

1. The following questions were submitted in response to this RWP. The Government’s responses are provided below:

Amendment 0001		
	Question	Answer
1	Do you have any specific instructions for Non- Traditional Defense Contractors?	The instructions provided in our Request for White Papers are the same for all potential respondents.
2	Given that we have responded to the TARDyS3 RFI and participated in the Reverse Industry Day, should we also respond to this RFWP?	Yes. The Request for White Papers is a separate requirement. All vendors must respond to the RWP posted on beta.SAM by the response deadline in order for their submission to be considered for this opportunity.

Amendment 0002		
	Question	Answer
3	We are a small business that meets the definition for a non-traditional defense contractor. Please clarify/define what a “significant role” entails for a non-traditional defense contractor that partners with a traditional defense contractor with regards to providing services for TARDyS3.	The Agreements Officer, with assistance from the Government team, will determine whether small business(es) or non-traditional defense contractor(s) are performing to a significant extent on a case-by-case basis after reviewing the traditional defense contractors proposed solution and assessing the totality of the circumstances for the proposed prototype project.
4	The notional schedule depicts the prototype development beginning in April 2021. The ROM template requests a price for FY2021. Should the FY2021 price assume a six month period of performance (1 April 2021 through 30 September 2021)?	Yes
5	The ROM template provided by the government includes FY2021 – FY2023. Does this indicate that the prototype period will	No, the prototype period is anticipated to last 12 months. The ROM template is revised accordingly.

	continue through FY2023, and if the prototype is successful, the production contract would be awarded after FY2023?	
6	I would like to know more about your upcoming RFI that is entitled "DISA requirement for TARDyS3." It seems to be meant for an OTA. I would like to know more about what you are seeking. I believe it has something to do with wireless.	DISA does not have an open RFI for TARDyS3. DISA's Request for White Papers is announced on beta.SAM.gov ( <a href="#">notice ID: DISA-OTA-21-9-TARDyS3</a> ) or on dreamport.tech under the DISA Call for White Papers section.
7	We are requesting more information about the specific OTA that will be used for this program. Will you use SOSSEC, another existing DoD OTA, or will it become its own OTA?	DISA does not use consortia to fulfill its OTA requirements. As a result of this standalone Prototype OTA, DISA may award a prototype OTA to the successful Vendor.
8	Is there a requirement for Zero Trust Architecture, and is this from the user (network security) and the applications and workloads (application security)?	Yes. From a user perspective, IPDR and S3 will both require open internet connectivity to interface with the CBRS community. To ensure we're resilient to malicious actors attempting to leverage that interface to move throughout our application and workloads, we require application of zero trust principles to both our external interfaces (e.g. entity authentication) and our internal containers to limit the potential for lateral/vertical movement within our applications.

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<b>Amendment 0004</b>		
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	Question	Answer
9	Will you allow a Requirement Traceability Matrix (RTM) as an Appendix or increase the technical page limit from 6 to 8 pages. This will help ensure we provide a thorough response.	The technical page limit will be increased from 6 pages to 7 pages. Vendors can utilize that extra page to include any additional content (e.g., a Requirement Traceability Matrix, etc.).
10	<i>Help Desk:</i> The RWP notes vendors shall "Provide technical and operational support (e.g., training and help desk support) to end-users." Does the government intend for the vendor to establish a formal help desk during the prototype phase (e.g. Tier system, dedicated help desk personnel, and defined availability)? If yes, does the government have any requirements around help desk availability? (e.g. EST business hours, M-F)	No formal help desk requirement exists; however, the Government looks forward to hearing industry's innovative approaches to providing technical and operational support to end users in their whitepapers.

