



Proposal Volume 1: Technical and Management (Attachments A and B)

**Commonwealth of Virginia
Virginia Information Technologies Agency (VITA)
Supply Chain Development Division**

Prepared for:
**Virginia Information Technologies Agency
(VITA)**

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23 June 2020

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1.0 TRANSMITTAL

23 June 2020

Virginia Information Technologies Agency (VITA)
Supply Chain Management (SCM)
11751 Meadowville Lane
Chester, VA 23836

Attention: Ms. Jeanne Mertens (Strategic Sourcing Consultant, Supply Chain Management)

Subject: Request for Proposals (RFP) 2020-23 for Data Analytics Solutions – Software, SaaS, and/or Services

Dear Ms. Mertens:

Sophinea Corporation, a certified Micro Small Business (pending) focused on providing Data Analytics and Analysis solutions to federal, state and local government agencies, is pleased to provide our proposal in response to the subject Request for Proposal entitled "Data Analytics Solutions – Software, SaaS, and/or Services". Sophinea's proposal is submitted on a Labor Hour (LH) and Firm Fixed Price (FFP) basis and as requested is valid for one hundred eighty (180) days from the date of submission. The proposed period of performance is for an initial term of three (3) years plus, at VITA's sole discretion, five (5) additional one (1) year renewals. Sophinea accepts the Terms & Conditions of the RFP and all amendments.

This proposal submittal is in both hard copy and USB Flash formats for the following volumes:

- One (1) complete original tabbed hardcopy, bound or contained in a single volume where practical, with permission to make copies;
- Six (6) sets of "Reproducible, Portable Data Storage Device" (RPSD) No. 1-Technical and Management Proposal
- One (1) copy of RPSD No. 2-Pricing, as specified in Section 3 of this RFP.
- One (1) copy of RPSD No. 3-Redactions, with redactions consistent with the requirements of RFP, Section 2, subsection L, Proprietary Information.

For negotiation or proposal questions, please contact me directly at (571) 201-5249 or by email at bthamm@sophinea.io. The alternate point of contact for this proposal is Ms. Colleen E. Thamm (CMO), who may be reached by phone at (571) 206-0852, or by e-mail at cthamm@sophinea.io.

Sincerely,



Brian G. Thamm
President & CEO

6/21/2020

eVA Transparency Reports



Vendor Information



Vendor Location and HQ information

Vendor Information

Vendor

Location Standard Name - eMall

Supplier:

Sophinea Corporation

Location Name - eMall Contact:

Sophinea Corporation

eVA Status: Active(Self-Registered)

eVA ID: VS0000297372

VLIN ID: VA00237038

Headquarter: Yes

Order Address

10811 Heaven Scent Ln

Manassas, VA 20110-2802

Contact Information

Contact: Brian Thamm

Phone No: 571-206-0852

Fax No: 000-000-0000

HQ Information

Headquarter Information

HQ Legal Name:

Sophinea Corporation

eVA ID: VS0000297372

Headquarter Ordering Address

10811 Heaven Scent Ln

Manassas, VA, 20110-2802

Vendor SWAM Certification

Business Type	Start Date	Expire Date

PCard & Orders	Purchase Order Dollars
Accepts P-Cards: Yes Accepts Visa: Yes Accepts Electronic Orders: Yes	No Purchase Order

NIGP Commodity Code(s)

NIGP Code	Description
91812	ANALYTICAL STUDIES AND SURVEYS (CONSULTING)
92000	DATA PROCESSING, COMPUTER, PROGRAMMING, AND SOFTWARE SERVICES
92022	DATA PREPARATION AND PROCESSING SERVICES (INCLUDING BATES CODING)

Report 9001 VendorDetail.1.1

https://logi.eopro.cgipdc.com/External/rdPage.aspx?rdReport=Public.Reports.Report9001_VendorDetail&rdAgReset=True&ReportEntity=&lnkVendCustCd=VS0000... 1/1

2.0 EXECUTIVE SUMMARY

2.1 UNDERSTANDING

Sophineo Corporation, leading a team comprised of Dito, LLC and The College of William & Mary, has a highly experienced Program Management and Data Analytics Technical Team that is successfully supporting multiple federal, state and local government agencies. Sophineo's mission is to support our clients in breaking through their analytics challenges, enabling them to achieve their analytics vision.

The Commonwealth of Virginia is establishing itself as a national leader in data-driven policy, evidence-based decision-making, and outcome-based performance management. To meet this objective, Virginia requires a vehicle that enables government agencies to procure services and solutions that address ever increasing data volumes, sophisticated use cases, and rapid technological advances. The key success criteria for achieving and maintaining this desired leadership position requires Virginia to (1) select services and solutions partners who are able to find the right fit between Virginia's analytics use cases and industry leading tools, (2) continue to invest in Virginia's base of analytics talent and innovation, and (3) develop the next group of analytics thought leaders and entrepreneurs. Team Sophineo, an integrated team led by Sophineo Corporation with Dito LLC, and The College of William & Mary as strategic teammates, has been constructed to achieve the aforementioned criteria for success. Our team is excited to partner with Virginia to meet their leadership objectives related to using data as a means to better serve our fellow citizens.

Sophineo is a micro business, founded in Virginia, to focus on the development of industry-leading data analytics solutions for the expressed purpose of enabling government customers to use data to improve services to their constituents - Virginia's exact objective of this program. Sophineo qualifies as a micro business, and we lead the development of analytics solutions on some of the most highly-visible, global programs at the Department of State. As the analytics lead at the Department of State's Refugee Processing Center (RPC), Sophineo designs and implements on-prem, cloud-based, and Software-as-a-Service (SaaS) solutions that enable the Department of State's Bureau of Population, Refugees, and Migration (PRM) to improve processes, efficiently allocate resources, and report to various stakeholders data related to applicants being processed through the United States Refugee Assistance Program (USRAP). This solution scales to a large global operation and enables secure data access to interagency and Non Governmental Organizations (NGOs) to include the United Nations. Additionally, Sophineo leads data analytics efforts on a contract that supports roughly half of all Visas issued by the State Department to foreign nationals. This is also a global program, processing high volumes of highly sensitive PII and Financial data from applicants, thus requiring data analytics solutions that are secure and scalable to numerous United States Embassies and Consulates, worldwide. The key component of Sophineo's success across all of our customer engagements has been a professional services team you can rely on, backed by proven technical and management processes, broad data analytics expertise and innovation with a comprehensive vision and the ability to execute.

Sophineo has partnered with Dito to bring industry leading government and commercial expertise in analytics and the public cloud. Dito is a premier partner with Google with specializations in Data Analytics and Location-based Services. Achieving premier partner status means Dito has demonstrated to Google Cloud the highest levels of technical proficiency, expertise, and impact with customers. This includes maintaining a staff of certified data analytics engineering resources and a continued demonstration of customer success. Dito is a fabulous example of a Virginia founded and headquartered startup achieving great things, supporting over 1,600 clients since their founding in 2007. Dito's clients include several city and county governments. Their client base also includes globally-recognized organizations such as The Boys and Girls Clubs of America and BMC Software. Dito's experience, and strong relationship with one

of the most innovative technology companies in the world in Google, will contribute to successful delivery of all client task orders and ensure Virginia has access to the most leading edge analytics products.

Our team's capabilities are further strengthened through partnering with the prestigious College of William & Mary's Data Analytics graduate and undergraduate programs at the Raymond A. Mason School of Business. This partnership will include the establishment of an internship program that will serve multiple purposes. First, a great deal of innovation in Data Analytics is occurring within United States Colleges and Universities. Our internship program will bring new perspectives on how Virginia can use analytics to meet the needs of its citizens. In addition, Virginia will need access to talented data analytics professionals to be able to meet their establishing itself as a national leader in data-driven policy, evidence-based decision-making, and outcome-based performance management. Our internship program will enable William & Mary students to gain real-world experience and contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.

For this proposal, we are bidding Data Analytics Solutions and Services against all ten (10) functional areas outlined in the RFP which include: Data Strategy and Solution Development; Data Architecture and Management; Data Governance, Data Documentation and Quality; Data Engineering (Movement); Data Visualization and Exploratory Data Analysis; Data Warehousing (Transformation); Data Analytics, and Statistical and Predictive Modeling; Data Integration and Consolidation (Data Lake); Machine Learning; and Intelligence. As a side note, we are not bidding or proposing any "SaaS" solutions in our proposal.

2.2 HIGHLIGHTS OF OUR PROPOSAL

Our team is experienced across all elements of the ten (10) functional program areas being proposed, empowered with best practices, and ready to partner with VITA to address upcoming challenges.

Team Sophinea and General Experience	Key Team Benefits
<p>Sophinea is an innovative provider of Data Analytics Solutions to the federal government, including State, DHS, Army and NIH. Sophinea's goal is to apply the right technologies, proven techniques and methods, innovative ideas, and skilled management to help our customers achieve their missions.</p> <p>Dito has been for 12 years in the Google Cloud partner ecosystem, serving 1600+ customers. It is a Premier Partner with Specializations in Data Analytics and Location-Based Services, a Single partner conduit to all Google Cloud enterprise solutions and has a wide variety of supported customers, use cases and deployments.</p> <p>College of William & Mary's Raymond A. Mason School of Business provides a Master of Science in Business Analytics program. The program focuses on four educational pillars: Business Acumen, Computing Technologies, Math Modeling, and Communicating with Impact. Courses include Machine Learning, Artificial Intelligence, Database Management, Optimization, Stochastic Modeling, Big Data, and Data Visualization.</p>	<ul style="list-style-type: none"> ● Key Personnel with extensive data analytics solutions experience supporting government agency environments, with technology partners (e.g., AWS, Tableau, Elastic Stack and others). ● A dedicated recruiting function, with robust recruiting tools, and a pool of over 50 Data Analytics resumes, ensuring a wide range of personnel capabilities. ● Mature, proven technical management and program management processes and tools are flexible and scalable to a task order contract. ● Dito maintains Premier Partner Google status, meaning Dito has demonstrated to Google Cloud the highest levels of technical proficiency, expertise, and impact with customers. It provides innovative Data Warehousing & Analytics and Data Sciences (ML/AI) solutions. ● W&M's Data Analytics program features the latest tools and technologies – including R, Python, Alteryx, Tableau, Gurobi, and AWS. The program includes practicum courses where students apply their knowledge and skills to real-world projects.

2.3 WHY YOU SHOULD CHOOSE TEAM SOPHINEA

*Team Sophinea is your **low-risk** and **best value** choice, offering **trusted** corporate leadership, dedicated Key Personnel, reach-back to innovative Data Analytics expertise, and **proven** program management.*

3.0 ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS INCLUDING DETAILED DESCRIPTION OF PROPOSED SOLUTION(S)

3.1 TEAM SOPHINEA'S INTRODUCTION FOR ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS

As highlighted below in Figure 3.1-Sophinea's Demonstrated Functional Experience on Relevant Mission Critical Programs, Team Sophinea has directly relevant Data Analytics and Analysis Solutions and Services experience to the subject RFP's requirements and experience providing this challenging support under large, classified, government task order type contracts. To ensure success, as in the past on these highlighted programs, Team Sophinea will provide innovative solutions to VITA by employing proven Big Data development practices in a collaborative approach with highly qualified personnel. Our team's in-depth knowledge of the Big Data environment provides a unique perspective into how to solve the challenges of today and tomorrow, which enables us to deliver powerful low-risk solutions. Our team will work with all stakeholders to identify data standards, business rules, operating requirements, and data information exchanges used in accomplishing program objectives.

Our technical approach is to anticipate enhancements to business processes and evaluate new technologies. We use proven, well-supported frameworks and patterns that robustly support technological evolution and deliver systems that have set standards and provided foundations for re-use in subsequent systems. Furthermore, as part of our organizational culture, we foster collaboration amongst all stakeholders from the start. This emphasis on knowledge-sharing leads to better products and a better overall experience for the customer.

As part of this collaboration, our Big Data team will work with all stakeholders to identify data analytics use cases that are fundamentally critical to our client's program objectives. Upon completion of the initial assessment, our experienced team of data engineers will provide a blueprint for the transformation of the landscape, with recommendations for data system integration and data visualization, process improvement, and the alignment of data systems with business activities. By utilizing industry best practices related to Agile development and applying our disciplined CMMI approach to developing high quality data analytics solutions, we will support our clients with the transformation of data driven business processes, innovation, and efficiency.

In order to provide further insight and additional information about Team Sophinea's technical response for Attachment A requirements that benefit from a more detailed solution discussions and graphics, we have provided expanded responses with graphics under a subscription entitled "ADDENDUM: Sophinea'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS".

Customer & Program	Functional and Technical Area Relevance: Data Analytics Solutions: Software, SaaS, and/or Services										Sophineo's Data Analytics Program Results
	1*	2*	3*	4*	5*	6*	7*	8*	9*	10*	
Department of State and Department of Homeland Security Worldwide Refugee Admissions Processing System Support Systems (WRAPS II)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Maintains Top Secret Level Security and Privacy Controls for classified Information Developed a Data and Analytics solution to provide global reporting in support of the United States Refugee Assistance Program (USRAP) Provides Systems Architecture Design, Data Visualization, Procurement Support to document licensing requirements, Training, and Global Provisioning of Tableau Technologies: Tableau Desktop, Tableau Server, Microsoft SQL Server, and Citrix Server
Department of State Consular Affairs Global Support Strategy (GSS) 1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Maintains Secret Level Security and Privacy Controls for classified information Supporting processing of US Visas by developing Data Analytics's solutions Develop and deploy Business Intelligence (BI) tools and Data Visualizations Analyze highly complex business requirements and generate technical specifications to design or redesign interactive dashboards that are mission-oriented and enable decision-makers data-driven operational and strategic decisions Setting up a Data warehouse in AWS (Redshift, S3, Tableau) Technologies: AWS, Tableau, Elastic Stack, ServiceNow Performance Analytics
National Institute of Health (NIH) Data Collection Training	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Training: Developed customized and tailored training for NIH's OD OHR staff, including training related to data collection from surveys and analysis of collected data using Excel and Tableau as the primary analytics tools
San Joaquin Foster Care Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Dito, a Google Cloud Premier Partner with a partner specialization in Data Analytics, was brought in to work as the solutions architect and application developer. The ICAN application uses Google Cloud Platform for computing and analytics, along with Google Maps Platform to leverage mapping and location data, merging data from various systems to create a weighted scoring system that helps identify the best resources based on the identified needs.
St. Tammany Parish, LA Analysis of Property Tax Audits	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<ul style="list-style-type: none"> Solution: Primarily using BigQuery, massive amounts of taxpayer data, such as Driver's License and Voter Records, are now ingested and analyzed within their secure cloud environment. Maintaining compliance with State and Federal laws which prohibit the unauthorized sharing of non-public data, the records are encrypted at-rest and in-motion while using Google Cloud Identity and Access Management tools to ensure that the data is only accessible by authorized individuals. From the existing verified data, Dito was able to create a prediction model, built with Machine Learning APIs and Tensorflow, in order to further automate and improve.

1* Data Strategy and Solution Development, 2* Data Architecture and Management, 3* Data Governance, Documentation and Quality, 4* Data Engineering, 5* Data Visualization and Exploratory Data Analysis 6* Data Warehousing (Transformation), 7* Data Analytics, Statistical and Predictive Modeling, 8* Data Integration and Consolidation (Data Lake), 9* Machine Learning 10* Intelligence

Figure 3.1 Sophineo's Demonstrated Functional Experience on Relevant Mission Critical Programs

Significant achievements since our founding with active engagements supporting major Data Analytics transformational changes for our client

3.2 ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS

3.2.1 GENERAL

General			
RFP Req. #	Requirement	Column A:	Column B:
GEN-1	(M) This is MUST HAVE #1 - (M) Proposal must be received by the due date and time. No late proposals will be reviewed.	Y	Sophinea's proposal will be submitted by the requested due date and time.
GEN-2	(M) This is MUST HAVE #2 - Each Solution's information system components, services, data and system information associated with the information system components and services shall remain within the continental United States. Please describe.	Y	Sophinea is a Micro Small Business headquartered and incorporated in the Commonwealth of Virginia. All work will remain and be performed within the continental United States, with most if not all of all Services support within Virginia.
GEN-3	(M) This is MUST HAVE #3 - For SaaS Solutions, the Supplier shall annually verify, by third-party AICPA SOC-2 (Type 2), that required Commonwealth of Virginia security controls have been implemented in the Solution environment; and, upon request provide a copy of the report to VITA and the Authorized User(s). The Trust service principles to be covered include Security, Availability, Processing Integrity, Privacy and Confidentiality.	Y	Sophinea is not bidding any SaaS Solutions so this GEN-3 requirement is not applicable to our Solutions/Services proposal
GEN-4	Authorized Users may choose to procure a Software Solution through one Supplier and procure installation, implementation, training, and/or other personnel services through a different Supplier. Do you agree with this requirement? Please describe.	Y	Sophinea agrees with and accepts this GEN-4 requirement.
GEN-5	No Commonwealth data is to be analyzed offsite, copied, transformed to obscure Commonwealth's ownership, or transmitted in any way without formal Authorized User approval. Do you agree with this requirement? Please describe.	Y	Team Sophinea agrees with and accepts this GEN-5 requirement. No Commonwealth data is to be analyzed offsite, copied, transformed to obscure Commonwealth's ownership, or transmitted in any way without formal Authorized User approval.

GEN-6	All applicable state and federal laws, regulations and standards concerning the protection of Commonwealth and Authorized User data must be complied with. Do you agree with this requirement? Please describe how.	Y	Team Sophinea agrees with and accepts this GEN-6 requirement. All applicable state and federal laws, regulations and standards concerning the protection of Commonwealth and Authorized User data must be complied with.
GEN-7	If requested by the Authorized User, Supplier staff will submit to background checks conducted and paid for by the Authorized User. Do you agree with this requirement? Please describe.	Y	Sophinea agrees with and accepts this GEN-7 requirement. Current Sophinea personnel hold federal government clearances up to the level of Top Secret so we are experienced with background security checks and the investigative process.
GEN-8	Does your Solution include pilots to allow an Authorized User to experience the value of the software or services, if requested by an Authorized User and defined through a Statement of Work (SOW) based on mutual agreement of scope? Please describe.	Y	Yes, for Solutions Proposals, Sophinea will offer an Authorized User the ability to experience the value of the proposed software or service through a pilot prior to full-scale development, if requested and defined under GEN-8. If a customer is interested in taking an additional step and would like to pursue a Prototype Study at additional cost, Sophinea has federal government contracting experience in conducting such studies and has the technical experience to collaborate with any Authorized User in defining a clear, concise SOW that will help them achieve the objectives of their Prototype Study.
GEN-9	Do you agree that there will be no cost to the Commonwealth or the participating Authorized Users for the use of the Solution or Supplier resources utilized during such pilots? Please describe.	Y	Yes, the cost of any Pilot Study as defined under GEN-8 will be at no cost. We will ensure any Solution we propose will include an offer by the OEM to demonstrate their product as part of a Pilot Study at no cost. In addition, if an Authorized User requests additional Service-level support from Sophinea to support an additional step of a Prototype Study, the cost, if any, will be dependent and negotiable on the amount of support services being requested by the User.

GEN-10	<p>Suppliers providing pilots will need to work with any Authorized User providing data to support that pilot to develop a mutually agreed upon Statement of Work (SOW) before a pilot can commence. That SOW needs to address exactly how the Supplier intends to analyze any Authorized User data and all of the controls and associated roles that will be applied to that data. Does your Solution meet this requirement? Please describe.</p>	Y	<p>Sophinea has in-depth experience conducting pilots under federal government Task Order Contracts. Each pilot will start with a mutually agreed upon Statement of Work (SOW) and Statement of Objectives (SOO) before work begins. As the data analytics lead for programs using non-public, classified data, we understand the need to consider the security implications of using client data while conducting pilots. In all instances, the Sophinea team works with the client and IT Security team to determine the appropriate use of data during pilots. In most cases, the agreement with the client and security team is to use either representative public data sets or test data that scrambles and/or hashes sensitive data. Team Sophinea will follow the same approach for all task orders awarded under this contract, and only using public data for any SaaS pilots. Our proposed, collaborative Technical and Task Management Approach is described in "Section 4.10 Service and Support Management"</p>
GEN-11	<p>Only "public data" may be utilized in SaaS Solutions and/or in any pilot. For the purpose of this Data Analytics RFP and any resulting contracts, "public data" is defined as information that can be freely used, reused and redistributed with no existing local, national or international legal restrictions on access or usage and with no login required to access the information. Does your Solution meet this requirement? Please describe.</p>	Y	<p>Sophinea currently supports classified federal government contracts and fully understands the protocols in managing and protecting confidential or classified information versus "public data." Any proposed SaaS Solutions or Pilot Study by Sophinea under the program will be in full compliance with the requirements of GEN-11. Our proposed, collaborative Technical and Task Management Approach is described in "Section 4.10 Service and Support Management"</p>
GEN-12	<p>For any mutually agreed pilots, the Supplier will provide subject matter experts as needed to support the pilot. Does your Solution meet this requirement? Please describe.</p>	Y	<p>Yes, for Solution proposals, Sophinea is willing to offer SMEs as needed to support the Pilot in order to provide a demo experience to the User as</p>

		noted under GEN-8.
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3.2.2 DATA STRATEGY AND SOLUTION DEVELOPMENT

Data Strategy and Solution Development			
RFP Req. #	Requirement	Column A:	Column B:
SSD	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	Y	<p>Sophinea, as an agnostic integration systems provider, offers Data and Analytics Solutions which are data-driven, modular solutions that enable clients to simplify and modify their businesses. Leveraging data and analytics to achieve digital business transformation is one of the biggest, toughest priorities our customers face. The Sophinea approach focuses first on the client's desired business outcomes, ahead of pre-determining and selecting a particular product technical capabilities. Knowing the client's desired outcomes help us in guiding our clients in managing potential costs, risks and optimizing the intended business benefits. As a result, rather than focusing on a single pre-determined solution up front, we offer a portfolio of products and choose the one for our Big Data solution that best fits our clients needs. This current portfolio of products is attached and continuing to grow. During the contract's 8 year period of performance, as we continue to review and test additional products in the market, we will add new, innovative products to our portfolio offering.</p> <p>Team Sophinea has led the data</p>

			strategy and solution development for many highly visible projects, in the Federal, State and Local, and Commercial Industries. Our team is currently responsible for leading Data Analytics modernization efforts for the United States Refugee Assistance Program (WRAPS II Project) and to support The Department of State's overseas Visa processing (GSS Project), both global programs that span operations in six continents. In addition, Team Sophinea has been involved in cutting edge analytics projects that support State and Local governments utilize the cloud to better serve their citizens. This includes using Artificial Intelligence and chatbots to better serve the citizens of Placer County, California (Placer County Project) and the use of Machine Learning Recommender Systems to support youth services in San Joaquin County, California (San Joaquin County Project). Our team's approach is not design solutions with an end product in mind, but to partner with our clients to find the perfect fit between technology and their use case.
SSD-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the Department of State (WRAPS II and GSS) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task

			order client.
SSD-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
SSD-3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section 508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards.</p>

			Any exceptions will be closely coordinated for approval with the task order client.
SSD-4	Does the Solution safeguard non-public data? Please describe.	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>

SSD-5	<p>Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.</p>	Y	<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user role. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>
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SSD- 6	<p>Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)?</p> <p>Please describe and list.</p>	Y	<p>Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.</p>
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SSD-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea will design custom data strategies and solutions that align to the VITA clients business objectives. This will include prospective best of breed technologies that serve as an enabler for their client. Data Analytics is core to Team Sophinea's mission. Thus, our technologists and engineers invest time and resources to stay abreast of data analytics industry trends and identify solutions that fit current and future client requirements. From cloud migration projects that enable clients to utilize the power of the cloud and its native tools to efficiently and cost effectively process data using sophisticated AL and ML algorithms to on-prem, hybrid cloud, and cloud hosted solutions that provide clients the flexibility to use cutting edge tools in classified operating environments, Team Sophinea will advise clients on components that are a direct fit for their organization's mission. As an example, Team Sophinea partnered with the multiple agencies San Joaquin County (<i>San Joaquin County Project</i>) has to provide youth services. Matching a foster child in need with a resource family that can provide the optimal environment, location, and various other resources to support the child's needs was a lot of work. The systems involved were largely manual and time intensive, having to find and review large amounts of paperwork. This resulted in longer processing and connected resources based more on convenience (which resource called back first) instead of being ideally matched with the level of needs. Team Sophinea was brought in to work as the solutions architect and application developer. In partnership</p>
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			<p>with Google Cloud, Team Sophinea developed an application that uses Google Cloud Platform for computing and analytics, along with Google Maps Platform to leverage mapping and location data, merging data from various systems to create a weighted scoring system that helps identify the best resources based on the identified needs. The application, called the ICAN Matching Engine has transformed the way San Joaquin County works with youth on probation and in foster care, as well as to manage the resource and foster care families. Now, the multiple, independent databases are accessible through a unified interface and the days of manually digging through paper files and notebooks of information to subjectively match needs with resources are a thing of the past. In addition, the intelligent cloud-based application identified the best possible matches between youth needs and resource families in the community, improving many youth's lives.</p>
SSD-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State</p>

			<p>customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).</p>
SSD-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II Project). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that</p>

			clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.
SSD-10	Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various</p>

			Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
SSD- 11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client dependant upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

SSD-12	<p>Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.</p>	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. The VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
SSD-13	Do you provide training on the Solution? Please describe, including all available training options.	Y	<p>Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a Machine Learning Recommender System for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through</p>

			multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.
SSD-14	Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.	Y	Team Sophinea's Technologists and Engineers stay abreast of technological trends in the area of data analytics. A component of this includes exploring technical documentation related to new Data Analytics products and advances to features in existing Data Analytics products. Our research serves as the basis for engaging in dialogue with vendors regarding solutions and exploring new tools and features that could be applied to address our clients' use cases and existing pain points. Indeed, this takes a great deal of time and effort, but we are passionate about Data Analytics and our clients' success (WRAPS II, GSS, Placer County, and San Joaquin County Projects).

SSD-15	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS II Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
			26

		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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SSD- 16	<p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <i>specific to this requirements category</i> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	Y	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Strategy and Solution initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Strategy and Solution roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project)</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the data strategy and solution development project.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with each other.</p>
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		<p>Databricks, Elastic Stack</p> <hr/> <p><u>Data Scientist:</u></p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p><u>Business Analyst:</u></p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The Business Analyst's analysis helps the design of improvements to existing technologies and processes.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p>
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			Tools: GitHub, Jira, Box, G Suite

3.2.3 DATA ARCHITECTURE AND MANAGEMENT

Data Architecture and Management			
Definition: Data Management is a plan for maintaining and improving the quality of data, data integrity, access, and security while mitigating known and implied risks. The plan must also address known challenges related to data management. Data management requires design skills to plan for systems, highly technical skills to administer hardware and build software, data analysis skills to understand issues and problems, analytic skills to interpret data, language skills to bring consensus to definitions and models, as well as strategic thinking to see opportunities to serve customers and meet goals.			
RFP Req. #	Requirement	Column A:	Column B:

ARM	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	<p>Y</p> <p>Team Sophinea builds scalable analytics solutions that meet specific needs of end users. The data architecture and data management strategy are incorporated into all of our solutions to ensure the integrity of the insights from the system and to ensure high performance of the system. Team Sophinea takes into consideration the needs of the client in terms of the number of data sources, the frequency data models used for end user reporting need to be updated, and the overall size of the data. In addition, our team also considers the various needs to segment the data, based on user groups and user roles. Finally, we develop strategies to ensure the integrity of the data through the use of automated quality control (QC checks). Through this process, the client can be confident that data can be processed in a timely manner to support end user decision-making, their data is protected, and the insights from their data are accurate.</p> <p>Our team has significant experience designing data architectures and data management strategies. In support of St. Tammany Parish (<i>St. Tammany Parish Project</i>), Team Sophinea designed a system to verify homeowners' property tax exemptions. This system required numerous data integrity checks based on cross-checks of data across multiple databases and jurisdictions to verify that the taxpayer claiming a homestead exemption is in fact eligible to claim that exemption. Primarily using BigQuery, massive amounts of taxpayer data are ingested and analyzed within their secure cloud environment. Maintaining compliance with State</p>
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			and Federal laws which prohibit the unauthorized sharing of non-public data, the records are encrypted at-rest and in-motion while using Google Cloud Identity and Access Management tools to ensure that the data is only accessible by authorized individuals. From the existing verified data, Team Sophinea was able to create a prediction model, built with Machine Learning APIs and Tensorflow, in order to further automate and improve insights for the client.
ARM-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ARM-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements.</p>

			Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.
ARM-3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>

ARM-4	Does the Solution safeguard non-public data? Please describe.	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meets the high standards established by the Federal Government and The Department of State (<i>WRAPS II and GSS Projects</i>), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
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ARM-5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user role. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.
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ARM-6 Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	<p>Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.</p>
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ARM-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea will design custom data strategies and solutions that align to the State of VITA clients business objectives. This will include prospective best of breed technologies that serve as an enabler for their client. Data Analytics is core to Team Sophinea's mission. Thus, our technologists and engineers invest time and resources to stay abreast of data analytics industry trends and identify solutions that fit current and future client requirements. From cloud migration projects that enable clients to utilize the power of the cloud and its native tools to efficiently and cost effectively process data using sophisticated AI and ML algorithms to on-prem, hybrid cloud, and cloud hosted solutions that provide clients the flexibility to use cutting edge tools in classified operating environments, Team Sophinea will advise clients on components that are a direct fit for their organization's mission. As an example, Team Sophinea partnered with the multiple agencies San Joaquin County (<i>San Joaquin County Project</i>) has to provide youth services. Matching a foster child in need with a resource family that can provide the optimal environment, location, and various other resources to support the child's needs was a lot of work. The systems involved were largely manual and time intensive, having to find and review large amounts of paperwork. This resulted in longer processing and connected resources based more on convenience (which resource called back first) instead of being ideally matched with the level of needs. Team Sophinea was brought in to work as the solutions architect and application developer. In partnership</p>
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			<p>with Google Cloud, Team Sophinea developed an application that uses Google Cloud Platform for computing and analytics, along with Google Maps Platform to leverage mapping and location data, merging data from various systems to create a weighted scoring system that helps identify the best resources based on the identified needs. The application, called the ICAN Matching Engine has transformed the way San Joaquin County works with youth on probation and in foster care, as well as to manage the resource and foster care families. Now, the multiple, independent databases are accessible through a unified interface and the days of manually digging through paper files and notebooks of information to subjectively match needs with resources are a thing of the past. In addition, the intelligent cloud-based application identified the best possible matches between youth needs and resource families in the community, improving many youth's lives.</p>
ARM-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State</p>

			<p>customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).</p>
ARM-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II Project). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that</p>

			clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.
ARM-10	Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various</p>

			Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
ARM- 11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

ARM-12	Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. The VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
ARM-13	Do you provide training on the Solution? Please describe, including all available training options.	Y	Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a Machine Learning Recommender System for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through

			multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.
ARM-14	Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.	Y	Team Sophinea's Technologists and Engineers stay abreast of technological trends in the area of data analytics. A component of this includes exploring technical documentation related to new Data Analytics products and advances to features in existing Data Analytics products. Our research serves as the basis for engaging in dialogue with vendors regarding solutions and exploring new tools and features that could be applied to address our clients' use cases and existing pain points. Indeed, this takes a great deal of time and effort, but we are passionate about Data Analytics and our clients' success (WRAPS II, GSS, Placer County, and San Joaquin County Projects).

