48Q: Should the five slide summary (Section II.F) be included within Volume 1 (i.e., pasted images of each slide within the PDF file for Volume 1), or just uploaded as a PowerPoint file as part of the overall zip file submission within the BAA tool?

48A: The PowerPoint slides should be submitted as a separate attachment to the technical volume.

47Q: Do the cover letter and transmittal letter count against the 30 page limit for Volume I?

47A: The cover letter and transmittal letter do not count to the Volume I page limit.

46Q: Regarding TA2, how much “tactical fidelity” (e.g., TPP) is required? Do you expect AI in the first phase? In the first 6 months?

46A: Proposers need to determine the level of tactical fidelity required by their specific approach taking into account the need to tackle the challenges addressed by the program and the intended users.

45Q: Do the TA2 performers need to address the deconfliction problem of multiple functional compiler users competing for a fixed number of resources/assets?

45A: Yes, at both levels of command.

44Q: When will the PowerPoint template be posted on FBO?

44A: No template will be provided. Please use the format in Appendix 3 (page 47).

43Q: What is the planning cycle / CONOP?

43A: One of the goals of the program is to accelerate the planning cycle to improve combat agility of units at the battalion level and below. This will involve both replication of the current planning cycle and exploration of new concepts to achieve faster and more effective mission execution.

42Q: Who manages the coordination of the operating picture between players? Is it a TA1 game mechanic or required for TA2?

42A: The coordination of the operating picture is part of the TA1 Basic Architecture and Mechanics.

41Q: What is the division of labor for the UI/UX between TA1 and TA2? Which performer provides the immersive 3D situational awareness?
41A: The TA1 performer will develop the UI/UX for the environment while the TA2 performer will develop the UI/UX for the tool. An immersive 3D situational environment is not required by the BAA and a rationale for its inclusion will need to be discussed if it is proposed.

40Q: The solicitations mention collaborations between performers. How does that happen and when during the program?
   40A: There will be frequent meetings and trips to visit collaborators. These meetings and trips should be included in your proposal.

39Q: Is starting from a game engine like Unity in the same category as leveraging existing LVC solutions?
   39A: No, but it is unlikely to be sufficient. It is incumbent on you to explain why you chose a specific engine and what value it provides.

38Q: What roles do you envision for AI?
   38A: AI is necessary so that a manageable number of users can run the simulation.

37Q: What is the target/ideal UI/UX run on (tablet, web page, PC)?
   37A: The target is a notional system that can be utilized by the USMC.

36Q: What does the visualization or UI/UX look like? Is it a 2D map or does it got down to the XCOM level of detail? Is there a first person perspective that a marine interacts with?
   36A: Answers to these questions depend on the specific approach proposed.

35Q: What are the Marines in the loop doing? Are they only using the functional compiler or are they playing at the individual or even fire team level? Are they working together on the same mission, or on multiple missions? Are they competing for resources?
   35A: The Marines are actively participating in the game.

34Q: Will there be a common government provided scenario/data or is that up to the TA 1/2 performers?
   34A: It will be provided by the TA3 & government.

33Q: Can you please expand upon your interest in modeling cyber effects in option phases?
   33A: We will not be addressing cyber in this program. (We will be addressing the EM spectrum).
32Q: Can you please expand upon the interaction subarea in TA1 and whether that is limited to player-player interactions or also includes player-AI interactions, AI-player interactions, and interactions with civilian populations?
   32A: Proposers should define what is appropriate to answer the questions. If you believe, you need rich AI to answer questions on combat power, then yes. Scenarios will have a civilian populace.

31Q: Can a vendor prime on one TA and subcontract on a second?
   31A: Yes

30Q: Please define “agile,” how does one measure/assess agility?
   30A: The definition of these metrics is for the proposers to address.

29Q: You mention killswitch and ATAK. How do you see those systems as part of PROTEUS?
   29A: These are notional platforms and there is flexibility in their definition.

28Q: Who are the users of PROTEUS? Are these soldiers in training? Is this a mission planning user? Is this for mission execution?
   28A: The intended users are Marine Corps stakeholders. They are not likely to be using it for mission execution.

27Q: What level of resolution will the virtual environment go down to? Will it include building interiors?
   27A: It is for the proposers to determine the level of fidelity appropriate for tackling the assessment and exploration of new approaches to combined arms operations involving coordination of effects in multiple domains. Building interiors should be considered.

26Q: How many echelons of users do you envision for the functional compiler (Brigade? Company? Squad?) What are the highest and lowest level users?
   26A: Battalion down to Marine fire team.

25Q: Can you elaborate on what you mean by “warfighting as a function app?”
   25A: An intuitive UI/UX that can be used to accomplish mission objectives on the battlefield (i.e. If you are the squad leader you don’t want a logistics planning problem you want something similar to what you might find in a game).

24Q: Regarding scalability, are we creating completely novel force packages (unconventional) and allowing the human operator to perform a “reasonableness” check?
   24A: Yes.
23Q: What level of complexity is expected for the UI?
   23A: The simplicity/complexity of the UI will be shaped by the USMC community as part of the program.

22Q: How long are wargames? Are they single session or multiple? How long is a session?
   22A: This is not likely to be a tabletop, but instead will be a platform that enables us to answer questions in a scalable way that may involve virtual/distributed concepts.

