

ANNEX E. TECHNICAL EVALUATION REQUIREMENTS – BID COMPLIANCE MATRIX

Canada will evaluate bids based on a series of Mandatory Requirements.

Mandatory Requirements

Canada defines Mandatory Technical Requirements in the criterion columns below. The criterion columns will determine if the Bidder has successfully achieved the minimum requirement. The Bidder must provide all information, documentation and follow any instructions specified in the evaluation criteria. Canada's evaluation team will evaluate the information, documents or other data provided by the Bidder to determine if the Bidder has successfully addressed all Mandatory Requirements.

Bidders must successfully meet all Mandatory Requirements in order for Canada to consider their response/proposal. If Canada's Evaluation Team deems that a Bidder fails to meet one of the Mandatory Requirements, Canada will deem the Bidder's response/proposal Non-Compliant, and their proposal will receive no further consideration.

Bid Compliance Matrix

The Bidder must provide a completed copy of this Compliance Matrix with their bid in electronic (Microsoft Word Format) format as well as a printed hard copy. For each requirement the Bidder must indicate whether the **MANDATORY REQUIREMENT** is met in the **MET** column and identify in the **BID REFERENCE** column where in the proposal the requirement has been met.

Additional Information

Any numbered title or section below is a direct reference to the respective section in the Statement of Work. It has been included in this grid as a convenience.

MODELLING

MANDATORY REQUIREMENT	MET	BID REFERENCE
4.1 Terrain Representation		
<p>(M1) 4.1.1. DVT must represent the “Whole of Earth.” This is to include, at a minimum, the following biomes: tropical rainforest, temperate rainforest, desert, tundra, taiga (boreal forest), grassland, wetlands, and arctic. This must also include, at a minimum the following landforms: beaches, bluffs/cliffs, canyons, dunes, hills, mountains, lakes, oceans, rivers, and ponds, plains, and valleys. Terrain must reflect events such as the passage of vehicles and explosions.</p>		
<p>(M2) 4.1.2. Users must be able to define the degree to which terrain impedes progress of entities in accordance with terrain classification. Example: Snow must provide realistic resistance to entities driving on a road.</p>		
<p>(M3) 4.1.3. DVT must generate custom/geo-specific terrain from source data provided by DND. See Annex C Standards, SYNTHETIC NATURAL ENVIRONMENT DATA SOURCES AND FORMATS</p>		
<p>(M4) 4.1.4. Users must be able to generate 2D tactical and topographical maps that correlate to the virtual and real terrain at user selected map scales from 1:5,000 to 1:1,000,000. These maps must be georeferenced and exportable in standard (COTS) GIS formats.</p>		
<p>(M5) 4.1.5. Terrain modelling must enable tactical exploitation of terrain including but not limited to cover from enemy fire, cloaking, and fire positions.</p>		
<p>(M6) 4.1.6. The DVT must enable cause-and-effect relationships resulting from within the synthetic environment. For example, during a simulation, vehicles will leave tracks on ground, artillery impacts will create craters, projectile impacts will damage buildings and impact terrain and rain will turn ground muddy and affect mobility.</p>		
<p>(M7) 4.1.7. Terrain must portray a smooth transition between differences in terrain</p>		