ARM-15	For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS II Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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ARM-16 Describe how the Solution supports business user data modeling, including custom groups, hierarchies, filtering and calculations (e.g., combining multiple data sources and applying logic/transformations to create a dataset ready for analysis).	Y Team Sophinea will work to define curated and production quality data marts to support data analytics and visualization. We understand data modeling is a critical component of ensuring data quality and standards. Team Sophinea leads efforts at the Department of State (WRAPS II) to design technical server requirements for data capture, processing, and storage, an approach for user authentication and management. Our team is also responsible for consulting on best practices and guidelines for designing and implementing server-side data models and Tableau Data Extracts. These models include custom groups, hierarchies, filtering and calculations. Historically, we have used MS SQL Server Stored Procedures and scheduled jobs to apply logic to cases for purposes of classification and creation of a custom operational pipeline. Through these jobs, we also denormalize the table structure to simplify reporting, enable end users to apply filters and define cycle-time metrics for each of our processes. We are currently modernizing the data architecture and data management strategies using AWS cloud-native technologies and leading-edge technologies such as Databricks and Immuta.
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ARM-17 <p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <i>specific to this requirements category</i> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	<p>Y</p>	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Architecture and Management initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Architecture and Management roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project)</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Data Architecture and Management project.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with</p>
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		<p>each other.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Scientist:</p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer</p>
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		<p>County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Data Architect:</p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Data Catalog, GitHub, Google BigQuery, MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p>Business Analyst:</p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The Business Analyst's analysis helps the design of improvements to existing</p>
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		<p>technologies and processes.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p><u>Undergraduate and Graduate Interns:</u></p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: N/A</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.2.4 DATA GOVERNANCE, DOCUMENTATION AND QUALITY

Data Governance, Documentation and Quality			
RFP Req. #	Requirement	Column A:	Column B:

GDQ	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	<p>Y</p> <p>Team Sophinea is proposing services support to address the VITA's Data Governance requirements.</p> <p>Data Governance is a keystone of maximizing value from analytics. Proper Data Governance ensures The VITA works from a common lexicon and also protects the highly sensitive data often used by government agencies. Team Sophinea's approach to supporting the VITA with Data Governance includes a combination of people, processes, and tools. Our approach has successfully established protections for PII, PHI, Financial Information, and data elements related to national security at the Department of State (WRAPS II and GSS Projects). Additionally, our approach has successfully established standards across interagency and non-governmental organizations (NGO's).</p> <p>Team Sophinea will work with VITA clients to develop and maintain data governance models. This will include working closely with the client's Data Governance Steering Committee, Data Stewards, and Data Owners. All data governance models will be designed in a manner that conforms to the Steering Committee's decisions related to what data should be captured and how data should be handled, including which governing laws and organizational rules apply. If the client does not have a steering committee or has not established a governance strategy, we will work with the client to design a model that is appropriate for the size and scope of their analytics objectives and also complies with applicable COV ITRM Policies and Standards. This model will serve as the basis for establishing</p>
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		<p>workflows and guidelines for Data Owners and Data Stewards to follow. Sophinea's approach can and will be adjusted based on the scope of the engagement, with a single individual assuming multiple roles for smaller projects.</p> <p>Data Governance can be designed as a manual process for smaller organizations or data initiatives. This would include, but not be limited to, a set of documents that capture data policies and catalogues/dictionaries. These manual processes typically also extend to strategies related to maintaining data quality and integrity and securing the data through security groups and data segmentation. However, clients Sophinea works with often have requirements that need to be scalable to thousands of users. In addition, our users are often globally distributed, operating out of Embassies and offices spanning all continents, excluding Antarctica. Furthermore, Team Sophinea's client's are dealing with Classified and Highly Sensitive data. Under these circumstances, Team Sophinea works with our clients to select software that enables them to automate, collaborate, and apply data security down to the cell level to ensure data governance objectives are applied consistently and uniformly throughout their organization. Team Sophinea will design Data Governance solutions that are tailored to each task order. These solutions with apply the right balance of people, processes, and industry-leading tools such as Immuta for Self-Service Data Access with Automated Privacy Control; BigID for discovery and management of personal and sensitive data across the entire data</p>
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			ecosystem; Informatica Axon for Automated Data Governance; and Collibra or Alation for Collaborative Data Cataloging, Master Data Management, and Metadata management.
GDQ-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS Projects) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
GDQ-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>

GDQ- 3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
GDQ- 4	<p>Does the Solution safeguard non-public data?</p> <p>Please describe.</p>	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to</p>

			<p>hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
GDQ-5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>

GDQ- 6	Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.
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GDQ-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Governance, Documentation, and Quality requirements, including Immuta, Informatica, Collibra, and Alation, and BigID.</p> <p>Immuta: Immuta enables customers to continuously enforce data policies across the client's enterprise data, enabling users to access data in a self service fashion but ensuring they are only allowed to access what they are permitted to see. Immuta's platform includes fine-grained access controls, dynamic policy enforcement, and privacy enhancing technologies to dynamically anonymize data, unlocking the value and utility of sensitive data for internal analytics and external data sharing. (https://www.immuta.com/)</p> <p>Google Data Catalog: Data Catalog is a fully managed metadata management service that simplifies data discovery at any scale. Data Catalog also offers a central and more secure data catalog across Google Cloud, allowing organizations to have a unified view of all their data assets and provides a foundation for governance by offering a strong security and compliance foundation with access level controls (ACLs) that extend to govern the data, so the right people find and access the right data. (https://cloud.google.com/data-catalog/)</p> <p>Informatica: Informatica's Data Governance solution serves as the basis for location, curating and</p>
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		<p>maintaining insight into the data made available for analysis. These components include the Enterprise Data Catalog, Axon and Informatica Data Quality. Enterprise Data Prep enables users to prepare data for usage in the analytics tool(s) of your choosing.</p> <p>(https://www.informatica.com/products/data-quality/axon-data-governance.html)</p> <p>Collibra: Collibra is a cloud-based platform that connects IT and the business users by removing the fragmentation and complexity of traditional data management technologies. The Collibra Platform, users can easily access trustworthy data while data governance teams can automate processes, and manage compliance.</p> <p>(https://www.collibra.com/)</p> <p>Alation: Alation uses search techniques perfected in the consumer space to simplify & automate creating an inventory of your data assets. Alation crawls & indexes data assets stored across different physical repositories including databases, Hadoop files and data visualization tools. Alation automatically ingests technical metadata, user permissions and business descriptions into a central repository that is a foundational resource for all data users in your organization.</p> <p>(https://www.alation.com/)</p> <p>BigID: BigID enables customers to capture and manage technical, business and security metadata. Their platform automatically catalogs and maps sensitive & personal data using advanced metadata classification techniques. It also incorporates</p>
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			industry leading approaches to Data Transfers & Sovereignty and Opt-in/Opt-Out Consent Governance. (https://bigid.com/)
GDQ-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).</p>

GDQ-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.</p>
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GDQ- 10	<p>Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.</p>	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to develop data sources</p>
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			and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
GDQ-11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

GDQ- 12	<p>Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.</p>	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
GDQ-13	Do you provide training on the Solution? Please describe, including all available training options.	Y	<p>Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (<i>Placer County Project</i>), maintenance of a machine learning recommender system for San Joaquin County (<i>San Joaquin County Project</i>), and on-site training spanning six continents when deploying Tableau Server for the Department of State (<i>WRAPS Project</i>). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through multiple</p>

			<p>channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
GDQ-14	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Data Governance.</p> <p>Immuta: https://documentation.immuta.com/2.8/L</p>

			<p>GCP Data Catalog: https://cloud.google.com/data-catalog/docs</p> <p>Informatica: https://www.informatica.com/products/data-quality.html</p> <p>Collibra: https://www.collibra.com/resources</p> <p>Alation: https://www.alation.com/resources/</p> <p>BigID: https://bigid.com/resources/</p>
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GDQ- 15	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition responsibility to a</p>
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		<p>healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models. Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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GDQ- 16	<p>Describe how the business user can view statistics on the overall quality and distribution of the data, how the Solution identifies potential issues with the data, and any facilities that automatically recommend actions to fix identified issues.</p>	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. One of the key components of evaluating the quality of data is to review summary information regarding the data types and distributions. A picture can say a thousand words. Statistical distributions can help analysts quickly identify issues with the data. A few common issues are related to columns with a significant number of NULL values. This can signal to the analyst that they should confirm whether the column should be used for analysis or perhaps is deprecated. Distributions are also useful to identify outliers in the dataset. These values should be cleaned prior to further analysis. Team Sophinea has considerable experience using custom coding and native application features for exploratory data analysis. Team Sophinea has used native features in tools such as Alteryx (WRAPS II Project), Tableau Prep (WRAPS II Project), and Kibana (GSS Project) to view statistics and graphical distributions of data. In addition, our team has experience using tools such as SQL Server and RStudio to custom code for exploratory analysis.</p>
GDQ- 17	<p>Describe how a report consumer and a report author can view common definitions for metadata objects either via links to help text or mouse-over on a report column.</p>	Y	<p>Team Sophinea has experience deploying tools to clients for purposes of automated management of metadata. There are multiple tools we are currently deploying for our Department of State customer (WRAPS II Project), including Immuta and AWS Glue, which index the metadata related to registered tables. These tools ensure data catalogs maintain current without significant manual effort which tends to fall behind and become obsolete. In</p>

			addition, powerful search capabilities that are available to both report consumers and authors support a common understanding of the data.
GDQ-18	Describe how the Solution offers a single repository for <i>all</i> metadata, such as mappings of business concepts to underlying data structures (e.g., dimensions and measures), as well as layouts and report configurations (e.g., prompts and filters).	Y	In addition to automating the cataloguing of metadata objects, Team Sophinea's current deployment of AWS Glue (WRAPS II Project) provides additional capabilities for our client to store all data in a single metadata repository and continuously map underlying schemas through the use of crawlers. Furthermore, Immuta provides the client the ability to catalog data at various levels and manage access through the use of defined purposes. The use of purposes further defines the context related to the data set and guides analysts and end users with its appropriate use and interpretation of results.

GDQ- 19	<p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles specific to this requirements category can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	<p>Y</p> <p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Governance, Documentation and Quality initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Governance, Documentation and Quality roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project)</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the data governance project. They are responsible for working with the Steering Committee to define guidelines for classifying data, approving data use for organizational use cases, and approving data to be shared outside of organizational boundaries.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating</p>
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		<p>applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with each other.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Architect:</p> <p>Role: Supports the transactional and schema design to embed strategies to secure and govern data at the transactional level. Also supports the design and development of curated and production models (e.g. Data Mart) to embed commonly accepted reporting criteria in an effort to provide a more common structure to end-user</p>
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		<p>reports.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Data Catalog, GitHub, Google BigQuery, MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p>Data Scientist:</p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Application Developer:</p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and</p>
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		<p>then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Data Analyst:</p> <p>Role: Supports the identification of anomalies in the data and supports the stewardship of the data. The Data Analyst is in a ideal position to identify data anomalies as identified</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San</p>
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		<p>Joaquin County Projects</p> <p>Tools: Immuta, Google BigQuery, MongoDB, MS SQL Server, MySQL, Tableau, Looker, Elastic Stack, Databricks</p> <hr/> <p>Business Analyst:</p> <p>Role: Documents data-related issues into a tracking system for appropriate resolution. Resolution could include configuration changes, or bug fixes to source systems, and data fixes.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Data Engineer:</p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/> <p>Database Administrator:</p>
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		<p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p> <hr/> <p><u>Undergraduate and Graduate Interns:</u></p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: N/A</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.2.5 DATA ENGINEERING (MOVEMENT)

Data Engineering (Movement)			
Definition: Data engineering focuses on building data pipelines to facilitate the movement of data across the organization. This includes processes that clean and standardize data into a usable state.			
RFP Req. #	Requirement	Column A:	Column B:

ENG	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	<p>Y</p> <p>Team Sophinea will work with the task order client to scope intended use cases for tools to be used for developing Data Pipelines for VITA clients. Our team has significant experience deploying streaming and batch data pipelines as a fit for our client's individual use cases. Team Sophinea developed a real time data pipeline for St. Tammany Parish, LA (<i>St. Tammany Parish Project</i>) to automate the cross checking of various records across multiple databases in multiple jurisdictions. Primarily using BigQuery, massive amounts of data are ingested and analyzed within a secure cloud environment. Maintaining compliance with State and Federal laws which prohibit the unauthorized sharing of non-public data, the records are encrypted at-rest and in-motion while using Google Cloud Identity and Access Management tools to ensure that the data is only accessible by authorized individuals. Team Sophinea was able to further improve upon the pipeline through the creation of a predictive model, built with Machine Learning APIs and Tensorflow, in order to further automate and improve the solution.</p> <p>In addition, the Sophinea Team led the creation of the data pipeline used by the Department of State (<i>WRAPS II Project</i>) to report on the United States Refugee Program (USRAP). This pipeline is the lifeblood of a Tableau solution that manages Refugee processing across six continents and is used to report statistics to various stakeholders to include Congress and the White House. Due to the geographical dispersion of processing sites, the pipeline built for the program needs to</p>
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			be available 24 hours per day, six days per week.
ENG-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS Projects) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ENG-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ENG-3	Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:	Y	Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future

	<p><u>IT Accessibility and Website Standards</u></p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>		<p>proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ENG-4	Does the Solution safeguard non-public data? Please describe.	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic</p>

			<p>Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
ENG- 5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>

ENG-6	Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.
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ENG-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Data Engineering (Movement) requirements, including Databricks, Elastic, Alteryx, Google Dataprep, and Google Dataflow.</p> <p>Databricks: Databricks enables users to build data pipelines across batch and streaming data, leveraging the speed of Spark, the collaboration of shared notebooks, and the flexibility of using familiar programming languages such as Python, R, Java, Scala, and SQL (https://www.databricks.com/)</p> <p>Elastic: Elastic Logstash dynamically ingests, transforms, and ships your data regardless of format or complexity. Logstash Logstash features a pluggable framework featuring over 200 plugins. Mix, match, and orchestrate different inputs, filters, and outputs all in real time. (https://www.elastic.co/logstash)</p> <p>Alteryx: Alteryx simplifies the process of building out data pipelines with 250+ code free and code friendly tools. Using Alteryx, analysts are able to use a repeatable drag and drop workflow to prepare pipelines to be orchestrated in production using Alteryx Server. This can be all done without having to write SQL code or custom scripts. (https://www.alteryx.com/)</p> <p>Google Dataprep: Google Cloud Dataprep by Trifacta is an intelligent data service for visually exploring, cleaning, and preparing structured</p>
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			<p>and unstructured data for analysis, reporting, and machine learning. Because Cloud Dataprep is serverless and works at any scale, there is no infrastructure to deploy or manage. Additionally, all recipes can be easily shared and managed in production (https://cloud.google.com/dataprep/)</p> <p>Google Dataflow: Google Dataflow enables fast, simplified streaming data pipeline development with lower data latency. Resource auto scaling paired with cost-optimized batch processing capabilities means Dataflow offers virtually limitless capacity to manage your seasonal and spiky workloads without overspending. (https://www.thoughtspot.com/)</p>
ENG-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that</p>

			address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).
ENG-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in

			terms of their desired mission outcomes.
ENG-10	Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an</p>

			approach, in this instance using Tableau Sites, to enable users to develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
ENG- 11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

ENG-12	Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
ENG- 13	Do you provide training on the Solution? Please describe, including all available training options.	Y	<p>Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through</p>

			<p>multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
ENG- 14	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Data Engineering.</p> <p>Databricks: https://databricks.com/documentation</p> <p>Elastic:</p>

			<p>https://www.elastic.co/guide/index.html</p> <p>Alteryx: community.alteryx.com/</p> <p>Google Dataprep: https://cloud.google.com/training/</p> <p>Google Dataflow: https://cloud.google.com/training/</p>
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ENG-15	For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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ENG- 16	Describe how the Solution provides a business user with an interface from within various types of analytic content in order to view sources, calculations and manipulations in the underlying business user data mashup.	Y	Team Sophinea will work with the task order client to define the end user requirements for data as a key component of our data strategy and solution. Dependent on the task order client's requirements our solutions will offer the ability to use tools like Alteryx Connect, Alation, and Colibra to enable users to easily search and view available data sources. This information will also provide important details related to data lineage, to include source systems, transformations, and other key details through the use of descriptions and tags.
ENG- 17	Describe how the Solution supports business user data mashup from multiple data sources and whether this is done in a report or a dashboard or in a reusable data model.	Y	Team Sophinea will work with the task order client to define the end user requirements for data as a key component of our data strategy and solution. Team Sophinea has defined reusable data models at both the dashboard level (e.g. Tableau Workbooks) or at the data source level (e.g. Database level or Tableau Data Extracts) (WRAPS II and GSS Projects). Our solutions commonly enable both approaches providing a good deal of flexibility for the client.
ENG- 18	Describe how the business user can join data sources (structured and/or unstructured) and access a variety of joins between data sources (e.g., full outer, inner, left, right). Clarify whether the Solution supports blending of measures only or union of multiple datasets with additional dimensions.	Y	Team Sophinea will use a mix of methods to curate data models for reporting. These methods will be inclusive of various SQL joins, but also include the use of more sophisticated modeling techniques using packages like T-SQL and various R and Python libraries, as an example. The tools selected for the task order client will consider the need to combine multiple tables and data sources to develop models for Data Analytics use cases.
ENG- 19	Describe how the user can enhance the data, such as by renaming, combining or splitting columns, using automatic date transforms and replacing values.	Y	Team Sophinea will curate the data source to ensure the field names are instantly recognizable by the end user and the data itself is in a format that is easily interpretable and filterable based on the task order client's

			requirements. This will involve renaming columns and also combining or splitting columns such as datetime and an individual's full name.
ENG-20	Describe how the overall model is shared and how individual metadata objects (e.g., dimensions, measures, calculations and parameters) can be shared across applications, reports and dashboards. For example, can a common dimension such as "product" be modeled once and shared?	Y	Team Sophinea will design data models that are shareable across applications, reports, and dashboards. Our team has a wealth of experience developing and maintaining a single source of truth through the establishment of common data models. The method in which these models are established and shared will vary based on the individual task order client's requirements. As an example, Team Sophinea developed and continues to maintain a set of common data models for the Department of State's Refugee Assistance Program (WRAPS II Project). This model is segmented on a row level to various end users and shared through MS SQL Server. These models have defined dimensions and parameters and also embedded calculations and measures.
ENG-21	Describe how data lineage is supported to determine which source systems contributed to the report, regardless of which extraction, transformation and loading (ETL) Solution is used.	Y	Team Sophinea understands the importance of considering how to track data lineage when designing a data analytics solution. AWS Glue will be a critical piece of our next generation data analytics solution at the State Department (WRAPS II Project). AWS Glue will enable our project to track data lineage at each step and search across all dimensions of our data source systems. Team Sophinea will evaluate the task order client's individual requirements to determine the best solution fit for their particular use case.

ENG- 22	Describe how the Solution follows a service-oriented architecture. Provide a list of multichannel (reusable) services exposed by your solution, for consumption by other clients.	Y	Team Sophinea will design our solutions using a Service Oriented Architecture. Our team uses APIs and microservices as key components of our Data Analytics solutions. Indeed, our Big Data and Machine Learning solution deployed to St. Tammany Parish (<i>St. Tammany Parish Project</i>) used BigQuery APIs to programmatically interact with Machine Learning libraries and also to move and ingest massive amounts of data for analysis analyzed within BigQuery secure cloud environment.
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ENG- 23	<p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <u>specific to this requirements category</u> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	Y	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Engineering (Movement) initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Engineering (Movement) roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project).</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Visualization and Exploratory Data Analysis project.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with</p>
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		<p>each other.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Architect:</p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Data</p>
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		<p>Catalog, GitHub, Google BigQuery, MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p>Data Scientist:</p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Application Developer:</p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San</p>
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		<p>Joaquin County Projects</p> <p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Data Integration Engineer:</p> <p>Role: Responsible for ensuring systems are able to transfer data between systems efficiently and effectively without data loss.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google Dataflow, Google Pub/Sub, API development and Management, Alteryx</p> <hr/>
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		<p><u>Data Engineer:</u></p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/>
		<p><u>Database Administrator:</u></p> <p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p> <hr/>
		<p><u>Business Analyst:</u></p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The Business Analyst's analysis helps the design of improvements to existing technologies and processes.</p>

		<p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p><u>Graduate/Undergraduate Intern:</u></p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.2.6 DATA VISUALIZATION AND EXPLORATORY DATA ANALYSIS

Data Visualization and Exploratory Data Analysis			
RFP Req. #	Requirement	Column A:	Column B:

VEA	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	<p>Y</p> <p>Team Sophinea will work with the task order client to scope intended use cases for tools to be used for Visualization and Exploratory Data Analysis. Our team has significant experience deploying several industry leading Business Intelligence platforms for our clients to include the first enterprise deployment of Tableau at the Department of State, Looker, Kibana, and visualizations using a custom javascript library called D3.js. All business intelligence tools have their own strengths and weaknesses. Team Sophinea's has expertise with deploying traditional BI tools that rely on batch data processing, such as Tableau, and BI tools such as Kibana which has been designed to display streaming analytics. Furthermore, our team stays abreast of advances in business intelligence tools, such as Looker and Thoughtspot. These tools have been respectfully designed to address the complexity of maintaining data pipelines for visualizations and enabling Natural Language Processing (NLP) to further simplify data analysis.</p> <p>Team Sophinea's experience with a broad set of tools allows our team to advise clients on a best fit solution for their particular use case instead of proposing a one size fits all approach. We have worked on large, global analytics efforts that represented transformational changes to manner in which our clients used data as a strategic asset. Team Sophinea led the transition from spreadsheet-based reporting on the United States Refugee Assistance program (WRAPS II Project) to dynamic, chart based business intelligence and exploratory data analysis. Tableau is now used as the single source of truth</p>
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			for over 1,000 users, globally.
VEA- 1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS Projects) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
VEA- 2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
VEA- 3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract</p>

	<p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>		<p>will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
VEA-4	Does the Solution safeguard non-public data? Please describe.	Y	Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.

			In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.
VEA- 5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.

VEA- 6	<p>Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)?</p> <p>Please describe and list.</p>	<p>Y</p>	<p>Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.</p>
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VEA- 7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Visualization and Exploratory Data Analysis requirements, including Tableau, Looker, Kibana, and Thoughtspot..</p> <p>Tableau: Tableau is an industry-leading business intelligence and analytics tool. Tableau provides numerous chart and map-based options for data visualizations. The tool is easy to get started with but is also highly customizable. Dashboards created with Tableau Desktop can be shared several different ways, to include as a stand alone file and through Tableau Server. (https://www.tableau.com/)</p> <p>Looker: Looker is a modern BI tool that runs on an in-database architecture and supports real-time data refreshes. One of the aspects of Looker that makes it unique is that its underlying data models are created through a SQL-like language called LookerML. This enables analysts to rapidly create and share new models using a familiar language. (https://looker.com/)</p> <p>Kibana: Kibana is a free and open user interface that lets users to visualize their Elasticsearch data and navigate the Elastic Stack. Kibana enables clients to reliably and securely take data from any source, in any format, then search, analyze, and visualize it in real time. (https://www.elastic.co/kibana)</p> <p>Thoughtspot: ThoughtSpot is the</p>
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			leader in search & AI-driven analytics for enterprises. With their next-generation analytics platform, business people can use Google-like search to easily analyze complex, large-scale enterprise data and also get trusted insights to questions they did not know to ask, automatically - all with a single click. (https://www.thoughtspot.com/)
VEA-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).

VEA-9	<p>List licensing options for the Solutions you have included in this category. Please describe.</p>	<p>Y</p> <p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.</p>
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VEA-10	<p>Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.</p>	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to</p>
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			develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
VEA-11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

VEA- 12	Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
VEA-13	Do you provide training on the Solution? Please describe, including all available training options.	Y	Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through

			<p>multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
VEA-14	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Data Visualization and Exploratory Data Analysis.</p> <p>Tableau: https://www.tableau.com/learn</p>

			<p>Thoughtspot: https://www.thoughtspot.com/resources</p> <p>Elastic: https://www.elastic.co/training/</p> <p>Looker (Google): https://cloud.google.com/training/</p>
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VEA-15	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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VEA- 16	Describe how the Solution offers an extensive library of commonly used descriptive statistical functions, including mean, min, max, standard deviation, confidence interval and hypothesis testing using basic statistical capabilities (e.g., t-test, chi-square).	Y	Team Sophinea has experience deploying Business Intelligence tools (WRAPS II Project) that enable users to easily calculate descriptive statistical functions. As each tool is unique, so is the manner in which these statistics are derived. As an example, Tableau provides the option to develop calculated fields or use interface tools. This is different from Looker, which uses a SQL based modeling language to calculate statistics, and Thoughtspot, which interprets natural language to derive statistics. There are pros and cons to each tool and the manner in which these metrics are derived. Team Sophinea will work with task order clients to determine which tool is best for their particular situation.
VEA- 17	Describe how the Solution can be used to automatically generate advanced analytic visualizations (such as the ability to visualize correlations or clusters in a dataset or display decision tree).	Y	Team Sophinea has experience deploying some of the most advanced Data Visualization platforms available in the market today (WRAPS II and GSS Projects). Team Sophinea has experience deploying leading edge Data Visualization tools, such as Looker, that enable users to automatically generate advanced analytics visualizations, such as developing correlations, clusters, and decision trees without the requirement of custom software development.

VEA- 18	Describe how the Solution supports interactive capabilities: (1) excluding data from views; (2) cascading filters; (3) drill down and up for different chart types; (4) sort. List interactions explicitly supported or not supported.	Y	<p>Team Sophinea works on global projects (WRAPS II and GSS Projects) that have numerous layers of complexity and thousands of unique data values. Thus, our team understands the importance of data visualization features such as sorting, drilling up and down with different chart types and using cascading filters. Cascading filters are a native feature of Tableau and an often requested feature in our deliverables to the client. With thousands of options available within certain dimensions, it is extremely helpful for values that are irrelevant due to other applied filters to be removed from view. Additionally, it is important to consider which chart types are appropriate to use to answer questions at various levels. Tools such as Tableau enable drill down into the data and displaying various chart types based on the second and third level questions that arise from top-level summary visualizations..</p> <p>Team Sophinea will work with the task order client to determine the interactions that matter most to them and their use cases. This feedback will serve as the basis for our recommendations.</p>
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VEA- 19	Describe how the Solution supports interactive capabilities: (1) zooming and/or panning; (2) brushing; (3) show detailed rows behind a visualization. List interactions explicitly supported or not supported.	Y	Team Sophinea understands the true value of data visualization tools is to view data sets from various different perspectives and how data is related. The data visualization tools Team Sophinea deploys to customers are designed to be highly interactive. This includes engineering dashboards that allow users to zoom and/or pan in and out, brushing separate charts or views within a dashboard, and show detailed rows behind a visualization. Team Sophinea uses all of the techniques when building out Dashboards for our Department of State customer, using Tableau (WRAPS II Project). Tableau allows users to zoom in and pan in on chart types such as maps, time series charts, and scatter plots. Through this interaction, other charts that have been configured to be linked in the dashboard will dynamically update to show data for a highlighted geographical region, period of time, or specific cluster in the scatter plot. Additionally, the tool tips can be added to visualization to provide drill downs or additional context related to the points on the visualization. Furthermore, navigation buttons can be added to allow the user to quickly find the associated row-level data for the visualization.
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VEA-20	<p>Describe how the Solution supports autonomous and code-free business-user-authored data discovery and dashboards, and a "WYSIWYG" design for users without expertise in data models, SQL, ETL, application development, BI report design or advanced analytics.</p>	<p>Y</p> <p>Team Sophinea partners with our clients to determine the best fit for their specific analytics needs. One of the most popular tools on the market today is Tableau. Tableau enables end users to start building visualizations with no coding required. Dashboarding in Tableau is extremely powerful, however, data exploration is where Tableau really shines. As Tableau does not require coding and charts dynamically update as data elements are added, removed, reconfigured, etc. As changes are made, the Tableau application generates SQL so users are able to explore data without having to worry about the friction introduced through the need to modify code. This experience is further enhanced by the manner in which Tableau caches data. Data caching enables instant updates to charts without the need to hit the refresh button. Furthermore, Tableau has 70+ native data connectors, which makes connecting to a myriad of transactional and curated data sources simple. This provides enormous flexibility of clients who want to enable different users to access data at various levels of curation, eliminating the requirement for all users to understand how to ETL transactional data.</p> <p>Team Sophinea has seen the ease of Tableau use first hand when we lead a global deployment at the Department of State (<i>WRAPS II Project</i>). As a part of this deployment, Sophinea staff traveled to seven global sites to work side-by-side with end users who had limited experience developing their own reports. Users found Tableau to be extremely easy to use and were able to start building reports very</p>
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			quickly. The intuitiveness of the product made change management activities easier to manage. Tableau now serves as the single source of truth for the entire program and users have transitioned from report requesters to report creators.
VEA-21	Describe which maps (i.e., Esri, Google Maps, OpenStreetMap, Mapbox) are supported "out of the box" and down to what level of detail: country, zip/postcode, street. Describe support for choropleths (filled) or dot.	Y	Team Sophinea understands the importance of maps for end users as maps are a commonly requested feature of all of our Data Visualization projects (WRAPS II, GSS, and San Joaquin County Projects). The specific out-of-the-box mapping software will vary from application. As an example, Tableau uses Mapbox and Kibana uses OpenStreetMap. All of our solutions enable choropleths, dot mapping, and density mapping features. However, many of these tools also have native connectors that extend their base mapping capabilities. As an example, Tableau users that have requirements for sophisticated geospatial analysis can connect to Esri.

VEA- 22 <p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <i>specific to this requirements category</i> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	<p>Y</p>	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Visualization and Exploratory Data Analysis initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Visualization and Exploratory Data Analysis roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project)</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Visualization and Exploratory Data Analysis project.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and</p>
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		<p>how the components interface with each other.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Architect:</p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p>
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		<p>Tools: Google BigTable, Google Data Catalog, GitHub, Google BigQuery, MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p>Data Scientist:</p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Application Developer:</p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer</p>
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		<p>County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Machine Learning Engineer:</p> <p>Role: Use big data tools and programming frameworks to ensure that the raw data gathered from data pipelines are redefined as data science models that are ready to scale as needed. This includes the necessary work to put models defined by data scientists into production and ensuring that they are designed in a manner that is efficient for the infrastructure they will run on.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County</p>
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		<p>Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Immuta, MS SQL Server, Alteryx, Databricks, Elastic Stack, GitHub, MongoDB Atlas, MySQL, R Studio, Google Dialogflow</p> <hr/> <p>Data Engineer:</p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/> <p>Database Administrator:</p> <p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p>
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		<p>Data Analyst:</p> <p>Role: Responsible for acquiring and cleansing data, applying statistical techniques, and interpreting the results using their domain knowledge. The insights data analysts derive could be delivered in many different forms to include studies, reports, and dashboards.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Immuta, Google BigQuery, MongoDB, MS SQL Server, MySQL, Tableau, Looker, Elastic Stack, Databricks</p> <hr/>
		<p>Business Intelligence Developer:</p> <p>Role: Responsible for understanding the business domain and related data and to use modern Business Intelligence tools to design production quality visualizations that can be used by end users.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Tableau, Looker, Elastic Stack, Google Data Studio</p> <hr/>
		<p>Business Analyst:</p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its</p>

		<p>integration with technology. The Business Analyst's analysis helps the design of improvements to existing technologies and processes.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Graduate/Undergraduate Intern:</p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.2.7 DATA WAREHOUSING (TRANSFORMATION)

Data Warehousing (Transformation)			
RFP Req. #	Requirement	Column A:	Column B:

WAR	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	Y	<p>Team Sophinea will work with the task order client to scope intended use cases for tools to be used for developing Data Warehouse for VITA clients. Our team has significant experience deploying Data Warehouses as a key component of our Data Analytics platforms for our clients. As an example, Team Sophinea developed a Data Analytics solution that is being used by St. Tammany Parish (St. Tammany Parish) which primarily uses Google's BigQuery to process massive amounts of taxpayer data within a secure cloud environment. Maintaining compliance with State and Federal laws which prohibit the unauthorized sharing of non-public data, the records were encrypted at-rest and in-motion while using Google Cloud Identity and Access Management tools to ensure that the data is only accessible by authorized individuals. In addition, Team Sophinea is currently supporting the modernization of the Data Analytics solution with the Department of State (WRAPS II Project). This solution will include the use of Amazon Redshift to support global processing of sensitive Refugee records. As technologies evolve, Team Sophinea has established working partnerships with leading-edge companies such as Databricks, who has a solution called Delta Lake which emulates the functionality of Data Warehouses but uses cheaper, object storage such as Amazon S3.</p>
WAR-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS) are governed by Federal Acquisition Regulations (FAR), the</p>

	<p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>		<p>State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
WAR-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
WAR-3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the</p>

	If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.		following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.
WAR-4	Does the Solution safeguard non-public data? Please describe.	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>

WAR-5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.
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WAR-6 Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	<p>Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.</p>
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WAR-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Data Warehousing requirements, including Google BigQuery, Amazon Redshift, Microsoft SQL Server, and Snowflake.</p> <p>Google BigQuery: Google BigQuery is a serverless, highly scalable, and cost-effective cloud data warehouse that enables users to query streaming data in real time and get up-to-date information on all your business processes. (https://cloud.google.com/bigquery/)</p> <p>Amazon Redshift: Redshift enables users to query petabytes of structured and semi-structured data across your data warehouse, operational database, and your data lake using standard SQL. Redshift lets users easily save the results of your queries back to your S3 data lake using open formats like Apache Parquet to further analyze from other analytics services like Amazon EMR, Amazon Athena, and Amazon SageMaker. (https://aws.amazon.com/redshift/)</p> <p>Microsoft SQL Server: Microsoft SQL Server enables users to build intelligent, mission-critical applications using a scalable, hybrid database platform that has everything built in—from in-memory performance and advanced security to in-database analytics. (https://www.microsoft.com/en-us/sql-server/sql-server-2016)</p> <p>Snowflake: Snowflake is designed with a patented new architecture to</p>
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			be the centerpiece for data pipelines, data warehousing, data lakes, data application development, and for building data exchanges to easily and securely share governed data. (https://www.snowflake.com/)
WAR-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).