11	<i>GIS:</i> Are any Geographic Information System (GIS) visualization or analysis capabilities envisioned as part of the IPDR application?	Innovative features, to include but not limited to GIS visualizations, could be included as part of a whitepaper responses. Such innovations will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.
12	<i>GIS:</i> Does the government envision that IPDR will graphically display the likelihood of interference using GIS engine, terrain maps, and RF shadowing? Alternatively, does the government envision that IPDR will display the likelihood of interference in a tabular, graph-based, or other visual representation that does not involve GIS and visual terrain maps with RF shadowing?	Innovative features, to include but not limited to GIS engines, terrain mapping, and RF shadowing, could be included as part of a whitepaper responses. Such innovations will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.
13	<i>GIS:</i> If GIS visualization or analysis capabilities are required, will IPDR interface with an existing DoD, NTIA or other GOTS GIS system that provides this capability, or will this capability be developed by the vendor as part of the IPDR prototype?	Innovative features, to include but not limited to GIS visualization or analysis capabilities, could be included as part of a whitepaper responses. Such capabilities will not be provided to interface with IPDR. Such innovations will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.
14	<i>SAS Data:</i> To support IPDR functionality on IL-5/IL-6, does the government envision replicating the SAS database in an IL-5/IL-6 environment and participating in the daily Cooperative Periodic Activities among SASs (CPAS) to achieve eventual consistency?	Each vendor should propose its best, innovation solution. Vendors are encouraged to develop innovative approaches to support robust and efficient prototype IPDR capabilities.
15	<i>SAS Data:</i> Will the TARDyS3 tool suite need to query data from each SAS database independently, or will one SAS administrator database be selected as the primary data source?	A single SAS administrator will not be selected as a primary data source
16	<i>Interference:</i> Is IPDR required to evaluate the likelihood of interference with PAL licensees and/or GAA users that have lower prioritization than DoD incumbents, or, alternatively, is IPDR required to only evaluate the likelihood of interference with other DoD incumbents, under the assumption that when a coordination event notification is sent to the SAS, the SAS will address all potential interference by notifying PAL and GAA users they must clear out of the spectrum?	The IPDR is expected to evaluate all known potential sources of interference to DoD incumbents.
17	<i>Interference:</i> Is IPDR required to unambiguously identify the source of interference from PAL/GAA users, which requires importing large quantities of	The IPDR is expected to evaluate all known potential sources of interference to DoD incumbents in coordination with SASes.

	<p>data from a public SAS and analyzing all emitters for potential interference, or, alternatively, is IPDR required to send an Interference Report to the public SAS and rely on the SAS to address interference from lower priority users in accordance with the role the FCC has assigned to the SAS?</p>	
18	<p><i>Propagation Model:</i> The RWP states that the IPDR shall “...use the same propagation model(s) as used in the WINNF Release 1 specification or any future propagation models which are added to later releases...” Can the government identify the specific WinnForum specification and document section number? (there are multiple technologies and propagation models mentioned across several WinnForum specifications and technical white papers)</p>	<p>The WinnForum propagation models are found in the WINNF-TS-0112 Version 1.9.1 13 March 2020 CBRS Operational and Functional Requirements in Section 4 SAS Requirements R2-SGN-03. This document can be found at: <a href="https://cbrs.wirelessinnovation.org/release-1-standards-specifications">https://cbrs.wirelessinnovation.org/release-1-standards-specifications</a></p>
19	<p><i>Sensor Aggregation Service:</i> The RWP states “A sensor aggregation service is made available for netted environment sensors to provide electromagnetic environmental data that feeds an interference identification service to identify potential sources of interference.” Is IPDR required to ingest electromagnetic environment data from a sensor aggregation service (e.g., ESC) for the purpose of identifying potential interference, or, alternatively, is IPDR required to send an Interference Report to the public SAS, which is already receiving environment data from ESCs, and already running an interference identification service in accordance with the role the FCC has assigned to the SAS?</p>	<p>The IPDR provides an ingestion service for sensors and should provide an API for external sensors. IPDR may ingest electromagnetic environment data from such sensors for the purpose of identifying potential interference.</p>
20	<p><i>IPDR Dashboard:</i> The RWP states that the IPDR shall “Provide an interface to the regulatory community, FCC and NTIA, for regulatory oversight with a dashboard showing current interference reports.” By “interface,” does the government mean a graphical user interface/dashboard hosted in an IL-2 environment as part of the IPDR application? If so, is this GUI envisioned to integrate with any data pulled from FCC/NTIA</p>	<p>Vendors are encouraged to propose innovative solutions. Such innovations will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.</p>

