

Subject:

RFP-ACT-SACT-24-35 Digital Twin Proof of Concept

Reference:

Q&A #3

Date of Issue:

17 April 2024

The following questions were raised with respect to subject **RFP-ACT-SACT-24-35 Digital Twin Proof of Concept**. Responses are to provide clarification.

Questions	Responses
<p>1. Task Specificity Concerns: The reference to "a simulation system" in WP#2 is notably vague. It could refer broadly to a Digital Twin simulation environment or more specifically to a Digital Twin Simulation Toolkit or Tool Suite (DT Sim Tk) intended for the development of a Digital Twin of a Physical Twin. Can you clarify what exactly is being requested for the "Proof of Concept"? The delineation among the Digital Twin, the Physical Twin, and the DT Sim Tk remains ambiguous.</p>	<p>1. Definition of "a simulation system" is from NATO approved terms. For further clarification on "a simulation system" refer to Q2#13</p>
<p>2. NATO Problem Domain Preferences: Given the vagueness mentioned above, it is unclear which NATO problem domains are of priority for the Proof of Concept. Are there specific areas where NATO seeks to explore Digital Twin applications, such as Battle Management Command & Control (BMC2), Missile Defense, or Joint Operations & Planning? We request NATO to provide guidance on problem domain preferences to tailor our proposal effectively.</p>	<p>2. There is no problem domain preference.</p>
<p>3. Acceptance Criteria Clarifications:</p> <ul style="list-style-type: none">• The Acceptance Criteria outlined in Section 6 appear quite broad, aligning with early-stage R&D project expectations. Could NATO specify what would constitute sufficient evidence for Proof of Concept acceptance?• Would a compelling software demonstration that customizes a commercial Digital Twin Simulation Toolkit for NATO's need be adequate for WP#2? Furthermore, we seek clarification	<p>3.</p> <ul style="list-style-type: none">• The Acceptance Criteria are related to the individual deliverables. No specific design and development methodology is requested. The contractor design and implementation methodology will be accepted.• WP2 cannot be assessed without successfully finishing WP1. Level of details and fidelity is a part of your design.

on the expected fidelity and detail regarding NATO operational aspects in the Digital Twin demonstration.	
<p>4. ANNEX B: Grading Matrix Specificity:</p> <ul style="list-style-type: none"> Regarding the grading criteria, especially criterion #4 in ANNEX B, it specifies points awarded based on the use of the simulation system in NATO versus non-NATO exercises. Given our experience encompasses significant US Department of Defense (DoD) exercises, we inquire whether US DoD experience, considering the US is a NATO ally, will be considered equivalent to direct NATO experience for the purposes of this evaluation? 	4. Criterion#4 “6 - 10 points – simulation system has been used in the NATO experiment or exercise [in MTEP]” If the simulation system was not used in the NATO experiment or exercises in NATO MTEP you wouldn’t get score 6-10.
<p>5. FFP Cost Estimations Ambiguity:</p> <ul style="list-style-type: none"> Acknowledging the RFP's general vagueness and open-ended nature, could NATO provide an approximate FFP range (both a floor and a ceiling) that would enable CompassBlue. AI to submit a competitive bid? This information is crucial for ensuring our proposal meets the Technical / Price = 60/40 (Best Value Compliant Offer) criteria effectively. 	5. No, we do not provide budget information or estimated contract value.
6. Can we get a copy of the NexGen M&S Capability Requirements Brief (CRB) referenced on page 12 of the RFP?	6. All relevant information from CRB needed for successful completion of the project are included in the RFP.
7. What systems and software does NATO use now to accomplish its M&S priorities?	7. Question not relevant to the RFP.
8. Can we get a copy of the 2023 NATO Digital Transformation Implementation Strategy to better understand the scope and scale of the development of a Single Synthetic Environment (SSE), where all intelligence disciplines feed their data and is used for training, war gaming, modelling and simulation, AI training, and the development of digital twins?	8. All relevant information needed for successful completion of the project are in RFP.
9. What are representative simulation systems NATO may already be considering that the digital twin will need to integrate into?	9. There are no specific simulation systems that are considered for DT integration in the project.
10. If the contract is delayed from a 6 May 2024 start date, at what point will the specific WP milestone delivery dates change?	10. WP milestones are not expected to change. If a delayed start is expected, delivery dates would be collectively agreed with selected bidder.