elevation and map edges in order to avoid sharp and unnatural edges.		
(M8) The DVT must permit import and display of standard elevation data formats at appropriate resolution to include but not limited to: DTED0; DTED1; DTED2; and, LiDAR.		
(M9) 4.1.8. Terrain databases must include correlated day vision, night vision and thermal representations of the terrain. The user must be able to view and interact with the correlated day vision, night vision and thermal representations of the terrain.		
(M10) 4.1.9. Features within the terrain databases must contain attribution according to their feature class (type) and extent, including but not limited to, soil surface region (sand, gravel, mud, soil, etc.), landcover (beach, forest, grassland, marsh, sand dune, swamp, thicket etc.), road types (paved, unpaved, gravel, dirt etc.), water depth (waterways, streams, lakes, oceans etc.), infrastructure, urban (built up areas).		
(M11) Placeholder		
(M12) 4.1.11. Terrain databases must incorporate solid obstacles to impede land vehicle movement. For example, houses, narrow urban terrain, and vegetation must impede movement in a way representative of the real world.		
(M13) 4.1.12. DVT must not limit the size of the terrain databases. The area of the terrain database “playbox” depends on end users requirements. The rest of the world will be represented by fabricated/auto-generated terrain.		
(M14) 4.1.13. DVT must be able to integrate custom terrains seamlessly with the fabricated/auto-generated world terrain. Terrain databases must have a visual extension at the border of the terrain with at least 5 km extent.		
4.2. Environment Modelling		
(M15) 4.2.1. DVT Environmental conditions must be accurately depicted within the synthetic environment with their appropriate effects on sensors, movement, and vision. These conditions include but are not limited to		

light conditions, weather conditions, obscurants (smoke) and seasons. For example, a strong wind would blow smoke in the appropriate direction and speed.		
(M16) 4.2.2. The DVT Software Developer Kit (SDK) must allow users to dynamically modify environmental conditions present in the synthetic environment.		
(M17) 4.2.3. The synthetic environment must accurately represent light conditions according to the nature of the light source (sun, moon and artificial), simulated time, geographical location and weather conditions.		
(M18) 4.2.4. The synthetic environment must accurately represent weather conditions including but not limited to rain, sleet, snow, fog, wind, and sand storms.		
4.3. Computer Generated Entity Representations		
(M19) 4.3.1. The DVT must render Blue, Red and Neutral entities in sufficient detail for visual detection, classification and identification. Entities must include, “Pattern of Life”, instantiations in all terrain settings. Entity behaviours must reflect damaged, destroyed, wounded or killed states.		
(M20) 4.3.2. Computer Generated Entities (CGE) must be modeled using open standard formats for 3D models. The SDK must allow modifications of vehicle attributes such as dimensions, weight, fuel and expendables capacity, transmission ration and maximum speed to reflect those of live sea, land and air vehicles.		
(M21) 4.3.3. CGE articulations and animations must be configurable with DIS enumerations. Models must support damage states affecting mobility fighting ability and full loss of viability.		
(M22) 4.3.4. DVT must provide tools to enable the creation, deletion and modification of CGE attributes at run time (such as EO/IR signature) and the import and export of GFI CGE.		

(M23) DVT must have the ability to import and animate, “Open Flight” format CGE.		
(M24) Refer to Annex B. The legacy CGE models located in Annex B must be included/available in DVT on delivery. Source data for these CGEs must be provided to DND.		
(M25) 4.3.5. The CGE included with DVT must include but not be limited to enemy, friendly and neutral forces, civilians, animals, structures, obstacles and clutter. See Annex B. Enemy, friendly and neutral force CGE must include various military elements including but not be limited to naval and civilian water craft, infantry, armour, artillery, engineers, aviation, air defense, fast air, UAV, medical and logistical elements.		
(M26) 4.3.6. CGE representing structures must include but not be limited to huts, barns, houses, apartment buildings, schools, religious buildings, hospitals, factories, shops, gas stations, rail stations, airports, compound structures, cave systems.		
(M27) 4.3.7. CGE representing obstacles must include but not be limited to sand bags, fences, wire, ditches, road blocks, check points, tunnels, mine fields, trenches, and gabions.		
(M28) 4.3.8. CGE representing clutter must include but not be limited to barrels, car wrecks, garbage, containers, and crates.		
(M29) 4.3.9. The CGEs must be affected by external influence including but not limited to being damaged, destroyed, wounded, killed or moved.		
(M30) 4.3.10. CGE must be capable of being automated and displaying a realistic pattern of life. For example, neutral forces in a village will go about their daily business instead of remaining still or an attack on a village will cause civilians to flee or hide.		
(M31) 4.3.11. Autonomous and semi-autonomous CGE must be capable of detecting CGE, terrain and culture outside air and land vehicles, so that, when dismounting, they can execute appropriate TTPs.		
(M32) 4.3.12. DVT CGE must have visualisations in different light condition and		