	APIs?	
21	<p>ROM: When specifying the information required on the cover sheet, the RWP requests “total ROM cost for the twelve (12) month period of performance.” However, the ROM table includes FY21 – FY23. Can the government clarify the prototype period of performance? Should the ROM on the cover sheet match the total from the Basis of Estimate table?</p>	<p>The prototype period is anticipated to last 12 months. The ROM template is revised accordingly (see question 5 above).</p>
22	<p><i>RWP Page 21, Section 5.3 Data Markings. Marking requirements specify that data be “conspicuously and legibly” marked with a protective legend that identifies the OTA project number, vendor’s name and address, and the submittal date, along with the warning “Use or disclosure of data contained on this sheet is subject to restriction” on the title page of any restricted data sheets.</i></p> <p>Please clarify that vendors should provide in the footer: the OTA project number, vendor’s name and address, and the submittal date, along with the warning “Use or disclosure of data contained on this sheet is subject to restriction on the title page of any restricted data sheets.”</p>	<p>Respondents may display the required data markings in the header or footer of any restricted data sheets.</p>
23	<p><i>RWP Page 24 / Section 7 Implementation of Section 899 (A)(1)(B). This section states, “The vendor shall complete the representation at paragraph (d)(1) and paragraph (d)(2) of this provision.”</i></p> <p>With nothing in the Instructions and no page count, could the Government clarify how they would like this this information provided?</p>	<p>This representation is not included in the page count and may be included as an appendix to the white paper.</p>
24	<p><i>RWP Page 32. (Process interference detection reports...).</i></p> <p>Which of these will the IPDR communicate directly with: SAS’s, ESC’s, CBSD’s? In the user GUI, are DoD radar system users submitting reports manually via a web portal? If so, what are they submitting?</p>	<p>Innovative features, to include which CBRS systems IPDR communicates with, could be included as part of a whitepaper responses. Such innovations will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.</p> <p>DoD radar system users will manually submit reports using the prototype IPDR. At a minimum, they will report their general location (i.e. DPA) and impacted channel(s)</p>

	Or does this mean API-driven system-to-system report submitting?	(e.g. 3550-3560 MHz, 3560-3570 MHz, etc.)  DoD EMS Command and Control (C2) systems may submit reports using the prototype IPDR as a non-person entity (NPE) via an API.
25	<i>RWP Page 32 (bottom). The final major bullet discusses an automated negotiation service. The sub-bullets discuss GUI's, which implies a user-facing portal.</i>  Is that correct that the "GUI" is user-facing web pages? If so, why is there a GUI for SAS admins to respond to interference if there is an automated negotiation service? Or does the "interface to CBRS SAS admins" mean system-to-system communication rather than a user-facing portal?	Two types of interfaces must be supported to enable the automated negotiation service. One interface would be a set of user-facing webpages to provide the SAS administrators with a GUI that enables them to respond to reported interference. The other interface would be system-to-system communication with SASes as non-person entities (NPEs) to allow the SASes to attempt to resolve interference without manual intervention by SAS administrators.
26	<i>RWP Page 32 (In addition to the requirements above).</i>  For calculating interference, is the IPDR expected to use a COTS-based algorithm? Custom algorithm? There are pros and cons in each approach.	Vendors are encouraged to make tradeoff decisions that provide the best overall value.  Solutions will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.
27	What kind of authentication and authorization is required? Will these products inherit controls from another system, or do they need to provide these controls native to the solution?	Platform One security requirements for deployment to their IL-2 and IL-5 production environments will govern the TARDyS3 development activities. Platform One builds a Continuous ATO from multiple ATOs covering the infrastructure, platform, and deployment process. The infrastructure and platform ATOs cover a majority of NIST 800-53 RMF controls. Once a team completes the Certificate to Field ( <i>valid for one year or until architecture is changed – major release</i> ) real-time deployments to production are enabled. The Certificate to Field (CtF) process uses SD Elements to answer the final NIST 800-53 RMF controls that are specific to the application.
28	What is the volume of data that IPDR is expected to process, and on what interval?	The volume and interval of data will depend on how frequent interference is reported in JSIRO.
29	Does the data demand change significantly due to an outside factor? Are there major peaks or valleys in data load, and if so, what would example use cases be causing that?	Data demands may appreciably change due to external factors. These peaks and valleys will depend on Navy operations and Citizens Broadband Radio Service (CBRS) deployments.