<p>11. Developed test evaluation:</p> <ul style="list-style-type: none"> • In RFP, annex A, section 2 “Background and Scope”, precisely in page 13, the contractor support is split into two components, being task 1 focused mostly on research and design and task 2 focused mostly on development and integration. • Is the contractor in charge of defining the added value of having DT fully integrated within the simulation system or is there any specific expectation in this direction? 	<p>11 This is the contractor responsibility as per design and implementation.</p>
<p>12. Expected deliverables:</p> <ul style="list-style-type: none"> • Beside what already stated in RFP, annex A, section 4 (page 14), please detail what NATO is expecting to get in terms of report documents, design documents, software code, installation / configuration manuals etc... • Does NATO ACT have any expectations about required deliverables, other than documentation and workshops? WE KINDLY REQUEST YOU TO PROVIDE US ASAP WITH A DID TEMPLATE (i.e. Data Items Description, SPECIFICALLY) IN ORDER FOR US TO SUBMIT OUR BEST QUOTATION, THANK YOU 	<p>12. Design and development methodology including reporting mechanism of the contractor will be accepted. There is no deliverable on installation/configuration manuals.</p> <ul style="list-style-type: none"> • All requested deliverables are specified as per WP1.1- WP1.4 and WP2.1 – WP2.4
<p>13. Better to be product agnostic or product optimized:</p> <ul style="list-style-type: none"> • The development plan for the DT environment tailored on a Leonardo product with its own specific needs will lead to choices that might be less optimal for non-aeronautical platforms. Does NATO have any preferences for the target platform? Does the environment need to be fully agnostic about the target platform? • Are expected any score disadvantage in case of DT environment optimized for one of our products and then not fully agnostic about the platform? 	<p>13.</p> <ul style="list-style-type: none"> • No preferences on a real asset within DT. • There is no preference on the real asset, therefore it will not be scored.

<p>14. Intellectual Property in case of product zero-D model:</p> <ul style="list-style-type: none"> • According to HQ SACT general terms and conditions, section 32 “Rights in technical data and computer software”, the ownership of work product, including models, is transferred to HQ SACT. • It looks like there is no difference between background and foreground intellectual property (IP). Being zero-D models product specific and essential to develop and test the DT environment, can those models be treated like background information, or do we need to develop a dummy zero-D model whose IP will be transferred to HQ SACT? • Please, confirm that all background information will remain property of the contractor. Only results and foreground information will form the work product and thus be transferred to HQ SACT ownership. • Furthermore, please clarify the term “technical data” in paragraph “b”, still in section 32. Confirm it does not refer to background information, since it will remain under contractor’s ownership. 	<p>15. HQ SACT confirms that existing background information, i.e. zero-D models, will remain the property of the contractor.</p> <p>Technical data excludes background information.</p>
<p>16. Commercial SW vendor eligibility:</p> <p>In RFP, section 4, page 3 it is stated that: “This RFP is open to governmental or commercial entities:</p> <p>(a) Established in a North Atlantic Treaty Organization Alliance member nation.</p> <p>(b) Working in the required field of study and legally authorized to operate in the United States of America, at the time of bidding.</p> <p>(c) Has performed the desired past performance including size, cost and scope, as described in this RFP.”</p>	<p>16. Yes, as long as they are legally authorised to operate in the USA.</p>

<ul style="list-style-type: none"> • Does it mean that commercial SW developers such as Microsoft, Oracle or Amazon are eligible for this RFP? 	
<p>17. Extra score for DT poc based on more products:</p> <p>Proposal for DT proof of concept might be based on one or more products with different characteristics and based in different physical environments.</p> <p>In case of proposal based on more than one single product, is this proposal going to get extra score?</p>	<p>17. Technical scores are out of 100 points maximum.</p>
<p>18. Further clarification requests</p> <p>In RFP, section 8 “Bidder clarification”, paragraph “a”, it is stated that “The Contracting Officer must receive such requests for clarification no later than 3 (three) calendar days prior to the bid closing date.”</p> <p>Please confirm the clarification requests can be submitted until April 14th, 21st 2024, 09:00 hours, Eastern Standard Time, Norfolk, Virginia, USA.</p>	<p>18. Questions on RFP terms, clauses, provisions or specifications can be submitted before the 21 April. Technical and Contractual questions must be submitted before 10 April.</p> <p>See Amendment 1 of the RFP.</p>
<p>19. Bidder’s conference</p> <p>In RFP, section 8 “Bidder clarification”, paragraph “b”, it is stated that “In lieu of a bidder’s conference, HQ SACT invites bidders to submit initial technical and contractual questions not later than 3rd 10th April 2024.”</p> <p>Please confirm if the bidder’s conference will be replaced by the initial technical and contractual questions/answers or if a bidder’s conference will be arranged and, in this case, when it is planned.</p>	<p>19. Yes. HQ SACT will not hold a bidder’s conference.</p>

