

**Request for White Papers
Persistent Cyber Training Environment (PCTE)
Cyber Innovation Challenge #3**

1.0 Purpose:

This Request for White Papers (RWP) is issued to seek vendors capable of fulfilling the Persistent Cyber Training Environment (PCTE) topics outlined below:

- Technical Management Dashboard
- White Cell (Exercise Control)
- Assessment (Systems and Training Performance)

The Government will evaluate the solutions with the intent of negotiating an Other Transaction Agreement under the Training and Readiness Accelerator (TReX). The Government will evaluate solutions in each topic area and are not required to submit a comprehensive solution for all three areas.

2.0 Summary and Background

The PCTE is intended to solve Department of Defense (DoD) gaps that include the capability to effectively plan, build and conduct Cyber Mission Force (CMF) training. Currently, CMF training scenarios are manually deployed on a variety of cyber range resources with varying capabilities that lack fidelity, interoperability, reusability and cannot scale to support projected CMF demands. To close this training shortfall, DoD requires a persistent cyberspace training environment that can rapidly deploy and redeploy high fidelity training scenarios, on demand, into specific environments to meet the needs of the CMF. PCTE will enable the CMF to conduct training, exercises and mission rehearsals for the full spectrum of Cyberspace Operations.

PCTE deploys prototype capabilities through competitive Cyber Innovation Challenges (CICs) to the field consisting of capabilities including event management, environment creation/replication, and connections into to the Services' Crew Training Facilities. With continued evaluation of the CIC prototypes by Cyber Mission Forces (CMF) personnel, the PCTE platform will continue to evolve based on changes to technology, threat, and tactics, techniques and procedures (TTPs).

Building on CIC-1 and CIC-2 awarded capabilities, CIC-3 is being issued to investigate prototype solutions specifically in the area(s) of Technical Management Dashboard, White Cell (Exercise Control) and Assessment (System and Training Performance). The intent of the challenge is to evaluate the technical feasibility of integrating these capabilities into a PCTE baseline training solution that is presently incorporating contributions from selected CIC-1 and CIC-2 vendors with Government integration activities.

2.1 Applicability of Attached Documents to this Request

2.1.1 Attachment 1, PCTE CIC-3 Statement of Need: Vendors should read the Statement of Need to understand the PCTE platform, its current baseline and the CIC-3 topic areas requested to expand its capabilities. Vendors should submit white papers aimed for a particular topic area. Vendors who have solutions across multiple topics areas are requested to divide and submit separate white papers to each topic area accordingly (more detail in Paragraph 3.4) and showcase how potential solutions can specifically meet the topic area being addressed. Vendors should articulate any assumptions or major discrepancies between the Statement of Need and their technical solution.

2.1.2 Attachment 2, PCTE CIC-3 Use Cases: Vendors should utilize the use case document to provide contextual understanding of how potential solutions support a cyber training event across planners, blue/red teams, technical operations management and event managers. The use cases identify notional dependencies and inter-relationships amongst solutions to the rest of the PCTE platform.

2.2 The Government intends to integrate vendor solutions into the modular PCTE baseline that currently includes other commercial and proprietary products. Integration will require technical data exchange, dialogue, and software/hardware integration of proposed solutions within the Government's DevOps environment. It is expected that vendors may have to work directly with other vendors under Government integration oversight to help establish and extend the PCTE platform to meet CIC-3 identified gaps, as appropriate based on individual solutions.

2.3 The Government anticipates that a follow-on transaction for further prototyping, or a follow-on production contract or transaction, may be awarded to the Vendor(s) for this effort without the use of competitive procedures if the participants in the transaction successfully complete the prototype project as outlined within the awarded scope of the initial transaction and the bounded scope of this competition. A follow-on transaction for further prototyping, or production effort, could potentially involve the requirements for additional technical enhancements, software support, and/or sustainment of the solution(s) provided for the Technical Management Dashboard, White Cell, or Assessments.

2.4 Vendors interested in responding to this Request for Solutions must be members of the Training and Readiness Accelerator (TReX).