WAR-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.</p>
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WAR-10	<p>Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.</p>	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to</p>
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			develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
WAR-11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

WAR-12	Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
WAR-13	Do you provide training on the Solution? Please describe, including all available training options.	Y	Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through

			<p>multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
WAR-14	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Data Warehousing.</p> <p>Google BigQuery: https://cloud.google.com/training/</p> <p>Amazon Redshift:</p>

			<p>https://aws.amazon.com/training/</p> <p>Microsoft SQL Server: https://microsoft.github.io/sqlworkshops/</p> <p>Snowflake: https://training.snowflake.com/</p>
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WAR- 15	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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WAR- 16	<p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <i>specific to this requirements category</i> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	Y	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Warehousing (Transformation) initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Warehousing (Transformation) roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project).</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Warehousing (Transformation) project.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with</p>
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		<p>each other.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Architect:</p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Data</p>
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		<p>Joaquin County Projects</p> <p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Data Integration Engineer:</p> <p>Role: Responsible for ensuring systems are able to transfer data between systems efficiently and effectively without data loss.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google Dataflow, Google Pub/Sub, API development and Management, Alteryx</p> <hr/>
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		<p><u>Data Engineer:</u></p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/>
		<p><u>Database Administrator:</u></p> <p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p> <hr/>
		<p><u>Business Analyst:</u></p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The Business Analyst's analysis helps the design of improvements to existing technologies and processes.</p>

		<p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Graduate/Undergraduate Intern:</p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.2.8 DATA ANALYTICS, STATISTICAL AND PREDICTIVE MODELING

Data Analytics, Statistical and Predictive Modeling			
RFP Req. #	Requirement	Column A:	Column B:

ASP	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	<p>Y</p> <p>Sophinea, as an agnostic integration systems provider, offers Machine Learning Solutions which are data-driven, modular solutions that enable clients to simplify and modify their businesses. Leveraging data and analytics to achieve digital business transformation is one of the biggest, toughest priorities our customers face. The Sophinea approach focuses first on the client's desired business outcomes, ahead of pre-determining and selecting a particular product technical capabilities. Knowing the client's desired outcomes help us in guiding our clients in managing potential costs, risks and optimizing the intended business benefits. As a result, rather than focusing on a single pre-determined solution up front, we offer a portfolio of products and choose the one for our Big Data solution that best fits our clients needs. This current portfolio of products is attached and continuing to grow. During the contract's 8 year period of performance, as we continue to review and test additional products in the market, we will add new, innovative products to our portfolio offering.</p> <p>Team Sophinea has led the development of Machine Learning solutions for many highly visible projects, in the Federal, State and Local, and Commercial Industries. As an example, Team Sophinea has been involved in cutting edge analytics projects that support State and Local governments utilize the cloud to better serve their citizens. This includes using Artificial Intelligence and chatbots to better serve the citizens of Placer County, California (Placer County Project).</p>
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			Our team's approach is not design solutions with an end product in mind, but to partner with our clients to find the perfect fit between technology and their use case.
ASP-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ASP-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ASP-3	Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in	Y	Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal

	<p>accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>		<p>government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
ASP-4	Does the Solution safeguard non-public data? Please describe.	Y	Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular

			<p>vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
ASP- 5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>

ASP- 6	Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.
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ASP-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Data Warehousing requirements, including Databricks, Alteryx, SAS, R Studio, and DataRobot.</p> <p>Databricks: Databricks is an enterprise-grade application that enables the collaborative development of Machine Learning algorithms using Python, R, Scala, Java, and SQL. Databricks also simplifies the task of placing machine learning algorithms into production to address streaming and batch analytics use cases. (https://databricks.com/)</p> <p>Alteryx: Alteryx simplifies the process of building out data pipelines with 250+ code free and code friendly tools, including numerous Predictive Modeling tools. Using Alteryx, analysts are able to use a repeatable drag and drop workflow to prepare pipelines to be orchestrated in production using Alteryx Server. This can be all done without having to write SQL code or custom scripts. (https://www.alteryx.com/)</p> <p>SAS: SAS supports the end-to-end predictive analytics modeling process with a comprehensive visual – and programming – interface. SAS empowers analytics team members of all skill levels with a simple, powerful and automated way to handle all tasks in the analytics life cycle. https://www.sas.com/en_us/home.html</p>
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			<p>R Studio: RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace. (https://rstudio.com/)</p> <p>DataRobot: DataRobot democratizes data science and automates the end-to-end process for building, deploying, and maintaining AI at scale. Powered by the latest open-source algorithms and available in the cloud, on-premise, or as a fully-managed AI service, DataRobot gives you the power of AI to drive better business outcomes. (https://www.datarobot.com/)</p>
ASP-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team</p>

			Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).
ASP-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood

			the value they were procuring in terms of their desired mission outcomes.
ASP-10	Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the</p>

			ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
ASP-11	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (<i>WRAPS II</i>). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

ASP-12	Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
ASP-13	Do you provide training on the Solution? Please describe, including all available training options.	Y	<p>Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through</p>

			multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.
ASP-14	Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Data Analytics, Statistical and Predictive Modeling.</p> <p>Databricks: https://academy.databricks.com/</p>

			<p>Alteryx: community.alteryx.com/</p> <p>SAS: https://www.sas.com/en_us/learn.html</p> <p>R Studio: https://education.rstudio.com/</p> <p>DataRobot: https://www.datarobot.com/resources/</p>
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ASP-15	For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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ASP-16	Describe how the Solution offers analytical functions to build, such as time series analysis, clustering, estimation, classification, affinity analysis and attribute importance.	Y	Team Sophinea will design solutions that meet the unique needs of the VITA task order client. These solutions will provide visual and custom coded options to apply various analytical functions, such as time series analysis, estimation, classification, affinity analysis and attribute importance. These tools also enable deeper analysis through decision forests, gradient boosting, support vector machines, factorization machines, bayesian networks, among others. As one example, Team Sophinea supported St. Tammany Parish, LA (<i>St. Tammany Parish Project</i>) to automate the cross checking of various records across multiple databases in multiple jurisdictions. Using Google BigQuery, our team was able to use Machine Learning APIs and Tensorflow to build a predictive model that further enhanced the client's tax verification process.
ASP-17	Describe how the Solution automatically generates, for example, forecasts, trends, predictions, clustering, segments, correlations, factors analysis. Also describe the types of model and algorithm supported (linear, Winters, etc.).	Y	Team Sophinea will design solutions for predictive modeling that provide the ability to easily generate various models and algorithms. All our best of breed tools enable our clients options to automatically generate common models and algorithms or custom code using Python and R libraries. As an example, DataRobot not only applies hundreds of predictive models and algorithms against a dataset to determine the best fit, the tool goes a step farther and combines multiple predictive models and algorithms. This enables the end user to achieve results that would be difficult to achieve based on common time and resource constraints. Team Sophinea will work with the customer in evaluating tools such as DataRobot, SAS, Databricks, and others to determine which tool is the best fit for

			their needs.
ASP-18	Describe how automatically generated advanced analytics models can be viewed and modified by specialist data scientists.	Y	<p>Team Sophinea will provide the VITA client with tools that offer the flexibility of using a combination of visual and custom coding capabilities. As an example, SAS provides a graphical interface that enables modelers to explore the data and identify potentially statistically significant variables. From there, the analyst can further tighten their model through the use of custom coding. Data Robot takes this a step further and applies algorithms to the dataset to classify the types of algorithms that might be useful based on the data attributes. We will work with the client to determine their predictive modeling objectives for purposes of identifying the best fit for their use case.</p>

ASP-19	<p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <u><i>specific to this requirements category</i></u> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	Y	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Analytics, Statistical and Predictive Modeling initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Analytics, Statistical and Predictive Modeling roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project).</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Data Analytics, Statistical and Predictive Modeling project.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and</p>
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		<p>purpose for each component, and how the components interface with each other.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p><u>Cloud Architect:</u></p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p><u>Data Architect:</u></p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google BigTable, Google Data Catalog, GitHub, Google BigQuery,</p>
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		<p>MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p>Data Scientist:</p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Application Developer:</p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p>
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		<p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Machine Learning Engineer:</p> <p>Role: Use big data tools and programming frameworks to ensure that the raw data gathered from data pipelines are redefined as data science models that are ready to scale as needed. This includes the necessary work to put models defined by data scientists into production and ensuring that they are designed in a manner that is efficient for the infrastructure they will run on.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Immuta, MS SQL Server, Alteryx,</p>
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		<p>Databricks, Elastic Stack, GitHub, MongoDB Atlas, MySQL, R Studio, Google Dialogflow</p> <hr/> <p>Data Engineer:</p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/> <p>Data Analyst:</p> <p>Role: Responsible for acquiring and cleansing data, applying statistical techniques, and interpreting the results using their domain knowledge. The insights data analysts derive could be delivered in many different forms to include studies, reports, and dashboards.</p> <p>Experience: Reference back to Past Performance Citation</p> <p>Tools: Immuta, Google BigQuery, MongoDB, MS SQL Server, MySQL, Tableau, Looker, Elastic Stack, Databricks</p> <hr/> <p>Database Administrator:</p>
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			Gurobi, and AWS

3.2.9 DATA INTEGRATION AND CONSOLIDATION (DATA LAKE)

Data Integration and Consolidation (Data Lake)			
RFP Req. #	Requirement	Column A:	Column B:
INT	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	Y	<p>Team Sophinea will work with the task order client to scope intended use cases for tools to be used for developing Data Integration and Consolidation (Data Lake) for VITA clients. Our team has significant experience deploying Data Lakes as a key component of our Data Analytics platforms for our clients. As an example, Team Sophinea developed a Data Analytics solution that is being used by San Joaquin County, California (<i>San Joaquin County Project</i>) to find perfect matches for its child welfare program. Two components of this solution are Google Cloud Storage and Google Cloud Datastore to serve as the Data Lake. These solutions enable the county to store documents and other unstructured data. In addition, Team Sophinea is currently supporting the modernization of the Data Analytics solution with the Department of State (<i>WRAPS II Project</i>). This solution will include the use of Amazon S3 to serve as the Data Lake in support of global processing of sensitive Refugee records. As technologies evolve, Team Sophinea has established working partnerships with</p>

			leading-edge companies such as Databricks, who has a solution called Delta Lake which extends the functionality of S3 storage by enabling it to serve as a Data Warehouse while using cheaper, object storage.
INT-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (WRAPS II and GSS) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
INT-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If proposed solution does not, please explain.</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>

INT-3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
INT-4	<p>Does the Solution safeguard non-public data? Please describe.</p>	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and</p>

			<p>Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
INT-5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.	Y	<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>

INT-6	Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.
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INT-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Integration & Consolidation (Data Lake) requirements, including Google Cloud Storage, Google Cloud Datastore, Amazon S3, and MongoDB Atlas.</p> <p>Google Cloud Storage: Google Cloud Storage is globally unified, scalable, and highly durable object storage for developers and enterprises. (https://cloud.google.com/storage/)</p> <p>Google Cloud Datastore: Google Cloud Datastore is Datastore is a highly scalable NoSQL database. Datastore automatically handles sharding and replication, providing you with a highly available and durable database that scales automatically to handle elastic workloads. (https://cloud.google.com/datastore/)</p> <p>Amazon S3: Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. Amazon S3 is designed for 99.99999999% (11 9's) of durability, and stores data for millions of applications for companies all around the world. (https://aws.amazon.com/s3/)</p> <p>MongoDB Atlas: MongoDB Atlas is a fully managed, global cloud database from MongoDB that combines a flexible JSON-like data model, rich querying and indexing, and elastic</p>
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			scalability while automating time-consuming database admin tasks. (https://cloud.google.com/mongodb)
INT-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).

INT-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.</p>
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INT-1 0	Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to</p>
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			develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
INT-1 1	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

INT-1 2	Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications.</p> <p>This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
INT-1 3	Do you provide training on the Solution? Please describe, including all available training options.	Y	Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through

			<p>multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
INT-1 4	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Data Integration and Consolidation.</p> <p>Google Cloud Storage: https://cloud.google.com/training/</p> <p>Google Cloud Datastore:</p>

			<p>https://cloud.google.com/training/</p> <p>Amazon S3; https://aws.amazon.com/training/</p> <p>MongoDB: https://university.mongodb.com/</p>
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INT-1 5	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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INT-1 6 <p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <i>specific to this requirements category</i> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	Y	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data Integration and Consolidation (Data Lake) initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data Integration and Consolidation (Data Lake) roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project).</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Data Integration and Consolidation (Data Lake) project.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and</p>
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		<p>how the components interface with each other.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Architect:</p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p>
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		<p>Tools: Google BigTable, Google Data Catalog, GitHub, Google BigQuery, MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p>Data Scientist:</p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Application Developer:</p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer</p>
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		<p>County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Data Integration Engineer:</p> <p>Role: Responsible for ensuring systems are able to transfer data between systems efficiently and effectively without data loss.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google Dataflow, Google Pub/Sub, API development and Management, Alteryx</p> <hr/>
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		<p><u>Data Engineer:</u></p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: RWRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/>
		<p><u>Database Administrator:</u></p> <p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p> <hr/>
		<p><u>Business Analyst:</u></p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The Business Analyst's analysis helps the design of improvements to existing</p>

		<p>technologies and processes.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p><u>Graduate/Undergraduate Intern:</u></p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.2.10 MACHINE LEARNING

Machine Learning <p>Definition: Machine learning is distinct from predictive modeling and is defined as the use of statistical and mathematical techniques to allow a computer to construct predictive models. Machine learning is a branch of artificial intelligence, which refers to intelligence displayed by machines. Advanced machine learning algorithms are composed of many technologies (such as deep learning, neural networks and natural language processing), used in unsupervised and supervised learning, that operate guided by lessons from existing information.</p>			
RFP Req. #	Requirement	Column A:	Column B:

MAC	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	<p>Sophinea, as an agnostic integration systems provider, offers Machine Learning Solutions which are data-driven, modular solutions that enable clients to simplify and modify their businesses. Leveraging data and analytics to achieve digital business transformation is one of the biggest, toughest priorities our customers face. The Sophinea approach focuses first on the client's desired business outcomes, ahead of pre-determining and selecting a particular product technical capabilities. Knowing the client's desired outcomes help us in guiding our clients in managing potential costs, risks and optimizing the intended business benefits. As a result, rather than focusing on a single pre-determined solution up front, we offer a portfolio of products and choose the one for our Big Data solution that best fits our clients needs. This current portfolio of products is attached and continuing to grow. During the contract's 8 year period of performance, as we continue to review and test additional products in the market, we will add new, innovative products to our portfolio offering.</p> <p>Team Sophinea has led the development of Machine Learning solutions for many highly visible projects, in the Federal, State and Local, and Commercial Industries. As an example, Team Sophinea has been involved in cutting edge analytics projects that support State and Local governments utilize the cloud to better serve their citizens. This includes using Artificial Intelligence and chatbots to better serve the citizens of Placer County, California (Placer County Project)</p>
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			<p>and the use of Machine Learning Recommender Systems to support youth services in San Joaquin, California (<i>San Joaquin Project</i>). Our team's approach is not design solutions with an end product in mind, but to partner with our clients to find the perfect fit between technology and their use case.</p>
MAC-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>		<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (<i>WRAPS II and GSS</i>) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
MAC-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If the proposed solution does not, please explain.</p>		<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces that are intended for public consumption and interagency collaboration (<i>WRAPS II Project</i>). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated</p>

			for approval with the task order client.
MAC-3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>		<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
MAC-4	Does the Solution safeguard non-public data? Please describe.		Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (WRAPS II and GSS Projects), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by

			<p>security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
MAC-5	Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.		<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>

MAC-6 Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.		<p>Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.</p>
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MAC-7	Identify the components of your analytics Solution that fit this category. Please describe	N/A	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Machine Learning requirements, including Databricks, Google Dialogflow, R Studio, Automated Insights, and Dataiku.</p> <p>Databricks: Databricks is an enterprise-grade application that enables the collaborative development of Machine Learning algorithms using Python, R, Scala, Java, and SQL. Databricks also simplifies the task of placing machine learning algorithms into production to address streaming and batch analytics use cases. (https://databricks.com/)</p> <p>Google Dialogflow: Google Dialogflow gives users new ways to interact with your product by building engaging voice and text-based conversational interfaces, such as voice apps and chatbots, powered by AI. Dialogflow incorporates Google's machine learning expertise and products such as Google Cloud Speech-to-Text and works across mobile apps, the Google Assistant, Amazon Alexa, Facebook Messenger, and other popular platforms and devices. (https://dialogflow.com/)</p> <p>R Studio: RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace. (https://rstudio.com/)</p>
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			<p>Automated Insights: Automated Insights's Wordsmith application is a self-service platform that uses Natural Language Generation (NLG) to transform data into clear, human-sounding narrative. Wordsmith enables complete narrative customization, real-time content updates, and a powerful API for flexible publishing. (https://automatedinsights.com/)</p> <p>Dataiku: Dataiku is the platform democratizing access to data and enabling enterprises to build their own path to AI in a human-centric way. This is done through an end-to-end platform that allows users to connect to numerous data sources, cleanse data, develop and deploy machine learning models into production, and monitor and adjust machine learning models. (https://www.dataiku.com/)</p>
MAC-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	N/A	Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was

			<p>designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).</p>
MAC-9	List licensing options for the Solutions you have included in this category. Please describe.	N/A	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to</p>

			<p>the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.</p>
MAC-10	<p>Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.</p>		<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and</p>

			manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
MAC-11	Do you provide installation (including configuration) services for the Solution? Please describe.		Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

MAC-12	<p>Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.</p>	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
MAC-13	Do you provide training on the Solution? Please describe, including all available training options.		Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through

			<p>multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
MAC-14	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	N/A	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Machine Learning.</p> <p>Databricks: https://academy.databricks.com/</p> <p>Dataiku:</p>

			<p>https://www.dataiku.com/learn/</p> <p>Automated Insights: https://wordsmithhelp.readme.io/docs</p> <p>Google Dialogflow: https://cloud.google.com/training/</p> <p>R Studio: https://education.rstudio.com/</p>
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MAC-15	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	N/A	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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MAC-16	<p>Describe how the Solution can be used to support user-defined algorithms in a plug-and-play fashion and import/export via Predictive Model Markup Language (PMML), R-based Models or Python.</p>	N/A	<p>Team Sophinea has experience designing Machine Learning application stacks, using tools such as Databricks, to collaboratively develop user-defined Machine Learning algorithms. Databricks enables clients to plug-and-play models built in R, Python, Java, Scala, and SQL and deploy these models into production. Databricks is a key component of the data analytics modernization efforts we have been leading on the Department of State's Refugee Assistance Program (WRAPS II Project). Paired with Immuta, Databricks enables the client to efficiently and securely scale data modeling across organizational and geographic boundaries by using collaborative notebooks and automating data governance on the datasets. This provides great benefit to the client due to the technical and domain knowledge required to successfully develop models.</p>
MAC-17	<p>Describe the ability to include chatbots and conversational analytics. Specify whether the bots are text-enabled only or also support voice. Describe to what degree these capabilities are native and "out of the box," versus requiring customization.</p>	N/A	<p>Team Sophinea has experience developing chatbots to support our clients. As mentioned above, Team Sophinea supported Placer County, California (Placer County Project) with the development of voice-enabled chatbots to streamline operations while creating more engaging customer experiences. This chatbot leveraged Google Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. This application has several reusable components and can be tailored to meet our client's specific requirements.</p>

MAC- 18	<p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <i>specific to this requirements category</i> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Machine Learning initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Machine Learning roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project).</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Machine Learning project.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with each other.</p>
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		<p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p><u>Cloud Architect:</u></p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p><u>Data Architect:</u></p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Data Catalog, GitHub, Google BigQuery,</p>
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		<p>MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p><u>Data Scientist:</u></p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p><u>Application Developer:</u></p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San Joaquin County Projects</p>
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		<p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Machine Learning Engineer:</p> <p>Role: Use big data tools and programming frameworks to ensure that the raw data gathered from data pipelines are redefined as data science models that are ready to scale as needed. This includes the necessary work to put models defined by data scientists into production and ensuring that they are designed in a manner that is efficient for the infrastructure they will run on.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p>
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		<p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Immuta, MS SQL Server, Alteryx, Databricks, Elastic Stack, GitHub, MongoDB Atlas, MySQL, R Studio, Google Dialogflow</p> <hr/> <p><u>Data Integration Engineer:</u></p> <p>Role: Responsible for ensuring systems are able to transfer data between systems efficiently and effectively without data loss.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google Dataflow, Google Pub/Sub, API development and Management, Alteryx</p> <hr/> <p><u>Data Engineer:</u></p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/> <p><u>Database Administrator:</u></p>
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		<p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p> <hr/> <p><u>Business Analyst:</u></p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The Business Analyst's analysis helps the design of improvements to existing technologies and processes.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p><u>Graduate/Undergraduate Intern:</u></p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County</p>
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			Projects Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS
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3.2.11 INTELLIGENCE

Intelligence			
RFP Req. #	Requirement	Column A:	Column B:
INT	<p>Please list the Solutions that you are proposing for this category.</p> <p>When answering the questions below, please address each proposed Solution in your response and detailed explanation.</p> <p>PLEASE ALSO ATTACH A ONE PAGE PRODUCT SHEET FOR EACH SOFTWARE AND/OR SaaS SOLUTION THAT YOU ARE PROPOSING.</p>	Y	<p>Team Sophinea will work with the task order client to scope intended use cases for tools to be used for Data and Business Intelligence Analysis. Our team has significant experience deploying several industry leading Business Intelligence platforms for our clients to include the first enterprise deployment of Tableau at the Department of State, Looker, Kibana, and visualizations using a custom javascript library called D3.js. All business intelligence tools have their own strengths and weaknesses. Team Sophinea's has expertise with deploying traditional BI tools that rely on batch data processing, such as Tableau, and BI tools such as Kibana which has been designed to display streaming analytics. Furthermore, our team stays abreast of advances in business intelligence tools, such as Looker and Thoughtspot. These tools have been respectfully designed to address the complexity of maintaining data pipelines for visualizations and enabling Natural Language</p>

			<p>Processing (NLP) to further simplify data analysis.</p> <p>Team Sophinea's experience with a broad set of tools allows our team to advise clients on a best fit solution for their particular use case instead of proposing a one size fits all approach. We have worked on large, global analytics efforts that represented transformational changes to manner in which our clients used data as a strategic asset. Team Sophinea led the transition from spreadsheet-based reporting on the United States Refugee Assistance program (<i>WRAPS II Project</i>) to dynamic, chart based business intelligence and exploratory data analysis. Tableau is now used as the single source of truth for over 1,000 users, globally.</p>
INT-1	<p>Does each Solution comply with all current COV ITRM Policies and Standards, as applicable, found at:</p> <p>ITRM Policies, Standards and Guidelines</p> <p>Please describe. If a proposed solution does not, please provide details that specify the Standard/Policy and how Supplier's solution does not comply.</p>	Y	<p>Team Sophinea has experience following similar federal government IT Policies and Standards. As an example, Team Sophinea's projects at the State Department (<i>WRAPS II and GSS</i>) are governed by Federal Acquisition Regulations (FAR), the State Department's Bureau for Information Resource Management (IRM) and Diplomatic Security (DS), and also FedRAMP for cloud-based solutions. Team Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
INT-2	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at:</p> <p>ITRM Policies, Standards and Guidelines</p>	Y	<p>Team Sophinea understands the importance of complying with our client's respective data standards. Data standards are integral to ensure data can be ingested, processed, and shared. As an example, Team Sophinea designs reports and data exchanges through API interfaces</p>

	<p>Please describe. If proposed solution does not, please explain.</p>		<p>that are intended for public consumption and interagency collaboration (WRAPS II Project). It is imperative to follow established guidelines such as machine readable formats and shared standards related to file types and data elements. Sophinea will ensure solutions proposed as task orders under VITA will comply with governing COV ITRM Policies and Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>
INT-3	<p>Does each Solution provide effective, interactive control and use with nonvisual means and provide 508 Compliance in accordance with the following standard regarding IT Accessibility and 508 Compliance:</p> <p>IT Accessibility and Website Standards</p> <p>For further information please refer to:</p> <p>https://section508.gov/</p> <p>www.access-board.gov</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal. (The VPAT template can be found on the section508 site). If no, does the Solution provide alternate accessibility functionality? Please describe.</p>	Y	<p>Team Sophinea understands the necessary requirements to ensure 508 Compliance on its current federal government programs. We are knowledgeable with the Rehabilitation Act and will ensure each future proposed Solution under the contract will meet the requirements of GDQ-3. As an example, all public reporting from the Department of State is required to be 508 Compliant (WRAPS II Project).</p> <p>Details of our Technical Approach to 508 Compliance are included in the following 3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS under 3.3.1.1 - IT Accessibility and 508 Compliance. Through this documented approach, Sophinea will ensure solutions are compliant with governing IT Accessibility and Website Standards. Any exceptions will be closely coordinated for approval with the task order client.</p>

INT-4	Does the Solution safeguard non-public data? Please describe.	Y	<p>Team Sophinea has significant experience working on data analytics projects using sensitive and classified data. All of our solutions are built with data security as a core feature. All data analytics solutions engineered by Sophinea meet the high standards established by the Federal Government and The Department of State (<i>WRAPS II and GSS Projects</i>), to include SOC II, SOC III, FISMA, and FedRAMP certifications. All tools require multi-factor authentication with either physical or software tokens. In addition, our solutions require end-to-end data encryption, both in transit and at rest. Finally, all tools are actively monitored by security tools such as Splunk and Elastic Stack to hunt for potential internal and external security threats and are subject to regular vulnerability testing through the Department of State's Cyber Team with the Bureau of Diplomatic Security.</p> <p>In addition to the security engineered into our solutions, Team Sophinea employees are required to complete annual security training. This training includes guidance in the handling of data, to include client data.</p>
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INT-5	<p>Does the Solution have mechanisms that will prevent one entity from viewing another entity's data if the Solution is deployed on a shared platform? Please describe.</p>	Y	<p>Team Sophinea supports clients that require data access to be governed based on strict need to know policies. These policies include requirements to prevent one entity from viewing another entity's data. As an example, our project supporting the Refugee Assistance Program (WRAPS II Project) requires sharing of data across 20+ entities. Team Sophinea addresses the client's requirement to deploy shared platforms and secure data access through a combination of security groups at the datasource level and designing strategies that take advantage of the shared application's user and data management controls. In addition, Team Sophinea has partnered with industry-leading companies, like Immuta, to engineer in cell-based access controls to data based on entities and user roles. Team Sophinea's approach ensures analysts and end users only have access to data that is related to the entity they work for and relevant for their role.</p>
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INT-6	Does the Solution have the ability to extract data from multiple existing analytic tool sets or platforms (Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc.)? Please describe and list.	Y	Team Sophinea views interoperability among applications and platforms to be a key component of a successful analytics solution. Our solutions will be tailored to each client's requirements, with focus paid to the ease at which existing investments in applications can be scaled to meet myriad use cases using native connectors. This is of particular importance at the data layer of the analytics solution. Using industry standard databases such as Google's Big Query, Microsoft SQL Server, Oracle DB, among other databases enables a broad set of tools to be used for analysis, to include Cognos, SAS, Business Objects, MicroStrategy, Microsoft Analytics, etc. However, these decisions are not restricted to the database layer. As an example, when our Department of State client (WRAPS II Project) was seeking a solution to modernize their Business Intelligence (BI) tool Sophinea employees developed a solution that included the use of Tableau. A key rationale for this decision was that Tableau has over 70 native connectors with the ability to extend to additional data sources through JDBC and ODBC connectors. This choice continues to pay off for the client as Tableau will continue to be easily supported through their current application modernization initiative.
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INT-7	Identify the components of your analytics Solution that fit this category. Please describe	Y	<p>Team Sophinea is tool agnostic and will engineer solutions that address specific task order requirements for the client. However, we have identified a small group of best of breed technologies that will meet the VITA's Visualization and Exploratory Data Analysis requirements, including Tableau, Looker, Kibana, and Thoughtspot..</p> <p>Tableau: Tableau is an industry-leading business intelligence and analytics tool. Tableau provides numerous chart and map-based options for data visualizations. The tool is easy to get started with but is also highly customizable. Dashboards created with Tableau Desktop can be shared several different ways, to include as a stand alone file and through Tableau Server. (https://www.tableau.com/)</p> <p>Looker: Looker is a modern BI tool that runs on an in-database architecture and supports real-time data refreshes. One of the aspects of Looker that makes it unique is that its underlying data models are created through a SQL-like language called LookerML. This enables analysts to rapidly create and share new models using a familiar language. (https://looker.com/)</p> <p>Kibana: Kibana is a free and open user interface that lets users to visualize their Elasticsearch data and navigate the Elastic Stack. Kibana enables clients to reliably and securely take data from any source, in any format, then search, analyze, and visualize it in real time. (https://www.elastic.co/kibana)</p> <p>Thoughtspot: ThoughtSpot is the</p>
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			leader in search & AI-driven analytics for enterprises. With their next-generation analytics platform, business people can use Google-like search to easily analyze complex, large-scale enterprise data and also get trusted insights to questions they did not know to ask, automatically - all with a single click. (https://www.thoughtspot.com/)
INT-8	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the Solutions you have included in this category. Please describe.	Y	Team Sophinea understands that flexible platform deployment options for Data Governance is important for our clients. During our process of discovery, Team Sophinea will work with our task order clients to define their preferred deployment option. Team Sophinea has experience working across platforms, to include on-prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS). Furthermore, Team Sophinea has experience working with vendors to design implementation strategies for SaaS services, as a hosted solution on AWS GovCloud. As one example, Team Sophinea partnered with Immuta to deliver a proof of concept (POC) for a Department of State customer (WRAPS II Project). While Immuta's standard data governance offering is cloud-based, the POC was designed as a local install within the Department of State's instance of AWS GovCloud. While Team Sophinea will engineer solutions that address specific task order requirements for the client, we have identified a small group of best of breed technologies, such as Immuta, Informatica, Collibra, Alation, and BigID. This group of tools have a mix of multiple deployment options, to include, on prem, cloud hosted, hybrid cloud, and Software as a Service (SaaS).

INT-9	List licensing options for the Solutions you have included in this category. Please describe.	Y	<p>Team Sophinea will be delivering services to implement solutions that are a tailored fit for the task order client. Our team has significant experience developing business cases for full analytics stack technology investment. Our team understands licensing strategies can become complex and include numerous options that include core-based, named users, and consumption-based vendor models. As an example, Team Sophinea recently developed business cases for a new analytics technology stack for a Department of State client (WRAPS II). The pricing for this analytics technology stack was highly complex and included a mix of core-based licensing, fixed platform licensing, and developing estimates for consumption-based pricing. Included in the development of the pricing model was a thorough analysis of a user base of over 1,000 internal and external stakeholders, broken into various roles and levels of access to tools within the technology stack. Team Sophinea developed a business case for the client that clearly outlined the prospective costs and tied user counts and access to specific use cases that are relevant to the client's mission. This approach ensured the client was comfortable with the investment and understood the value they were procuring in terms of their desired mission outcomes.</p>
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INT-1 0	Can the Solution be deployed in a manner that supports shared use among Commonwealth agencies? Please describe.	Y	<p>Team Sophinea architects and deploys enterprise applications that can be scaled to multiple user groups and agencies. Our team will work with VITA and their task order clients to determine the business case and individual use cases related to the deployment of the system. One of the key discussion points will be configuration considerations related to multiple entities requiring firewalled access to the system. However, Team Sophinea also knows that discussions and considerations do not stop at the point of deployment. Indeed, client needs shift over time and leveraging single solutions across multiple agencies to address similar use cases can be an effective approach to reduce the cost and complexity related to each agency deploying a solution they will need to license, configure, manage, and secure.</p> <p>Team Sophinea has experience developing and deploying scalable solutions to the government. When Team Sophinea deployed the first instance of Tableau Server at the Department of State (WRAPS Project) one of the key challenges when developing the solution was to determine how to establish a single source of truth with over 1,000 users accessing the server across multiple entities. These entities included The State Department, Department of Homeland Security, and various Non-Government Organizations (to include the United Nations), each of which needed to develop and manage their own analytic work products. One of the key reasons for the successful deployment was the ability for Team Sophinea to define an approach, in this instance using Tableau Sites, to enable users to</p>
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			develop data sources and visualizations with the confidence sensitive data and insights would be restricted to only those individuals with a need to see the content.
INT-1 1	Do you provide installation (including configuration) services for the Solution? Please describe.	Y	Team Sophinea supports the installation and configuration of all elements of the solution. These services may vary from client to client depending upon the nature of the deployment. For solutions that require on premise installation or installation on a cloud VM, Team Sophinea will lead or support based on the task order client's need. In some cases, the client may want Team Sophinea to provide actual or virtual (using secure web conference and screen sharing) "over-the-shoulder" installation and configuration support due to common restrictions tied to administrative access to systems and accounts. If the client is comfortable with providing administrative access, Team Sophinea can support direct installation and configuration. Team Sophinea has experience supporting similar requirements at the Department of State (WRAPS II). These on premise installations typically are conducted through web meetings due to security restrictions or utilizing installation scripts through tools like CloudFormation on AWS.