<p>through sensors using light amplification or thermal energy:</p> <p>Ground Models:</p> <ul style="list-style-type: none"> • Day Visual Unaided (3 meter high target) <ul style="list-style-type: none"> ○ Detectable¹ at 3000 meters; ○ Classify¹ at 1500 meters; ○ Identify¹ at 1000 meters • Day Visual Magnified (3M high target) <ul style="list-style-type: none"> ○ Detect at 6000m ○ Classify at 4000m ○ Identify at 2000m • Night Aided (NVG or Thermal) <ul style="list-style-type: none"> ○ Detect at 1000m ○ Classify at 500m <p>Air Vehicles:</p> <ul style="list-style-type: none"> • Day Visual Unaided <ul style="list-style-type: none"> ○ Detect at 6 nautical miles ○ Determine flight orientation at 6 nautical miles ○ Identify at 4 nautical miles <p>¹ Detectable means, “there is a moving object at this location”; Classify means, “it is a commercial pattern vehicle”; Identify means, “It is a pickup truck”.</p>		
<p>(M33) 4.3.13. CGE must realistically display textures, damage states and articulated parts (for example a tank barrel). CGE with articulated weapon systems must have at least 4 damage states including: undamaged, mobility damage, turret damage and totally damaged.</p>		
<p>(M34) 4.3.14. All other CGE must have at least 3 damage states: undamaged, partially damaged and totally damaged.</p>		
<p>(M35) 4.3.15. CGE must be capable of aggregation at doctrinal Collective Training levels (See Annex A).</p>		
<p>(M36) 4.3.16. Dismounted CGE, civilians and other life forms must be able of adopting</p>		

postures including but not limited to standing, prone, crawling, walking, running, wounded and dead.		
(M37) 4.3.17. Enemy, friendly and neutral force CGE must exhibit various modifiable attributes including but not limited to acquisition time, engagement time, effectiveness of fire and ability to evade fire.		
(M38) 4.3.18. Enemy, friendly and neutral forces CGE and civilian CGE mobility must be affected by the terrain type including but not limited to its composition (road, sand, gravel, mud, etc.), slope, vegetation, water depth.		
(M39) 4.3.19. DVT must realistically portray and animate the movement and behaviours of automatic and semi-automatic CGE sea, land and air vehicles.		
(M40) 4.3.20. Battlespace CGE objects must have a unique reference ID that persists during run-time scenarios and re-starts.		
4.4. Culture (Man-made features such as roads, bridges, buildings, towers)		
(M41) 4.4.1. DVT must render buildings, bridges, roads and other structures in sufficient detail for visual detection, classification and identification. Visual, Night Amplified and EO/IR; detection, classification and identification is required.		
(M42) 4.4.2. Culture must reflect weapon effects, damage from environment effects such as floods and fire, and, the passage of vehicles.		
4.5. Weapon Performance		
(M43) 4.5.1. Ballistics, damage and other weapon parameters represent effects of the class of system, but are UNCLASSIFIED (UNCLAS) on DVT delivery.		
4.6. Legacy and Tailored Models		
(M44) 4.6.1. DVT must import for re-use, Government Furnished (GFI) entity, culture and terrain models, (As listed in SOW Annex B), and support user or vendor generation of new models.		

Mandatory for models listed at Annex B, and for DND library of “Open Flight” format CGE.		
4.7. Vehicle Dynamics		
(M45) 4.7.1. DVT must animate sea, air and land vehicles with physics-based vehicle dynamic models. Dynamic models must be tuned to the specific vehicle class and type.		
(M46) The DVT SDK must enable modification of the vehicle dynamics models.		

