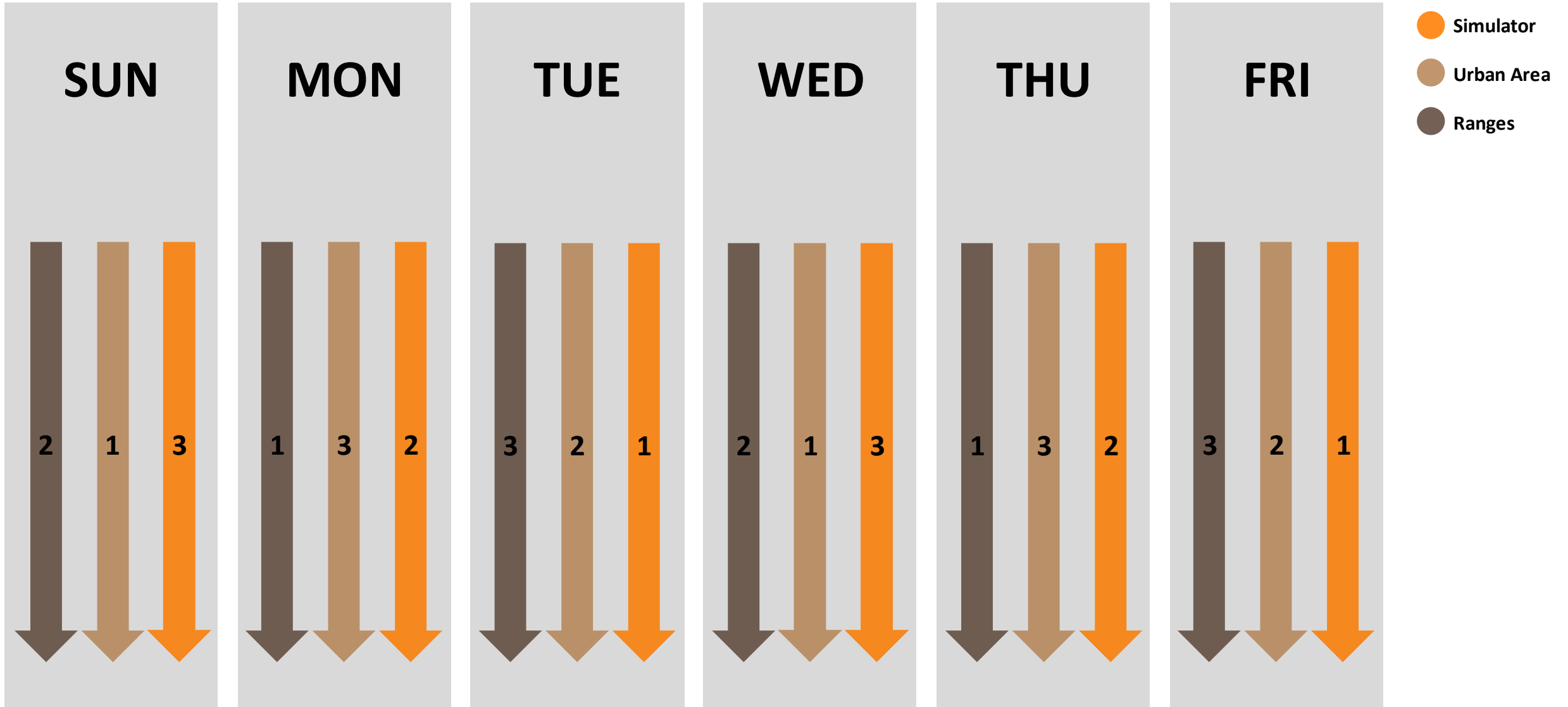
Department Weapon

Competency

Leaders



Week Training Plan





MAGNET

Live Training System





MAGNET Live Training System

MAGNET is a unique MILES* System:

