Performance Work Statement

For

Enterprise Data Engineering

ADVANA
DISCOVER. UNDERSTAND. DECIDE.

Department of Defense
Chief Digital and Artificial Intelligence Office
Solicitation # FA8003-24-R-0017
3 September 2024

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68 # 1.0 Introduction

69 ## 1.1 Background

70

71 Advana is the Department of Defense (DoD) Chief Digital and Artificial Intelligence
72 Office's (CDAO) enterprise-wide, multi-domain data, analytics, and artificial intelligence
73 (AI) platform that provides all DoD military and civilian decision makers, analysts, and
74 builders with enterprise data, tools, and capabilities—all in a scalable, reliable, and secure
75 environment. Jointly managed by the DoD CDAO Mission Analytics and Enterprise
76 Platforms and Services Directorates, the mission of Advana is to accelerate decision
77 advantage by making data, analytics, and AI widely accessible, understandable, and
78 actionable across DoD. To do this, the Advana platform hosts curated analytics
79 applications in a total of 13 DoD business domains, to include logistics, people and
80 health, intelligence and security, readiness and global force management, etc.; it provides
81 market-leading, self-service tools to perform data exploration, model development, data
82 visualization, and other analysis activities; and it provides both users and builders on-
83 demand data, analytics, and AI capabilities via a DoD-wide platform.

84 ## 1.2 Objectives

85

86 The objectives for this procurement are as follows:

87

88 1.2.1. Obtain program management expertise that drives continuously improving program
89 efficiencies and operational effectiveness in supporting approximately 400 automated
90 data pipelines and approximately 30 AI/machine learning (ML) models.

91

92 1.2.2. Provide the DoD with state-of-the-art enterprise data engineering capabilities to
93 amplify the impact of new and existing analytics applications used on Advana.

94

95 1.2.3. Prepare the DoD for data productization, by systematically implementing strong
96 data governance and AI governance principles, processes, and practices within its
97 centralized data, analytics, and AI platform, Advana.

98 # 2.0 Requirements

99 ## 2.1 Program Management

100

101 The contractor shall:

102

103 2.1.1. Organize a kickoff meeting within two weeks of award to identify roles and
104 responsibilities, review expectations, review software development plan, and accomplish
105 the coordination necessary for performance. Submit agenda prior to the event, and
106 minutes after the event (A001; A002; A003).

107

108 2.1.2. Plan and implement an Agile software management process across Advana
109 utilizing industry best practices; and review completed, in-progress, planned near-term
110 (e.g., increment planning), and planned long-term (e.g., strategic roadmap) technical
111 activities at a level of detail and cadence as agreed upon with the CDAO (A003).

112
113 2.1.3. Prepare and maintain a roadmap and backlog to identify, plan, coordinate,
114 prioritize, and manage execution of all required technical activities (A004; A005).
115
116 2.1.4. Routinely report the following (A006):

117   2.1.5.1. Number and overall summary of incidents involving spillage of
118   classified, personally identifiable information (PII), protected health
119   information (PHI), and other restricted/controlled information.

120   2.1.5.2. Summary of template, guide, and playbook development under
121   paragraph 2.2.2.

122   2.1.5.3. Summary of engineering support provided under paragraph 2.2.3.

123   2.1.5.4. Summary of training plan development and execution under
124   paragraph 2.3.3.

125   2.1.5.5. Summary of training plan development under paragraph 2.3.11.
126
127 2.1.5. Support audit response between Advana management and external independent
128 auditors. This includes quality reviews over all Provided by Client requests, policies and
129 documentation, and preparation for auditor observations and meetings. Coordinate all
130 phases of audit from planning, execution, and remediation (A001; A002).

131 **2.2 Data Engineering**
132
133 The contractor shall:
134
135 2.2.1. Manage a team of specialized data scientists and data engineers focused on
136 optimizing the creation, deployment, testing, and iterative development of all bronze,
137 silver, and gold data tables deployed across unclassified and classified CDAO
138 environments, in accordance with the References.
139
140 2.2.2. Create and maintain templates, guides, and playbooks to inform and enable the
141 DoD to reuse and scale data, analytic, and AI work for decision advantage (A007).
142
143 2.2.3. Provide engineering support to all customers working to leverage the Advana
144 platform and other CDAO platforms to:

145   2.2.3.1. Build data products and data mesh services.

146   2.2.3.2. Register, ingest, store, search, and retrieve data products.

147   2.2.3.3. Develop suites of data quality business logic.

148   2.2.3.4 Train, test, and deploy production AI/ML models.

149 **2.3 Data and AI Governance**
150
151 The contractor shall:
152
153 2.3.1. Maintain existing and implement more mature data and AI governance processes
154 that allow for finer grained access control and decentralized stewardship of DoD data and
155 AI assets.