SIMULATION

MANDATORY REQUIREMENT	MET	BID REFERENCE
5.2. Time		
(M47) 5.2.1. Simulations must execute in real time and user-selectable rates of slow or fast time.		
(M48) DVT must ensure that Simulation time is synchronized across user stations operating in the whole earth environment.		
5.3. Injects		
(M49) 5.3.1. DVT must permit users to modify parameters such as scenario, terrain and weather during run-time.		
(M50) 5.3.2. DVT must display status information for CGE objects and changes via notification. Examples: position, waypoints, hostility level, materiel holdings, tactical posture, bearing, speed and damage state.		
5.4. Environmental Conditions		
(M51) 5.4.1. DVT must represent environmental conditions such as 24 hour cycles, seasons, weather, position of sun, moon and stars, and, obscuring phenomena.		
(M52) 5.4.2. DVT must reproduce natural and man-made environmental sounds, including Doppler shift.		
(M53) 5.4.3. DVT must reproduce explosion sounds in accordance with weapon yields and flash to bang delay.		
(M54) 5.4.4. DVT must reproduce machinery and other equipment sounds.		
5.6. Command and Control Interface		

<p>(M55) 5.6.1. DVT must generate Command and Control messages C18 and C19 in selected formats. (See Annex C to SOW.)</p>		
<p>(M56) 5.6.2. DVT must represent CGE object navigation information such as position, altitude, heading, attitude and GPS information at a level appropriate to a virtual human or sea, land or air vehicle entity.</p>		
<p>5.7. Instructor/Operator Station (IOS)</p>		
<p>(M57) 5.7.1. DVT must allow an IOS to load, initiate and control scenarios and environmental conditions.</p>		
<p>(M58) 5.7.2. The IOS must allow instructors, operators or EXCON staff the ability to control training for a single trainee or multiple trainees from a single control station.</p>		
<p>(M59) 5.7.3. The IOS must allow instructors, operators or EXCON staff to dynamically modify any element in the synthetic environment including terrain, environmental conditions and CGE. Specifically:</p> <ul style="list-style-type: none"> • Access to ORBAT • Creation of new units and groups IAW Mil Std 2525 types • Creation of new control features (markers) • Create, read, update and delete CGE • Access to fixed CGE object parameters such as ID 		
<p>(M60) 5.7.4. The IOS must allow instructors, operators or EXCON staff to dynamically start, stop and restart specific exercises from any temporal or spatial location.</p>		
<p>(M61) 5.7.5. The IOS must be designed to allow instructors, operators or EXCON staff to view multiple simultaneous windows including but not limited to: views in vehicle crew and dismount position and their instruments; trainee status such as health and ammunition count; a topographical map displaying position and orientation of combat CGE objects-including aim points of articulated weapons and sensors; and, statistical information.</p>		
<p>(M62) 5.7.6. The IOS must allow instructors, operators or EXCON staff the ability to easily view battlefield metrics and dynamically</p>		

calculated statistical information including but not limited to hits, misses, and detection distances.		
<p>(M63) 5.7.7. The IOS must allow instructors, operators or EXCON staff the ability to dynamically control AI actions of CGE including but not limited to: movement; deploying weapon systems; mounting; dismounting; entering and leaving buildings; attacking; defending; withdrawing; retreating; delaying; clearing; patrolling; consolidating; breaching; and, taking up specific formations or positions.</p> <p>Mandatory at CT Levels 1 to 3.</p>		
<p>(M64) 5.7.8. The IOS must allow instructors, operators or EXCON staff the ability to dynamically alter CGE attributes such as: health status; skill level hostility level; and, location. For example, a destroyed tank may be instantly revived and moved to another battlefield location, a group of civilians may suddenly become hostile.</p>		
<p>(M65) 5.7.9. The IOS must allow instructors, operators or EXCON staff or operators the ability to introduce pre-programmed exercise injects using triggers.</p>		
<p>(M66) 5.7.10. The IOS must allow players, instructors, operators or EXCON staff the ability to control CGE as individual entities or as aggregate groups, IAW CT Levels.</p>		
<p>(M67) 5.7.11. The IOS must allow instructors, operators or EXCON staff the ability to communicate with any other personnel in the training system using C2 formatted messages (See Annex C to SOW, C19), simulated radio, text or telephone as appropriate. DVT must enable voice or formatted message communication between CGE.</p>		
<p>(M68) 5.7.12. The IOS must allow instructors, operators or EXCON staff the ability to monitor and record trainee communications.</p>		
<p>(M69) 5.7.13. The IOS must have an autonomous mode that allows a virtual instructor to operate the system using pre-defined scenarios and or course content.</p>		