3.0 White Paper Responses:

3.1 Capability/Concept Solutions: White Paper responses shall be structured in a two-part Capability/Concept response. The first part will require a vendor to propose what their current demonstrable *capability* is to date – with the second part providing their *concept* for what they believe they can achieve, if further funded to adapt it to meet PCTE capability needs and technical integration goals (modularity, scalability, extensibility, standards adherence, accessibility).

3.2 In addition to the Capability/Concept Solutions, responses shall also address the following additional focus area for each topic within their submissions:

3.2.1 Technical Management Dashboard:

- i. Description of capability to provide help desk and technical operations support for PCTE platform required to deliver Cyberspace Operations (CO) training as a service.
- ii. Management and execution of the IT operations and maintenance of PCTE resources and services (i.e. Regional Compute Storage, applications, coordination, requests, collaboration, network, range resources, alerting, etc).
- iii. Capabilities that provides services, tools, and products to manage and execute common operating picture of PCTE infrastructure and platform availability, accessibility and security posture.

3.2.2 White Cell (Exercise Control)

- i. Capabilities that allow White Cell to oversee, coordinate, and control the exercise environment to drive training audience's accomplishment of tasks and training objectives (i.e. sensor placement, throttling, plans/designs).
- ii. Capabilities enabling the execution and monitoring of all actors in near-real time within PCTE training event/scenario, associated data and event visualizations, alerting, training injects, data recording and ability to adjust training scenario flow (i.e. pause, resume, snapshot, stop) and control resources.

3.2.3 Assessment (Systems and Training Performance)

- i. Description of a capability or a suite of tools that allows the White Cell to conduct overall tailored analysis of the environment and assessment of the performers within after action reviews.
- ii. Description of a capability that has live and automated assessments with analytics and visualizations supporting data capture, playback, and archival of elements or segments of the training event as a learning aid to the training audience.
- iii. Description of a capability that has visualizations of performance metrics for various components in the physical environment as a learning aid for network designers, technical operators, and tool managers.

3.3 Anticipated Delivery Schedule: Vendors shall include their anticipated delivery milestone schedule to reflect their individual solution(s). For capabilities and/or concepts that will require additional development, those time-frames should be explicitly states as well.

3.4 Submissions should be broken out into seven-page increments, for each topic area, with clearly severable breaks for each topic. Each individual topic area response is limited to no more than seven pages.

Number of Topic Area	Number of Pages
One Response	7 pages
Two Responses	+7 pages
Three Responses	+7 pages

3.4.1 Vendors are encouraged to use their page counts as appropriate for their unique solution. There is no prescribed amount that should be devoted to the “capability” portion vice the “concept” solution or the “delivery schedule”.

3.4.2 Vendors are limited to the seven-page increment for each topic area, regardless if they use fewer than seven pages under one section.

3.5 Vendors should ensure that all assumptions made during development of responses is clearly stated.

3.6 Intellectual Property and Rights in Technical Data: Intellectual Property and Rights in Technical Data: All IP and data rights are negotiable based on individual vendor solutions.

It is the Government’s desire to receive government purpose rights to all development and deliverables of technical data and software funded under the transaction agreement, for at least a five-year period. The five-year period, or such other period as may be negotiated, would commence upon execution of the Other Transaction Agreement that required development of the items, components, or processes or creation of the data. Upon expiration of the five-year or other negotiated period, the Government would receive unlimited rights in the technical data. Government purpose rights means the right to use, modify, reproduce, release, perform, display, or disclose technical data and software within the Government without restriction; and release or disclose technical data and software outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose technical data and software for United States government purposes.

Your response should clearly outline the appropriate rights in technical data and software that will be delivered with your solutions.

3.6.1 If additional detail is necessary to appropriately detail IP and Rights in Technical Data, this information may be included as an Appendix.

3.7 Proposed Pricing and Milestones: Vendors should submit fixed amount pricing with their solution(s), with payments occurring at clearly definable, detailed milestones (if necessary). Vendors shall also clearly identify the anticipated licensing

and sustainment costs associated with their solution. Pricing should be provided in Appendix 1 to the solution, with no page count associated with it.

3.8 Provide your nontraditional* business status or your ability to meet the eligibility requirements of [10 U.S. Code § 2371b](#) on the cover page of your response. Within your response, please check the following box which applies – with appropriate justification if applicable.

