

BRIEF OF PROPOSAL

INFANTRY WEAPON TRAINING SIMULATOR (IWTS)

1. **Brief Description.** The Infantry Weapon Training Simulator (IWTS) is a modularly designed system which allows handling of Small Arms of a Section and Platoon to include in-service Pistols, Carbines, Rifles, Light Machine Gun (LMG), Rocket Launchers (RL), Sniper Rifle, Multiple Grenade Launcher (MGL) and MP9 (Sub Machine Carbine). A large number of modules can be built into the system which includes Annual Range Courses, Moving Target exercise, Reflex Shooting course, Field Firing, Tactical Engagement etc. In IWTS, scenarios could also be tailor-made to user requirements using 3D graphic softwares and AI and the lane configuration can also be customized to 6 lane, 8 lane or 10 lane profiles. The simulator uses in-service weapons but replaces the moving parts with the vendor provided recoil parts. The system has a tethered (where the compressed air is supplied for the recoil through a cable) and an untethered version (where the compressed air is filled in the modified magazine of the weapon system). In the present case, the **requirement is of a fully untethered Infantry Weapon Training Simulator (IWTS).** Diagnostics suite built into the module, allows the instructor to switch the scenario as well as evaluate the firer's performance.

2. **Broad Qualitative Requirements (QR).** Indian Army seeks Infantry Weapon Training Simulator (IWTS) with the following broad qualitative requirements:-

- (a) **Total No of Lanes.** Should support a minimum ten lane system.
- (b) **Weapons.** Should be able to provide training on all direct firing weapons available at section & platoon level to include Pistols, Carbines, Rifles, Light Machine Gun (LMG), Rocket Launchers (RL), Sniper Rifle, Multiple Grenade Launcher (MGL) and MP9 (Sub Machine Carbine). The simulation of the weapon system (including recoil and sound) should be as per the actual ballistics.
- (c) **Tethered/ Untethered.** Equipment should be completely untethered.
- (d) **Modular.** Should have the flexibility to train on any combination of weapons as mentioned in Paragraph 2 (b) above. Also capability to upgrade and absorb future weapons at the Section or Platoon level with limited effort should exist.
- (e) **Replica Weapons.** Should allow use of either replica of in-service weapons / in-service weapons or both in a single 10 lane IWTS.
- (f) **Weapon Laser Unit (WLU).** Should use an eye-safe laser and should have a feature for calibration of laser to weapon sight.
- (g) **Power Source for Weapon Laser Unit (WLU).**
 - (i) Power source for WLU should be re-chargeable and each charge should give a usage time of minimum four hours.
 - (ii) Should have a Battery Charging Station for charging at least one battery per lane i.e. (10 batteries) at a time.

(h) **Recoil System.** Should have an untethered recoil system and should facilitate all firing modes-single shot, burst/controlled burst and automatic fire of weapons.

(j) **Targets & Firing Practice.** Should be able to generate various types of targets, exercises and Range Course practices (Annual Range Course -2009) as per training needs or mission needs of the user.

(k) **Scenario Builder.** System should have the facility to create the operational scenarios, targets and target behaviours as per training needs or mission needs of the user i.e. Counter Insurgency/Counter Terrorism or conventional.

(l) **Simulation Related Features.** Should be able to portray different weather conditions & light conditions including enabling simulation of illumination provided by pyro-techniques.

(m) **Projection /Screen.** Projection system(s) should support High Definition (HD) and should have edge blending capability.

(n) **Recording Facility.** Should have facility to handle/manage recorded firing data & subsequently replay them for analysis of practice sessions.

(o) **Fault Analysis.** The system should have a facility to generate diagnostic report of the firing session and create reports of mistakes/faults by the firer.

3. **Estimated Quantity Required.** 66 IWTS.

4. **Tentative Timelines.** As per Chapter IIIA of DPP-2016.