30	<p>With two federal holidays occurring in November including a traditionally extended Thanksgiving holiday, and given industry may receive answers to questions with few days remaining until proposal submission, would the government consider extending the proposal due date to 11 December 2020 at 0800 CST?</p>	<p>The Government will extend the due date to 07 December 2020 at 1400 CST</p>
31	<p><i>RWP Table 1: Response Page Limits, RWP Section 2.4 Affirmation of Business Status Certification, Pages 5 &amp; 9.</i></p> <p><i>Section 2.4 states the following: “vendors must meet the requirements outlined in 10 USC Section 2371b(d)(1). Vendors shall explain in their White Paper submission, not to exceed ten (10) pages, how they will meet these statutory requirements. Failure to provide the required explanation may result in the White Paper not being considered for this OT Agreement.”</i></p> <p><i>Although Section 2.4 says that the certification is to be included as an attachment, RWP Table 1: Response Page Limits (page 5) does not indicate where the required explanation should be included.</i></p> <p>Please clarify where Offerors should explain their compliance with 10 USC Section 2371b(d)(1).</p>	<p>Respondents should explain their compliance with 10 USC Section 2371b(d)(1) within the body of their White Paper.</p>
32	<p><i>RWP Table 1: Response Page Limits RWP Section 7, Pages 5 &amp; 14, John S. McCain National Defense Authorization Act (NDAA). Section 7(page 24) states the following: “The vendor shall complete the representation at paragraph (d)(1) and paragraph (d)(2) of this provision.”</i></p> <p>RWP Table 1: Response Page Limits (page 5) does not indicate where the representation should be included. Please confirm that Offerors can include the required representation as an appendix to the white paper.</p>	<p>This representation is not included in the page count and may be included as an appendix to the white paper.</p>
33	<p><i>RWP Section 3.4.5 Price, Pages 17 &amp; 18 Travel.</i></p> <p>Will the Government provide the place of</p>	<p>The Place of Performance will be the contractor’s site.</p>

	performance for this effort (Government or Contractor Site) so that Offerors can determine the appropriate travel costs required for program execution?	
34	<p><i>RWP, Cover, Page 1, "White Papers Due Date/Time (Suspense) December 04, 2020 / 0800 CST".</i></p> <p>Will DISA consider providing a two-week deadline extension due to the limited question response period and Thanksgiving holiday?</p>	The Government will extend the due date to 07 December 2020 at 1400 CST
35	<p><i>RWP, Section 1.2, Page 4, "Successful Scheduling Capability – End-users must be able to access and use a prototype S3 capability. Prototype S3 capability successfully supports scheduling spectrum access at all required DOD sites1. An API is developed in coordination with FCC-certified SAS administrators to enable interference protection of scheduled DOD use in the 3550-3650 MHz band".</i></p> <p>Will the Joint Spectrum Center data base be a source of data available for use by the scheduling application to be built? If so, are there published API's available for interfacing with those systems? (Specify type of model)</p> <p>Will DISA provide integration information to the DoD-DPA application?</p>	<p>The Joint Spectrum Center data base will not be a source of data available for use by the scheduling application to be built.</p> <p>More information regarding the commercial SAS specifications can be found in the Release 1 Requirements document WINNF-TS-0112 Version 1.9.1 13 March 2020 CBRS Operational and Functional Requirements available here:  <a href="https://cbrs.wirelessinnovation.org/release-1-standards-specifications">https://cbrs.wirelessinnovation.org/release-1-standards-specifications</a>.</p>
36	<p><i>RWP, Appendix B, Page 38, "The vendor will be provided a condition where a DoD user is experiencing interference. This will model a Joint Spectrum Interference Resolution Online (JSIRO) type report in accordance with Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3320.02D. The following will also be provided: A DD1494 for the DoD notional system, a location for the DoD notional system, and a notional deployment of the Citizens Broadband Radio Service Device CBSDs (including installation parameters)."</i></p> <p>Is the developed application intended to actively address deconfliction from civilian users?</p>	Yes – The IPDR is intended to address deconfliction from civilian users.
37	<i>RWP, Section 3.4.5, Page 17, "Provide a list of the</i>	Respondents will use a plug number of \$50K for travel.

	<p><i>other direct costs required to meet the technical approach as described in the White Paper and the estimated costs with basis of estimate. Identify any business travel expenses (e.g., estimated costs for lodging, transportation, and meals) and identify the basis for how the travel costs were calculated."</i></p> <p>To level the field, will DISA provide costs for projected travel, to include approximate # of trips?</p>	
38	<p><i>RWP Attachment A, page 33, At a minimum, deploy an IL-5 environment that simulates a potential IL-6 implementation.</i></p> <p>Development of each version of this application (IL-2-6) from a standard IL2 environment could have immediate benefits to the delivery speed and quality, given our ability to emulate IL-6 environments. Would the Sponsor consider such a "Build Low, Shift High" scenario given it meets compliance/governance requirements and integrates with Platform One?</p>	<p>Innovative features, to include but not limited to "build low, shift high" scenarios, could be included as part of a whitepaper responses. Such innovations will be assessed and evaluated within the construct of the stated TARDyS3 evaluation and assessment criteria.</p>
39	<p><i>RWP, Section 3.4.2, Page 14, "Facility Security – The degree to which the vendor is able to access and use facilities capable of supporting development and operations of an S3 and IPDR capability at IL2, IL4, IL5, and IL6."</i></p> <p>Is DISA requiring vendors to provide a SCIF for IL6 work? (Will DISA be providing access to a secret SCIF with access connectivity to IL6 environments?)</p>	<p>Yes – DISA requires each vendor to have access to cleared SECRET facilities to conduct work at the SECRET level. This will meet the place of performance being the vendor's facilities. DISA will not be providing access to SECRET facilities with IL6 connectivity.</p>
40	<p><i>RWP, Section 3.4.2, Page 14, "Facility Security – The degree to which the vendor is able to access and use facilities capable of supporting development and operations of an S3 and IPDR capability at IL2, IL4, IL5, and IL6."</i></p> <p>For IL2/4/5, will places of performance include vendor and/or remote sites?</p>	<p>Yes, places of performance may include vendor remote sites.</p>
41	<p><i>RWP, Section 3.4.3, Page 15, "Describe your</i></p>	<p>The term "Partner" refers to any vendor that is either in a subcontractor or in a</p>

