



ITEM: Weapons Systems Sims Bundle

DEPARTMENT: IGNITE Pathways

EDA Investment No: 05-79-06179

CLOSING DATE: April 11, 2023

IGNITE Pathways in partnership with the U.S. Department of Commerce's Economic Development Administration (EDA) is seeking to procure a system of health simulators. The mission of IGNITE Pathways is to "Transform educational experiences through business collaboration and involved learning." This equipment will help support the mission of giving students a transformational experience. The Weapons Systems Sims Bundle will consist of:

- Virtual Reality System
- Marksmanship System
- Augmented Reality System

**SPECIAL NOTE:**

Each machine is to be quoted individually (including options included and respective pricing) and selection and procurement will be based upon and awarded separately based on the evaluation criteria contained within this document.

**Virtual Reality System – 4 total systems with warranty included**

- Must include up to 4 simultaneous trainees for cooperative training in a safe environment.
- Must include up to 12 simultaneous weapons/tools per system configuration. Highly realistic weapon material, weight, and feel.
- Scalable footprint from 10' X 10' to 35' X 35'.
- Expanded suspect verbiage and actions to support various conversations and officer commands.
- Must include over 180 suspect and bystander avatars, with variations in gender, ethnicity, and clothing.
- Must include over 40 high-quality environments with adjustable weather, time of day, and trainee/suspect/bystander starting locations.
- Must include over 120 drag-and-drop props (e.g. contraband, weapons).
- Must include eye Tracking
- Must include peripheral vision indicator
- Measures distance from officer to suspect tracking
- Provide after action reviews with multiple viewpoints and metrics such as shot trajectory.
- Nuisance generator to create realistic background noises and visuals (e.g. barking dog, shots fired, yelling).
- Must be able to create, edit, and save custom scenarios.

- Practice shooting range for trainees to practice weapon deployment on targets and training dummies.
- Must have software/equipment that allows trainees to feel physical sensations when hit by force during a training scenario.
- Must have a heart rate monitor that tracks trainee spikes during scenarios.
- Environments must include the following:
- Alleyway, Apartment, Bank, Bar, Church, Gas Station, Grocery Store, High School, Hospital, Jail Facility, Military Barracks, Military Gate, Military Visitors Center, Motel, Park & Playground, Parking Lot, Pawn Shop, Residential House, Backyard, Garage, Rooftop, Security Entrance, Street, Underpass, University Emergency Room
- Must be highly interactable and allow trainees use their hands for actions from opening doors to handcuffing suspects.
- Handguns that must be available are: Glock 17, 19, Sig Sauer P320, S&W M&P 9, 40, SIG M18, Beretta Px4
- Tasers that must be available are: X26P, X2, 7
- Rifles that must be available are: AR15 / M4, Remington (lethal or less lethal)
- Others that must be in this bid: MK-3 OC Spray, Stinger LED Flashlight, Expandable baton, 40mm Less Lethal, Launcher

## Marksmanship System

- High performance laptop PC which supports the Instructor Operator Station (IOS), 360-capable audio, and 2 external speakers.
- HD 1920 x 1080p system projector.
- Shot placement camera.
- Ruggedized carrying case (size of a large range bag, easily handled by one person).
- Need a choice of system bundles including one or two BlueFire® simulated pistols and/or rifles. as well as a BlueFire Recoil Refill Station.
- Need advanced marksmanship software that displays courses, processes and stores course data, and enables real-time instructor monitoring of course/weapon feedback data.
- High-fidelity simulations that provide positive training transfers from the simulator to live fire ranges and real engagements.
- Must include photorealistic 3D terrains and 3D targets (including “paper” targets).
- Must include multiple environments, effects (weather and lighting), day and night settings.
- Ability to upload and display reference documents for trainees (Excel, PPT, Word, PDF).
- Must support for up to 5 users training simultaneously, or 1-5 lanes that can be used for individualized and customized exercises.
- Unlimited supply of virtual, environmentally-friendly firearm ammunition.
- Instructor & Trainee Marksmanship Capabilities:
- State-specific courseware that focus on those drills and skills required for certification.
- Must have automatic coaching that analyzes shooting results/sensors to highlight potentially poor shooting habits.
- Instructor Operator Station (IOS) providing real-time monitoring of trainees’ performance including course / weapon feedback data, exercise data, course results, replay of shots, and the ability to store trainee results in the student database.