- There is at least one nontraditional defense contractor or nonprofit research institution participating to a significant extent in the project.
- All significant participants in the transaction other than the Federal Government are small businesses or nontraditional defense contractors.
- At least one third of the total cost of the project is to be provided by sources other than the Federal Government.

*Nontraditional – an entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by the Department of Defense (DoD) for the procurement or transaction, any contract or subcontract for the DoD that is subject to full coverage under the cost accounting standards prescribed pursuant to [41 U.S. Code § 1502](#) and the regulations implementing such section.

3.9 In addition to your nontraditional business status, the cover page of the response shall also include the company name, Commercial and Government Entity (CAGE) Code (if available), address, and primary point of contact including phone number and email address. The cover page does not count towards page count.

3.10 All questions related to this RWP should be submitted in writing to initiatives@nstxl.org, with “CIC-3 Question” used in the subject line. Questions must be submitted no later than **12:00 PM EST on July 18th, 2018**. Questions received after the deadline may not be answered. Questions shall not include proprietary data.

3.11 Responses shall be submitted no later than **12:00 PM EST on August 2nd, 2018**. Your response should be submitted electronically to initiatives@nstxl.org, with “PCTE – CIC3” used in the subject line.

4.0 Vendor Selection Process:

4.1 After receipt of submissions from TReX members, the Government will complete their initial evaluations with consideration given to the technical merit of the response, current capability, feasibility of integration to the current PCTE baseline, cost to operate, and total project risk across each topic area. The proposed project price, delivery schedule, and data rights assertions will be considered as aspects of the entire response when weighing risk and reward.

The considerations listed above are not listed in any specific order of priority and

responses will be considered as a whole. Comparative analysis of submissions is allowed.

4.2 After initial evaluation, the Government will conduct a down select to the pool of vendors with the most technically feasible solutions to hold demonstrations of the capability for the proposed topic area. Demonstrations are currently estimated to be held in late September 2018 in Orlando, FL. Based on outcome of the demonstration, the Government will collaborate with vendor(s) to finalize any unique requirements and terms and conditions necessary before final award and selection is made.

4.3 The Government reserves the right to hold in-depth discussion with individual vendors throughout the Challenge to ascertain capability and potential of submissions.

4.4 The Government may issue more than one OTA under this announcement and across multiple topic areas. The Government will award this project, via TReX, to the respondent(s) whose solution substantiates to be most advantageous to the Government, with consideration given to the technical merit of the response, current capability, feasibility of integration to the current PCTE baseline, cost to operate, and total project risk. The Government reserves the right to award to a respondent that does not meet all of the requirements, but provides attributes or partial solutions of value, of the Challenge.

4.5 Evaluations will be conducted by a pool of subject matter experts, which will include contracted support personnel from the following companies: John Hopkins University, MITRE, Optimal Solutions Technologies (OST), COLSA and Corvus Group. Contracted support personnel will only serve as advisors. Personnel receiving access to this information will be limited to an as-needed basis and all individuals will be required to sign non-disclosure agreements prior to receiving access – the companies themselves have been restricted from any current or future PCTE opportunities.

5.0 Additional Information

5.1 The costs of preparing and submitting a response is not considered an allowable direct charge to any contract or agreement.

5.2 Export controls: research findings and technology developments arising from the resulting submission may constitute a significant enhancement to the national defense and to the economic vitality of the United States. As such, in the conduct of all work related to this effort, the recipient will comply strictly with the International Traffic in Arms Regulation (22 C.F.R. §§ 120-130), the National Industrial Security Program Operating Manual (DoD 5220.22-M) and the Department of Commerce Export Regulation (15 C.F.R. §§ 730-774).

5.3 All submissions shall be unclassified. Submissions containing data that is not

to be disclosed to the public for any purpose or used by the Government except for evaluation purposes shall include the following sentences on the cover page:

“This submission includes data that shall not be disclosed outside the Government, except to non-Government personnel for evaluation purposes, and shall not be duplicated, used, or disclosed -- in whole or in part -- for any purpose other than to evaluate this submission. If, however, an agreement is awarded to this Company as a result of -- or in connection with -- the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent agreed upon by both parties in the resulting agreement. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]”

5.4 Each restricted data sheet should be marked as follows:

“Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this submission.”