21Q: Is managing military info ops efforts a part of the wargame or is it primarily kill-chain/kinetics?
   21A: Information operations (e.g., use and impact of social media and news reporting, cyber operations) are not part of the program.

20Q: How significant is the representation of a civilian population for each phase?
   20A: The presence of a civilian population is important to the problem; however, it is up to the proposer to determine how to incorporate a civilian population into the model.

19Q: How should technology transition be addressed in the proposals?
   19A: Technology transition is part of the evaluation criteria included in the BAA.

18Q: How do you plan to leverage CASCADE? What is the level of overlap desired between PROTEUS and the other programs discussed at the Proposers’ Day (OFFSET, Squad X)? Are we supposed to align our proposed technologies to their programs at all?
   18A: There are no plans to leverage CASCADE in this program. Additionally, there is no desired overlap between PROTEUS and the other programs discussed during proposers’ day. Squad X and OFFSET may however inform future concepts to be employed by PROTEUS.

17Q: What role will experienced ground warfighters have in evaluating the STO PROTEUS proposals? Can you give us more detail on the initial Marine scenario to be used at the 12 month demo?
   17A: We will not provide any detail on the initial Marine scenario at this time.

16Q: What are your plans to down-selection and when in the program schedule will they occur? What role is the government intending to have in TA1&TA2 integration?
   16A: There are no plans for a compulsory down select in the program. The government will facilitate interactions between the TA1 and TA2 teams but it is incumbent on those teams to coordinate the integration.
15Q: What particular tools or government GFE software do you expect contractors to leverage for the TA1, TA2 or TA3 tasks?
   15A: Proposers will leverage the government provided cloud development environment described in question #6.

14Q: Are the TA3’s expected to develop the models for the systems in the wargame environment or simply define their characteristics and effects for the TA1’s to then go and model?
   14A: As mentioned in the BAA, “Performers in TA3 will provide models that define functional characteristics of systems being composed as well as tactics (TTP’s) associated with groupings of these systems.” Integration of these into the test environment is the responsibility of TA1.

13Q: What is the funding profile for the program?
   13A: Funding for the program is set at $50M over 3 years.

12Q: Will the proposers’ day slides be available with voice presentation? If so, please send link.
   12A: Please check the DARPA solicitations page.

11Q: Due to the high level collaboration required between TA1 and TA2 operators and the need for immediate interface in order to support the demonstration schedule, how does DARPA propose to manage the coordination and enforcement of collaboration between the TA1 and TA2 performers?
   11A: Close collaboration between TA1 and TA2 teams is a requirement of the program. Proposers should also expect to coordinate with the government team through recurring calls, likely on a monthly cadence, along with periodic in person reviews as mentioned in BAA 6.2.1.

10Q: How many individual systems are expected to be modeled in TA3?
   10A: Proposers should expect to model any systems that are part of a battalion landing team.

9Q: What is the maximum visual level of representation expected for the individual 3D assets, e.g. aircraft, vehicles, dismounts? Are we looking at SimCity (low fidelity) or VBS/FPS (high-fidelity)?
   9A: Proposers are responsible for determining the necessary level of visual representation for 3D assets required to meet the program objectives.

8Q: How many performers does DARPA anticipate funding for each TA?
   8A: Each TA will have one or more performers.
7Q: Does DARPA require that we use both a commercial IRB and a Government IRB? 
   7A: This information can be found in the BAA (Section 6.2.4).

6Q: What type of cloud environment will be provided by the Government? 
   6A: The cloud environment is a secure DARPA owned self-service research and development platform which provides users with a suite of tools including: file sharing tools, a code repository, project wikis & issue tracking, a web-based self-service virtualization framework, web-based virtual desktop architecture, and secure VPN. The compute capabilities are composed of 5 TB RAM, 392 physical cores (capable of being over-provisioned to 3136 vCPU), and 722 TB of storage.

Researchers will have access to OpenStack Horizon (equivalent to AWS EC2) and can provision whatever baseline or operating system they would like. If container orchestration is required, Mesos or Kubernetes will be deployed and maintained. We have slight preference for Kubernetes but currently run several Mesos clusters so either is fine. Other services available include: Internet, DNS, etc., GitLab/CI, Confluence, Software defined networking (via OpenStack web user interface) Application/authentication proxy for APIs and UIs, Oauth2 endpoint, NFS data storage, and Databases.

Both the hardware and software aspects of the cloud environment can be adjusted if required by the specific approaches selected.

5Q: Where will evaluation events be held, in a Government or Performer facility and will these events be coordinated by the Government or the Performer? 
   5A: The government team will coordinate the three demos, which will be held at government sites.

4Q: Are scenarios developed for the virtual test environment expected to be created in real-time (e.g., insertion of new scenario events by a human as the scenario unfolds)? 
   4A: The government will create the scenarios in advance, but the progression of the scenarios will depend on the decisions made by players.

3Q: Are immersive technologies such as virtual reality of interest? 
   3A: If the technology is required for your approach, then yes.

2Q: What is the desired ratio of humans to artificial agents (Red & Blue forces) in the simulation? 
   2A: This decision should be included in the proposer’s approach.
1Q: Who is responsible for developing the Apps that use TA2-developed formation compilers – TA1 or TA2 performers?

1A: The TA2 performers will create the compiler, which will be projected in the TA1 Environment.