- Instructor-initiated weapon malfunctions, which force trainees to perform immediate action drills while being engaged in a controlled exercise environment.
- After Action Review (AAR) reports (simulator dependent): weapon cant angle, butt pressure, trigger squeeze, aim trace, hit point, Point of Aim and Point of Impact indicators for instructors and students to review and discuss results and corrective actions.
- Must have the trainee's ability to "shoot and move" (forward moving eye point).
- Assigning multiple weapons per trainee to enable transition drills in a controlled environment.
- BlueFire Simulated Weapons Supported: Pistols: Glock 17, Glock 19, S&W M&P .40, SIG P320, Rifle: M4 / M4A1, Shotgun: Mossberg 500.
- Projection Screen and Stand.
- Ceiling mounts for projector and shot camera.
- Dvorak or laser insert weapons.
- Air tank for recoil refill station.

## **Augmented Reality – 4 man system with warranty included**

- Support of up to four trainees simultaneously in the actual or 3D virtual environment, posing realistic stress in a safe training setting.
- All trainees see their own physical features, weapons, and magazines, including their actual co-located training partners.
- Interactive avatars provide unexpected and adjustable scenarios each time by moving them in the scanned environment.
- Realistic and customizable avatars that can be easily changed, based on age, sex, race, body type and clothing style.
- All parts of this bid will allow participants to be able to scan and train in rooms up to 100'x100' square feet.
- High fidelity BlueFire™ weapons, including recoil, magazine replacement, weapon cant sensing, lockback and instructor-controlled simulated failures.
- Unmatched After-Action Review allows instructors to replay their actions for enhanced training recognition.
- Capabilities include: Multiple eyepoint views, - Multiple trainee views, - Birds eye view, - Moveable camera, - Barrel/muzzle tracking, - Shot trajectory, - Shot placement, - Trainee's head direction, - Trainee's eye gaze, - Active timeline
- BlueFire® Weapons Supported: M4A1, Glock 17, M17/M18, Sig Sauer P320 full/compact
- Must come with a four-person fire Team Kit to support up to eight hours of training time. The kit must consist of: Instructor Operator Station (IOS), including: Laptop, Network/wireless router, large areas may require a mesh network with additional wireless hotspots and appropriate router, Calibration wand, location scanning software, trainee travel case
- Four HMDs with tracking cameras and four fully equipped AR tactical kits, a compact wearable Micro PC, networking hub and a USB rechargeable battery power pack
- Two spare kits for successive training and battery charging including two HMDs with tracking cameras and two fully equipped AR / MR tactical kits
- Four USB weapon dongles and four infrared (IR) weapon trackers



- Three-year warranty included: recurring warranty fee and cloud access subscription fees to access updates and upgrades will be required for years two and beyond
- BlueFire® fill station (to support simulated weapons) with air tank

### **Selection Criteria**

All the above specifications will be included in evaluation of vendor proposals. Specific priority will be given to the following areas:

- Cost - 40%
- Build Volume - 10%
- Durability/reliability/warranty of the above subsystems in a typical operating environment - 25%
- Customer references - 5%
- Educational discount - 20%

### **Additional Provisions:**

-Buy American Provision: "To the greatest extent practicable, contractors are encouraged to purchase American-made equipment and products with funding provided under EDA Financial assistance."

-This project is partially funded with Federal funds from the United States Department of Commerce, Economic Development Administration and therefore is subject to the Federal laws and regulations associated with the program.