INT-1 2	<p>Do you provide implementation services for the Solution (working with an Authorized User to deploy the Solutions to meet a business need)? Please describe.</p>	Y	<p>Team Sophinea understands that selection of the right technologies to meet the client's needs is only the first step in a successful data analytics engagement. Indeed, implementation services are critical to ensure high rates of user adoption and that the full capabilities of the solution are leveraged. Thus, our team will offer Project Management, Technical, and Change Management services as a component of every solution. Our team's project management approach will be to work in partnership with your team, to help properly plan, govern and monitor the deployment of your analytics solution. Also, our technical team can help to set up, configure and lead the rollout to users to ensure minimal disruption and maximum success. Furthermore, our change management professionals can address impacts, prepare users for the switch, and set positive expectations with the necessary training and internal communications. This implementation approach has been proven to be successful on implementations of advanced analytics deployments, such as the deployment of a Machine Learning solution to San Joaquin County, California (<i>San Joaquin County Project</i>). As a part of this program, Team Sophinea partnered with Google and San Joaquin County modernized the process of matching a foster child in need with a resource family. This involved the successful implementation of a solution that replaced manual and time intensive paperwork tasks to an intelligent cloud-based application that identifies the best possible matches between youth needs and resource families in the community. This implementation was a resounding success not only</p>
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			due to the quality of the solution but through Team Sophinea's proven approach to implementing innovative solutions. VITA can expect the same level of high quality solution implementation for all of our proposed Solutions.
INT-1 3	Do you provide training on the Solution? Please describe, including all available training options.	Y	Team Sophinea will include Training as part of our proposal for all proposed solutions. Team Sophinea understands one of the biggest challenges for clients adopting analytics solutions is the value displayed during proof of concepts not becoming a reality once the solution is deployed. Team Sophinea is proud of our Training lineage and how end-user and train-the-trainer training has contributed to global and local solution deployments. Team Sophinea has dedicated training staff and will partner with vendors, when necessary, when deploying all solutions to VITA agencies. Our team has experience training users on sophisticated analytics solutions such as the development and maintenance of a chatbot solution for Placer County (Placer County Project), maintenance of a machine learning recommender system for San Joaquin County (San Joaquin County Project), and on-site training spanning six continents when deploying Tableau Server for the Department of State (WRAPS Project). In addition, Team Sophinea also provides general and tool specific training to our Government clients. This includes Data Collection and Data Analysis and Tableau training to The National Institutes of Health (NIH) and the United States Army G6/CIO. Team Sophinea's will be tailored based on the needs of the needs of the task order customer. Training can be delivered through

			<p>multiple channels by instructors ("Instructor-led Training Services"), either in person or virtually, or online-only. A self-paced online training course ("Self-Paced Training Services") is another option for products that are part of the Solution. Our Training will include qualified training personnel and relevant training materials.</p>
INT-1 4	<p>Describe any links in the Solution to video and written tutorials covering most of the available functionality, and explain the level of access users have to extensive online information and forums about the Solution, such as user manuals, "how to" guides and best-practice recommendations.</p>	Y	<p>Team Sophinea understands the availability of documentation and "how to" guides are critical to ensuring clients have the requisite resources to troubleshoot issues as they arise. Every technology vendor Team Sophinea will propose will be required to maintain a vast array of complementary resources on their website, including resources for all skill levels and roles. This will include how-to guides, whitepapers, live and on-demand webinars, and active community forums that enable users to post questions and engage in dialogue with the community on best practices and tips for success. In addition to complimentary resources, technology vendor Team Sophinea will also provide paid training options that have a more individualized training for vendors and also in-person and virtual classroom options. Most vendors will also offer enhanced support options. These options can be particularly important when the analytics tool is engineered into a mission-critical system. Below are some examples of the scope of support provided by Team Sophinea as best of breed in the area of Intelligence.</p> <p>Databricks: https://academy.databricks.com/</p> <p>Elastic:</p>

			<p>https://www.elastic.co/training/</p> <p>SAS: https://www.sas.com/en_us/learn.html</p> <p>Hootsuite/Brandwatch: https://education.hootsuite.com/</p> <p>Tableau: https://www.tableau.com/learn</p> <p>Thoughtspot: https://www.thoughtspot.com/resources</p> <p>Looker: https://cloud.google.com/training/</p>
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INT-1 5	<p>For each Solution, provide examples of how the Solution was used by both business and IT users, and the level of training and skill required by each. Include what entity used the Solution. If possible, use government related examples.</p>	Y	<p>Team Sophinea will define roles and responsibilities as it relates to each task order solution. This discussion will include an evaluation of task order clients' intended use cases for the solution and the level of central governance required and desired. As a part of this discussion, Team Sophinea will conduct a skills assessment of existing staff and provide recommendations regarding deployment strategies. In some circumstances, Team Sophinea may design a roadmap to achieve the client's desired roles for business and IT users over time. This could be necessary in instances where the client has an accelerated timeline for solution deployment. In this type of circumstance, the tool may be temporarily supported primarily by IT. However, migration of responsibility will be phased to business users over time, as they have the opportunity to perform training.</p> <p>Team Sophinea has a wealth of experience defining appropriate user roles and tool governance policies to ensure successful deployment of Data Analytics solutions. As an example, Team Sophinea managed the global deployment of Tableau Desktop and Tableau Server at the Department of State (WRAPS Project). A key reason for the success of this project was a phased approach to platform deployment. The client's culture was one where data analytics products were centrally developed by a dedicated team. Tableau provided the client to enable end users with self service analytics, but there were concerns related to shifting responsibility to end users overnight. Thus, a plan was put into place to gradually transition</p>
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		<p>responsibility to a healthy balance between the reporting team and the end user. This included, but was not limited to, train-the-trainer training and brown bag lunches. The client's desired end state was achieved within six months from Day 1 deployment. In this end state, the reporting teams focused on data modeling and governance of data sets and the end users were freed up to ask questions against curated data models.</p> <p>Likewise, Team Sophinea's deployment of a chatbot solution for Placer County (Placer County Project) required clear definitions of what IT will manage and how it is intended to be used. In this instance, the responsibility of answering repetitive questions shifted from the customer service representatives to the tool. To enable this Team Sophinea partnered with the county's IT team to build a chatbot which leverages Google Cloud Platform technologies including Dialogflow, App Engine, Cloud Datastore, Google Assistant, and Actions on Google. However, the content for the chatbot needed to be relevant to the common questions being asked and the context of those questions. This information came from the business. Development and deployment of chatbot features has not been a one time event, but continues to evolve as new and common questions emerge from citizens. The chatbot enables IT to take on the responsibility of deploying new scripts to answer common questions which frees up customer service representatives to provide more individualized attention to less common questions. This balance results in a better citizen experience for the residents of the county.</p>
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INT-1 6	Describe how the Solution executes or filters reports through queries entered into a search bar in natural language (e.g., "What were our sales in New York last month?" and "How does it compare to last year's sales?").	Y	<p>Team Sophinea has experience integrating Natural Language Processing (NLP) through their solutions provided to the Department of State (WRAPS II Project). On this project we have deployed Tableau Server to over one thousand users, globally. Included into the Tableau Server component of the solution, Team Sophinea has enabled the use of NLP. Users with permissions to the data set are able to use a search bar in Tableau Server to search for answers against Tableau Data Extracts. This feature can be tuned to better understand the business language of the client. Team Sophinea also has some experience using a newer tool called Thoughtspot, which has been engineering around search.</p>
INT-1 7	Describe how the Solution enables all BI content to be made available as an embeddable report part via an API (web service) for embedding with other content sources or applications with full report interactivity, report attributes, derived measures, etc.	Y	<p>Team Sophinea works with several Business Intelligence tools that enable our clients to embed dashboards in applications, websites, etc. These tools include Looker, Tableau, and Kibana (WRAPS II and GSS Projects). These dashboards provide a fully featured experience for end users but can be embedded in locations where decisions are being made. As an example, these dashboards could be embedded in a case management system which would allow the user to access the information without having to log into a separate system.</p>

INT-1 8	<p>Describe how the Solution provides users with a code-free way to blend data visualizations, text, multimedia content and links to external content to create a live infographic-type object.</p>	<p>Y</p> <p>Team Sophinea partners with our clients to determine the best fit for their specific analytics needs. One of the most popular tools on the market today is Tableau. Tableau enables end users to start building visualizations with no coding required. Dashboarding in Tableau is extremely powerful and can be designed to create infographic-type objects. Tableau dashboards also enable designers to add texts, multimedia content and external content through the dashboard pane. Furthermore, Dashboard Extensions provide additional capabilities through custom-coded javascript applications.</p> <p>Team Sophinea has seen the ease of Tableau use first hand when we lead a global deployment at the Department of State (WRAPS II Project). As a part of this deployment, Sophinea staff traveled to seven global sites to work side-by-side with end users who had limited experience developing their own reports. Users found Tableau to be extremely easy to use and were able to start building reports very quickly. The intuitiveness of the product made change management activities easier to manage. Tableau now serves as the single source of truth for the entire program and users have transitioned from report requesters to report creators.</p>
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INT-1 9 <p>Authorized Users may need expertise/resources to perform data analysis and/or in utilizing data analytic solutions. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers. Does your Solution have the ability to provision these types of resources? If so, what roles <u>specific to this requirements category</u> can you provide? Please name and describe the roles and supplier-demonstrated experience for these roles. For each role, name the tools that your personnel have experience with.</p>	Y	<p>Team Sophinea offers a wide range of data analytics technical experts to ensure VITA clients meet their organization's objectives for their investments in analytics. Our team has the ability to provision the right resources as required to support Data and Business Intelligence initiatives. The exact skill set mix will be dependent on the needs of the client and the size of the engagement. Indeed, in smaller engagements a single individual may cover roles that would generally be split up into multiple roles in larger client engagements. However, below are some representative examples of Data and Business Intelligence roles we have supported in client engagements. Further details related to the projects below, and how they relate to VITA's requirements, are highlighted in the above sections. (e.g. WRAPS II Project)</p> <p>Program Manager:</p> <p>Role: Supports the overall management of the Data and Business Intelligence project.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p>Systems Architect:</p> <p>Role: Responsible for evaluating applications and designing the architecture that includes the various components, the use case and purpose for each component, and how the components interface with</p>
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		<p>each other.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p>Cloud Architect:</p> <p>Role: Responsible for designing, developing, and managing a mix of cloud native and hosted applications and services on a cloud platform.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google Cloud Platform, Amazon Web Services (AWS)</p> <hr/> <p>Data Architect:</p> <p>Role: Responsible for designing the data architecture for an application and/or organization. This includes defining how the data will be stored, consumed, integrated and managed by different data entities and IT systems, as well as any applications using or processing that data.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Data</p>
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		<p>Catalog, GitHub, Google BigQuery, MongoDB Atlas, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, SQL Server, Alteryx, Databricks, Elastic Stack</p> <hr/> <p><u>Data Scientist:</u></p> <p>Role: Subject Matter Expert in the use of large data sets, from multiple systems, in multiple formats to answer complex and domain specific questions. Ability to quickly gain an understanding of complicated data-related tasks and define next steps necessary to resolve them. This includes leading initiatives to learn new tools and apply them to current use cases.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, Looker, Immuta, Tableau, MS SQL Server, Alteryx, Databricks, Elastic Stack, Google Data Catalog, GitHub, MongoDB Atlas, MySQL</p> <hr/> <p><u>Application Developer:</u></p> <p>Role: Oversees the entire life cycle of a software application. Designs and creates the application, codes it, and then tests the product for functionality and errors. Ensures that other requirements are met, such as performance and security.</p> <p>Experience: WRAPS II, Placer County, St. Tammany Parish, and San</p>
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		<p>Joaquin County Projects</p> <p>Tools: Python, R, Javascript</p> <hr/> <p>Data Warehouse Engineer:</p> <p>Role: Oversees the full life-cycle of back-end development of the business's data warehouse. This includes responsibility for the development of ETL processes, cube development for database and performance administration, and dimensional design of the table structure.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Google Dataflow, MS SQL Server, Alteryx, MongoDB Atlas, Amazon S3, Google Cloud Datastore</p> <hr/> <p>Machine Learning Engineer:</p> <p>Role: Use big data tools and programming frameworks to ensure that the raw data gathered from data pipelines are redefined as data science models that are ready to scale as needed. This includes the necessary work to put models defined by data scientists into production and ensuring that they are designed in a manner that is efficient for the infrastructure they will run on.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p>
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		<p>Tools: Google BigTable, Google Cloud SQL, Google BigQuery, Immuta, MS SQL Server, Alteryx, Databricks, Elastic Stack, GitHub, MongoDB Atlas, MySQL, R Studio, Google Dialogflow</p> <hr/> <p>Data Engineer:</p> <p>Role: Supports the efficient data processing and storage, with a focus on data integrity. They are also granting access to various data sets in many organizations.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Google Dataflow, GitHub, Alteryx, Elastic Stack</p> <hr/> <p>Database Administrator:</p> <p>Role: Responsible for managing the storage and organization of data and ensuring that data is available to users and is secure from unauthorized access.</p> <p>Experience: WRAPS II, GSS, Placer County, St. Tammany Parish, and San Joaquin County Projects</p> <p>Tools: Google BigQuery, MongoDB, MS SQL Server, MySQL, Google Cloud SQL, Elastic Stack</p>
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		<p>Data Analyst:</p> <p>Role: Responsible for acquiring and cleansing data, applying statistical techniques, and interpreting the results using their domain knowledge. The insights data analysts derive could be delivered in many different forms to include studies, reports, and dashboards.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Immuta, Google BigQuery, MongoDB, MS SQL Server, MySQL, Tableau, Looker, Elastic Stack, Databricks</p> <hr/> <p>Business Intelligence Developer:</p> <p>Role: Responsible for understanding the business domain and related data and to use modern Business Intelligence tools to design production quality visualizations that can be used by end users.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: Tableau, Looker, Elastic Stack, Google Data Studio</p> <hr/> <p>Business Analyst:</p> <p>Role: Responsible for analyzing the client organization and documents its business or processes or systems, assessing the business model and its integration with technology. The</p>
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		<p>Business Analyst's analysis helps the design of improvements to existing technologies and processes.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: GitHub, Jira, Box, G Suite</p> <hr/> <p><u>Graduate/Undergraduate Intern:</u></p> <p>Role: Per customer approval, will contribute to solving real-world data analytics challenges working side-by-side with experienced Sophinea and Dito data analytics architects and engineers.</p> <p>Experience: WRAPS II, GSS, Placer County, and San Joaquin County Projects</p> <p>Tools: R, Python, Alteryx, Tableau, Gurobi, and AWS</p> <hr/>
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3.3 ADDENDUM: SOPHINEA'S TECHNICAL RESPONSE TO ATTACHMENT A - FUNCTIONAL AND TECHNICAL REQUIREMENTS

3.3.1 ATTACHMENT A - GENERAL REQUIREMENTS OF PROPOSED FUNCTIONAL AREAS (ADDITIONAL INFORMATION)

3.3.1.1 IT ACCESSIBILITY AND 508 COMPLIANCE RESPONSE- QUESTIONS NO. 3 ON ALL FUNCTIONAL AREAS (ADDITIONAL INFORMATION ABOUT OUR TEAM'S APPROACH)



Exhibit 1.1-1. Team Sophinea's Section 508 Methodology *Ensures media is accessible to persons with disabilities*

The requirements of Section 508 of the U.S. Rehabilitation Act are some of the most important standards to which VITA must adhere. The members of your client community may have auditory, visual or mobility impairments, and Team Sophinea is committed to ensuring that these persons with disabilities have innovative and accessible knowledge sharing assets available to them. Team Sophinea's support to the Information Technology Association of America (ITAA) Section 508 subcommittee and its participation in the National Institute of Standards and Technology (NIST) Conferences on Accessibility demonstrate our commitment to Section 508 compliance.

Team Sophinea's proposed Product Solutions include web-based solutions that incorporate a wide variety of multimedia formats, including Flash and other digital video. We have experience with many clients' compliance testing procedures, enabling us to provide Section 508 solutions for these formats that serve the broad VITA audience. Team Sophinea provides accompanying scripts for audio/video assets, keyboard navigation, alternate presentation formats (i.e., Flash versus non-Flash) optimized screen reader functionality, and the incorporation of relevant alt tags and long descriptions for images. Usage of these "best practices" in design allows Team Sophinea to anticipate the needs of the VITA customer community—our strategies enable compliance requirements to be met, while also supporting the learning style preferences of different end users.

1.1 Products and Services Proposed

All Electronic and Information Technology (EIT) products delivered as part of this task order will meet the applicable accessibility standards in 36 CFR 1194.2, unless an agency exception to this requirement exists.

The Standards that apply to the VITA acquisition are:
 1194.21: Software Applications and Operating Systems
 1194.22: Web-based Internet Information and Applications
 MM36 CFR 1194 implements Section 508 of the Rehabilitation Act of 1973, as amended, and is viewable at:
<http://www.section508.gov/index.cfm?fuseAction=stdsdoc>. Team Sophinea targets 100% compliance with these standards.

Section 508 Methodology

Team Sophinea's methodology for Section 508 compliance supports the development of recommendations to the VITA regarding product or service compliance with Section 508, alternatives, and courses of action that may be required. Our eight-step process is outlined below and illustrated in **Exhibit 1.1-1**.

I. Scenario

Describe the mission, desired result and population characteristics.

II. Summary of Market Research

Survey vendors providing Section 508 compliant products or services matching the scenario and review research of other sources, such as VITA, commercial, or market analysts.

III. Develop a requirements document (Functional and Technical Requirements)

Chart the hardware and software in place or in development, compatibility issues, and constraints or restraints imposed on potential solutions.

IV. Identify Applicable Section 508 Requirements

Some requirements may not apply, depending on the relevant Section 508 subsection(s) VITA exceptions. Narrow the criteria, and then add back in any that may be desirable to best satisfy mission needs, even though not specifically required.

V. Identify Vendors

Compare requirements to available vendor solutions. Qualify and rank order the vendors in accordance with Section 508 and the client's infrastructure and mission.

VI. Distribute Requirements

Distribute Functional, Technical, and Section 508 criteria to vendors.

VII. Evaluate Vendor Input

We will use benchmark testing wherever possible to assess the potential solution within VITA's IT infrastructure and operations.

VIII. Develop and Forward Recommendations

Provide recommendations based on survey, test, and analysis results. In the event that the recommendation is not 100% compliant, Team Sophinea's recommendation will include a Section 508 Mitigation plan.

Section 508 Testing Strategy:

CFR 1194.2 provides detailed specifications related to Web-based Internet Information and Applications. Team Sophinea will dedicate a Section 508 Testing Team comprised of Quality Assurance resources to review knowledge management assets and ensure compliance. Team Sophinea's Section 508 Testing Team will use a testing suite of the hardware and software necessary for verifying Section 508 accessibility. Our process involves a number of standard, repeatable tasks identified in Exhibit 1.1-2 that align with our development process and ensure we meet VITA's anticipated level of rigor in our testing

Phase	Task	Description
Analysis	Accessibility Requirements Identification	Verify accessibility requirements with customer.
Design	Compliant Element Option Identification	Determine 508 compliance strategies for each element of the learning asset.

		Compliance consideration begins in the design phase, where Team Sophineo analyzes how each component or element of the learning asset's design will be made accessible to persons with disabilities.
Design	Test Plan (Customized per Task)	Customize internal Section 508 test procedures for each element of the learning asset; baseline test plan has its foundation in the Web Accessibility Initiative.
Design	Verification/Approval of Approach	Conducted with customer, as part of prototype review/PDR.
Development	Element Description included in Storyboards	Document the detailed compliance approach at page level.
Development	Testing Execution <ul style="list-style-type: none"> • Section 508 standards review (described below) • Keyboard accessibility test (described below) • Screen reader test (described below) 	Execute test plan for each programmed lesson. If a lesson is not compliant, a fix/test cycle is repeated until the lesson is compliant.
Implementation	Customer Validation Testing	Customer performs internal testing of full learning asset (if desired).
Implementation	Final Compliance Certification	Delivery of <i>Compliant Asset Evaluation Report</i> that documents test results and includes sign-off certification (sample report is provided on page II- iii)

Exhibit 1.1-2 – Team Sophineo Section 508 Testing Procedures - *Incorporated Throughout the Product Development Life Cycle*

The Team Sophineo testing methodology includes:

- a) **Section 508 Standards Review:** The reviewers use a *508 Compliance Testing Checklist* (Exhibit 1.1-3) to identify those elements of the asset that need to be corrected. The Team Sophineo Section 508 reviewer then sends those corrections that need to be addressed to the applicable web designers and application developers. This cycle of testing, identification of issues, and correcting continues as necessary until the reviewer is satisfied with the asset's compliance.

Section 508 Compliance Testing Checklist				
Asset Name: Reviewer:				Date:
CFR Reference	Item to Test	Description	Pass	Fail
1194.22 (a)	Text equivalent for every non-text element.	Alt description or text description or long description attribute for every image, flash file, video file, audio file etc Images used as links are descriptive of the link destination		
1194.22 (b)	Equivalent alternatives for all video and audio files shall be synchronized.	Synchronized captions for video files Captions and/or transcripts for audio files		
1194.22 (c)	Information conveyed with color is also available without color.	Color is not used to convey important information		
1194.22 (d)	All documents are readable without requiring an associated style sheet.	Layouts can use CSS however the document shall be understandable without CSS		
1194.22 (e)	Server-side image map- redundant text links shall be provided for each active region.	Hot spots shall not be used for server side maps. Separate text links shall be provided		

1194.22 (f)	Client- side image maps shall be provided instead of server-side image maps.	Alt text and hot spot region shall be provided for client-side image maps		
1194.22 (g)	Data Tables- row and column shall be identified.	Using “th tag”-rows and column headers are identified If used for layout-tables do not have row or column headers		
1194.22 (h)	Data Cells and Header cells- markup shall be used to associate the cells for data tables.	All cells shall be associated with appropriate headers		
1194.22 (i)	Frames- shall be titled with text to assist with identification and navigation.	Each frame is given a title (describes purpose or content)		
1194.22 (j)	Flickering page- Avoid pages that cause the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	To reduce optically-induced seizures, no elements on the page shall flicker at a rate of 2 to 55 cycles per second		
1194.22 (k)	A text only page with equivalent information or functionality shall be provided to make the site when compliance cannot be accomplished in any other way.	Text only is provided only when there is no other way to make content accessible Text only provides the functionality equivalent to the main version An alternative is provided for components (plug-ins, scripts etc) that are not accessible		
1194.22 (l)	Pages/Interface elements- all information provided by the script shall be identified with functional text that can be read by assistive technology.	All scripts (Java scripts pop-up menus) are either accessible to assistive technologies and the keyboard or an alternative method of accessing equivalent functionality (standard link) Information within scripts is text-based or text alternative		
1194.22 (m)	Applets and plug-ins- page must provide a link to a plug-in or applet on the client system to interpret the page content.	A link is provided where a plug-in can be downloaded All Java applets, scripts and plug-ins (PDF files and PowerPoint files, etc) and content within them are accessible to assistive technologies		
1194.22 (n)	Electronic forms- the online forms shall allow people using assistive technology to access the information, field elements, directions and clues required for the completion and submission of the form.	All form controls have text labels Form elements have labels associated with them in the mark-up Dynamic HTML form scripting shall not interfere with assistive technologies		
1194.22 (o)	Repetitive navigation links – a method shall be provided to permit users to skip the repetitive navigation links.	A link shall be provided to skip over lists of navigational menus or lengthy lists of links		
1194.22 (p)	Timed response – User shall be alerted and given sufficient time to indicate more time is required.	Users shall have control over timing of content changes		
Recommendations/Comments				
Reviewer Signature	Date Description		Approved/Not Approved & Comments	

Exhibit 1.1-3. Section 508 Compliance Testing Checklist - Repeatable process to ensure Section 508 compliance.

- b) **Keyboard Accessibility:** The reviewer performs several tests using keyboard-only navigation, ensuring that users with disabilities can access all elements without using a mouse. The keyboard accessibility test is based on the test plans developed during the design phase, where alternative screen and screen element navigation are documented.
- c) **Screen Reader Testing:** The screen reader test is the last form of testing, which uses Job Access with Speech (JAWS) screen reading software to ensure that blind and visually impaired users have access to the content displayed on the computer screen. The *JAWS Screen Reader Testing Checklist* (Exhibit 1.1-1) is used for the screen reader test. Corrections that need to be addressed are submitted in the form of Change Requests (CRs) or documents with comments. Once the corrections are made, another screen reader test is then performed to ensure that all non-compliant issues were addressed.

Team Sophinea's process promotes a standardized review of VITA assets and implements the testing strategies listed above to ensure compliance. Adherence to this process ensures all assets delivered to VITA are tested using the same methodologies, and compliance issues are identified and documented appropriately.

We will conduct research on emerging technologies and how Section 508 applies to alternative delivery methods such as mobile devices. In addition, forward-looking strategy will help Sophinea stay attuned to the criticality of information accessibility, especially with the possibility of more Wounded Warriors entering the workforce.

JAWS Screen Reader Testing Checklist			
Asset Name: Reviewer:		Date:	
Description		Pass	Fail
All text is read correctly on the screen			
Tab order is correct			
All links are correct			
Navigation is correct			
All alt tags and D links are read correctly			
Application interaction is tested following Test Plan guidelines; all elements are correct when read with screen reader			
Recommendations/Comments			
Reviewer Signature	Date	Approved/Not Approved & Comments	

Exhibit 1.1-1. JAWS Screen Reader Testing Checklist – Standardized testing to ensure 508 Compliance.

4.0 ATTACHMENT B: SECURITY ASSESSMENT AND GOVERNANCE MAP FOR NON-PREMISE BASED SERVICES

Attachment B - Security Assessment and Governance Map for Non-Premise Based Services			
RFP	RFP 2020-23	Date	6/23/20
Notes & Comments			
Please complete the below fields for agency name, supplier name and requested Cloud service/product name.			
Requesting Agency	Supplier Name	Supplier Product/Service Name	Approved PGR#
Virginia Information Technologies Agency	Sophinea Corporation	N/A, Personnel Services Only	N/A
<u>Agency & Supplier:</u> Please acknowledge by entering the authorized name(s) below and current date that you have read and understand the above 'Note' and all of the applicable security standards.			
Agency Authorized Contact: Jeanne C. Mertens Date: 5/8/2020			
Supplier Authorized POC: Brian G. Thamm Date: 6/23/2020			

5.0 SUPPLIER PROFILE

5.1 SUPPLIER PROPOSAL COMPLIANCE

Sophinea verifies that our proposal is accurate and complete, is prepared in accordance with the solicitation requirements, including providing all information, content, responses and appendices requested and that Sophinea accepts all terms and conditions of the RFP and its amendments. Figure 5.0 - Supplier Profile Response Matrix below outlines: 1) each RFP Supplier Profile requirement with reference to the proposal section in which we address that requirement; 2) our team's proposed approach to each requirement; and 3) benefits of our approach

Figure 5.0 - Supplier Profile Response Matrix

Requirement	Sophinea's Proposal	Benefits of our Approach
5.2 Supplier Corporate Overview		
Business (5.2.1)	<ul style="list-style-type: none"> • Small Business with corporate core competencies in Big Data • Low-risk management framework based on PMBOK, ISO 9001, and ITIL 4 	<ul style="list-style-type: none"> • Clear communication and accountability • Continued mission success
Organization and Structure (5.2.3)	<ul style="list-style-type: none"> • Key Personnel are trusted and experienced in managing complex Big Data programs • Multi-prong approach to developing and delivering Big Data Solutions and Services through Best-of-Breed technology partners and teaming with the College of William & Mary • Robust recruiting program 	<ul style="list-style-type: none"> • Committed, responsive management and technical team • Staffing ability for surge or special requirements • Current resume pool of 50 Big Data personnel and academic resources of W&M
Locations (5.2.4)	Sophinea is headquartered in Virginia and all prime work and support by its partner W&M will be performed in Virginia	<ul style="list-style-type: none"> • Convenient reach-back to a full range of Sophinea/W&M capabilities and facilities (Arlington and Williamsburg, VA))
Strategic Relationships (5.2.5)	<ul style="list-style-type: none"> • The College of William & Mary's Data Analytics' Department is a strategic partner • Other technology solutions partners: Sophinea has a number of technology product partnerships with companies such as Tableau, Hootsuite, Alteryx, AWS, and others. 	<ul style="list-style-type: none"> • Provides academic and research capabilities and surge support. • Sophinea's partnership experience provides the agnostic ability to analyze and then choose the Best-of-Breed solution for upcoming task requirements.
5.3 Financial		
Financial Capabilities	Sophinea has a strong Balance Sheet and steady revenue cash flow with federal government clients on multi-year task order contracts.	Financial strength and access to a strong Line of Credit provides healthy financial stability.
5.4 Future, Long Term Vision and Strategic Plan		
Vision and Strategic Planning	Sophinea's mission is to support our clients in breaking through their analytics challenges, enabling them to achieve their analytics vision	Our experience in developing and delivering Big Data solutions on complex federal IT programs will provide a low-risk approach for the IT challenges facing VITA during the next 8 years.
5.5 Supplier Experience Level and Customer References		
References	Sophinea is a Big Data company supporting multiple clients in the federal government on multi-year task order contracts similar to VITA's.	Sophinea's strong past performance provides low-risk assurance to VITA of selection.
5.6 Performance Standards Methodology		
Automated Tools and Controls	<ul style="list-style-type: none"> • Robust set of automated tools to manage performance, including automated accounting systems, AceProject, MS Project, Risk Radar) • Automated tools 	<ul style="list-style-type: none"> • Fewer errors and timely, accurate reporting • Accurate timely invoicing • Resource Allocation and Risk Mitigation • Work stays on budget and on schedule

	<ul style="list-style-type: none"> • Continuous management attention 	<ul style="list-style-type: none"> • Accurate reporting of metrics and deliverables
5.7 Governance and Compliance Management		
Management Processes	As a federal government contractor, Sophinea has experience and is already in compliance with the numerous federally mandated laws and regulations and security and data privacy requirements used by our industry,	Sophinea already has management processes and controls in place to ensure compliance with all Governance and Compliance laws and regulations.
5.8 Security Risk Management Overview		
Comprehensive security risk management processes	<ul style="list-style-type: none"> • Comprehensive 6-step risk management process • Web-based, easy to use risk management tool (<i>Risk Radar</i>) 	<ul style="list-style-type: none"> • Risks are identified early and effectively mitigated • Automated tools provide visibility and access to risk data
Quality Assurance Plan	<ul style="list-style-type: none"> • Our quality assurance system is fully responsive to program needs and emphasizes ISO 9001 and CMMI concepts. 	<ul style="list-style-type: none"> • High-quality, reliable services and deliverables • Frequent monitoring and measurement
5.9 Disaster Recovery/Security Plan		
Plans to mitigate against disaster and firm's security infrastructure	Sophinea is intimately familiar with developing and supporting IT Contingency Plans and has assisted several Army customers in building their COOP Plan from the ground up. Our solutions combine efficient, cost-effective processes, technologies, and organizational partnerships.	<ul style="list-style-type: none"> • Experience in developing disaster recovery exercise plans including realistic exercises covering site-wide disasters and internal events, such as data center loss, single server loss, and individual and group data loss and recovery.
5.10 Service and Support Management		
Post Implementation and Account Mgmt. Plan (5.10.1)	Leveraging ITIL 4, our services and processes will be defined, measurable against SLAs, continuously monitored, and analyzed to provide maximum service levels	<ul style="list-style-type: none"> • Using service level management, the central role of service level management makes it the natural place for establishing and monitoring metrics against a benchmark
Account Management Plan (5.10.2)	<ul style="list-style-type: none"> • Sophinea offers a disciplined, systematic, low-risk management approach, proven under current task order programs and enhanced with our ITIL 4/PMI based technical management processes. • Our clearly defined program organization lays out the foundation for open communication and collaboration across the team and directly with the customer and its Steering Committees. 	<ul style="list-style-type: none"> • Account Management Plan will ensure delivery of high-quality Big Data solutions and services to achieve customer current needs and increasing demands brought about by change.
Project Team (5.10.3)	The Sophinea's proposed Program Management Team, led by Brian Thamm, is structured to manage the overall program organization, conduct best hiring practices, meet all VITA requirements, and have direct access to any necessary team resources for any contingency.	Our plans put in place a flexible path for managing a successful process, including reach-back and surge capabilities.

5.2 SUPPLIER CORPORATE OVERVIEW

5.2.1 BUSINESS

Sophinea Corporation, founded in 2018, is a micro small business technology leader incorporated and headquartered in the Commonwealth of Virginia providing Business Intelligence and Data Analytics Services to protect the national interests of the United States and advance peace, security, and sustainable development. The company has significant experience leading complex, world-wide Big Data development efforts for federal government clients. It will be the Prime for the program with support from its subcontractor Data Analytics partners, Dito and William & Mary. Additional Vendor Partnerships that provide access to a wide range of products for Data Analytics Solutions are outlined in our Appendix G- Products.



Sophinea's Core Competencies include:

- Technology Consulting: Data Architecture, Design Data Science Services, Business Intelligence Services, Data Management
- Business Consulting: Data Analytics Strategy Roadmap, Design Business Process Improvement, Change Management, Analytics Training

Sophinea's mission is to support our clients in breaking through their analytics challenges, enabling them to achieve their analytics vision. Whether your organization has made significant investments in various data analysis tools that have not fully achieved their initial objectives, are challenged with getting started on defining a data analytics roadmap, or are attempting to resolve issues with your data pipeline, our consultants will partner with your organization to develop solutions that can be seamlessly deployed.

Sophinea's current Data and Analytics, Business Intelligence (BI), Artificial Intelligence (AI) clients include Department of State (DoS), Department of the Army CIO-G-6, Department of Homeland Security (DHS)/U.S. Citizenship and Immigration Services (USCIS), and U.S. Department of Health and Human Services/National Institutes of Health (NIH).

Program summary highlights of our team's Data Analytics and Analysis experience, including Training, are outlined below. In addition to these highlights, as requested in the RFP, we have provided three (3) detailed contract citations with program contact information under Section 4.5 SUPPLIER EXPERIENCE LEVEL AND CUSTOMER REFERENCES.

- **Sophinea: Department of State Worldwide Refugee Admissions Processing System (WRAPS) Support Services II (WRAPS II):**

Total Period of Performance: 11/1/2018 - 7/7/2026 (including option periods)

Description of Work: The Department of State's (DoS) Bureau of Population, Refugees, and Migration (PRM) requires a data and analytics solution to provide global reporting in support of the United States Refugee Assistance Program (USRAP). This interagency program requires the establishment and maintenance of global reporting standards and close coordination with US Government Interagency

partners and Non-Governmental Organizations (NGOs). All reporting must be in compliance with the DoS Foreign Affairs Manual (FAM).

These partnership efforts have extended to a close working program relationship with the Department of Homeland Security's U.S. Citizenship and Immigration Services (USCIS) Refugee Affairs Division (RAD) to ensure efficient and effective interagency collaboration. We have weekly review meetings with USCIS and their primary analysts, a working group of approximately 15 users, who have access to the DoS Tableau Server. The goal is to increase the number of USCIS users on Tableau to make sure all parties are working from common data.

Sophinea personnel led efforts to design and implement a strategy to migrate Data and Analytics from distinct reporting environments that were distributed among nine processing sites to a single site in Arlington, VA. This work included migration from tabular reports developed using Microsoft SQL Server Reporting Services (SSRS) to the first enterprise deployment of Tableau Server at the Department of State.

Under the WRAPS II program, Sophinea provides Tableau Server Architecture Design, Data Management, and Data Visualization support services, Procurement Support, Training, and Global Provisioning:

- ❑ **Systems Architecture Design:** Sophinea employees develop data systems architecture design requirements to be implemented for Tableau Server. This included designing technical server requirements for data capture, processing, and storage, an approach for user authentication and management, and consulting on best practices and guidelines for designing and implementing data models, Tableau Data Extracts, and Tableau workbooks.
 - ❑ **Data Visualization:** Sophinea leads efforts to transition from reporting from Excel spreadsheets generated from SSRS to communicating information through the use of Data Visualization best practices. This includes interviewing and documenting use cases with staff and developing Tableau workbooks for publishing and dissemination through the WRAPS global Tableau Server instance. These use cases served as the basis for data visualization design.
 - ❑ **Procurement Support:** Sophinea leads efforts to document licensing requirements for purposes of procurement. Sophinea also serves as the primary Point of Contact (POC) to facilitate discussions and procurement actions between Tableau and the WRAPS Project Management Organization (PMO).
 - ❑ **Training:** Sophinea provides training for Tableau Desktop and Tableau Server to PRM and processing site staff. This training is designed based on the experience level of the cohort (e.g. basic, intermediate, or advanced). This training is designed to ensure they have the requisite skills to take advantage of Tableau's newest features.
 - ❑ **Global Provisioning:** Sophinea manages the global provisioning of Tableau through the approval of Tableau license requests, coordination with the USRAP Production Team to enable access with new user groups, and the development and management of policies related to access to Tableau Desktop and Tableau Server.
 - ❑ **Technologies:** Tableau Desktop, Tableau Server, Microsoft SQL Server, and Citrix Server
- **Sophinea: Department of State Bureau of Consular Affairs (CA) Global Support Strategy ("GSS")1.0:**

Total Period of Performance: 5/1/2019 – 8/31/2020

Description of Work: Sophinea is supporting the GSS program's important role with processing US Visas by developing Data Analytics solutions that transform raw, complex data sets into data models that can be used to deploy business intelligence tools and visualizations that are utilized by leadership to analyze key performance indicators and assess the health and growth of the program.

This work requires Sophineo to analyze highly complex business requirements and generate technical specifications to design or redesign interactive dashboards that are mission-oriented and enable decision-makers to data-driven operational and strategic decisions.

- **Sophineo: National Institutes of Health (NIH) Data Collection Training**

Period of Performance: 8/1/2019 – 8/31/2020

Description of Work: Sophineo developed customized and tailored training for NIH's OD OHR staff. This included training related to data collection from surveys and analysis of collected data using Excel and Tableau as the primary analytics tools. The Training Curriculum included:

- Data Collection:** Sophineo developed and delivered training that covered the various data collection methods, with a focus on data collection through surveys. The training focused on the methods available to prepare the collected data for analysis with a focus on understanding various biases in surveying and approaches to reducing bias in the dataset.
- Data Analysis:** Sophineo developed data analysis training that focused on various approaches to analyzing data through the use of Microsoft Excel and Tableau. **Tableau Training:** Sophineo is delivering Tableau training at multiple levels to NIH. This includes leadership training intended to advise NIH leadership regarding best practices related to using Tableau and data as a strategic asset within the organization. **Technologies:** Tableau Desktop, Tableau Server, and Microsoft Excel

- **Dito: San Joaquin County, CA**

Description of Work: San Joaquin County has multiple agencies working with its youth to provide services. Matching a foster child in need with a resource family that can provide the optimal environment, location, and various other resources to support the child's needs was a lot of work. The systems involved were largely manual and time intensive, having to find and review large amounts of paperwork. This resulted in longer processing and connected resources based more on convenience (which resource called back first) instead of being ideally matched with the level of needs.