5.8. After Action Review (AAR)		
(M70) 5.8.1. The DVT AAR capability must capture and replay the entirety of the synthetic environment (terrain, environmental conditions, CGE, instrument readings and site views) from any spatial or temporal point and from the viewpoint of any CGE.		
(M71) 5.8.2. The AAR capability must be able to capture and replay all communications, sounds and recording of trainees.		
(M72) 5.8.3. The AAR capability must include tools that allow for the automated creation of an AAR presentation based on relevant exercise events that instructors can then edit if necessary.		
(M73) 5.8.4. The AAR capability must include tools that allow for the ability to tag and easily find specific temporal points and or actions that occurred within the synthetic environment. For example, during a 24 hour exercise a user must be able to find when a battle occurred without having to forward through the entire exercise.		
(M74) 5.8.5. The AAR capability must allow for the selection, annotation and export of video sequences from an exercise replayed in 3D Stealth and 2D tactical map to a feasible media with related communication and sound (radio, intercom and combat sounds).		
(M75) 5.8.6. The AAR capability must allow for the conduct of an AAR while another exercise is being conducted.		

SCENARIOS

MANDATORY REQUIREMENT	MET	BID REFERENCE
6.1. Scaling		
(M76) 6.1.1. DVT must provide a first-person gaming interface to network individuals, squads, platoons, vehicles and Joint force team members. (See Annex A) Mandatory first person, out of the box at CT Levels 1 to 3.		

(M77) 6.1.2. DVT must demonstrate a scenario at CT Level Five (Combat Team) as described at: B-GL-321-006/FP-001: Combat Team in Operations. The demonstration must include the Combat Team, also known as the Sub-Unit, augmented by aviation and one battery of artillery.		
(M78) 6.1.3. Demonstrated scenario must execute in an open format terrain data base, using source data provided by DND.		
(M79) 6.1.4. The DVT application must provide a graphical interface, which does not require software coding, to create, modify or run scenarios.		
(M80) 6.1.5. The DVT application must be configurable to coordinate multiple DVT application instances from a single master DVT application instance, to support a distributed scenario or vignette.		

INFORMATION MANAGEMENT/INFORMATION TECHNOLOGY

MANDATORY REQUIREMENT	MET	BID REFERENCE
7.1. Hosting		
(M81) 7.1.1. The vendor must provide hosting options to include desktop, client-server, virtual machine, thin client and cloud.		
7.2 Image Generator (IG)		
(M82) 7.2.1. DVT must include image generation in visual and sensor spectral bands. The integrated IG must provide resolution, field of view and brightness to enable detection, classification and identification of entities, culture and terrain.		
(M83) 7.2.2. The IG must present imagery to desktop or other monitor, projection on flat screen or dome display, immersive virtual reality and augmented reality devices.		
(M84) 7.2.3. The IG must ensure, "fair fight", synchronization, between multi-user stations, of Level of Detail and weather.		
(M85) 7.2.4. The IG must operate on the latest versions of MS Windows, starting with Windows 10 64 bit, at contract award.		