	<p><i>company and partner's working capital cash position and your ability to remain viable throughout the prototype and possible production TARDyS3 efforts"</i></p> <p>Does the term "partner" refer to subcontractors?</p>	teaming relationship.
42	<p><i>RWP, Appendix A, Page 32, Interface to both the DoD portal-DPA user community with a graphical user interface (GUI) and the SAS Administrators with an API for machine access</i></p> <p>Can the Sponsor clarify the type of access being requested for SAS Admins? Machine access via API is not usually a best practice for Zero Trust-based environments, and as such, we want to ensure we are capturing your request clearly.</p>	Two types of interfaces must be supported to enable the automated negotiation service. One interface would be a set of user-facing webpages to provide the SAS administrators with a GUI that enables them to respond to reported interference. The other interface would be system-to-system communication with SASes as non-person entities (NPEs) to allow the SASes to attempt to resolve interference without manual intervention by SAS administrators.
43	<p><i>RWP, Section 3.4.2, Page 14, "Facility Security – The degree to which the vendor is able to access and use facilities capable of supporting development and operations of an S3 and IPDR capability at IL2, IL4, IL5, and IL6."</i></p> <p>Will DISA sponsor the accreditation of a secret SCIF and the connectivity to an IL6 environment?</p>	DISA expects each vendor to have access to cleared SECRET facilities to conduct work at the SECRET level. This will meet the place of performance being the vendor's facilities. DISA will not be providing access to SECRET facilities with IL6 connectivity. DISA may sponsor accreditation of SECRET facilities for the TARDyS3 effort.
44	<p>The cover sheet lists the project number as DISA-OTA-21-9-TARDyS3. The header throughout the doc lists the project number as DISA-OTA-20-9-TARDyS3, Could you please confirm that DISA-OTA-21-9-TARDyS3 is the correct project number?</p>	The correct project number for the RWP is DISA-OTA-21-9-TARDyS3. Both the cover sheet and references to the project number within the RWP document have been revised accordingly.
<b>Amendment 0005</b>		
	<b>Question</b>	<b>Answer</b>
45	<p>Per the RFI Q&amp;A Amendment #2, the following question was asked and answered:  Question: Is the Government open to other DevSecOps environments besides Cloud One and Platform One?  Government's Answer: Yes, if they provide similar capabilities (e.g. PaaS, continuous-ATO, hardened containers, service mesh architecture)</p>	No, Platform One provides the only approved solution to fulfill the TARDyS3 Tool Suite requirements.

	<p>For DISA-OTA-21-R-TardyS3 RWP, we have the same question, referencing the above Section 1, 1.2, 4 of 43, (a). Does the same answer apply to the RWP as it did for the RFI?</p>	
46	<p>Regarding Section 1, Overview/Description, 1.2 Statement of Need, Page 4 of 43.</p> <p>b. Successful Cross-Domain Implementation - At a minimum, deploy an IL-5 environment that simulates a potential IL-6 implementation. Data is appropriately tagged and securely managed in accordance with classification and information security guidance that could enable a future Cross Domain implementation. An API is provided to enable migration of this IL-5 environment to IL-6 and support a future Cross Domain implementation.</p> <p>Can the government please explain and/or provide more detail regarding "An API is provided"? Who provides the API? Is the API to be tested in this Prototype? Does Platform One provide IL-6 development?</p>	<p>The API is a required feature of IPDR and will provide an interface to a future cross-domain solution. The API is to be provided by the TARDyS3 Tool Suite developer. The API is required for the IL-5 prototype IPDR and will be tested. Platform One does not currently provide IL-6 development, but plans to provide an IL-6 development environment within Q1CY21.</p>