The Dito Google Cloud team was involved early in the project to help San Joaquin County explore potential solutions. Through innovation labs designed to uncover core issues and brainstorm solutions, the idea for the "Innovative Care for Adolescent Needs" (ICAN) application was developed.

Dito, a Google Cloud Premier Partner with a partner specialization in Data Analytics, was brought in to work as the solutions architect and application developer. The ICAN application uses Google Cloud Platform for computing and analytics, along with Google Maps Platform to leverage mapping and location data, merging data from various systems to create a weighted scoring system that helps identify the best resources based on the identified needs.

- Solution used:** ICAN Matching Engine and Google Cloud Platform (AppEngine, Cloud Storage, DataStore, Google Maps API and BigQuery)

- **Dito: St. Tammany Parish, LA**

Description of Work: Local property tax authorities, often tax assessors, encounter a time-consuming and labor-intensive process when attempting to verify homeowners' property tax exemptions. Various records must be accessed and cross-checked across multiple databases and jurisdictions to verify that the taxpayer claiming a homestead exemption is in fact eligible to claim that exemption.

With a variety of criteria that the exemption can be claimed for, each claim required individual and manual verification. Existing automation methods only provided for a nominal increase in efficiency, leaving a huge workload on the local tax authorities to verify or deny the claims.

Dito was a subcontractor to Assessure Systems, LLC who wanted to have a significantly more efficient process to analyze property tax audits. Solution: Primarily using BigQuery, massive amounts of taxpayer data, such as Driver's License and Voter Records, are now ingested and analyzed within their secure cloud environment. Maintaining compliance with State and Federal laws which prohibit the unauthorized sharing of non-public data, the records are encrypted at-rest and in-motion while using Google Cloud Identity and Access Management tools to ensure that the data is only accessible by authorized individuals.

From the existing verified data, Dito was able to create a prediction model, built with Machine Learning APIs and Tensorflow, in order to further automate and improve. Dito has also assisted in building tools to analyze smaller reports in real time, and allowing easy access to the computational power of GCP through Google App Engine.

5.2.2 CORPORATE IDENTITY

- **Corporation Name:** Sophinea Corporation
- **Parent Company/Subsidiary:** Sophinea Corporation has no subsidiaries or parent company.
- **Incorporation:** Commonwealth of Virginia, date 2018, as an S-Corporation
- **DUNS Number:** 081368088
- **Cage Code:** 863B7
- **Federal EIN:** 83-1733223
- **Virginia SCC:** 08352247
- **System for Award Management (SAM):** Registered as Sophinea Corporation
- **Business Size:** Qualifies as a Micro Small Business (no socioeconomic classification). Small Business Size under \$3.0M size standard.
- **Virginia Micro Small Business Certification:** (Status: Pending), Tracking Number: 815358 (dated 6/19/20)
- **eVA ID:** VS0000297372
- **VLIN ID:** VA00237038
- **Corporate Address**
Sophinea Corporation
4201 Wilson Blvd., Suite 300
Arlington, VA 22203
- **Corporate Mailing Address:**
Sophinea Corporation
10811 Heaven Scent Lane
Manassas, VA 20110
- **Corporate Website:** <https://www.sophinea.io/>
- **Points of Contact:**
 - Primary: Brian G. Thamm, President & CEO
bthamm@sophinea.io | (571) 201-5249
 - Alternate: Colleen E. Thamm, Chief Marketing Officer (CMO)
cthamm@sophinea.io | (571) 206-0852

5.2.3 ORGANIZATION AND STRUCTURE

Corporate and task order management in the dynamic Big Data environment requires a systematic, disciplined approach of sound leadership, effective IT governance, and comprehensive program management efforts. In response to these critical needs, Sophinea will deliver the right leadership, execution team, methodologies, and tools to support higher-level VITA IT program goals and objectives, Authorized User objectives, and overall Commonwealth of Virginia Big Data business objectives. Our program and task management response is highlighted by the following:

- **Program Leadership:** Our PM Brian Thamm's over 10 years of Big Data development experience, Masters Degree in Data Analytics, PMP certified, and over 15 years of program management experience supporting complex federal government IT development programs bring a valuable and unique perspective. He will have complete operational and negotiating authority on the program.
- **Team of Personnel Resources:** Dito and The College of William & Mary (W&M) have joined our team to provide significant Data Analytics, academic, research and surge reach-back capability. Dito's core competencies include: Data Warehousing & Analytics, Data Sciences (ML/AI), Cloud Migrations, App Modernization, Location-Based Services and Location-Based Services. W&M's undergraduate and graduate Data Analytics Internship programs will provide personnel resources where possible as part of our proposed solution approaches. In addition, since our team is Virginia-based, we already have a resume pool of more than fifty (50) Big Data personnel located in Virginia who are available for tasking and surge requirements. As a result, we bring a seamless transition for new tasks, surge or other specialty Big Data requirements.
- **Management Tools:** Our tools, such as Risk Radar, for managing and reporting on program performance (cost, schedules, quality) deliver to the Government timely and systematic reporting in a dynamic, challenging environment.
- **Management Controls and Methodologies:** We employ performance-based management techniques and utilize structured IT service standards based on CMMI, the Project Management Institute (PMI), ITIL 4, and ISO 20001 standards, enabling the Government to measure our progress and results.

Program Organizational Structure:

Sophinea offers a powerful combination of in-depth understanding working with government customers, skilled data analytics resources, corporate management committed to customer satisfaction, and reach-back to the proven processes and in-depth expertise of an innovative small business — all focused on overcoming the Big Data challenges VITA faces over the next eight (8) years.

Sophinea offers a disciplined, systematic, low-risk management approach, proven under its current federal government programs and enhanced with proven innovations and Agile-based processes. This approach will ensure customer needs are achieved and increasing demands brought about by change are addressed. As depicted in **Figure 5.2.3**, Sophinea's Program Management Office (PMO), comprised of Mr. Brian Thamm (PM) and his Deputy PM, Michelle Chance of Dito, and supported by Sophinea corporate-level administrative resources, is structured to manage the overall program organization, meet VITA contract and tasking requirements, and bring the resources of Sophinea and our integrated team for any contingency.

Our disciplined program management methods emphasize a process-oriented approach that eliminates bottlenecks, offers flexibility and scalability, and achieves success with total customer satisfaction. Sophinea also brings mature, adaptive and proven technical processes that ensure predictable and consistent results that allow customers to achieve their daily mission and set the conditions for future quality performance. We bring innovation to our customers, both technologically and from a business point of view.

To further strengthen the PMO in managing the projected wide range of functional area requirements, we have included three (3) innovative program management approaches. First, in addition to the two (2) Subject Matter Experts (SMEs) in the PMO itself, we have assigned a pool of three (3) Key Personnel who will always be committed and available to support the program. Second, we have established a three (3) person Technical Advisory Council with impressive Data Analytics expertise who will be available for

consultation and support to the PMO and various program tasking. Finally, because of the unique challenges and difficulties frequently faced in task transitions (both start-up and close-out), we have designated an seasoned executive to support the PMO in leading those transition phases for our team. Our strong and experienced program management team ensures that Sophinea program management has the attention and communication channels to ensure VITA's success. We will leverage proven procedures to manage and track every VITA task. If problems arise, we will follow our Escalation Authority procedure to resolve the issue to VITA's benefit. Our plans put in place a flexible path for managing a successful process. Sophinea will always provide the best quality with our resources and manage them efficiently and cost-effectively.

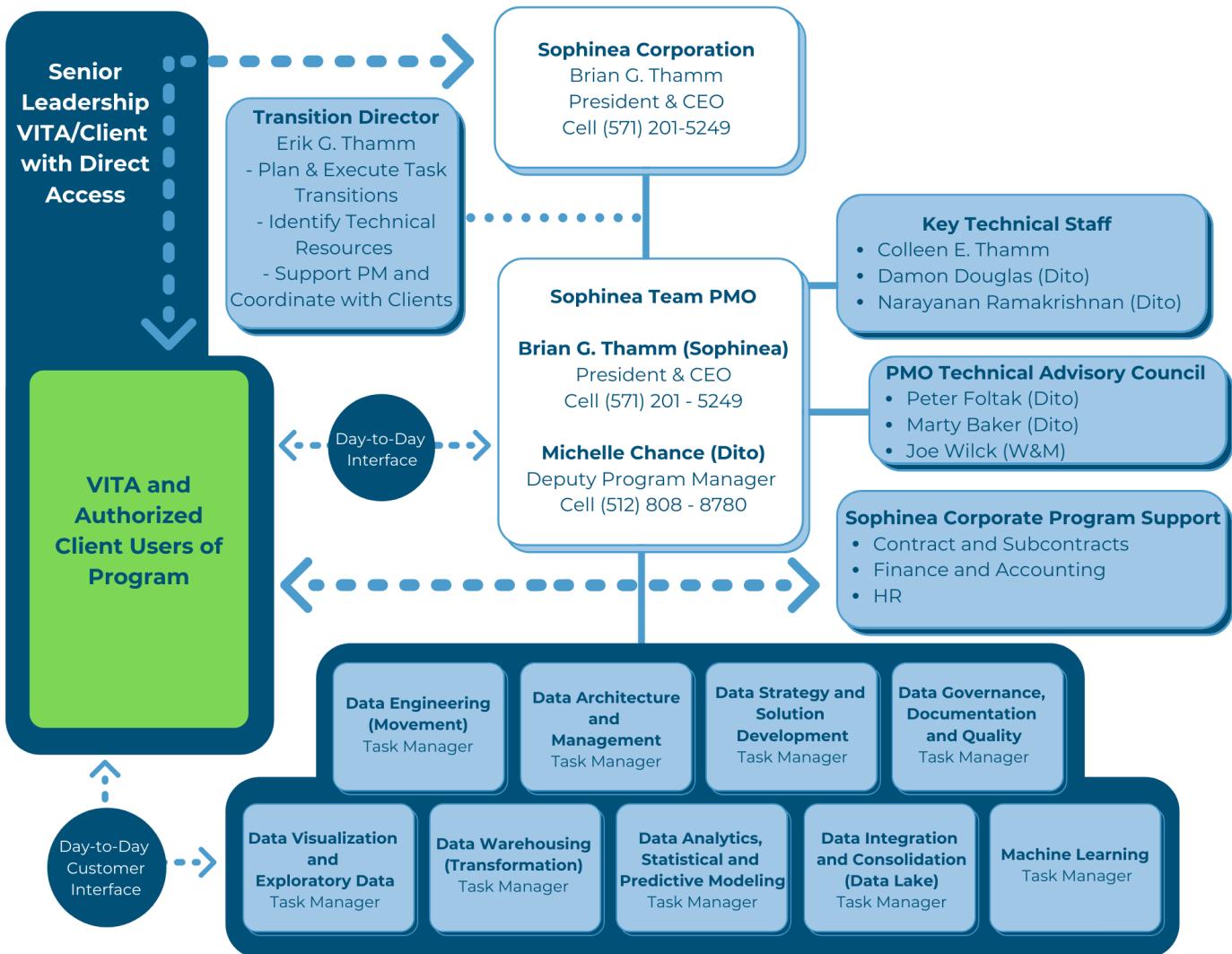


Figure 5.2.3, Sophinea's Program Management Office (PMO)

5.2.4 LOCATIONS

Both Sophinea and Dito are incorporated and headquartered in the Commonwealth of Virginia at Arlington and Reston respectively. In addition, Sophinea is teamed with the College of William & Mary with its primary location in Williamsburg, Virginia. Team Sophinea commits that all prime work locations for this program will be in the Commonwealth.

5.2.5 STRATEGIC RELATIONSHIPS

As noted in the Executive Summary, Sophinea has formed a formidable technical team with Dito, a highly experienced Data Analytics and Google Cloud Premier Partner, and The College of William & Mary, with undergraduate and graduate programs in Data Analytics that is led by Joe Wilck, a respected researcher in Data Analytics. The school will provide additional valuable research into the trends of the Data Analytics field and reach-back to their Internship Program.

In addition to Dito and W&M as strategic subcontractors, Sophinea has partnership relationships with a number of product vendors that can support a myriad of potential Data Analytics solutions under the VITA Program. Team Sophinea is already using some of them on existing federal, state, and local government contracts and will continue to explore the market for others to add to our team's vendor portfolio as technology continues to evolve over the next eight (8) years of the program.

5.3 FINANCIAL INFORMATION

5.3.1 TOTAL ANNUAL REVENUE

Sophinea's annual accrued revenues for FY2019 were approximately \$500,000 and are projected to be over \$900,000 for FY2020. All of the revenues were Data Analytics services and solutions related. As a team, the Sophinea/Dito annual revenues for FY2019 were over \$40,000,000. All of the revenues were Data Analytics services, solutions and products related.

5.3.2 DUN AND BRADSTREET CREDIT REPORT

As a Micro Small Business, D&B has no current full D&B Business Report on Sophinea.

5.3.3 ANNUAL REPORTS

Please refer to Addendum B - Annual Reports for Sophinea's certified, CPA prepared tax financial statements (i.e., income statements and balance sheets) for the past two (2) years since its founding in 2018. For questions concerning the prepared tax return statements, contact:

Ginny Graef, Tax Senior Manager
Keiter CPA
Innsbrook Corporate Center
4401 Dominion Boulevard
Glen Allen, Virginia 23060
Main Phone Number: 804.273.6200
Email: ggraef@keitercpa.com

For additional information about the deep financial resources available to support Sophinea's daily operations and growth, contact:

Catherine Nicholas, Managing Director — Investment Officer
Wells Fargo Advisors
Tel: (301) 961-0126
catherine.nicholas@wellsfargo.com
www.catherinenicholas.com

5.3.4 RESEARCH AND DEVELOPMENT

For Fiscal Year 2019, the percentage of Sophinea's total revenue invested in Research and Development was 0%.

5.4 FUTURE, LONG TERM VISION AND STRATEGIC PLANS

Sophinea's Corporate Vision is "Delivering Leading Edge Data & Analytics Solutions". The perception of data analytics has shifted from an operationally-segmented activity performed by an organization's data analyst team, in response to narrowly-defined questions, to the desired capacity to empower employees throughout the organization to use data to support decision-making and inform strategy and investment. However, for many organizations, a gap continues to exist between the promise of a data democratization and current reality. This is a profound issue for organizations now operating in an increasingly data-driven world. Indeed, failure to develop a leading data analytics competency does not just hamper operations but can prohibit organizations from being able to achieve the very basics of their mission.

We have experience partnering with our clients to break through their analytics challenges, enabling them to achieve their analytics vision. Our mix of technology and business consulting experience enables Sophinea to develop solutions across a complex, multidimensional set of challenges. Our partnership with our clients is not focused on delivering pre-packaged solutions, but developing tailored solutions built on industry best practices. Whether your organization has made significant investments in various data analysis tools that have not fully achieved their initial objectives, are challenged with getting started on defining a data analytics roadmap, or are attempting to resolve issues with your data pipeline, our consultants will partner with your organization to develop solutions that can be seamlessly deployed.

Sophinea core technical competencies are Data Analytics and Analysis and it is the focus and success of our company's strategic plan. In fact, we carefully chose the other two strategic members of our team, Dito and William & Mary's Data Analytics Department, for their same focus on Data Analytics. Dito offers an impressive performance record as a Google Premier Partner. Dito maintains **Premier Partner** status, meaning they have demonstrated to Google Cloud the highest levels of technical proficiency, expertise, and impact with customers. They maintain required levels of certified resources, year-over-year growth rates, approved business plans, and customer successes.

William & Mary offers an interesting research and academic resource that will ensure, as a team, that we discover emerging technologies in the early stages for incorporation into our proposed solutions and that we are aware of any changes to industry standards so we can quickly incorporate them.

Finally, Team Sophinea already has established relationships with a number of Data Analytics Vendor companies. It will be a smooth transition to have those relationships move over to the VITA Program. And, as mentioned before, our team will continue to follow the market for new, emerging technology and solutions to add to our Vendor Portfolio.

We believe that the team we formed offers an attractive combination of talent and resources that will ensure long term success in addressing and solving any Data Analytics challenge facing our customers under the VITA Program.

5.5 SUPPLIER EXPERIENCE LEVEL AND CUSTOMER REFERENCES

5.5.1 SUPPLIER REFERENCES

Supplier Reference #1: Reference's Organization Name Department of State (DoS)

Reference's Current Point of Contact Name	Point of Contact E-mail	Point of Contact Phone Number	Reference's Contract No.
Joseph Campbell, Program Manager, GDIT	joseph.campbell@gdit.com	703-424-8350	2018-HCSD-SC-DEVIS-WRAPPS-0002
Reference's Project Manager Name	Project Manager E-mail	Project Manager Phone Number	Project Description
Joseph Campbell, Program Manager, GDIT	joseph.campbell@gdit.com	703-424-8350	<p>Department of State Worldwide Refugee Admissions Processing System (WRAPS) Support Services II (WRAPS II): The Department of State's (DoS) Bureau of Population, Refugees, and Migration (PRM) requires a data and analytics solution to provide global reporting in support of the United States Refugee Assistance Program (USRAP). This interagency program requires the establishment and maintenance of global reporting standards and close coordination with US Government Interagency partners and Non-Governmental Organizations (NGOs). All reporting must be in compliance with the DoS Foreign Affairs Manual (FAM).</p> <p>Sophinea is leading the design and implementation of a Data Analytics modernization initiative at PRM. This solution has enabled the DoS to collaborate with various stakeholders throughout the world to ensure efficient, effective, and secure case processing.</p> <p>Work performed under this initiative has included the development and implementation of a database and data modeling strategy to deliver program insights to decision makers.</p> <p>This initiative also includes the design and deployment of a Tableau Business Intelligence (BI) solution. Through Tableau, DoS has access to deep insights into data measures that are critical to tactical and strategic decision-making.</p>
Reference's Contract Manager Name	Contract Manager E-mail	Contract Manager Phone Number	Date Implemented

Vicki Blett Principal Contracts Administrator, GDIT	vicki.blett@gdit.com	757.389.4778	Total Period of Performance: 11/1/2018 - 7/7/2026 (including option periods) \$2,085,483.44
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Supplier Reference #2: Reference's Organization Name: Department of State (DoS)

Reference's Current Point of Contact Name	Point of Contact E-mail	Point of Contact Phone Number	Reference's Contract No.
William Coomer, Director of IT Operations, GDIT	wcoomer@visaops.net	571-364-5374	7SF00005BJ
Reference's Project Manager Name	Project Manager E-mail	Project Manager Phone Number	Project Description
William Coomer, Director of IT Operations, GDIT	wcoomer@visaops.net	571-364-5374	<p>Department of State Bureau of Consular Affairs (CA) Global Support Strategy ("GSS")1.0:</p> <p>Description of Work: Sophineo is supporting the GSS program's important role with processing US Visas by developing Data Analytics solutions that transform raw, complex data sets into data models that can be used to deploy business intelligence tools and visualizations that are utilized by leadership to analyze key performance indicators and assess the health and growth of the program.</p> <p>This work requires Sophineo to analyze highly complex business requirements and generate technical specifications to design or redesign interactive dashboards that are mission-oriented and enable decision-makers to data-driven operational and strategic decisions.</p>
Reference's Contract Manager Name	Contract Manager E-mail	Contract Manager Phone Number	Date Implemented
Jeffrey Booth Principal Contracts Administrator, General Dynamics Information Technology, Inc.'s (GDIT)	jeff.booth@gdit.com	703.403.2762	Total Period of Performance: 5/1/2019 – 8/31/2020 \$500,400

Supplier Reference #3: Reference's Organization Name _San Joaquin County, CA (Dito)

Reference's Current Point of Contact Name	Point of Contact E-mail	Point of Contact Phone Number	Reference's Contract No.
Jim Brown	jjbrown@sjgov.org	(209) 468-3939	Contract ID# 46538-5
Reference's Project Manager Name	Project Manager E-mail	Project Manager Phone Number	Project Description
Jim Brown	jjbrown@sjgov.org	(209) 468-3939	<p>Description of Work: San Joaquin County has multiple agencies working with its youth to provide services. Matching a foster child in need with a resource family that can provide the optimal environment, location, and various other resources to support the child's needs was a lot of work. The systems involved were largely manual and time intensive, having to find and review large amounts of paperwork. This resulted in longer processing and connected resources based more on convenience (which resource called back first) instead of being ideally matched with the level of needs.</p> <p>The Dito Google Cloud team was involved early in the project to help San Joaquin County explore potential solutions. Through innovation labs designed to uncover core issues and brainstorm solutions, the idea for the "Innovative Care for Adolescent Needs" (ICAN) application was developed.</p> <p>Dito, a Google Cloud Premier Partner with a partner specialization in Data Analytics, was brought in to work as the solutions architect and application developer. The ICAN application uses Google Cloud Platform for computing and analytics, along with Google Maps Platform to leverage mapping and location data, merging data from various systems to create a weighted scoring system that helps identify the best resources based on the identified needs.</p> <p>Solution used: ICAN Matching Engine and Google Cloud Platform (AppEngine, Cloud Storage, DataStore, Google Maps API and BigQuery)</p>
Reference's Contract Manager Name	Contract Manager E-mail	Contract Manager Phone Number	Date Implemented

Jim Brown	jjbrown@sjgov.org	(209) 468-3939	Start: 10 April 2018 End: 13 Aug 2019 Implemented: 13 Aug 2019
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5.6 PERFORMANCE STANDARDS METHODOLOGY

The Team Sophineo approach to meeting performance standards is multi-faceted. As with the performance on our current Data Analytics programs, we will work directly with our customers on the development of their desired performance standards on a task by task basis, based on and in compliance with the Commonwealth's Data Standards, and fully understand the performance expectations and need for compliance with those standards. Our approach is to consistently utilize well documented processes based on ITIL 4, combined with constant monitoring and continuous improvement to exceed SLA expectations. The individualized training plans will keep the technical staff ahead of the new technology implementation plan and in compliance with all certification requirements.

Another facet to our methodology is continual service improvement, including the planned and controlled introduction of ITIL 4 to enhance existing processes. The processes and procedures implemented will be fully documented and available for review through the shared client/Team Sophineo repository. Customer feedback in this process is critical to ensure our team is meeting all customer expectations and is included as a step in our performance monitoring methodology.

All applicable process improvements will be captured and reported, providing efficient handling and improved reporting consistent with Commonwealth Data Standards. As we introduce new processes, staff will be trained using the documented processes.

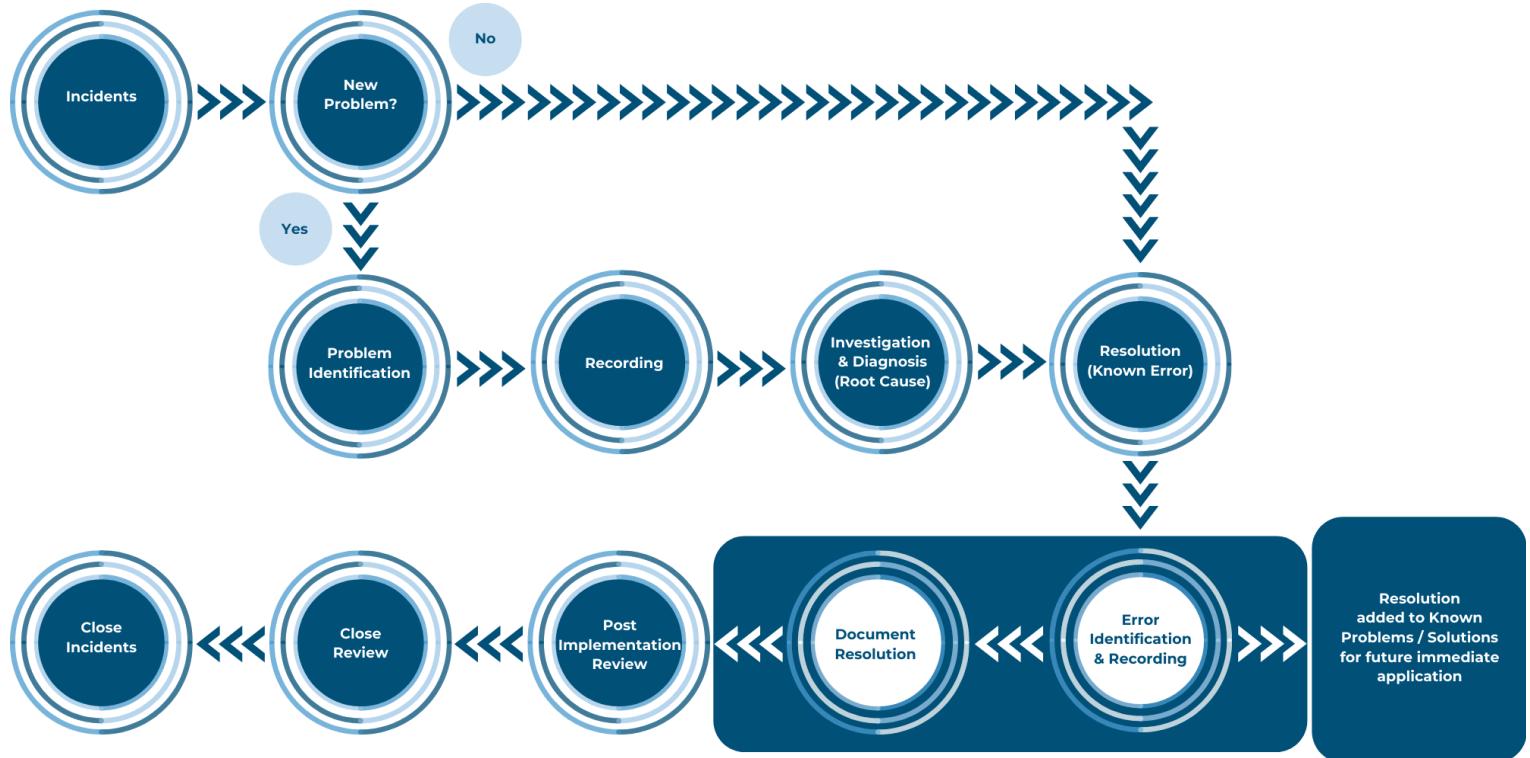


Figure 5.6 - Routine and Unpredicted Events. ITIL's problem management approach reuses knowledge to turn unpredicted events into routine events.

Compliance with Commonwealth Data Standards and regulations is a MUST! Commonwealth Data Standards serve to enhance and protect IT assets and secure resources.

Metrics drive how we measure our performance. Team Sophinea will identify, collect, analyze, report and trigger improvements based upon metrics as part of our continual improvement process. We will report Government required metrics and additional metrics, as needed, to ensure we are intelligently and transparently monitoring all IT services, projects and processes. Team Sophinea will meet/exceed those metrics that are defined in the tasks.

Service Metrics: Our team will collect, analyze and report the metrics for solutions and services that are identified in the tasks. We will determine efficient methods to capture the metrics using automated tools and provide reports to the Government using a shared repository. Finally, we will analyze metrics and trends to identify opportunities for improvement and develop Service Improvement Plans (SIP) in collaboration with the Government.

Project Metrics: Metrics for project execution will also be collected, analyzed and reported. Project metrics include the percent of projects delivered on-time, the percentage of projects delivered within budget, the number of scope changes per project, the number of active projects, the number of identified risks, the number of unmitigated risks, etc. Improvement plans will be created to respond to any deficiencies identified by the metrics and to proactively respond to trends.

Process Metrics: Our team recognizes the need to continually improve the definition and management of all processes we use to support VITA and all Authorized Users. Identifying, collecting, analyzing, reporting and triggering improvements based upon metrics and trends is a significant part of our approach to continual process improvement. As we continue to improve our processes, we will identify new metrics and opportunities to improve on existing metrics. For example, our Release Management metrics include: number of releases that had to be rolled back, number of incidents resulting from releases, total number of releases, etc. We will leverage the ITIL 4 recommended process metrics for identified task processes.

Reporting: By consolidating our reporting in our shared repository, Team Sophinea will provide the Government with an easy and effective way to view contract performance information. We will work with the Government to ensure the information in the repository is timely and relevant to avoid risks such as information overload. We will also work with the Government to ensure proper value is obtained from each metric we track to ensure we are not wasting resources tracking metrics that produce too little value.

5.7 GOVERNANCE AND COMPLIANCE MANAGEMENT

As a solution provider and catalyst for continual improvement, to provide Program Management Governance Brian Thamm will work with VITA customers to consistently deliver quality products and services to accomplish their task and organizational mission objectives . Our approach is to partner with VITA and Authorized Users executive leadership in setting up an Executive Steering Committee on a governance approach that includes a structure and process that facilitates timely decision making and execution. The goal is to ensure that high data quality exists throughout the complete lifecycle of the data, and data controls are implemented that support business objectives A key first step is to define and implement a rigorous set of Governance processes upfront during Task Phase-In to accurately define roles and responsibilities and the processes to address issues and problems. An Executive Steering Committee will help monitor execution; a joint VITA/Team Sophineat management team will oversee daily activities; and the task teams themselves can focus on business process implementation, organizational change management, data migration, and technical development.

In Team Sophinea, Mr. Thamm will lead the effort for VITA and has the complete senior leadership backing of Dito and William & Mary to ensure success. In addition to weekly and monthly meetings with customer Technical Leads, Mr. Thamm will host formal quarterly In-Progress-Reviews (IPRs) with senior executives of our Government customers, to ensure full corporate visibility and responsiveness to all customer program needs. In addition, Mr. Thamm is fully accessible for any reason at any time, including at home, if the need ever arises.



Figure 5.7 Data Governance: Our collaborative approach with VITA ensures high data quality and data control

Our corporate management staff will support our PM in administering the task order. Security, administration, and contract personnel will directly interface with Mr. Thamm. Our contract manager oversees our finance and scheduling functions and will work directly with Mr. Thamm to tailor financial reports and schedules to the Government's needs and requirements.

5.8 SECURITY RISK MANAGEMENT OVERVIEW

Team Sophinea is Data Analytics vendor neutral and will ensure any customer proposed tools achieves full integration of data and functionality to enhance the overall level of customer service and security risk management.

While our team is highly experienced with products such as Tableau, Databricks, Google Cloud Platform Data Analytics and others, our openness to finding the best solution for a particular customer's requirements makes us vendor- neutral. Team Sophinea offers significant support depth and new opportunities for collaboration to support new products and customization requirements by leveraging the expertise of Team Sophinea's Technical Advisory Council (also referred to as our Center of Excellence (CoE)).

When organizations face an industry-specific challenge or the need for specific Data Analytics expertise, they can look to Team Sophineo's Technical Advisory Council's senior Data Analytics scientists who are at the forefront of new technology trends and breakthroughs. Thus, they can apply that knowledge to everything from radically new solutions to ingenious answers for everyday business challenges. Because of our vendor neutrality, our Center of Excellence (CoE) can provide an unbiased, optimum set of solutions, services and products.

Team Sophineo Security CoE Solutions

- Risk Governance: Prioritization, allocation, disclosure
- Information Risk Management: Strategy, gap analysis, requirements analysis, road map, architecture
- Compliance Assurance and Management: Program planning, consulting, assessments, policy development, audit support, certification and accreditation
- Managed Security Services: Intrusion prevention, firewalls, monitoring, vulnerability assessments and intelligence, incident response, business continuity
- Identity and Access Management: Strategy, planning, user provisioning, authentication, meta directories, access management, biometrics

Figure 5.8.1 - Security CoE Solutions Approach

One example of how our team implements a comprehensive Security Risk approach is our team's referenced St. Tammany Parish project referenced in 5.2.1 Business which dealt with sensitive county tax information. Primarily using BigQuery, massive amounts of taxpayer data, such as Driver's License and Voter Records, are ingested and analyzed within their secure cloud environment. Maintaining compliance with State and

Federal laws which prohibit the unauthorized sharing of non-public data, the records are encrypted at-rest and in-motion while using Google Cloud Identity and Access Management tools to ensure that the data is only accessible by authorized individuals.

As a result, we are uniquely positioned to develop and demonstrate customized solutions and prototypes in a cost-effective and low-risk environment. We will leverage the CoE's Security Risk Management expertise when considering, evaluating or implementing new technologies and solutions.

Risk Management Process

An integral part of Team Sophineo's comprehensive risk management approach is risk mitigation, which we apply to minimize risk impact to program performance, schedule, and cost. Our approach is consistent with ITIL 4 as defined in the IT Service Continuity Management element, ensuring business continuity by reducing the vulnerability and risk to mission by means of effective risk analysis and risk management. Comprehensive risk management and mitigation fully support VITA's business continuity plan, technical continuity of operations (COOP), and disaster recovery and also in the continuity of daily operations throughout the effort.

As in many aspects of the VITA Program, risk management is optimized only when two critical factors — true customer situational awareness and best practice processes — are combined. Without insight and understanding of the environments, organizations, preferences, and pitfalls gained over years of similar daily support, a management team could overlook critical risks while effective and inexpensive mitigations could still be employed. Team Sophineo offers the winning combination of real Data Analytics program experience and proven tools and processes to effectively manage risk.

We work proactively to identify and mitigate project risks. The keys to our approach are the following:

- Early project planning with the month-ahead, rolling 90 and rolling 180 day planning
- Early identification of potential risks
- Assessment of the potential implications of any risk

- Assessment of risk-mitigation options and their potential effects
- Early presentation of these assessments to the Government, along with recommendations for mitigation

We are committed to a team approach to risk management, with open and frank communication as soon as potential risks are identified. As we identify areas of concern, we will immediately bring them to the Government. The status of our risk-mitigation actions is a standing agenda item for all status meetings.