(M86) 7.2.5. The IG must support CIGI version 3.3.		
(M87) 7.2.6. Must support DIS 6 or higher (Entity packets as well as interactions).		
(M88) 7.2.7. Must support multi-channel visual flow synchronization.		
(M89) 7.2.8. Must support Virtual Reality headsets.		
(M90) 7.2.9. Must support an accurate ephemeris model -based on the date, time and location.		
(M91) 7.2.10. Must support weather effects such as clouds, fog, precipitation, and wind and sea states.		
(M92) 7.2.11. Must support particle effects such as dust.		
(M93) 7.2.12. Must support special effects such as tracer rounds, explosions, missile trails, muzzle flashes, smoke, fire and flares.		
(M94) 7.2.13. Must support user created overlays (such as HUDs) in OpenGL or Direct X.		
(M95) 7.2.14. Must support simulating infrared sensor and camera views and Night Vision Devices. Sensor displays must allow selection of position, orientation, and adjustment of optics on separate individual channels.		
(M96) 7.2.15. Must support controlling the articulation and animations of standard 3D models.		
(M97) 7.2.16. Must support whole world terrain with high resolution inserts.		
(M98) 7.2.17. Must support modeling underwater terrain.		
(M99) 7.2.18. Must support standard GIS vector and raster data for the construction of terrain data, including but not limited to: <ul style="list-style-type: none"> • Vector polygon, line and point data, • Raster image, elevation data and bathymetry data. 		
(M100) 7.2.19. DVT must allow users to create rule sets defining how and when CGE and terrain are rendered. For example: <ul style="list-style-type: none"> • Specific CGE always appear regardless of view distance 		

<ul style="list-style-type: none"> IG forces rendering of a specific CGE LOD regardless of view distance 		
(M101) 7.2.20. DVT must allow access to the framebuffer and rendering pipeline.		
7.3. Integration with Legacy Constructive Sim		
(M102) 7.3.1 DVT must integrate with the legacy CONSIM systems to provide 2D and 3D visualization of the battlespace. This includes an Application Programming Interface to allow data to flow in and out of the DVT into other systems.		
7.5. Software Developer Kit (SDK)		
(M103) 7.5.1. The DVT application must provide a graphical interface, which does not require software coding, to create, modify or run scenarios.		
(M104) 7.5.2. The DVT application must provide a map-based user interface for scenario development by a non-specialist.		
(M105) 7.5.3. The DVT application must provide a user interface for the editing of entities, weapons and sensors by a non-specialist.		
(M106) The SDK must allow access to object information such as type, size, shape, control features, and military characteristics.		
(M107) 7.5.4. The SDK must allow enumeration of battlespace object instances, including units, materiel and control features.		
(M108) 7.5.5. The DVT application must provide a user interface for the editing of terrain navigation mesh and CGE geometry by a non-specialist.		
(M109) 7.5.6. The SDK must allow access to inter-visibility and sensor detection information, including: <ul style="list-style-type: none"> Line of Site (LOS) visibility cylinder between two points Visibility between two points based on selected sensor Detection between two points based on sensor and AI 		
(M110) 7.5.7. The DVT API must allow access from C/C++, Java, JavaScript, HTML 5 or network protocol.		

(M111) 7.5.8. Any C/C++ libraries must include current and one previous release of Visual Studio.		
(M112) 7.5.9. Any Java implementations must support JRE 11.		
(M113) 7.5.10. SDK documentation must include units and geometric frame, (for example, “get Speed”, will return the current speed in metres/second).		
(M114) 7.5.11. SDK and API must allow debugging during run-time: <ul style="list-style-type: none"> • API calls return error codes in case of failure • API sets breakpoints and watches • Symbols are available for all user code • Ability to attach to the process. 		
(M115) 7.5.12. The UI framework must use an open standard such as HTML 5.		

MANAGEMENT

MANDATORY REQUIREMENT	MET	BID REFERENCE
8.1. Licencing		
(M116) 8.1.1. Supplier must provide enterprise/unlimited licencing. Licenses must be perpetual on the hardware they were assigned to after the contract has ended.		
8.2 Compliance Matrix		
(M117) 8.2.1. The Bidder must complete and submit this compliance matrix, in Microsoft Office compatible format as part of the bid. The Bidder must indicate whether the MANDATORY REQUIREMENT is met in the MET column and identify in the BID REFERENCE column where in the proposal the requirement has been met.		
8.3. Access		
(M118) 8.3. Operation of the DVT must not rely on a commercial internet connection.		
8.4 Documentation		
(M119) 8.4.1. The Vendor must provide documentation in enough detail to allow end users to design, develop, execute and de-brief scenarios at first person and Collective		