156
157 2.3.2. Enforce asset model structure standards for all asset types available within the DoD
158 Federated Data Catalog.
159
160 2.3.3. Systematically develop and execute training plans that enable DoD data stewards
161 to catalog and federate organizational data assets within the DoD Federated Data Catalog.
162 (A008)
163
164 2.3.4. Develop, maintain, and continually expand the DoD Federated Data Catalog across
165 DoD unclassified and classified environments, while integrating it with other catalogs
166 across the federal Government, e.g., General Services Administration (GSA), Department
167 of Veterans Affairs (VA), etc.
168
169 2.3.5. Identify how to promulgate the DoD Federated Data Catalog as DoD's
170 authoritative metadata interface at all classification levels, by establishing and
171 maintaining standards for connecting to other public sector data and model catalogs, such
172 as that hosted at data.gov.
173
174 2.3.6. Ensure all data assets and AI/ML model assets are registered within the DoD
175 Federated Data Catalog and Advana's AI/ML model registry; and kept up to date in an
176 event driven fashion.
177
178 2.3.7. Develop and deploy a systematic, automated metadata card and AI/ML model
179 metadata card strategy that is consistent with prevailing data mesh principles; and aligned
180 to DoD and CDAO policy identified in the References.
181
182 2.3.8. Provide a DoD Federated Data Catalog with associated application program
183 interfaces (API) and integration toolsets that lists complete metadata and access
184 information for DoD datasets and AI models, supporting reuse and sharing for future
185 development.
186
187 2.3.9. Make cataloged data cards and model cards discoverable to consumers, so that the
188 DoD Federated Data Catalog provides a comprehensive view of the stewardship and use
189 of data and model assets across the DoD.
190
191 2.3.10. Define, implement, and maintain interoperable, policy-as-code data access control
192 processes and capabilities that enable attribute-based access control for data available on
193 the Advana platform's unclassified and classified environments; and which may be
194 exported and shared to inform and enforce access to data in other enterprise platforms.
195
196 2.3.11. Develop and deliver training plans that enable federated stewardship over data
197 access control, e.g., data tagging, policy creation, etc. (A008).
198
199 2.3.12. Develop, test, deploy, and maintain automated data quality and data lineage
200 management capabilities, which enable tracing data lineage through transformations, and
201 provide the ability to share and consume lineage from other DoD systems and platforms.
202
203 2.3.13. Integrate all the above into the Advana system and other CDAO and DoD
204 platforms.

205 **2.4 Models as a Service**

206
207 The contractor shall:

208
209 2.4.1. Create and support AI models for use cases in a specific Advana functional domain
210 (e.g., financial management analytics), that may be inferenced for similar use cases
211 within other DoD platforms.

212
213 2.4.2. Implement state-of-the-art algorithms within the Advana platform and other CDAO
214 platforms for relevant categories of AI/ML models.

215 # 3.0 Performance Management

216 **3.1 General**

217
218 The contractor service requirements are summarized into performance objectives that
219 relate directly to mission essential items. The performance threshold describes the
220 minimum acceptable levels of service required for each performance objective. These
221 thresholds are critical to mission success but do not represent all contract performance
222 requirements. All contract performance requirements in this performance work statement
223 will be monitored.

224 **3.2 Services Summary**

225

Metric #	Performance Objective	PWS Para	Performance Threshold	Surveillance Method
1	TBD	TBD	TBD	TBD
2	TBD	TBD	TBD	TBD

226 # 4.0 General Requirements

227 **4.1 Period of Performance**

228
229 The period of performance shall be 12 months from the date of contract award.

230 **4.2 Place of Performance**

231
232 The place of performance shall be the contractor's facilities and DoD CDAO locations in
233 the Washington, District of Columbia (D.C.) area.

234
235 **4.3 Hours of Performance**

236
237 The Contractor shall maintain a consistent, 24-hour level of support Monday through
238 Friday.

239 **4.4 Government-Furnished Property**

240

241 Government-furnished property (GFP) is not anticipated to be necessary and will not be
242 provided under this contract.

4.5 Government-Furnished Information

244
245 Government-furnished information (GFI) means information in the possession of, or
246 directly acquired by, the government and subsequently furnished to the Contractor for
247 performance of a contract. GFI also includes contractor-acquired information if the
248 contractor-acquired information is a deliverable under the contract and is for continued
249 use under the contract. Upon award of the contract, the government will provide the GFI
250 listed under References.

4.6 Security

252
253 The contractor shall have an active Top Secret Facility Security Clearance and comply
254 with the security classification guidance specified in the contract DD Form 254 before
255 performing work on any classified Government systems or classified material. All
256 classified work shall be performed at either a DoD CDAO-provided or DoD CDAO-
257 approved sensitive compartmented information facility (SCIF). Additionally, to
258 adequately support classified workload requirements, no less than 30% of the contractor's
259 personnel shall remain Sensitive Compartmented Information (SCI)-eligible for the
260 duration of the contract.