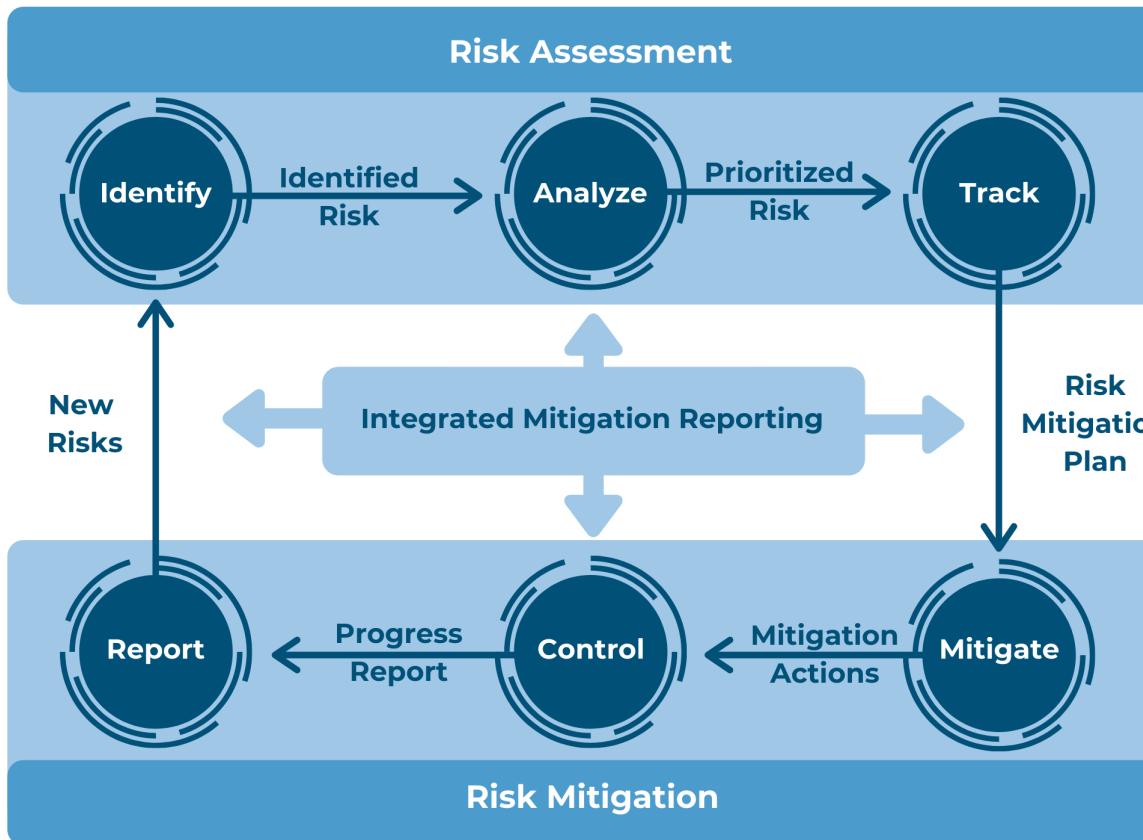


Figure 5.8.2. Risk Management Process. Our proven closed loop process focuses on early and frequent communication with the Government.

As shown in **Figure 5.8.2 - Risk Management Process**, our integrated approach to risk management includes two processes: risk assessment and risk mitigation. Risk assessment covers identifying, analyzing, and tracking risks. Risk mitigation covers developing and controlling mitigation actions and reporting.

The features and benefits of each step of our risk management process are described in **Figure 5.8.3 - Key Risk Management Steps**. With our team having numerous success stories on similar major government Data Analytics programs, our team has unique abilities into solving the Big Data risks facing our VITA clients. Our approach is to summarize the risks at the beginning of the task and assess their probability — the likelihood of the risk materializing — and impact — and finally the consequences if the risk becomes a reality before and after our proposed mitigation.

Process and Feature	Benefit
Identify — Any person can identify a risk through formal and informal mechanisms.	<ul style="list-style-type: none"> • Built into our culture; management sponsorship from the top • Allows focus on full range of all types of risks: known and unknown, predictable and unpredictable
Analyze — We assess each identified risk to determine whether it is valid (i.e., it is real and actionable). Each valid risk is further assessed through quantitative analysis to determine the impact on cost, schedule, and performance.	<ul style="list-style-type: none"> • Ensures focus on real risks that could impact program success. This step is often overlooked in risk management programs and results in a poorly focused risk management effort. • Ensures a clear understanding of impact. Enables us to target mitigation activities that offer the most value • Establishes a baseline for future analysis
Track — Risk data is entered into <i>Risk Radar</i> (see below for explanation)	<ul style="list-style-type: none"> • Provides visibility to all authorized users • Ensures nothing falls through the cracks
Mitigate — We develop and implement a risk mitigation plan and integrate mitigation activities into the PM Plan.	<ul style="list-style-type: none"> • Ensures we take actions necessary to eliminate risks or reduce their impact to an acceptable level • Ensures mitigation was effective before we retire the risk
Control — <i>Risk Radar</i> automatically flags critical or overdue risks for immediate management attention and escalation.	<ul style="list-style-type: none"> • Enables us to determine if the status or impact of the risk has changed, verify that the mitigation approach is effective, and change the mitigation approach if needed
Report — We use <i>Risk Radar</i> to generate tailored reports and present status at IPRs (status reviews)	<ul style="list-style-type: none"> • Ensures the right level of management attention to remove roadblocks, make necessary decisions, reallocate resources, etc., through early and continued discussion of risks

Figure 5.8.3 - Key Risk Management Steps The benefits of our Risk Management Process. ensures risks are identified, evaluated, and tracked until they are verified and closed.

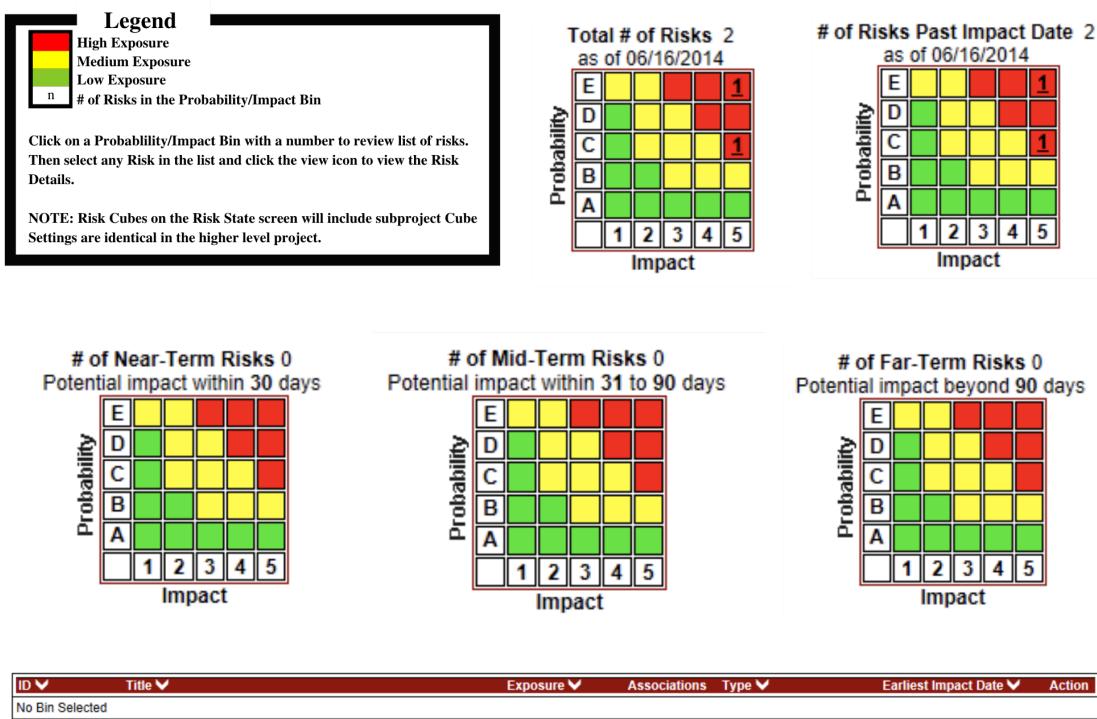
Team Sophinea will perform all work with an eye toward managing and mitigating risk. All our proposed methods and techniques have a track record of past success. Our QA Plan also incorporates processes and procedures specifically designed to mitigate risk in the Data Analytics and Analysis environment. One of the Risk Management Tools that Team Sophinea uses to effectively manage risks on many large, complex programs is Risk Radar.

Team Sophinea will utilize Risk Radar, an industry-leading risk management tool to aid in the risk management process. **Figure 5.8.4 - Risk Radar** is a screen shot from the Risk Radar risk profile. Risk Radar is an easy-to-use Web-based application that offers flexibility and scalability. Risk Radar benefits include the following:

- A common enterprise framework for cost, schedule, technical, and performance risks
- Visibility and global access to risk data for geographically dispersed users
- Specialized functions for prioritizing and retiring project risks
- Drill-down capability to uncover increasing levels of detail
- Attributes, views, sorts, and reports that can be tailored
- Log of historical events

Figure 5.8.4 - Risk Radar

Risk Radar



5.9 DISASTER RECOVERY/SECURITY PLAN

Team Sophinea uses a suite of technical approach as a Solutions and Services Provider, not as a SaaS Provider, is based on planning, preparation, and prevention. Our team is intimately familiar with building and maintaining COOP OPLANS and has assisted clients such as the US Army at Aberdeen Proving Ground (APG) in building their COOP Plan from the ground up. Our solutions combine efficient, cost-effective processes, technologies, and organizational partnerships.

Our team will work with Government POCs to build a comprehensive eight (8) year program plan in developing and testing fully functional recovery operations. We will determine a comprehensive, scalable solution that meets the needs of our program clients while adhering to the policies and guidelines in the Commonwealth's Data Standards. In developing these plans, we will focus on volume, volatility, capacity, connectivity, required up-time, service recovery time, rules and regulations, and migration. Our experience and background will ensure a compliant COOP Plan, while looking for cost saving measures to keep costs low, that is scalable to meet increasing data/user/network requirements, retains access to Mission Essential Functions (MEF) and critical systems and applications, utilizes Emergency Relocation Facilities (ERF), provide ease of use, employs net-centric concepts to mitigate risks, and is tested annually.

For customers with existing COOP Plans, we will develop and enhance testing protocols, can provide on-site support for exercises, and can deploy Key Personnel as required. Our continued involvement in this process ensures greater continuity in case of a COOP event

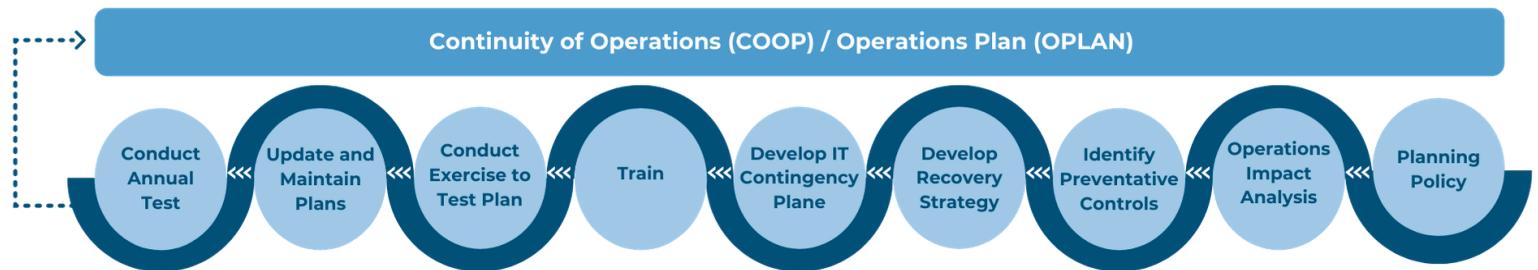


Figure 5.9 - COOP and OPLAN Support Services Team. Team Sophinea's COOP is comprehensive and proven.

In creating and maintaining COOP OPLANS, we will create a disaster recovery exercise plan using the model found in **Figure 5.9 - COOP and OPLAN Support**. This includes realistic exercises covering site-wide disasters and internal events, such as data center loss, single server loss, and individual and group data loss and recovery.

Our team will collect data using a Web-based portal for COOP OPLANS and report to agency management on metrics collected during testing and actual events. These reports will include duration to failover, fallback performance of communications and applications, response of Key Personnel, and adherence to protocols. From this data, we will derive recommendations for process improvement. Team Sophinea will leverage the expertise of its Technical Advisory Council with organization-specific systems, server virtualization, replication, and clustering which will prove invaluable as we move forward.

5.10 SERVICE AND SUPPORT MANAGEMENT

5.10.1 POST IMPLEMENTATION AND ACCOUNT MANAGEMENT PLAN

Our disciplined, systematic, low-risk management approach, proven under our team's current and past IT programs and enhanced with proven innovations and ITIL 4/PMI based processes, provides a firm foundation for achieving maximum service levels within a minimal amount of time following service implementation. Team Sophinea's project and account management methodology is based on the Project Management Book of Knowledge (PMBOK) and integrated with ITIL 4 processes. By integrating these practices, Team Sophinea captures both PMBOK focus on individual project best practices with emphasis on consistent and effective organizational processes.

There are a number of useful Project Management Controls and Techniques that we use. First, we employ a robust set of management tools, including a Work Breakdown Structure (WBS), with Microsoft Project and AceProject. For automated timecard management for accurate hour and cost reporting, we utilize a timekeeping system that has been approved by the federal government's Defense Contract Audit Agency (DCAA). These and other tools and processes outlined in **Figure 5.10.1 - Summary of Management Approach, Techniques, and Controls** ensure a well-planned program with rapid access to status. During the Performance Phase our team's management plan is integrally linked to our surveillance method. All team members responsible for supporting the effort produce defined metrics. As part of the Monitoring Phase, management is responsible for supporting a defined process to analyze measurement data and use the results to confirm performance levels needed to meet objectives and to identify and correct, as necessary.

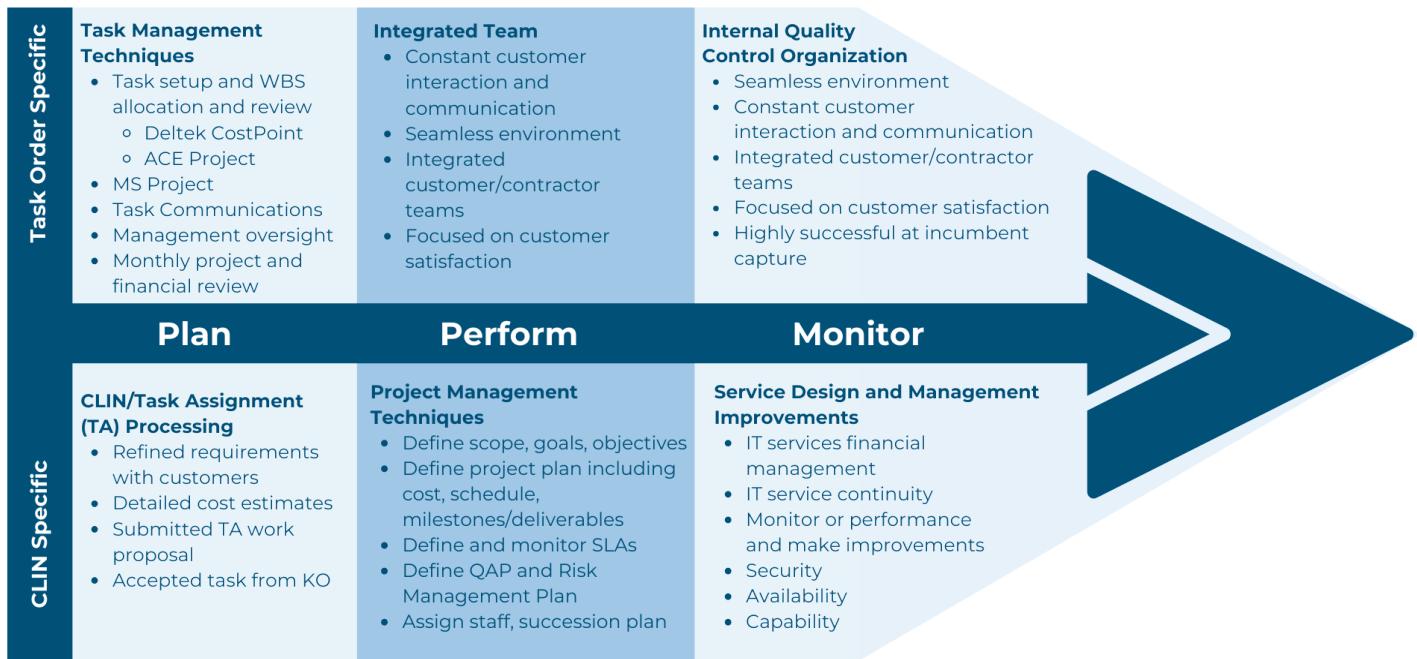


Figure 5.10.1.1 - Summary of Management Approach, Techniques, and Controls

Figure 5.10.1.2 - PMBOK Life Cycle below shows the steps of our proven, low-risk PMBOK approach for managing and controlling tasks under the VITA Program. For effective program management, we use the concept of task life-cycle phases that divide task orders into smaller sub-tasks for better management control. The task life cycle begins with the VITA PWS, from which we created a WBS of all work to be performed in a traceable numbering system for the entire program. Our draft Project Management Plan (PMP) defines project events, accomplishments, and tasks. Tasks may be completion-oriented development tasks with resources, milestones, reviews, and deliverables, or to the provision of services to the enterprise with resources, schedules, and performance metrics.

PMBOK Task Life Cycle

Task Order Phase	Management Activity	Objective
I - Initiation	PM and Task Managers perform activities geared toward formally authorizing a new task	<ul style="list-style-type: none"> Define task objectives and initial scope Identify task deliverables Forecast required resources
II - Planning	PM and Task Managers plan how project will be conducted and document information in PMP and its related plans.	<ul style="list-style-type: none"> Produce a set of plans to manage the task
III - Execution	Task Manager oversees activities aimed at completing the work of the task.	<ul style="list-style-type: none"> Deliver service or solution
IV - Monitor and Control	PM, Task Managers, and the team perform activities to keep the task on track.	<ul style="list-style-type: none"> Observe task execution Measure variance from the set of task management plans Take action if the task strays from the plans
V - Closeout	PM, Task Managers, and the team perform activities to close task.	<ul style="list-style-type: none"> Subcontract closeout Task closeout

Figure 5.10.1.2 - PMBOK Life Cycle: The PMBOK task planning life cycle approach ensures systematic, repeatable, and timely completion of tasks.

5.10.2 ACCOUNT MANAGEMENT PLAN

5.10.2.1 TASK MANAGEMENT APPROACH

Our PM, Mr. Brian Thamm. has full authority to make program decisions and immediately respond to resource, schedule, or budget matters. Mr. Thamm will direct the contract-level program administrative support activities, which will be carried out by the PMO. He is responsible for all aspects of performance management, including financial, personnel, schedule, and all subcontractors. He will work closely with all VITA stakeholders to anticipate needs, assist with planning, and ensure solutions are consistent with VITA strategic plans, objectives, and changing priorities. He will proactively help in program planning, alignment, integration, assurance, process improvement, budget and financial planning, objectives, and technology evolution and formulate business solutions that maximize return on investment and reduce total cost of ownership. He will assess whether we are meeting VITA needs, identify areas for improvement, and facilitate VITA and Authorized Users and program communications with Team Sophinea. The activities that the PMO will carry out under Mr. Thamm's' direction include:

- Development of a comprehensive Program Management Plan which will address Governance, Scope Management, Communications Management, Cost and Schedule Management, Subcontractor Management, Quality Control and Risk Management across the entire program.
- Contract functions required for proper adherence to the Task Order requirements, as well as for addressing any contractual issues that arise
- Program control functions required to properly track expenditures, create invoices, and reconcile payments
- Central administrative functions required for timely and correct status reporting, as well as for performing required clerical, documentation, and other related functions
- Configuration management (CM) and Program Work Breakdown Structure (PWBS) management functions required to monitor, manage, and report accomplishments according to the approved plan.

Task Planning: During Initiation and Planning of tasks, Mr. Thamm along with the Task Managers will assist the Authorized Users in identifying work objectives, technical and management requirements, performance metrics, and SLAs. He will help prepare Performance Work Statements (PWSs) that detail the objective, scope, functional requirements, criteria, applicable standards, skills required, reporting requirements, and deliverables. He will revise the task order's Quality Assurance Plan (QAP), as required.

Our Quality Assurance Plan (QAP) defines the process for monitoring and controlling and sets inspection intervals to ensure we meet SLAs and performance requirements. During Execution and Controlling, we will apply our QA and QC methods to measure and report performance metrics and cost and schedule performance. Upon task completion in Closing, we document lessons learned and deliver final reports.

Reporting Tools and Communications: Successful completion of complex operations and integration services projects requires team-based problem solving, open communication, and collaboration. Our success is predicated on the principle of partnering with our customers to help realize their goals. For ease of rapid, accurate communications of the depicted reports to our customers, we will use our shared repository. Our PM, Mr. Thamm, will meet routinely with the VITA and Authorized Users to review project status, priorities, and schedules and to discuss any problems, issues, or conflicts. This essential communication establishes a common understanding of assignments and a forum for collectively solving problems and introducing process improvements. We will work with VITA throughout the project life cycle, conducting project coordination and communication activities through the status reviews listed in **Figure 5.10.2.1**

Review	Description
Weekly Project Status Review	Throughout the project, Mr. Thamm (PM), our Task Managers, and government technical representatives will meet to discuss project status. We will be responsible for the timely production and distribution of the agenda and minutes of these meetings. Initially, we would recommend having weekly review meetings to ensure the transition occurs smoothly and that all assigned tasks are completed as expected. This will ensure that everyone is well informed of the projects and any issues that may be pending.
Weekly Team Status Meetings	These internal meetings will be held between our Task Managers and the Technical Leads to review project status, priorities, and schedules, and to discuss any problems, issues, or conflicts. This essential communication reduces misinterpretation of assignments and provides a forum for collectively solving problems and introducing process improvements.

Monthly In-Progress Reviews	These meetings will be held between Mr. Thamm, our Task Managers, government technical representatives, and key VITA stakeholders. These reviews are intended to formally communicate status, specific issues, recommended solutions, and view planned activities. Reviews will cover all aspects of program performance to include technical progress, schedule, problems, risks, and forecasts, and any other discrepancies between planned and actual program performance.
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Figure 5.10.2.1 Status Reviews of Reports. Frequent communication ensures all VITA Program stakeholders have high visibility into program operations, and allows early resolution of potential issues.

Using automated tools such as Monday.com the PM and Task Managers establish the budget and schedule, and the Task Leads manage daily activities for their respective areas. Our Task Managers work with the Government to assign resources, establish controls, and monitor performance. Our Task Managers monitor performance and take prompt corrective action whenever cost, schedule, or quality variances indicate the need. Our workflow management process offers a uniform method to schedule activities and manage deliverables across multiple task orders. This enables us to review, monitor, and control the quality and consistency of our performance and deliverables.

MANAGEMENT CONTROLS

With the tools described above, we will proactively measure and monitor VITA Program progress against plans and schedules, identify and analyze problem areas, and provide visibility into actual progress so management can implement corrective actions.

Our control system provides:

- Integrity of the individual task cost and schedule baselines
- Changes to and retains records of scope, schedule, and cost
- Reports on progress to plan
- Variance analysis
- Highlights of trends and production forecasts
- Identification of roadblocks and proposed mitigations
- Tracking of risks, issues, changes or any exceptions that need to be monitored and addressed

By providing real-time visibility into project status and progress with our tools and metrics, we provide actionable information to the PM.

With automated tools such as our automated accounting system and Monday.com, we collect both qualitative and quantitative data to measure our performance. These metrics provide a feedback mechanism to the PM for the planning process.

For cost control, our PM uses G Suite products and our automated accounting system to set baseline budgets against known schedules. Integrated system components account for and control all costs. With these tools, we can plan budgets, capture costs, monitor variations between planned and actual, and identify issues early. If variations are identified, we develop improvement plans, identify risks, and implement corrective action.

5.10.2.2 - TRANSITION OF SOLUTION MANAGEMENT TO A PUBLIC BODY

The result of our systematic management approach provides a clear, concise detailed plan to any task issued to our team under the contract. As suggested, if the task was to provide support to achieve

self-sufficiency of a public body with respect to the solution and the transition of solution management to a public body requesting such transition, we would approach it in a collaborative manner with the public body as outlined above. As an added benefit, we have a successful Task Transition Approach that is outlined in our proposal that would also be beneficial to leverage in any public body transition as outlined.

5.10.2.3 STEERING COMMITTEE

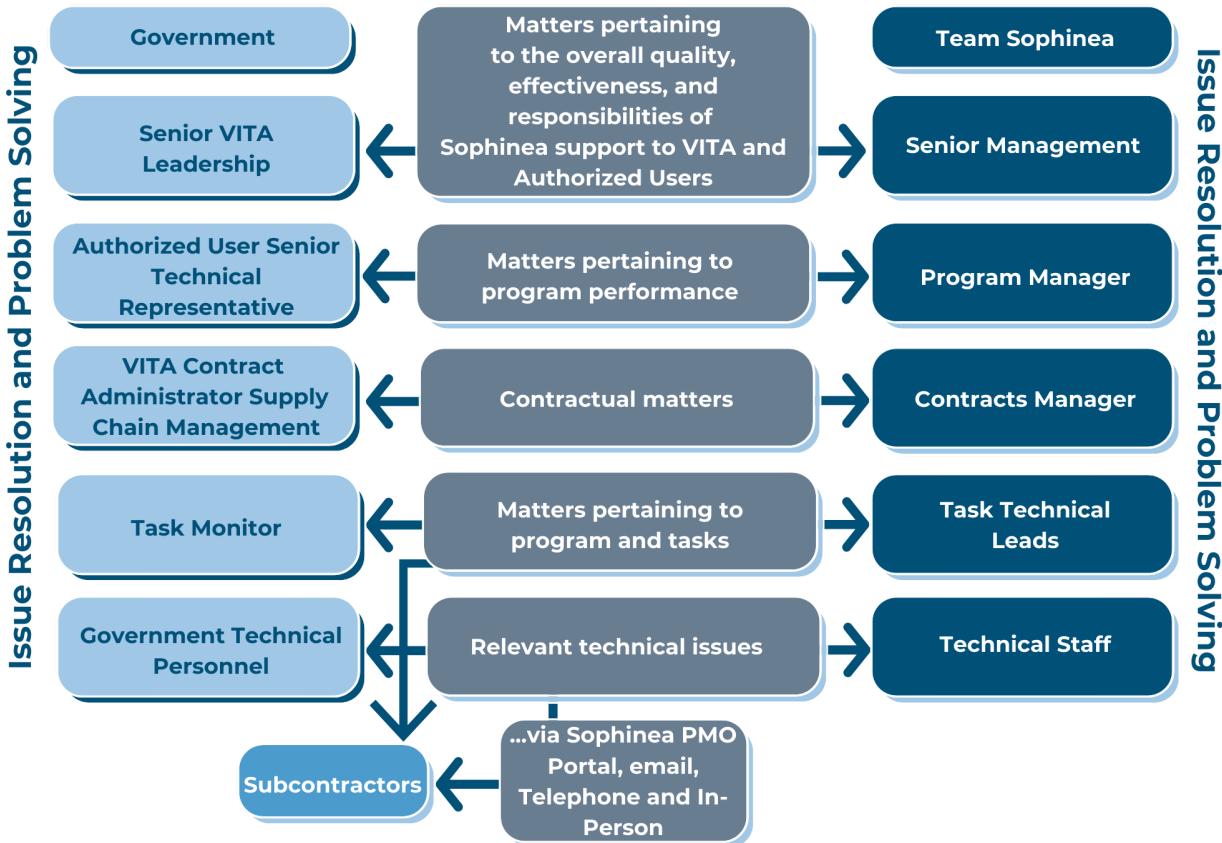
Team Sophinea welcomes the concept of a Steering Committee consisting of senior management personnel, including personnel involved in the contractual relationship, from VITA and Supplier. As is evident from our Management Approach, a major part of our team's approach in the past is a close, collaborative partnership with our clients. As a minimum, we will commit to our PM, Mr. Thamm, and Deputy PM, Ms. Michelle Chance, participating on the committee. If the Steering Committee would be interested in exploratory technical discussions on technology trends, we will also commit our Technical Advisory Council.

5.10.2.4 ESCALATION PROCEDURE

Issue-Escalation Resolution: Our approach to Issue-Escalation Resolution is based on establishing a cooperative, collaborative partnership with our customers and is managed through well-defined communication interfaces for all aspects of account management, including direct, easy access to Sophinea executive management as depicted in our Organization Chart, Figure 5.2.3, Sophinea's Program Management Office (PMO) which includes our President's cell number to ensure you can reach him, if needed, 24/7.

Our primary goal is to help our customers achieve success. Open sharing of project goals, a cooperative approach to assessing risk, including using automated tools to help track risks, recognizing and resolving issues and problems, and open access to information will be provided through formal, such as monthly review meetings, and continuous informal meetings with VITA and Authorized Users.

Sophinea has a reputation for going the extra mile to be sure our clients are satisfied; thus, if challenges arise, Sophinea management will make resources available to get the job done. Customer satisfaction and meeting client business goals are of paramount importance to Sophinea and the foundation of our past performance-based contracts which had demanding SLAs, on which we score high points for exceeding expectations. VITA has the full commitment of and direct access to Brian G. Thamm, President & CEO, and his personal commitment to resolving any issues. This gives our customers the ability to elevate any issue or concern directly to Sophinea senior leadership.



Open Communications, Collaboration and Escalating Problem Solving

Figure 5.10.2.4 Escalation Procedure: Our integrated interfaces and communications promote open and frequent information exchange and ability to easily address issues.

5.10.2.5 TRANSITION PLAN: TRANSITION PHASE-IN/PHASE-OUT REQUIREMENTS (RE-RFP 6. SUPPLIER PROFILE)

As we prepare for the new VITA program effort, we have already begun transition planning and risk management, led by our PM Brian Thamm and supported directly by our Transition Director. We have developed an effective transition organization with clear lines of authority, and clear communication lines with customer personnel.

For the proposed VITA IDIQ-task order contract, there are two basic types of transitions which are anticipated:

- Phase-In of a new task order effort or of an effort being transitioned from an incumbent contractor.
- Phase-out of a delivered solution or services or of an on-going effort being transitioned to a new contractor.

Whether it is Phase-in or Phase-out, we offer a structured management approach that provides stability, continuity, and customer knowledge to deliver complete customer satisfaction. As with the change of any

contract or task order, staffing is the major element in transition. By using our milestone tasking approach, we ensure that staffing requirements are met for Phase-in and are continued during Phase-out with no loss of task continuity.

Regardless of what phase of Transition it may be, Sophineo understands that careful advanced planning is needed. In fact, we have already identified typical potential risks and developed a plan to mitigate them. During the Transition Period, there are 3 key challenges which we fully address in our plan:

- Task Order Contracts: Our knowledge, understanding and experience of large, multi-year task order type contracts ensures smooth negotiation and transition of tasking, whether it be a new effort or one being transitioned from an incumbent contractor
- Recruitment of Personnel: Our team has a pool of over 100 existing personnel to draw from for new efforts or for additional surge support. We also have on-going recruiting efforts that maintain an active pool of another approximately 100 personnel with a wide range of Data Analytics and Analysis backgrounds.

For any transition of incumbent contractor personnel on a task, because of our employee-oriented work environment, we have a remarkable record on past contracts of retaining over 90% of incumbent personnel assurances. We will have no issues in satisfying any and all contract staffing requirements.

- Confidentiality Agreements and Personnel Security Clearances: With our designated FSO, we have the ability to quickly conduct background checks, execute Confidentiality Agreements and, if security clearances are ever required, support the timely processing of security clearances of new hires up to the level of Top Secret or above. All new personnel will meet with our FSO one-on-one to ensure prompt processing.

5.10.2.5.1 TRANSITION DIRECTOR

Our Transition Director, Mr. Erik Thamm is a Sophineo senior executive with direct access to the President & CEO of Sophineo, Mr Brian Thamm, who is also our PM for the program. Mr. E. Thamm has in-depth corporate experience managing a number of successful contract phase-in/phase-out transitions on programs as large as 160 personnel. His assignment to this transition demonstrates the commitment of Sophineo's senior leadership to VITA and the successful performance of this task order contract.

5.10.2.5.2 TRANSITION MEETINGS

After the initial transition kickoff meetings with the Government after contract award, Sophineo will conduct weekly meetings with Government and Team Sophineo personnel to review progress to requirements. Before each meeting, our Transition Director will draw up the agenda, and after the meeting, minutes will be produced and issued. During the meeting the following will be discussed:

- Transition activities
- Program schedule
- Risk and risk mitigation
- Action items and issues

Staffing is a major factor of success during transition, but other activities and milestones must be accomplished to ensure smooth operations during and after the transition phase. As VITA and our PM accept the completion of transition activities, Mr. Thamm will provide a list of closed and open activities. Upon acceptance of the last transition activity, he will complete a final closeout report and submit it to the Government COR and our PM. Upon submission of the closeout report, the transition will be complete.

A similar structured management process will be followed for any Phase-out activities.

Activity	Definition	Compilation Measure
Contract or Task Award / Transition		
Task 1 — Team Sophinea Kickoff	Team Sophinea will host an internal meeting with the transition team staff to review the contract and prepare for the transition meeting with the Government.	Input to the Transition Plan and the creation of the presentation material for the Team Sophinea/Government kickoff meeting.
Task 2 — Team Sophinea/Government Kickoff meeting	Team Sophinea will present the transition plan and schedule to the Government. The purpose of the meeting is to ensure that all parties are working towards the same outcome and time table.	An agreed-upon approach for transition and approved project schedule.
Task 3 — Transition Plan	The plan contains the Transition Organizational Chart, transition staff members and contact list, Transition Reporting Requirements, Action Item List, Risk and Risk Mitigation Plan, Transition Schedule, and Transition Closeout Criteria.	The Team Sophinea Transition Executive will work with VITA and the Government PM to review and approve the Transition Plan.
Task 4 – Transition Meeting – Daily	The entire transition team will have daily meetings/conference calls to discuss action items and deliverables.	Daily review of schedule and action item list.
Task 5 — Transition Meetings	Predefined times to review the transition progress.	Agreed-upon transition schedule and an updated action item list.
Internal Operations		
Task 6 — Finance	Implement the Task Work Breakdown Structure (WBS) and create labor charging codes for distribution to Team Sophinea staff and subcontractor staff.	All staff have labor charge codes and are trained on labor timekeeping guidelines.
Task 7 — Security/Confidentiality	Confidentiality Agreements are signed and Security requirements are reviewed with customers and implemented for new tasks.	All staff members have signed Confidentiality Agreements (and if security clearances are ever required, have clearances transferred to the contract).
Task 8 — Subcontracts	Creation and completion of all subcontractor contracts.	All subcontractor contracts have been signed.
Task 9 – Staffing	Identify and hire staff, including badges, access to customer sites, and any required training activities that have been identified.	All staff is hired and has access to the work area. Staff is scheduled for any required training.
Task 10 — Communications	Communicate with incumbent staff, providing them with knowledge of the activities taking place. Coordinate with all appropriate parties (Government and other contractors). Use Sophinea's Portal for incumbent staff to post questions; each question will be answered.	Communication flyers, postings, e-mail, and Web sites are created to maintain current activities taking place during the transition.
VITA Operations (Task 18)		
Task 11 — Review Functional/Task Areas	Team Sophinea will provide a team to review each functional area looking at the operations and document the findings.	Team Sophinea will publish a report based upon the review of each functional area.
Task 12 — Contract Data Requirements List (CDRL)	Team Sophinea will work with the Government PM to identify and confirm the report structure.	Once the CDRL elements and design are approved, the first delivery of each CDRL will complete this activity.