- No blank ammunition
- No body harnesses
- Light-weight system
- No expensive communication networks
- Excon system
- Advanced After-Action Review
- Fielded with IDF, UK Army and Finland



MAGNET Company Training
20 minutes preparation time vs 2 hours in typical MILES Training

*MILES – Multiple Integrated Laser Engagement System



MAGNET in the IDF



Selected by the UK Army as the new RTES Operational in the RSME



RTES - Round less Tactical Engagement Simulation
RSME – Royal School of Military Engineering



MAGNET Live Training System



Fire Simulation

Sound & LED flash



Bullet Control

Control the number of rounds per player



Location

GPS & Orientation module



Communication

LTE & MESH for internal & external connectivity



Weapon operation

Loading, Safety, Trigger and Malfunction



Integrated TES

All in one solution including detectors and orientation module



Synthetic - Live

Representation in the virtual scenario with full interaction

TRAINEE KIT

Head kit



Magazine



SAT/Weapon Adapter



WEAPON KIT - INSTALLED





MAGNET Hit Detection Sensors





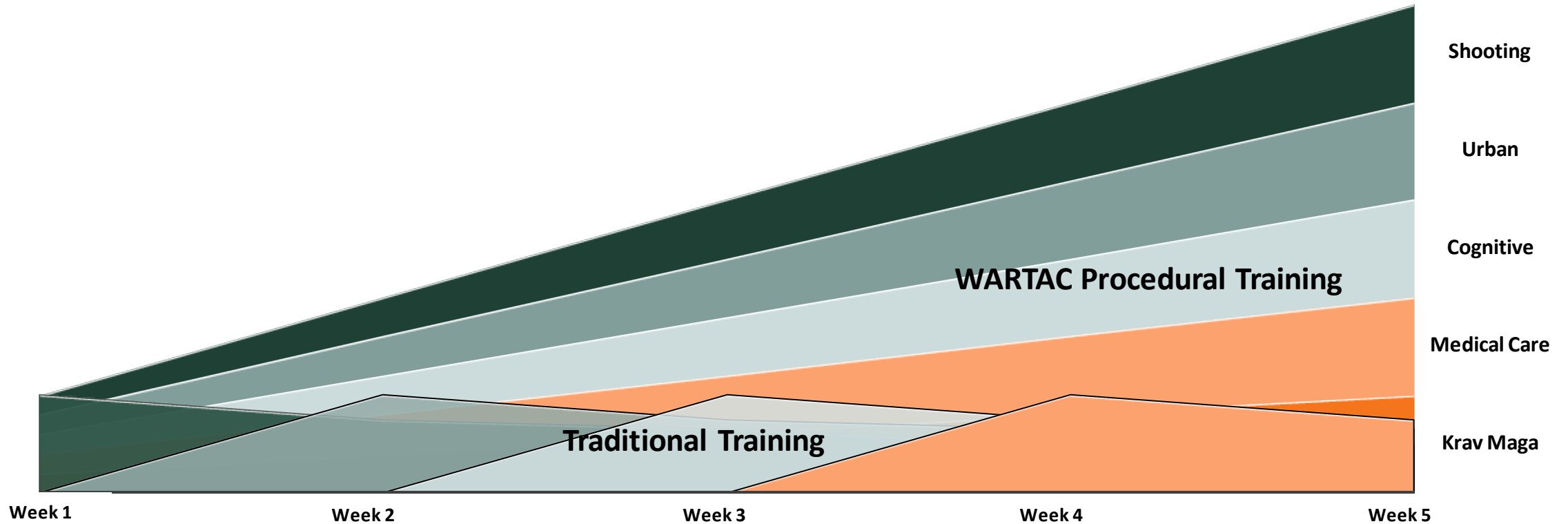
MAGNET Hit Detection Sensors





WARTAC Procedural Training vs. Traditional Training

Accumulated knowledge graph comparing the training methods





BAGIRA

WARNING!
THIS IS NOT A GAME