<p>Training Levels 2 to 5. Documentation must aid DND developers to modify modelling attributes in accordance with the security classification of the scenario.</p>		
<p>(M120) 8.4.2. The Contractor must provide DVT application documentation that covers the following aspects: scenario development, administrator, basic user, importance of configuration parameters and associated interdependencies.</p>		
<p>8.6. Software Updates and Maintenance</p>		
<p>(M121) 8.6.1. The Contractor must provide any and all DVT software updates, from the date of contract award, which will include updates to add-on software and plug-ins as appropriate. This will provide The Client with:</p> <ul style="list-style-type: none"> • All upgrades, updates and new releases of the licensed software; • All extensions and other modifications, including but not limited to drivers, service packs and service releases; • All Application Programming Interfaces (APIs), plug-ins, Software Design Kits (SDK) applets and adapters; • All rewrites, including in other programming language(s); and • On request, all back-grades or downgrades. 		
<p>8.7. Help Desk</p>		
<p>(M122) 8.7.1. The Contractor must provide The Client with a DVT telephone help desk, available from 07:00 to 19:00 EST on all working days. If calls are received outside of these hours they must be directed to an answering service and returned by 10:00 the following working day. A toll-free access number must be provided.</p>		
<p>(M123) 8.7.2. Support staff manning the help desk must be experienced at all aspects of DVT modules, and Application Programming Interfaces (APIs).</p>		
<p>(M124) 8.7.3. Support staff must be qualified to immediately answer “Tier 1” DVT</p>		

questions, which is any support query that doesn't require the assistance of dedicated DVT developers.		
(M125) 8.7.4. If a question is more complex, or involves add-on software, it will be escalated to "Tier 2" status and will be responded to by email or phone on the next working day or sooner. Tier 2 responses typically include, as an example, script or scenario.		
(M126) 8.7.5. If a response requires modification of DVT or a more complex response (for example a write-up describing how aspects of the DVT game engine or add-on software operate) then the query will be escalated to "Tier 3", and the Contractor must submit a quotation to conduct the work.		
8.8. Email Support		
(M127) 8.8.1. The Contractor must also offer support by email for Tier 1 and 2 questions (as defined above), with a guaranteed response time of two hours or less assuming the support request is received from 07:00 to 18:00 on working days. Emails received outside of these hours must be returned by 10:00 the following working day.		
8.9 Version Maintenance		
(M128) 8.9.1. The Contractor must continue to maintain the version of the licensed software (i.e., the version or "build" originally licensed under the Contract) as a commercial product (i.e., The Contractor must continue to develop new code in respect of the licensed software to maintain its functionality, enhance it and deal with software errors) for the contract period. After this time, if the Contractor decides to discontinue or no longer maintain the then-current version or "build" of the licensed software and, instead, decides to provide upgrades to the licensed software as part of the software maintenance, the Contractor must provide written notice to The Client at least 12 months in advance of discontinuation.		
8.10. Trouble Tickets		
(M129) 8.10.1. The Contractor must maintain a database of trouble tickets. Trouble tickets		

must be generated when The Client staff contact the help desk requesting assistance.		
8.11. Website		
(M130) 8.11.1. The Contractor must provide a web interface to allow The Client staff to submit and review trouble tickets. The web interface will be secured by a standard username and password mechanism.		
8.12. Software Warranty		
(M131) 8.12.1. Warranty for DVT will be extended for the duration of the support package. The Contractor must use its reasonable efforts to correct or repair “Bugs” identified by The Client in the DVT software within 30 days of the relevant trouble ticket being generated. “Bugs” are defined as an error or other unexpected behaviour that prevents the software from performing its intended purpose as a tactical training tool, and does not include functionality enhancements. Following such a repair, The Contractor must provide an interim software maintenance patch (also known as a “hotfix”). The process for testing and releasing such patches will be defined by The Contractor following contract award.		
8.13. Training		
(M132) 8.13.1. The Contractor must provide one training course per Contract Year, at a location chosen by The Client. The Client may also request additional courses throughout the contract year on an as and when needed basis, offered as options on the Contact.		
(M133) 8.13.2 DVT, out of the box, must provide real time performance support (tool tip) at the SDK and IOS. This may be done via roll-over text and context-dependent cueing.		
8.14. Integrated Solution		
(M134) 8.14.1. DVT solution must comprise a suite of virtual training components, an “application framework/architecture”, from a single “Original Equipment Manufacturer” (OEM). Deliverable components in a DVT system generally comprise: <ul style="list-style-type: none"> • Computer Generated Forces; • Image Generator; 		