Task 13 – Project Deliverables	Team Sophinea will work with the Government PM to identify and confirm the Milestone Schedule.	Once the milestone schedule is approved, the first milestone delivery will complete this Transition activity.
Task 14 — Service Level Agreements (SLAs)	Review and document all incumbent SLAs. Develop a plan to improve any service not meeting SLA requirements.	Publish the SLA report and identify measures that are currently below targets.
Task 15 — Quality Assurance Surveillance Plan (QASP)/Quality Assurance Plan (QAP) Final	Team Sophinea and the Government review the QASP and reach agreement on the process. Team Sophinea finalizes our QA Plan.	Final publication of our approved QAP.

Risk Category	Description of Potential Risk	Initial Risk Rating	Team Sopinea Mitigation Strategy	Mitigated Risk Rating
Personnel	Inability of a new contractor to transition a high percentage of incumbent personnel.	High	Team Sophinea can reduce this risk significantly with past performance exceeding 90% retention of previous workforces and a plan using contingency staff to fill the shortfalls.	Minimal
Confidentiality Agreements and Security Clearances	Inability to promptly initiate Confidentiality Agreements (and transfer Security Clearances if that need ever arises).	Medium	Sophinea has a Facility Security Officer (FSO) to ensure timely processing of the agreements.	Minimal

Figure 5.10.2.5 Transition Activities and Definition. A successful transition is completed when both parties have reached agreement on the activities and the criteria for their completion.

5.10.3 PROJECT TEAMS

5.10.3.1 KEY RESUMES

Our proposed PMO, Key Personnel and the establishment of a Technical Advisory Council bring a wealth of knowledge to VITA's Data Analytics Solutions Program and its very wide range of Data Analytics design, development, transformation, and infrastructure support and implementation activities. Because of the challenges facing VITA in the next 8 years, we chose multi-skilled individuals. This facilitates the institutionalization of important technical and program management processes such as quality management, issue resolution, alignment, and communication in each functional area. It allows each Task Lead to interact with their team peers on a wide variety of topic areas to create a very dynamic, robust management team that is not single-threaded in any specific area.

Our selection of Key Personnel supports our goal of creating the forward momentum required to support VITA across a wide range of Functional Area requirements from its current state through transformation and beyond to achieve its vision for tomorrow's Commonwealth.

Figure 5.10.3 details the roles, relevant experience, and qualifications of our proposed Key Personnel. Complete resume details of their experience are provided in Addendum A-Key Personnel Resumes.

Program Role	Proposed Personnel	Resume Highlights
VITA Program Manager (PMO) and Lead Data Scientist (Key Personnel)	Mr. Brian Thamm	<p>VITA Program Related Experience: Over 10 years of experience developing enterprise-level Data Analytics solutions for leading organizations and the Federal Government in all proposed Functional Areas of the VITA Program.</p> <p>Notable Achievements: Under Mr. Thamm's leadership, the first successful design and deployment of Tableau Server was delivered at the Department of State. Other notable State Department achievements include leading projects to use open source technologies and cloud platforms to design and deploy Data Analytics at scale.</p> <p>Education: Northwestern University Master of Science, Predictive Analytics, 2015 Villanova University Master of Business Administration, 2009 Virginia Commonwealth University Bachelor of Science, Business Administration, 2003</p> <p>Certifications: Project Management Professional (PMP) – December 2009 Tableau Desktop Qualified Associate – July 2017 ITIL v3 – Foundation Level Certification – September 2012 Programming: R, Python, SQL</p>
VITA Deputy Program Manager (PMO) and Data Analytics Solutions Scientist (Key Personnel)	Michelle Chance	<p>VITA Program Related Experience: As VP of Solutions Experience at Dito, background includes Initiating, Planning, Executing, Monitoring, and Closing projects while balancing all project constraints including budgets and schedules. Working knowledge of Intra/Internet/Extranet security issues and architecture. Critical analysis, problem-solving, and short and long-range project planning. Developing and working in relational databases</p> <p>Notable Achievements: Technical analysis and design, including database design and planning. Project management through full PMLC and SDLC processes. Experience using industry standards such as PMP, CMM, ITIL and ISO 9001. In-depth data analysis, reporting, conversion, migration and testing. Implementation of data quality thresholds and policies. Backup and recovery methods, practice, and evaluation including Rsync and several software solutions (Backup Assist, Red Gate). Ability to organize highly complex function projects and direct implementation. Training and experience with effective project management practices</p> <p>Education: BA, Management Information Systems Certified Third Party Risk Professional (CTPRP)</p>
Lead Social Analytics Scientist (Key Personnel)	Ms. Colleen Thamm	<p>VITA Program Related Experience: Colleen leads Sophinea's Social Analytics Practice. Social media data is increasingly relevant across all industries, especially the government. Colleen works with her government clients to achieve three (3) key Social Media Analytics Objectives: Stay secure: Simple measures can safeguard government organizations against security breaches and false information being published. Remain compliant: Remaining compliant with privacy requirements is critical for any</p>

		<p>government body. Develop Cost-Effective Social Media Outreach: Traditional public outreach is expensive and time-consuming, tools like Hootsuite/Brandwatch allows for time and cost savings</p> <p>Notable Achievements: Led the global deployment of a next-generation reporting solution to improve program execution. Developed the vision; gained executive approval; and led a multi-functional team to implement the various components of an integrated data stack for a complex, highly-visible program.</p> <p>Education: College of William & Mary, Master of Business Administration, Marketing Concentration 2015 Hollins University, Bachelor of Arts, Business Administration-Communications, 2010</p>
Transition Director (Key Personnel)	Mr. Erik Thamm	<p>VITA Program Related Experience: Because of the task order nature of this contract, disciplined management of Transitions will be important to ensure performance continuity. Mr. Thamm has in-depth corporate experience managing a number of successful contract phase-in/phase-out transitions on programs as large as 160 personnel. His assignment to this transition demonstrates the commitment of Sophinea's senior leadership to VITA and the successful performance of this task order contract..</p> <p>Notable Achievements: Mr. Thamm was the President, Chief Executive Officer (CEO) and principal founder of Log.Sec Corporation. Log.Sec Corporation was a small business that grew within 8 years of its founding in 2000 to approximately 400 personnel stationed world-wide and annual revenues over \$48 million. The company specialized in the fields of information technology and logistics engineering..</p> <p>Education: George Washington University, Master of Business Administration, 1981, College of William & Mary, BS-Management, 1972</p>
PMO Technical Advisory Council (Lead Cloud Scientist)	Richard Foltak	<p>VITA Program Related Experience: As VP-Head of Cloud for Dito, Richard leads Dito's Cloud practice, enriching our client's business value streams in embracing and optimizing leading-edge Cloud technologies within their practices. Industry certifications include those in Infrastructure Architecture, Data Engineering, Data Analytics, Machine Learning, DevOps, Networking, Cyber Security, IT Governance, and ITIL 4.</p> <p>Notable Achievements: His industry background includes being Chief Architect at Deloitte Consulting, Distinguished Architect at Verizon Data, and Senior Tech Lead at Cisco Systems.</p> <p>Education: Bachelor of Engineering MBA</p>
PMO Technical Advisory Council (Lead	Marty Baker	VITA Program Related Experience: Marty has over 20 years leading and managing large scale IT business transformation objectives for Dito. Prior to

Cloud Solutions Scientist)		<p>Dito, he worked at Deloitte then moved to GE Lighting and then BP America. Currently, he is Director of Dito's Cloud Solutions Services.</p> <p>Notable Achievements: At BP he developed and lead the Upstream Cloud Transformation Program leading BP's data center moves to the Microsoft Azure and AWS clouds</p> <p>Education:</p> <p>Certified Professional:</p> <ul style="list-style-type: none"> ● Project Management Professional ● Professional Scrum Master ● Professional Scrum Product Owner
PMO Technical Advisory Council (Lead Data Analytics and Operations Research)	Joe Wilck	<p>VITA Program Related Experience: Joe is Faculty Director of The College of William & Mary's Business Analytics, Information Systems, and Operations Program.</p> <p>Notable Achievements: His research interests include applied optimization, analytics, STEM education, operations research, and industrial and systems engineering applications. His research has been funded by DARPA, the DOD, the US Department of Energy, and the National Science Foundation - among many others. He has served or led in various capacities including academia, professional society leadership (volunteer), research panels, research projects, accreditation (specifically ABET), and curriculum.</p> <p>Education:</p> <p>Pennsylvania State University - University Park, Doctor of Philosophy (Ph.D.), Industrial Engineering and Operations Research Virginia Polytechnic Institute and State University, Master of Science (M.S.), Industrial and Systems Engineering (Concentration Operations Research) Virginia Polytechnic Institute and State University, Bachelor of Science (B.S.), Industrial and Systems Engineering</p>
Sr. Data Engineer - Google Cloud (Key Personnel)	Narayanan Ramakrishnan	<p>VITA Program Related Experience: Experienced professional with in-depth experience in pre-sales engineering, discovery, technical demos, training and presentations, Proof of Concepts (POC), post-sales engineering professional services, telecommunications, enterprise software consulting, solution delivery & Cloud Computing in various domains/verticals including Retail & Telecommunications</p> <p>Notable Achievements: Deep experience in Data Integration & Replication, High Availability (HA) & Maximum Availability Architecture (MAA) and Cloud Architectures, services and technologies.</p> <p>Education:</p> <p>Google Cloud Certified:</p> <ul style="list-style-type: none"> ● Professional Cloud Architect ● Professional Data Engineer
Sr. Data Analyst & Cloud Solutions	Damon Douglas	<p>VITA Program Related Experience: Prior to joining Dito as a cloud developer, Damon Douglas practiced pharmacy in both retail and hospital</p>

Developer (Key Personnel)	<p>settings. He currently develops data engineering and gRPC and REST API integration solutions using Google Cloud Dataflow and Google Kubernetes Engine.</p> <p>Education:</p> <p>Google Cloud Certified Professional:</p> <ul style="list-style-type: none"> • Data Engineer • Cloud Architect
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5.10.3.2 - RECRUITING AND HIRING METHODS

Team Sophinea considers two major factors when recruiting and hiring personnel for work on a customer site:

- Experience, skills, and ability of the candidate, as prescribed by the work description
- Work ethic, employment philosophy, and ability of an individual to mesh within the existing work-site culture

Our hiring process ensures these two factors are addressed during the recruiting process, with the results being improved client satisfaction and a workforce with the skills and experience to meet APG's mission. Team Sophinea will implement the following three-pronged approach to recruiting and hiring:

1. We have three dedicated, full-time recruiters with more than 20 years of experience at our team's corporate offices, plus we have direct access to W&M's Data Analytics graduate and undergraduate students. They are well-versed in client requirements and very familiar with the VITA mission objectives and onsite culture. As a result, recruiters can screen candidates for their technical expertise and also their ability to meet all expectations of a demanding client environment.
2. Our recruiting and hiring processes ensure consistent results in the delivery of qualified candidates. The result is workforce stability and uninterrupted contract performance.
3. Our formal Employee Referral Program encourages employees to recommend candidates to fill existing openings in the organization. With this program, employees receive referral award bonuses once a candidate they recommend is hired and begins working.

Figure 5.10.3.2 shows our extensive suite of recruiting tools to ensure a broad spectrum sourcing capabilities and access to the full depth of our team's personnel resources.

Online Tools	Description
GoogleHire, Indeed, Glassdoor, LinkedIn, CareerBuilder, etc.	Candidates search job listings and register at the career site. Automatically matches registered users with posted positions and e-mails the results to HR. Affiliated with 60 job Websites including Indeed, CareerBuilder, Glassdoor, etc.
Reassignment and Transfer Database	Identifies all currently available Team Sophinea employees. Team-wide keyword-searchable database contains employee resumes, availability date, and work location preference.
Talent Access Plus Database	Keyword-searchable database of employee profiles with summary of qualification, education, memberships, skills, certifications. Particularly useful to fill short-term or surge requirements.

Figure 5.10.3.2. Team Sophinea Recruiting Tools. Online tools enable us to rapidly fill vacancies with fully qualified staff.

With our state-of-the-art recruiting tools, we also use traditional methods, recruiting agencies, job fairs, college recruitment, and employee referral programs. Referrals from our employees continue to be one of the most successful recruiting techniques, generating fast and high-quality hires for many positions otherwise difficult to fill. Together, our traditional and innovative tools ensure recruitment of high-quality candidates and superior service for VITA.

We use the same basic background process of “vetting” new hires as we do for processing Security Clearances, although not through a formal e-Qip check. We can tailor the screening process, including actually processing Security Clearances, based on the need of the customer. Team Sophinea has also implemented a procedure that helps reduce the time it takes to fill positions requiring security clearance. This three-step process (outlined in **Figure 5.10.3.2-2**) starts immediately upon notification of the position being activated on the contract.

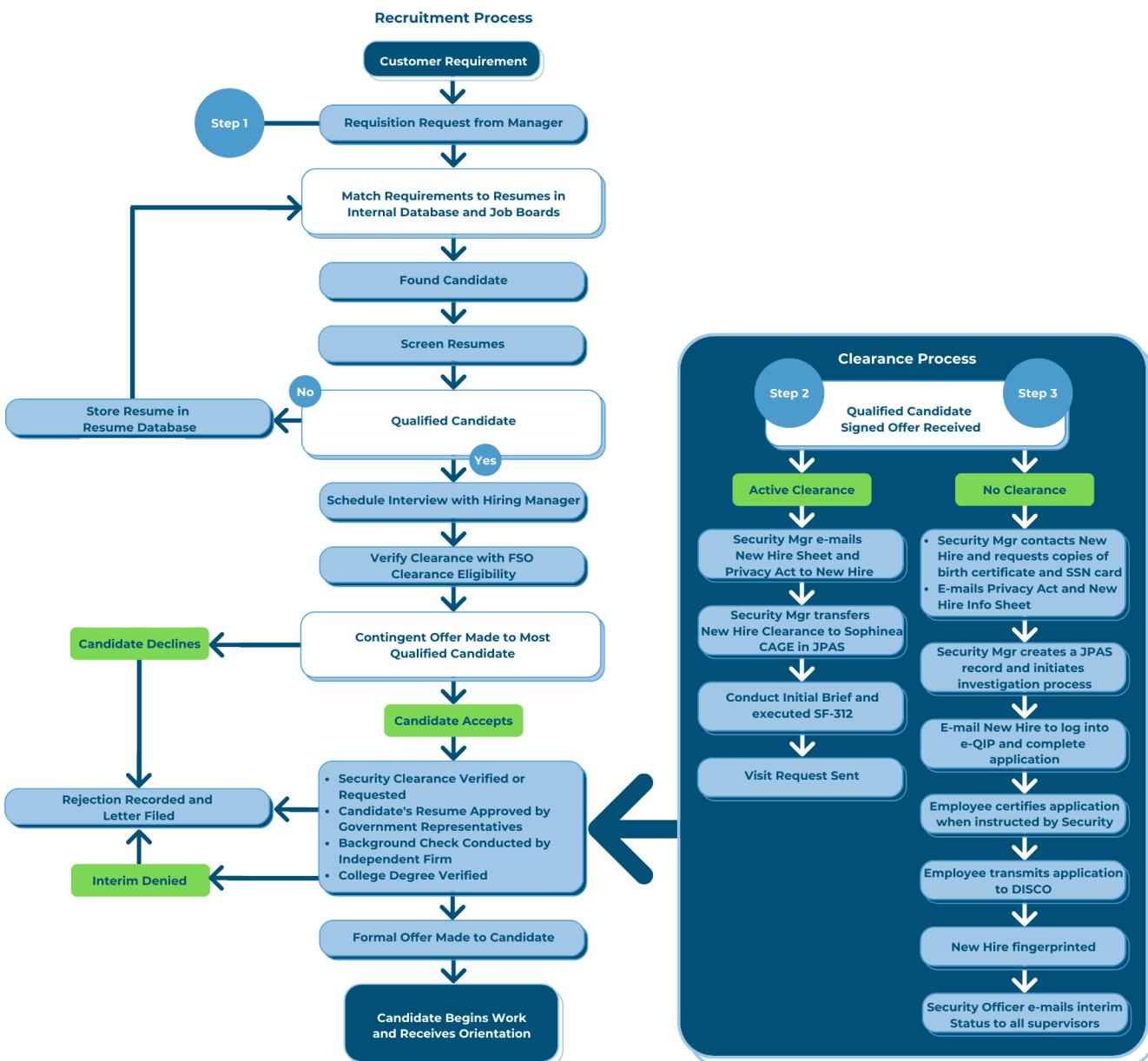


Figure 5.10.3.2-2 Team Sophinea’s Recruiting and Clearance Process

Step 1 is to identify those positions that require a clearance and at what level of clearance.
Step 2 includes those efforts associated with filling the position with a candidate with an active clearance so the clearance can be transferred from the current FSO to the hiring company's FSO.
Step 3 for those candidates that do not have an active security clearance. We prescreen them during the interview process for assurances that they can pass the associated background checks. We obtain approval from the candidate to perform a credit check and a police check, to screen each potential employee before a formal offer. Concurrently, we provide candidates access to the Electronic Questionnaires for Investigations Processing (e-QIP) Web site to begin completion of the appropriate form, depending on the level of clearance required. The credit check report and police check will identify any potential financial problems or arrest records that may delay the processing of a Secret or Top Secret Security Clearance.

5.10.3.3 - KEY PERSONNEL

We have noted on our Organization Chart who are the initial five (5) individuals who we are designated as full-timeKey Personnel. They are available for assignment within two (2) weeks of contract award. We understand the interest and issue VITA may have in the selection and rotation of any key account team members assigned to VITA and we are open to discussing a personnel procedure that will be fully satisfactory.

6.0 SUPPLIER PROCUREMENT AND SUBCONTRACTING PLAN

As requested, Appendix B - Supplier Procurement and Subcontracting Plan is provided under Section 7.2. Although Sophinea is a qualified small business currently supporting the federal government, we are committed to robustly supporting the Commonwealth's Small Business Program. We have added Dito LLC as a key small business technology partner on our team, have included the College of William and Mary for academic and research support, and are committed to pursuing and meeting the Small Business Owned Service Disabled Business (SDVOSB) goal of 3% as well as the inclusion of additional DSBSD-certified SWaM businesses and Non-SWaM businesses directly performing the Requirements of this contract.

7.0 VITA STANDARD CONTRACT AGREEMENT

Sophinea takes no exceptions to the terms and conditions of the VITA Standard Contract Agreement. As requested in the RFP, the completed table is below:

Issue:	Supplier's response (Y & N)
Do you agree that the contents of your response to Sections 5, 7 and 8 will become part of any contract that may be entered into as a result of this RFP?	Y
Will you agree to begin measuring the service level (Appendix A) within 60 days of the start of the implementation of the Service/Solution?	Y
The contract will include performance standards, measurement criteria and significant corresponding financial remedies.	Y
Do you agree to include the Service Levels and remedies for non-compliance as defined in Appendix A in the final contract?	
Do you agree that all provisions of the VITA Contract NOT addressed by you in the Appendix E table are acceptable?	Y
Do you acknowledge that you will submit a Supplier Procurement and Subcontracting Plan stating whether or not and how you will be utilizing small businesses in your proposal? See Section 7.	Y
Supplier acknowledges that no federal funds may be used to obtain any Service/Solution under a contract awarded, pursuant to this RFP, to any Supplier who appears on any excluded lists on the federal government's System for Award Management ("SAM") at https://www.vita.virginia.gov/supply-chain/scm-policies-forms/#sam .	Y
If Supplier proposes a solution that will require the Commonwealth to execute a EULA, either as a signed agreement or as "clickwrap", with a software manufacturer, Supplier shall, for each such software manufacturer, obtain the written consent of such software manufacturer to the terms and conditions of VITA's "License Agreement Addendum" attached as Attachment E and provide a copy of each such consent with its proposal.	Y
Do you affirm that your response meets all of the Mandatory requirements listed in section 2.Q?	Y
Do you affirm that your organization is properly registered with the Virginia State Corporation Commission to conduct business in the Commonwealth? Supplier is to complete Appendix D and submit with its proposal.	Y
Do you affirm that any anticipated partner or subcontractor that will provide Services/Solutions/SaaS directly to the Commonwealth is properly registered with the Virginia State Corporation Commission to conduct business in the Commonwealth? Supplier is to complete an additional Appendix D for all anticipated partners or subcontractors and submit with its proposal.	Y

Do you affirm that your organization and all affiliates are current with all sales tax obligations to the Commonwealth as of the due date of the proposals in response to this RFP?	Y
<p>Do you agree to accept the VITA "Mandatory Contract Terms" consisting of the:</p> <ul style="list-style-type: none"> ● "Core Contractual Terms"; ● "Required eVA Terms and Conditions"; and ● "Mandatory Internal Revenue Service (IRS) Publication 1075 (required for FTI data only)"? <p>The provisions of each are set forth at the following URL:</p> <p>https://www.vita.virginia.gov/supply-chain/scm-policies-forms/mandatory-contract-terms/</p>	Y
Do you agree to comply with the Supplier's Monthly Report of Sales and Industrial Funding Adjustment requirements (see details in standard contract included as an Attachment D to the RFP)?	Y

8.0 APPENDICES

8.1 APPENDIX A - SERVICE LEVEL AGREEMENTS (SLAs)

Performance and Cost controls, as well as milestone scheduling, are critical to a successful program. As technical task orders are issued, we are open and willing to negotiate specific technical SLAs for each task based on the needs and requirements of each customer. In addition, in the following table below we have recommended a number of general technical management and program management SLAs for VITA's review and consideration.

Our PM continuously monitors performance, cost and schedule data to meet customer expectations. For example, Team Sophinea's cost accumulation system comprehensively reports on financials and performance by collecting data from timecards, procurement systems, and online expense reporting systems. Monthly, our PM reviews and compares subtask costs and data with baselines, expectations, and budgets to detect cost variances early and the need for management intervention. We report hours and costs by task and labor categories monthly. Mr. Thamm also meets monthly, or as requested, with clients to review task progress and resource usage. We notify the Government when task order expenditures reach 75% of authorized task funding. The figure below summarizes the various technical and program management controls we use to manage and report performance.

Management Area	Management Controls Feature	Management Controls Benefits
Program Management Plan (PM Plan)	Within 30 days of award, Mr. Thamm will deliver a comprehensive PM Plan that defines our plans for all program areas, such as WBS, staffing, scheduling, cost control, subcontractor management, reviews and reports, security, data management, QA, and risk management. The PM Plan is updated over time, and serves as an overall guide to total program management.	The PM Plan becomes a "living document," since it is initially base-lined but then is regularly updated to reflect ongoing program plans and operations. The PM Plan thus summarizes program activity areas and defines our approach for managing all program areas.
Program Management Plan (PM Plan)	Roadmaps with milestones are established for major initiatives. Projected releases are scoped for initiatives and sprints are scoped using story points (or equivalent) Performance is tracked via sprint burndown charts (or equivalent) for approved roadmap milestones and sprint scope.	PMP details Milestone Schedule to ensure customer expectations are documented and tasking can be planned to deliver on those delivery expectations.
Program Management Plan (PMP)	Data Solution safeguards non-public are detailed in the PMP.	Ensures that all non-public data is secure and unable to be accessed by those not authorized.
DevOps	Keep current with emerging technologies and best practices that could impact VITA and RPC Operations. Identify opportunities for improvement	On a Quarterly basis, Sophinea will have its Technical Advisory Council conduct a technical review to VITA that provides the latest, best and most relevant solutions on the market so VITA can incorporate better solutions in its planning as technology evolves.

	and work with the client to prioritize for adoption.	
Program Management Plan (PM Plan)	Program activities are prioritized, planned, organized, and managed as evidenced by task plans and dashboards and by the active management/communication of issues, risks and blockers	Latest automated tools are used to ensure contract deliverables are delivered on time as required.
Program Management Plan (PM Plan)	Solution complies with all current COV ITRM Policies and Standards, as applicable	PMP can be easily updated to address and document changing conditions and contract requirements.
Subcontracts Management	Team Sophinea, as the prime TO lead, has assigned experienced personnel to perform these functions. We will systematically define a PWS for each, flow-down contract requirement and regularly monitor compliance. The Team Sophinea Subcontracts Manager will interact with our technical leaders to confirm work task assignments and compliance.	As the prime, we will define subcontracts so that each subcontractor is clearly tasked. We will use the proposed program-specific Web site to advantage in performing these functions and report monthly.
Data Management	Ms. Chance, our Deputy Program Manager, serves as the program's Data Manager. This individual takes responsibility for making CDRL development assignments, reviews completed products before delivery, and coordinates with the Contracts Manager to make formal deliveries.	Using the PMO as the central organizational unit that performs contract-wide work (and placing the Data Manager in the PMO), we centralize the data management activity within the program. The program's portal is used for effective program communication.
Cost Controls	We comply with all Government CAS regulations in collecting and managing costs. We adhere to DCAA guidelines and conform to all requirements. For this task order, we will collect and manage costs in accordance with standard PWS procedures.	Our primary automated cost collection system is straightforward and extremely effective for this multitask, multiyear type of task order. We will collect costs on a semi-monthly basis and report by the 15th of each month.
Schedule Controls	While we plan for all tasks to be performance-based against the WBS, we are prepared to manage any other developmental or time-sequenced task effectively, using Microsoft Scheduler as our primary schedule control tool.	We collect schedule data weekly. Task schedules are reviewed and managed by Task Managers, Technical Leaders, and the PM. Thus, schedules receive high visibility throughout the program organization.

Security Management	We have a SME who serves as the program's Security Manager, ensuring we conform to all Government security and classification requirements.	We maintain an automated database indicating the classification levels of all personnel. This list will be readily accessible to meet program needs.
Risk Management	Using Risk Radar, an automated risk management tool, we have analyzed potential program risks in the WBS areas, and have, in fact, used risk concerns as a major basis for developing our team, systematically covering each WBS area with qualified staff.	In response to WBS requirements, we assembled a team that provides exceptionally qualified in-depth coverage of all program functional areas. We therefore rate the overall program technical performance risks as Low for our team.
Quality Assurance Management	We establish our quality assurance system across the entire team on the basis of ISO 20000 concepts. We will use written policies, will put in place standardized administrative control procedures, define staff responsibilities, and standardize staff quality assurance training across the team.	A standard quality assurance system database has been defined; upon contract award, it will be disseminated throughout the team via the Team Sophinea repository which will have restricted access codes.

Figure 8.1 Program Management and Cost/Schedule Controls. These management controls enable us to effectively manage and report performance.

8.2 APPENDIX B - SUPPLIER PROCUREMENT AND SUBCONTRACTING PLAN

Appendix B - Supplier Procurement and Subcontracting Plan

All small businesses must be certified by the Commonwealth of Virginia, Department of Small Business and Supplier Diversity ("DSBSD") by the contract award date to participate in the SWAM program. Certification applications are available through DSBSD online at <http://www.sbsd.virginia.gov/>.

Supplier Name: Sophinea Corporation

Preparer Name: Erik G. Thamm

Date: 23 June 2020

Instructions

A. If you are certified by the DSBSD as a small business or as a micro business, complete only Section A of this form. This shall include DSBSD-certified women, minority, or service-disabled veteran-owned businesses when they have received DSBSD small business certification.

B. If you are not a DSBSD-certified small business, complete Section B of this form.

Section A

If your firm is certified by the DSBSD, are you certified as a (**check all that apply**):

- Small Business
 Small and Women-owned Business
 Small and Minority-owned Business
 Small Service Disabled Veteran-owned Business
 Micro Business
 Micro Business and Women-owned Business
 Micro Business and Minority-owned Business
 Micro Service Disabled Veteran-owned Business

Certification Number: **Virginia Micro Small Business Certification:** (Status: Pending), Tracking Number: 815358 (dated 6/19/20)

Certification Approval Date: _____

Certification Expiration Date: _____

Section B

Although Sophinea is a qualified small business currently supporting the federal government, we are committed to robustly supporting the Commonwealth's Small Business Program. We have added Dito LLC as a key small business technology partner on our team, have included the College of William and Mary for academic and research support, and are committed to pursuing and meeting the Small Business Owned Service Disabled Business (SDVOSB) goal of 3% as well as the inclusion of additional DSBSD-certified SWaM businesses and Non-SWaM businesses directly performing the Requirements of this contract.

Small Business Name & Address DSBSD Certificate # (Leave certificate number blank if Non-SWaM)	Status if Small Business is also: Women (W), Minority (M) Service-Disabled Veteran (D), Micro Business (O) Non-SWaM (NS)	Contact Person, Telephone & Email	Type of Goods and/or Services
SWaM Overall Commitment Percentage Please state here the overall commitment percentage for DSBSD-certified SWaM businesses directly performing the Requirements of this Contract: Note: The percentage above ONLY APPLIES to DSBSD-certified SWaM businesses who are directly performing the Requirements of this Contract. Do not include in the percentage any businesses performing the Requirements of this Contract that are non-SWaM businesses.			

8.3 APPENDIX C - PRICING

(Refer to Volume 2: Pricing Proposal).

8.4 APPENDIX D - STATE CORPORATION COMMISSION FORM

Virginia State Corporation Commission ("SCC") registration information. The Supplier:

- .. is a corporation or other business entity with the following SCC identification number: **08352247 -OR-**
- .. is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust **-OR-**
- .. is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the Supplier in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from Supplier's out-of-state location) **-OR-**



STATE CORPORATION COMMISSION

Richmond, August 27, 2018

This is to certify that the certificate of incorporation of

Sophinea Corporation

*was this day issued and admitted to record in this office and that
the said corporation is authorized to transact its business subject
to all Virginia laws applicable to the corporation and its business.
Effective date: August 27, 2018*

State Corporation Commission

Attest:

Joel H. Heck
Clerk of the Commission



CISECOM

" is an out-of-state business entity that is including with this proposal an opinion of legal counsel that accurately and completely discloses the undersigned Supplier's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia.

****NOTE** >>** Check the following box if you have not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for proposals (the Commonwealth reserves the right to determine in its sole discretion whether to allow such waiver): "

8.5 APPENDIX E - SUPPLIER EXCEPTIONS TO VITA CONTRACT TEMPLATE

Sophinea is not taking any Supplier exceptions to the terms and conditions of "Appendix E – Supplier Exceptions to VITA Contract Template."

Page Number	Contract Section/Subsection	Exception Explanation

8.6 APPENDIX F - SUPPLIER PROPRIETARY INFORMATION

Sophinea confidential information such as Financials and the names of Key Personnel resumes have been redacted in the submitted Redaction of the Proposal. A list of the redactions is provided below.

Page Number	RFP/Attachment Section/Subsection	Reason Information Deemed to be Proprietary

8.7 APPENDIX G - PRODUCT ONE PAGE OVERVIEWS

Team Sophinea has Vendor Partnerships that provide access to a wide range of products for Data Analytics Solutions which are outlined in our Appendix G- Products. Below are short one page summaries of their products. Team Sophinea already has established relationships with a number of them on our current contracts. It will be a smooth transition to have those relationships move over to the VITA Program. And, as mentioned before, our team will continue to follow the market for new, emerging technology and solutions to add to our Vendor Portfolio.



Overview

ThoughtSpot is the leader in search & AI-driven analytics for enterprises. We help the world's largest companies succeed in the digital era by putting the power of a thousand analysts in every business person's hands.

With our next-generation analytics platform, business people can use Google-like search to easily analyze complex, large-scale enterprise data and also get trusted insights to questions they didn't know to ask, automatically - all with a single click.

ThoughtSpot connects with any on-premise, cloud, big data, or desktop data source, deploying 85 percent faster than legacy technologies.

Awards

-  **Leader**
2019 Gartner Magic Quadrant
-  **Technology Pioneer**
World Economic Forum
-  **Top 100 Company**
Forbes 2018 Cloud 100
-  **50 Highest Rated Private Cloud Companies**
Battery Ventures / Glassdoor



Transformation of Digital Government

A sound digital analytics platform can lay the groundwork for a more effective digital government.

ThoughtSpot's self-service analytics platform empowers organizations to simplify access to data. When more people in the organization can ask questions (and get answers) with simple, plain-English search terms, the entire organization benefits. For organizations operating at the scale of the federal government, not having to wait a few days for a report can amount to millions of dollars in savings, operational efficiencies and even lives saved.



Data Sheet

Informatica Data Quality

Key Benefits

- Enhance IT productivity and business self-sufficiency
- Measure the quality of data for improved customer experience
- Empower data governance practitioners with visualizations of their data quality by visualizing the quality of their data
- Ensure analytics can be trusted with high-quality data
- Monitor and cleanse data on-premises, in the cloud, across big data, and traditional data sets

Improve the Quality of Your Data to Accelerate Your Data-Driven Digital Transformation

Reliable Data Quality Programs Deliver Data You Can Trust

Finding and fixing quality issues in your data can mean the difference between business initiative success and failure. If not properly identified and addressed, errors in your data can cost your company millions, resulting in missed revenue opportunities and exposing your company to unnecessary risk. The right approach to uncovering data quality problems requires that you leave no domain, no application, and no geography uncovered.

Informatica® Data Quality empowers your company to take a holistic approach to managing data quality across your entire organization. With Informatica Data Quality, you'll be able to ensure success of your data-driven digital transformation initiatives and projects across users, types, and scale, while also automating mission-critical tasks.

The Right User Experience for the Right Individual

Informatica Data Quality is designed to provide the best user experience for each member of the team and is flexible enough to handle the different levels of capabilities, skill sets, and interests from across your organization.

The Right Scale for the Right Workloads

Informatica Data Quality ensures that your teams, across lines of business or IT, can easily deploy data quality for all workloads: for real-time, web services, batch, and big data.

The Right Deployment Model for the Right Use Case

No matter what type of initiative your organization is working on, with Informatica Data Quality, you can easily deploy data quality for all use cases, such as:

- Data governance
- Master data management
- 360° customer view
- Analytics
- Risk management
- Enterprise data lakes



Automate data governance and access control.

Your perimeter is secure. Your cloud is secure. But is your *data* secure?

With the surging importance of cloud-based analytics and data science, and the simultaneous rise of data regulations, today's CISO faces a daunting challenge: **how to make data flow to those who need it while maintaining strong data security and privacy protection.** Immata was founded to solve this problem.

The Immata Automated Data Governance platform helps organizations secure their data and how it's used – going well beyond data encryption or role-based security approaches. We help data-driven organizations harness their ever-changing and expanding data sets while ensuring secure, compliant use – down to every query.