4.7 Travel

262
263 4.7.1. Contractor travel may be required under this contract to support the following trips:
264

Trip Purpose	Projected Dates of Travel	Travel To	Number of Trip Days	Number of Travelers
CCMD: INDOPACOM	8 weeks after contract award date	Honolulu, HI	5	Max of 4
DON IT West Conference	8 weeks after contract award date	San Diego, CA	3	Max of 3
NVIDIA Conference	12 weeks after contract award date	San Jose, CA	4	Max of 4
Collibra Data Citizens Conference	16 weeks after contract award date	Orlando, FL	3	Max of 4
CCMD: CENTCOM + SOCOM	16 weeks after contract award date	Tampa, FL	4	Max of 4

Microsoft Ignite Conference	16 weeks after contract award date	San Jose, CA	4	Max of 4
Tableau Conference	16 weeks after contract award date	San Diego, CA	3	Max of 2
CCMD: SOUTHCOM	20 weeks after contract award date	Miami, FL	4	Max of 3
Qlik Connect Conference	20 weeks after contract award date	Orlando, FL	3	Max of 2
Databricks Data + AI Summit	24 weeks after contract award date	San Francisco, CA	4	Max of 4
DON IT East Conference	24 weeks after contract award date	Norfolk, VA	3	Max of 3
CCMD: NORTHCOM + SPACECOM	32 weeks after contract award date	Colorado Springs, CO	4	Max of 3
CCMD: EUCOM + AFRICOM	36 weeks after contract award date	Stuttgart, DE	5	Max of 4
DoDIIS + STRATCOM	40 weeks after contract award date	Omaha, NE	5	Max of 4
NDTA + TRANSCOM	40 weeks after contract award date	St. Louis, MO	4	Max of 4
AWS Re:Invent Conference	44 weeks after contract award date	Las Vegas, NV	4	Max of 4

265

266 4.7.2. Upon the Government's notification to proceed with a scheduled trip, the
267 contractor shall arrange all transportation and other travel-related requirements to ensure
268 attendance by their appropriate personnel.

269

270 4.7.3. The contractor shall submit a report upon completing each travel event (A009).

271 **4.8 Associate Contractor Agreements**

272

273 4.8.1. "Associate Contractor Agreements" (ACA) are defined as agreements between
274 contractors that are working on government contracts or projects that specify
275 requirements for them to share information, data, technical knowledge, expertise, or
276 resources. The Government anticipates the need for one or more ACAs to successfully
277 perform all requirements of this contract. Prime contractor to subcontractor relationships
278 do not constitute ACAs and are not subject ACA requirements, as defined herein.

279

280 4.8.2. Before executing an ACA, the contractor shall provide a final draft agreement to
281 the CO that identifies the following information:

282   4.8.2.1. The associated contractors and their relationships.

283   4.8.2.2. The program(s) involved and the relevant Government contracts of
284   the associate contractors.

285   4.8.2.3. General description of associate contractor interfaces.

286   4.8.2.4. Categories of information to be exchanged or support to be provided.

287   4.8.2.5. Expiration date, or completion event, of the ACA.

288   4.8.2.6. Potential conflicts between relevant Government contracts and the
289   ACA.

290

291 4.8.3. The contractor will not be relieved of any contract requirements or entitled to any
292 adjustments to the contract terms because of a failure to resolve a disagreement with an
293 associated contractor. Additionally, liability for the improper disclosure of any
294 proprietary data contained in or referenced by any agreement rests with the parties to the
295 agreement, and not the Government.

296

297 4.8.4. All costs associated with the agreements are considered included in the negotiated
298 cost of this contract. Agreements may be amended only as required by the Government
299 during the performance of this contract.

300 # 5.0 Data Management

301 **5.1 Data Requirements**

302

303 The Contractor shall implement data management procedures for preparation, quality
304 control, administration, and delivery of data required by the following Contract Data
305 Requirements Lists (CDRL):

306

Exhibit Line Item (ELIN)	Title
A001	Meeting Agenda
A002	Meeting Minutes
A003	Software Development Plan
A004	Roadmap
A005	Backlog
A006	Status Report
A007	Training Materials

A008	Training Materials
A009	Trip/Travel Report

307 **5.2 Data Rights**

308

309 To enable maximum use, reuse, modification, and/or distribution throughout the Advana
310 ecosystem, the Government shall have an unlimited rights license to all technical data and
311 software documentation developed and acquired under this contract.

312 # 6.0 References

313

314 (a) "Designation of Enterprise Services Supporting Federated Data Cataloguing", 2 Dec
315   2020
316 (b) "Federated Data Catalog – Minimum Metadata Requirements", 1 Oct 2021
317 (c) "DoD Data Stewardship Guidebook", 10 Oct 2021
318 (d) DoD Federated Data Catalog
319 (e) Advana Data Acquisition Playbook
320 (f) Advana Data Operations Playbook
321 (g) Advana Data Catalog
322 (h) Advana Data Playbook
323 (i) Advana Machines Learning Operations Playbook
324 (j) Advana Builder Operations Playbook