<ul style="list-style-type: none"> • Terrain Generator; • Entity and Culture Models; • Projection Systems; • Connectivity Applications such as DIS and HLA; • Instructor Operator Station; • SDK • API • User Manuals • Synthetic Voice and Data Radio System; and, • After Action Review System. <p>The components of DVT must have been repeatedly and reliably integrated by the single OEM.</p>		
8.15 Trade Regulations		
(M135) 8.15.1. DVT must not be subject to trade regulations such as the International Traffic in Arms Regulations (ITAR) or the Export Administration Regulations (EAR).		
8.16 Intellectual Property		
(M136) 8.16.1. Canada must have an Enterprise Level Licencing Agreement for the DVT. Licencing rights must include release to, and use by, a third party supplier as Government Furnished Equipment.		

INTEROPERABILITY STANDARDS

Canada has a requirement for the DVT to be compliant with the following standards.

CATEGORY	STANDARD	MET	BID REFERENCE
INTEROPERABILITY			
	<p>(M137) C1. IEEE 1516-2010 High Level Architecture</p> <p>C2. STANAG 4603</p> <p>Details: Technical architecture developed to facilitate</p>		

	<p>the reuse and interoperation of simulation systems and assets. Allows interoperability with Joint M&S systems.</p>		
	<p>(M138) C3. IEEE 1278 Series</p> <p>Details: Protocol for linking simulations of various types. Allows interoperability with Army constructive M&S.</p> <p>Distributed Interactive Simulation (DIS) Version 6.0</p>		
	<p>(M139) C4. SISO-REF-010-2018</p> <p>Details: Data dictionary for Distributed Simulation.</p> <p>Must support DIS enumerations as specified by SISO</p>		
SYNTHETIC NATURAL ENVIRONMENT DATA SOURCES AND FORMATS			
Terrain Source Data - Imagery	<p>(M140) C5. Geographic Tagged Image File Format (GeoTIFF)</p> <p>Details: Metadata standard which allows geo-referencing info to be imbedded within a TIFF file.</p>		
	(M141) C6. Placeholder.	Left blank.	
	(M142) C7. Compressed ARC		

	Digitized Raster Graphics (CADRG)		
	<p>(M143) C8. Scalable Maps</p> <p>Details: For interoperability, maps scaled between 1:25K and 1:250K should show the same terrain data. Entity model locations must correlate to WGS-84 mapping datum.</p>		
Terrain Source Data - Elevation	<p>(M144) C9. Digital Terrain Elevation Data (DTED)</p> <p>Details : Digital datasets of terrain elevation values. Mandatory at DTED Level 2</p>		
	<p>(M145) C14. Open Flight</p>		
	<p>(M146) C17. SISO-STD-013-2014 Common Image Generator Interface (CIGI)</p> <p>Details: Interface that promotes a standard for a host device to communicate with an image generator</p>		
COMMAND, CONTROL, COMMUNICATION			
NATO-STD-APP6A NATO Joint Military Symbology	<p>(M147) C18. Allows 2D and 3D maps to represent units with standard military</p>		

	<p>symbology to comply with CF training systems</p> <p>Details: All 2D map unit and overlay representations should comply to this standard</p>		
	<p>(M148) C19. C2-SIM Gateway or equivalent</p> <p>Details: Allows entity data and messages to be integrated on a network into C2 systems. Specifically support for OTH-GOLD or MSDL (Military Scenario Development Language) or C-BML (Coalition Battle Management Language).</p>		