<p>20. Minor deviations</p> <p>In RFP, section 17 “Award”, it is stated that “HQ SACT reserves the right to negotiate minor deviations to the listed General Terms and Conditions to this RFP.” and in Enclosure 1 Compliance Statement it is showed how to report these minor deviations.</p> <p>What is the meaning of “Minor Deviation” in the said Compliance Statement? Would it refer to Deviations only to the RFP Document? Can deviations be proposed to the HQ SACT General Terms and Conditions?</p>	<p>20. SACT will negotiate any slight exceptions that the company takes to the terms and conditions.</p> <p>No it does not refer to the RFP document.</p> <p>Yes, requests for deviations should be addressed on enclosure 1.</p>
<p>21. Award</p> <p>In RFP, section 17 “Award” it is stated that “HQ SACT intends to award a firm fixed price contract(s) to the Offeror(s) whose proposal(s) represents the Best Value Compliant Offer to NATO. Partial awards are not authorized.”</p> <p>Please clarify if more than one contract can be awarded by HQ SACT.</p>	<p>21. No. There will be one awardee of this contract.</p>
<p>22. Other questions</p> <p>Digital Twin model validation: is the contractor expected to run any validation of the model? How?</p> <p>Have been set any rules for Digital Twin generation, in terms of necessary amount of data? Any rules for instances limiting the minimum or the maximum amount?</p> <p>Are there any constraints on how to transfer data between the simulation system and the physical asset? Can we rely on our server?</p> <p>Are sensors (for instance those on-board on the platform) expected to be part of the simulation?</p> <p>Is data format expected to be neutral?</p>	<p>22.</p> <p>Validation is not part of deliverables.</p> <p>No rules specified.</p> <p>The way data is transferred between a simulation system and DT is not specified. It is a part of your design.</p> <p>It is a part of your design and modular approach that you want to demonstrate.</p>

Any limitations or preference for the adoption of commercial tools vs. open source? Are the costs for licenses related to any adopted commercial tools expected to be included into the price proposal?	Data format of data exchange is not defined. No preferences. Yes
23. What simulation system are they proposing? Existing or future	23 Contractor simulation system is an existing simulation system.
24. What level is the simulation aimed at – JFC, Deployable Corps HQs, Component or Units?	24. No specific level of resolution of a simulation system is requested.
25. Definition of digital twin explicitly links to a 'physical asset' – does this rule out information, human behaviours, electro-magnetic spectrum and weather	25. Information, human behaviour, electro-magnetic spectrum and weather are not considered as a physical asset.
26. Our definition describes a DT as a representation of a physical 'asset'. Within this definition of an 'asset', do you mean a representation of a singular physical asset (e.g. of a tank) or could this be a representation of a system of physical assets (e.g. a specified energy network). Q - Would the use of human behaviours as a digital twin of a 'physical asset'? Q - What level are these simulations aimed at? e.g. JFC/ Deployable Corps, Units etc.?	26. Refer to #25. Definition of DT relevant for the project is in the RFP. Physical asset can be a system of systems. Human being is not understood as physical asset. No specific level is requested.
27. Is there a difference between the technical proposal and technical volume? They seem to be used interchangeably in the RFP. If the technical proposal is different, please elaborate.	27. No, the terms are used interchangeably.
28. If the two are separate, which document will the SOW be addressed in?	28. See 27.
29. If the two are separate, will they be combined into one document? Are they one Document?	29. See 27.
30. Is there a particular format for addressing the SOW in the technical portion?	30. There is not a particular format for the Technical proposal but the price proposal needs to be formatted in accordance with the instructions of this RFP.
31. In the technical proposal addressing the SOW, will this include a summary of potential solutions the contractor has, technology to be used, or a summary of	31. Yes, all three.

how the contractor will go forward? What should the technical proposal address in relation to the SOW?	The Technical proposal needs to address how the offeror can satisfy the requirements of the SOW.
32. For WP1.2 – 1.4, will the DT models be provided as is, or will they require continuous updates? Will the designed system autonomously take these updates?	32. DT is provided by the contractor. Synchronous and asynchronous exchange of data as per RFP is part of your design.
33. For past performance, can internal projects and contracts outside of government solicitations be referenced?	33. Yes but the referenced projects must be verifiable and of similar size and scope.
34. Very little information is given on the purpose of the DT. What will this digital twin be used for?	34. There is no specific use of the DT after project is done. It is a proof of concept that will demonstrate the benefits/drawbacks of DTs being integrated into current simulation systems.
35. Is there a limitation on how the simulation will be used? Will SMEs be using the simulation, or should this start immediately with no technical expertise?	35. There is no limitation on a simulation system use. It is a part of your design whether SME or not technical person is operating/using the simulation system.
36. Would ACT consider an extension to the Bidder Clarification for RFP-ACT-SACT-24-35 Digital Twin Proof of Concept?	36. No.
37. How many contractors will be awarded for the RFP?	37. This will be a single award.
38. What kind of security clearance do I need to contract for NATO?	38. Contractors do not require security clearances. However, contractors may be asked to sign non-discloser agreements on insights obtained. All work supporting the development of the narrative will be unclassified. The deliverables will not contain any sensitive information, will not be classified and, therefore, will not bear any classification markings.