Secure your data and how it's used, not just where it's stored

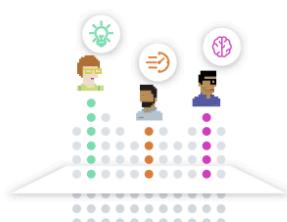
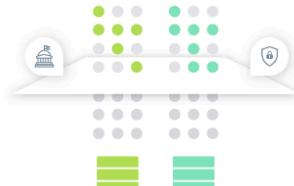
Reap the benefits of cloud-based analytics while mitigating the security risks of aggregating data in the cloud.

- ✓ Confidently invest in cloud-based analytics and data science with Immata governing access and control.
- ✓ With smart data detection, scan your data and tag personal information or anything deemed sensitive.
- ✓ Automatically control who can access what data for what purpose with no-code policies.

Accelerate time-to-data to maximize insights & minimize risk

Get the most from your data by giving users real-time, subscription-level access to *only the data they're permitted to see*.

- ✓ Combine subscription-based access with automated, fine-grained control using a built-in data catalog.
- ✓ Grant access for approved users, purposes, and projects, and initiate approval workflows for new users or highly sensitive data.
- ✓ Ensure fine-grained access control in any BI, analytics, or data science tool while maintaining strong data encryption.



Data incidents can happen - know why, so you can stop the next one.

Monitor data use and respond to incidents faster with powerful auditing and reporting tools.

- ✓ Prove who used what data, when and why.
- ✓ Access reports and logs to view who has access to each data source or table, what queries they ran, and what data they saw.
- ✓ Ensure compliance with privacy laws like CCPA and GDPR by analyzing the use of data against approved purposes or projects.



DATASHEET

Your Path to Enterprise AI

To succeed in the world's rapidly evolving ecosystem, companies (no matter what their industry or size) must use data to continuously develop more innovative operations, processes, and products. This means embracing the shift to Enterprise AI, using the power of machine learning to enhance - not replace - humans.

Dataiku is the centralized data platform that moves businesses along their data journey from analytics at scale to Enterprise AI, powering self-service analytics while also ensuring the operationalization of machine learning models in production.

Key Features

- Seamless connectivity to any data, no matter where it's stored or in what format.
- Faster data cleaning, wrangling, mining, and visualization.
- The latest in machine learning technology (including AutoML and deep learning) all in one place and ready to be operationalized with automation environments, scenarios, and advanced monitoring
- Every step in the data-to-insights process can be done in code or with a visual interface.
- Enterprise-level security with fine-grained access rights.



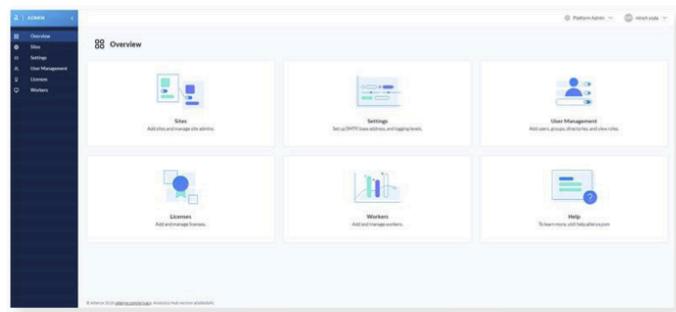


Where Automation Meets Intelligence

Data-driven decisions keep your team on track to exceed annual goals and garner attention from the executive level. As other departments look to leverage your team's expertise, the Alteryx Analytics Hub makes it easy to provide analytic collaboration spaces for analysts, data scientists, and decision makers to work together and share actionable insights every day. Empowering analysts to automate mundane analytic tasks and schedule reports and big data analyses to run simultaneously ensures they can make tough decisions quickly. Alteryx Analytics Hub delivers self-service analytics across teams in a secure and governed analytics environment with central administration to ensure data is always accessible.

ALTERYX ANALYTICS HUB PROVIDES:

- **Find data and answers faster:** See all data and analytic assets available so you can spend more time analyzing, not searching
- **Accelerate daily insights and actions:** Automate repetitive and complex processes to free people from manual tasks
- **Security and governance:** Keep your data and analytics assets secure while ensuring everyone gets the right level of access



Discover All Data and Analytic Assets

The hardest part of any analytics project is knowing what question to ask and where to start. The Alteryx Analytics Hub solves this with data catalog capabilities that empower everyone in your organization to discover all the available data and analytic assets within your organization. Using a keyword-search type environment, users can easily access metadata from a multitude of data sources, allowing organizations to leverage all their existing infrastructure. Additionally, users can seamlessly access and use all data and assets across the Alteryx Analytics Process Automation platform for faster acceleration of insights.

VISIT [ALTERYX.COM](https://www.alteryx.com)

ALTERYX ANALYTICS
HUB DATA SHEET



ALTERYX DESIGNER

"I'm able to take hours of work and literally pull it out in a three minute workflow. Alteryx helps us be strategic, and I think that's what I'm most excited about."

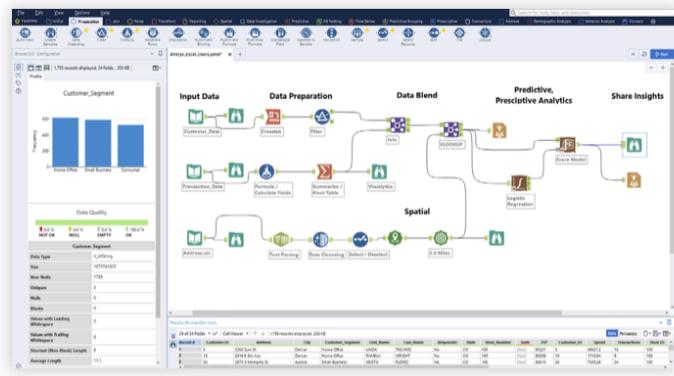
Amy Roll,

Manager of Compensation Data Analytics, BAE Systems

FROM RAW DATA TO READY TO USE RESULTS:

- Combine data sets - from the cloud, on the ground, from Excel, wherever - no unique identifying factors, no problem
- Analytics for all—predictive, statistical, and spatial—code-free for analysts, or code-friendly for data scientists
- Visual insights as you build your workflow and share your analysis with Visualitics

Alteryx Designer empowers analysts and data scientists with a self-service data analytic experience to unlock answers from nearly any data source available with [250+ code-free and code-friendly tools](#). Using a repeatable drag-and-drop workflow, you can quickly profile, prepare and blend all of your data without having to write SQL code or custom scripts. This used to require leveraging multiple tools—and even multiple people—to create an analytic model or report. Not anymore.



Connect to Data Wherever It Lives

With [20+ native data connections](#) and the ability to scrape web data, Alteryx Designer empowers you to work with nearly any data source available – data warehouses, ERP and cloud-based applications, flat files, Office applications, social media data and legacy analytics platforms. It doesn't matter if it's in the cloud, on your desktop, in traditional warehouses, or on the web.

VISIT ALTERYX.COM

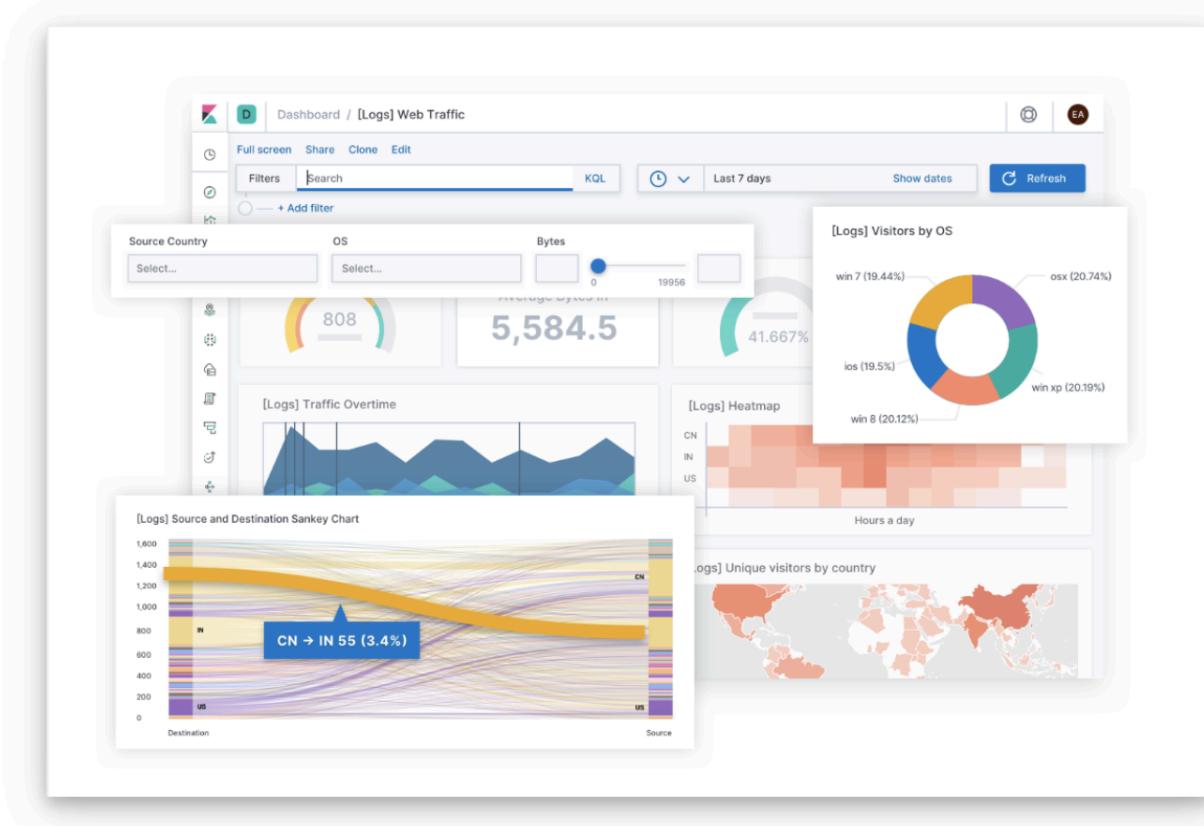
[DATA SHEET](#)

Kibana — your window into the Elastic Stack

Explore and visualize your data and manage all things Elastic Stack.

Whether you're a user or admin, Kibana makes your data actionable by providing three key functions. Kibana is:

- **An open-source analytics and visualization platform.** Use Kibana to explore your Elasticsearch data, and then build beautiful visualizations and dashboards.
- **A UI for managing the Elastic Stack.** Manage your security settings, assign user roles, take snapshots, roll up your data, and more — all from the convenience of a Kibana UI.
- **A centralized hub for Elastic's solutions.** From log analytics to document discovery to SIEM, Kibana is the portal for accessing these and other capabilities.



8.8 APPENDIX H - AMENDMENTS

8.8.1 AMENDMENT 1



COMMONWEALTH of VIRGINIA

Nelson P. Moe
 Chief Information Officer
 Email: cio@vita.virginia.gov

Virginia Information Technologies Agency

11751 Meadowville Lane
 Chester, Virginia 23836-6315
 (804) 416-6100

TDD VOICE -TEL. NO.
 711

May 19, 2020

AMENDMENT

TO: All Potential Offerors
FROM: Jeanne Mertens, Sourcing Specialist, Supply Chain Management
SUBJECT: Solicitation No. 2020-23
REGARDING: Amendment No. 1

Note: Each Offeror should complete and sign this Amendment No. 1 document in the spaces provided below and submit it with their proposal.

The following either changes or clarifies Solicitation No. 2020-23.

To accommodate the significant interest in RFP 2020-23, a second Pre-proposal Teleconference has been scheduled. Section 2.S "Timetable" (page 12) has been amended to add a second Supplier Pre-proposal Teleconference and registration deadline.

Timetable

Table 1

Register for pre-proposal teleconference #2 due to VITA	Wednesday May 20, 2020 4:00PM EST
Supplier pre-proposal teleconference #2	Thursday May 21, 2020 1:00-3:00 PM EST

Section 2.O. "Pre-Proposal Teleconference" (page 9) instructions for pre-proposal teleconference registration remain the same.

By signing and returning this document the Offeror acknowledges all the changes incorporated herein.

Name of company: Sophinea Corporation Date: 6/20/2020

Signature: Brian Thamm Print: Brian Thamm

Title: President / CEO Telephone: (571) 201-5249

Email: bthamm@sophinea.io

AN EQUAL OPPORTUNITY EMPLOYER

8.8.2 AMENDMENT 2



COMMONWEALTH of VIRGINIA

Nelson P. Moe
 Chief Information Officer
 Email: cio@vita.virginia.gov

Virginia Information Technologies Agency
 11751 Meadowville Lane
 Chester, Virginia 23836-6315
 (804) 416-6100

TDD VOICE -TEL. NO.
 711

June 1, 2020

AMENDMENT

TO: All Potential Offerors
FROM: Jeanne Mertens, Sourcing Specialist, Supply Chain Management
SUBJECT: Solicitation No. 2020-23
REGARDING: Amendment No. 2

Note: Each Offeror should complete and sign this Amendment No. 2 document in the spaces provided below and submit it with their proposal.

- 1) The following either changes or clarifies Solicitation No. 2020-23:

RFP Section 2. "Proposal Administration and Instructions" – Due Date/Time has been extended from June 16, 2020 4:00 PM Eastern to June 23, 2020 4:00 PM EST.

Section 2.S. "Timetable" (RFP page 12)

Table 1

Proposals due	Tuesday June 23, 2020 4:00 PM EST
----------------------	--

Section 2.M. "Proposal Protocol" instructions (RFP pages 8-9) regarding COVID-19 pandemic hand delivery remain the same and pertain to this new due date.

- 2) The following either changes or clarifies Solicitation No. 2020-23:

RFP Section 3. "Proposal Format" has been expanded to include the RPSD location (RPSD No. 1) for Attachment B, "Security Assessment and Governance Map for Non-Premise Based Services".

Section 3.A. "Supplier's Proposal Format" (RFP page 13)

Table 2

1.	Security Assessment & Governance Map for Non-Premise Based Services	Supplier's response by item in the Attachment B Security Assessment and Governance Map for Non-Premise Based Services tables as described in the instructions in Section 5 and Attachment B, clearly providing sufficient and complete responses.
----	--	---

By signing and returning this document the Offeror acknowledges all the changes incorporated herein.

Name of company: Sophinea Corporation Date: 6/20/2020
Signature:  Print: Brian Thamm
Title: President / CEO Telephone: (571) 201-5249
Email: bthamm@sophinea.io

8.8.3 AMENDMENT 3



COMMONWEALTH of VIRGINIA

Nelson P. Moe
Chief Information Officer
Email: cio@vita.virginia.gov

Virginia Information Technologies Agency
11751 Meadowville Lane
Chester, Virginia 23836-6315
(804) 416-6100

TDD VOICE -TEL. NO.
711

June 2, 2020

AMENDMENT

TO: All Potential Offerors
FROM: Jeanne Mertens, Sourcing Specialist, Supply Chain Management
SUBJECT: Solicitation No. 2020-23
REGARDING: Amendment No. 3

Note: Each Offeror should complete and sign this Amendment No. 3 document in the spaces provided below and submit it with their proposal.

The following either changes or clarifies Solicitation No. 2020-23:

For RFP Section 2. "Proposal Administration and Instructions", Item N. "Single Point of Contact" supplier inquiries and SPOC responses:

Strike the second paragraph stating:

"VITA cannot guarantee a response to questions received less than five (5) days prior to the proposal due date. No questions will be addressed orally."

Replace with a revised second paragraph stating:

"Questions must be received by the "Deadline for all questions" date specified in Table 1 in this Section. No questions will be addressed orally."

Insert a third paragraph stating:

"SPOC responses to received supplier questions imply no additions or revisions to proposal requirements described by RFP 2020-23 and its appendices, attachments and exhibits. Any additions or revisions to requirements of RFP 2020-23 and its appendices, attachments and exhibits will be specifically defined by an eVA-posted "Amendment" to RFP 2020-23."

By signing and returning this document the Offeror acknowledges all the changes incorporated herein.

Name of company: Sophinea Corporation Date: 6/20/2020

Signature: Brian Thamm Print: Brian Thamm

Title: President / CEO Telephone: (571) 201-5249

Email: bthamm@sophinea.io

AN EQUAL OPPORTUNITY EMPLOYER

8.9 APPENDIX I - ATTACHMENT B SECURITY ASSESSMENT AND GOVERNANCE MAP FOR NON-PREMISE BASED SERVICES

***Note: Refer to 4.0 Attachment B: Security Assessment and Governance Map for Non-Premise
Based Services***

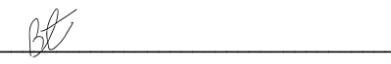
8.10 APPENDIX - EXHIBIT G: CERTIFICATION REGARDING LOBBYING

EXHIBIT G **CERTIFICATION REGARDING LOBBYING**

The undersigned certifies, to the best of his or her knowledge and belief, that:

- i). No Federal appropriated funds have been paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee or an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.
- ii). If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- iii). The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and Contracts under grants, loans and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature: 

Printed Name: Brian G. Thamm

9.0 ADDENDUM A - KEY PERSONNEL RESUMES

KEY PERSONNEL RESUME

NAME: Brian G. Thamm, PMP, MBA, MS Degree-Predictive Analytics

JOB TITLE: Program Manager and Lead Data Scientist

Program Role:

Mr. Thamm will have overall responsibility for managing the VITA Program and will lead technical task efforts as the Lead Data Scientist. He will provide monthly metrics (SLAs) and reports pertaining to task orders issued under the Functional Areas. Mr. Thamm will oversee the planning and execution of major projects and ensure the phases of the projects are completed in an acceptable manner, from concept through final implementation. As the Lead Data Scientist, he will provide technical expertise and creative design ideas to enable Big Data efficiencies within Authorized Users of the VITA Program. With his experience in high profile, mission-oriented, international federal government programs Mr. Thamm understands the importance of supporting VITA aggressive IT goals as well as various customer goals. He will ensure the Team Sophinea staff is accountable and meets performance objectives. Also, as in the past on federal government programs, Mr. Thamm will actively participate in monthly reviews with VITA and the technical representatives for each Authorized User.

Proposed Labor Category:

Program Manager and Lead Data Scientist

Education:

Northwestern University Master of Science, Predictive Analytics, 2015

Villanova University Master of Business Administration, 2009

Virginia Commonwealth University Bachelor of Science, Business Administration, 2003

Relevant Experience Manager: Data Analytics

Sophinea, Arlington, VA, November 2018-Present

Mr. Thamm has over 10 years of experience developing enterprise-level Data Analytics solutions for leading organizations and the Federal Government in all proposed Functional Areas of the VITA Program. Most recently, this includes leading the successful design and deployment of the first instance of Tableau Server at the Department of State. In addition, Mr. Thamm has led projects to use open source technologies and cloud platforms to design and deploy Data Analytics at scale. In addition, Brian has an undergraduate degree from Virginia Commonwealth University, an Executive MBA from Villanova University, and a Masters in Predictive Analytics from Northwestern University. Mr. Thamm is a certified Project Management Professional (PMP), Certified Scrum Master (CSM), and is ITIL Certified.

Mr. Thamm is knowledgeable with the technical and cultural challenges of developing and deploying analytics within the enterprise - from the upfront design of a secure and available solution, to developing use cases that are impactful and mission-focused, to ensuring users have the necessary training to effectively use the tools and extract insight from the data. This experience is invaluable for our clients as it ensures they have an industry partner who can develop a solution that is a perfect fit for their situation - whether that includes Commercial off the Shelf (COTS) tools, Open Source tools, or a combination of both. It also ensures that Sophinea is capable of designing roadmaps for our clients that are applicable to where they are in their analytics journey. Some clients are operating at 100% capacity with a Data Analytics platform and are ready for implementing Machine Learning (ML) and Artificial Intelligence (AI), while others can extract significant value from designing a single source of truth for Data Analytics. In all cases, Mr. Thamm has the knowledge and experience to serve as a trusted advisor.

CSRA (CSC), Arlington, VA, July 2016 – November 2018

Led the global deployment of a next generation reporting solution to improve program execution. Developed the vision; gained executive approval; and now leading a multi-functional team to implement the various components of an integrated data stack for a complex, highly-visible program.

Principal: Operations CSRA, Falls Church, VA, April 2013 – July 2016

Spearheaded the adoption of process-aligned data product initiatives to improve business operations. This included the development of use cases and designing prototypes and proof of concepts to justify ongoing investment.

Led the initiative to deploy an internal application called “Insight” which will be used to deploy analytics dashboards to CSRA business leaders and program managers. This custom platform was developed using Agile and involved collaboration with several stakeholder groups within the organization, such as the Chief Information Officer (CIO) organization, data owners and the user population. The platform was built using JavaScript, AngularJS and HTML and was deployed on AWS GovCloud.

- Promoted a shift towards using the R programming language. This included the development of predictive models and visualizations for management. It also included the development of training materials for other prospective analysts.
- Developed a corporate data analytics strategy for program delivery. This included the development of high-value use cases, evaluating data source quality and availability, and identifying analytic techniques that provide informed conclusions to stakeholders.
- Conceptualized and led the development and deployment of a staffing process application that automated a manually intensive step in the staffing process, integrated analytics for improved decision-making, and improved the quality of data collection for further process analysis.

Capture and Program Manager CSC, Falls Church, VA, March 2010 – March 2013

- Analyzed DoD deployment processing timeframes, market salary survey data and candidate drop-out probabilities to develop successful transition-in plans for multiple OCONUS programs.
- Developed and managed capture management dashboards to provide executive leadership with situational awareness of capture status and data-driven recommendations regarding successful bidding strategies.
- Analyzed technical documentation in collaboration with SMEs to streamline delivery and reduce costs related to IT Infrastructure projects.
- Authored technical responses to client Requests for Proposals (RFPs).
- Analyzed the competitive landscape, identified corporate reach-back opportunities to meet client needs, and defined quantitative and qualitative bidding strategies for potential new business opportunities.

Operations Manager CSC, Aberdeen, MD, February 2006 – February 2010

- Developed presentations for customers that provided a baseline of delivery performance and opportunities for operational improvement.
- Designed and developed program dashboards to communicate staffing and financial performance to clients.
- Authored technical responses to client RFPs.

Program Analyst Log.Sec Corporation (Acquired by CSC), Vint Hill, VA, February 2005 – February 2006

- Reviewed technical documentation in RFPs to validate corporate qualifications against client requirements.

- Authored proposal responses that communicated the corporation's technical approach to addressing client requirements.

Noesis, Incorporated, Contracts Administrator, Arlington, VA, November 2003 –February 2005

- Developed excel templates that facilitated the financial analysis and resulting closeout of a backlog of Final Invoices for client projects.

Certifications

Project Management Professional (PMP) – December 2009

Tableau Desktop Qualified Associate – July 2017

ITIL v3 – Foundation Level Certification – September 2012

Programming R SQL

KEY PERSONNEL RESUME

NAME: Colleen E. Thamm, MBA

JOB TITLE: Lead Social Analytics Scientist

Program Role:

Colleen leads Sophinea's Social Analytics Practice. Social media data is increasingly relevant across all industries, especially the government. Colleen works with her government clients to achieve three (3) key Social Media Analytics Objectives: Stay secure: Simple measures can safeguard government organizations against security breaches and false information being published. Remain compliant: Remaining compliant with privacy requirements is critical for any government body. Develop Cost-Effective Social Media Outreach: Traditional public outreach is expensive and time-consuming, tools like Hootsuite/Brandwatch allow for time and cost savings.

Proposed Labor Category:

Lead Social Analytics Scientist

Education:

College of William & Mary, Master of Business Administration, Marketing Concentration, 2015

Hollins University, Bachelor of Arts, Business Administration-Communications, 2010

Relevant Experience

Sophinea, Arlington, VA, Chief Marketing Officer (CMO) and Senior Social Analytics Consultant, April 2018-Present

Colleen serves as the CMO and leads Sophinea's Social Analytics Practice. Colleen has over 5 years of consultation/advisory services experience supporting strategic planning, performance measurement development, business analysis, training, and support. This experience includes working at Gartner for 3 years as a Digital/Social Media Marketing Advisor advising and supporting her CMO and CIO clients to create better business outcomes through the leverage of IT and Marketing.

In addition, as a trained Salesforce Administrator, and who has attended the Salesforce Development Conference, Colleen understands and can support the design and development of Salesforce solutions. Salesforce is an online solution for customer relationship management, or CRM. It gives a shared view of all users in an organization with one integrated CRM platform.

Gartner, Inc., Ft. Myers, FL, Social Media Advisor, July 2015 – April 2018

Led the global deployment of a next-generation reporting solution to improve program execution. Developed the vision; gained executive approval; and led a multi-functional team to implement the various components of an integrated data stack for a complex, highly-visible program.

Gartner is a leader in the IT market research and advisory field and Colleen's experience is directly relevant to the needs of VITA in understanding the Performance Management tools and processes that are trending in the IT field. She is positioned to provide senior VITA leaders with the indispensable business insights, advice and tools they need to achieve their mission-critical priorities and address the organizational needs of tomorrow. That understanding will be valuable in integrating strategic planning, program/project design, performance management, and learning.

Successful CIOs draw clear connections between IT and business value, and communicate that value effectively to business stakeholders. strategic view of the emerging trends shaping IT and business. For Colleen's clients, she was able to support them in meeting those goals. Her guidance helped them formulate plans that were designed to collect performance metrics — uptime, availability, budget allocation, etc. Improved business performance is the one true measure of the business value of IT.

The College of William & Mary: Full-time MBA Student August 2013- June 2015

Previous Experience prior to attending graduate school: Worked in the Insurance Industry as an Insurance Operations Analyst.

KEY PERSONNEL RESUME

NAME: Erik G. Thamm

DEGREES: BS, Management; MBA

JOB TITLE: Transition Director

Program Role:

In support of Sophinea's PM to ensure continuity of support, Mr. Thamm will manage the Transitions under the contract, whether they be the start-up or close-out of a task or be a transition of a task from an incumbent contractor over to a new task being performed by Sophinea. Mr. Thamm has over 45 years of corporate, operations, business development, and financial management experience, primarily in providing information technology and logistics support to the federal government. He currently supports the President of Sophinea Corporation, a small business specializing in Data Analytics and Business Intelligence, as Corporate Strategy Officer (CSO). Over the years, he has served as a member of the Board of Directors for One Federal Solution, Inc. (OFS), Log.Sec Corporation, the Professional Services Council (PSC) and Ventura Sciences, Inc.

The principal founder of Log.Sec Corporation in 2000, Mr. Thamm managed and oversaw the company's IT-related contracts for the US Army at Aberdeen Proving Ground (APG). With more than 165 people in the IT group, Log.Sec developed state-of-the-art Web applications, managed Army Enterprise Infrastructure, and supported more than 7,000 local users and tens of thousands of users Army-wide. Log.Sec was responsible for technical operations, including help desk and systems support, of the major APG Department of Defense (DoD) agency tenants including: US Army Environmental Command (USAEC), US Army Center for Health Promotion and Preventive Medicine (USACHPPM), US Army Development Test Command (DTC), US Army Research Development and Engineering Command (RDECOM), US Army Medical Research Institute of Chemical Defense (MRICD), and Edgewood Chemical Biological Center (ECBC).

Mr. Thamm had overall responsibility for fiscal, operational, administrative, and human resource management for APG's multifaceted programs. He provided guidance to technical managers and project managers (PMs) pertaining to day-to-day technical processes and procedures, including change management and control, problem management, and technical documentation. He coordinated studies to improve employee performance and to provide cost-effective solutions to technical issues. As President &

CEO, he was closely involved as a key point of contact (POC) to resolve operational issues requiring escalation. He regularly met with CORs (Government Technical Task Leads) to address new requirements and to ensure existing requirements were satisfied. For Help Desk and Systems Support, Log.Sec met or exceeded SLA metrics on tasks over the past years, despite the increasing numbers and complexity of calls. Log.Sec received many Letters of Commendation from various agencies it supported.

Proposed Labor Category:

Transition Director

Education:

Bachelor of Science Degree-Management from The College of William & Mary (W&M), 1972

Masters of Business Administration (MBA) Degree from The George Washington University (GW), 1981

Relevant Experience:

2018-Present: Mr. Thamm serves as Corporate Strategy Officer (CSO) to the President of Sophinea Corporation.

2013-2019: Mr. Thamm served as a Board Member and Senior Strategy Advisor at One Federal Solution, Inc. (OFS), a SDVOSB company focusing on Information Technology and Program Management to the federal government. During this time, the company grew in revenues from \$3 Million to over \$14 Million.

2011-2013: Following the two year planned M&A merger with Computer Sciences Corporation (CSC), Mr. Thamm founded StarPoint Corporation, an entrepreneurial consulting company. Upon accepting the appointment as Board Member and Senior Management Advisor at OFS, Mr. Thamm dissolved StarPoint.

2009-2011: After the M&A transaction in December 2008 that merged Log.Sec Corporation with Computer Sciences Corporation (CSC), Mr. Thamm served as Vice President of CSC/Army Programs for two years.

2000-2008: Erik G. Thamm was the President, Chief Executive Officer (CEO) and principal founder of Log.Sec Corporation. Log.Sec Corporation was a small business that grew within 8 years of its founding to approximately 400 personnel stationed world-wide and annual revenues over \$48 million. The company specialized in the fields of information technology and logistics engineering..

1992-2000: As President and Chief Operating Officer (COO) of Potomac Research International, Inc. (PRI), a wholly owned subsidiary of Decision Systems Technologies, Inc. (DSTI), Mr. Thamm reported directly to the Board of Directors of DSTI and was responsible for the overall performance of the \$16 million/yr. company. Notable recent achievements during his tenure as president included the difficult BRAC transition of PRI-supported government programs from Vint Hill Farms Station, VA to Ft. Monmouth, NJ and the competitive award of a major 5 year, \$50 million software development and network support contract at Aberdeen Proving Ground (APG), MD.

Previous to his assignment at PRI in July 1996, Mr. Thamm served as Senior Vice President and Deputy Chief Operating Officer on DSTI's Executive Management Committee. Mr. Thamm had a major role in the growth of DSTI during 1992-96 from an \$11 million/yr. to a \$32 million/yr. business unit. He supported the Office of the President in many phases of management ranging from strategic planning, business development, to operations. Business development efforts focused on growth and diversification of business including leading the Due Diligence Team that oversaw the strategic acquisition of PRI.

1983-1992: Mr. Thamm served as Vice President of ENSCO's Information Systems and Services (EISS) Division and had profit/loss responsibility for a \$12 million/year business unit. He played a key role in the growth of the unit from 50 to over 180 employees. He was instrumental in leading business development

efforts that resulted in growth and diversification of ENSCO's traditional scientific software development business base into the field of information management business applications.

1977-1983: Mr. Thamm held finance and contract management positions at Planning Research Corporation (PRC).

1972- 1977: Following graduation from The College of William & Mary, Mr. Thamm worked in procurement for the manufacturing & retail industry sectors.

KEY PERSONNEL RESUME

NAME: Richard Foltak

JOB TITLE: Lead Cloud Scientist

PMO Technical Advisory Council (Lead Cloud Scientist)	Richard Foltak	<p>VITA Program Related Experience: As VP-Head of Cloud for Dito, Richard leads Dito's Cloud practice, enriching our client's business value streams in embracing and optimizing leading-edge Cloud technologies within their practices. Industry certifications include those in Infrastructure Architecture, Data Engineering, Data Analytics, Machine Learning, DevOps, Networking, Cyber Security, IT Governance, and ITIL 4.</p> <p>Notable Achievements: His industry background includes being Chief Architect at Deloitte Consulting, Distinguished Architect at Verizon Data, and Senior Tech Lead at Cisco Systems.</p> <p>Education: Bachelor of Engineering MBA</p>
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NAME: Marty Baker

JOB TITLE: Lead Cloud Solutions Scientist

PMO Technical Advisory Council (Lead Cloud Solutions Scientist)	Marty Baker	<p>VITA Program Related Experience: Marty has over 20 years leading and managing large scale IT business transformation objectives for Dito. Prior to Dito, he worked at Deloitte then moved to GE Lighting and then BP America. Currently, he is Director of Dito's Cloud Solutions Services.</p> <p>Notable Achievements: At BP he developed and lead the Upstream Cloud Transformation Program leading BP's data center moves to the AZURE and AWS clouds</p> <p>Education: Certified Professional: <ul style="list-style-type: none"> ● Project Management Professional ● Professional Scrum Master ● Professional Scrum Product Owner </p>
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NAME: Damon Douglas

JOB TITLE: Sr. Data Analyst & Cloud Solutions Developer

Sr. Data Analyst & Cloud Solutions Developer (Key Personnel)	Damon Douglas	<p>VITA Program Related Experience: Prior to joining Dito as a cloud developer, Damon Douglas practiced pharmacy in both retail and hospital settings. He currently develops data engineering and gRPC and REST API integration solutions using Google Cloud Dataflow and Google Kubernetes Engine.</p> <p>Notable Achievements:</p> <p>Education: Google Cloud Certified Professional:</p> <ul style="list-style-type: none"> • Data Engineer • Cloud Architect
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NAME: Christopher Ferraro

JOB TITLE: Sr. Data Analyst & Google Maps Platform Engineer

Sr. Data Analyst & Google Maps Platform Engineer	Christopher Ferraro	<p>VITA Program Related Experience: Chris has been with Dito helping companies evaluate and adopt Google Maps and Cloud solutions. He has experience performing data-driven quantitative modeling in several areas including computer vision and machine learning.</p> <p>Notable Achievements: Before joining Dito he served as Assistant Center Lead and Project Lead for the NASA Develop National Program helping to conduct and oversee applied remote sensing research for governmental and private stakeholders.</p> <p>Education: M.S. in GIS and Remote Sensing, Graduate School of Geography at Clark University B.S. degrees in Environmental Science and Geography from the University at Albany. Google Cloud Certified Professional:</p> <ul style="list-style-type: none"> • GCP Professional Data Engineer • Google Maps Customer Engineer
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NAME: Narayanan Ramakrishnan

JOB TITLE: Sr. Data Engineer - Google Cloud

Sr. Data Engineer - Google Cloud	Narayanan Ramakrishnan	<p>VITA Program Related Experience: Experienced professional with in-depth experience in pre-sales engineering, discovery, technical demos, trainings and presentations, Proof of Concepts (POC), post- sales engineering professional services, telecommunications, enterprise software consulting, solution delivery & Cloud Computing in various domains/ verticals including Retail & Telecommunications</p> <p>Notable Achievements: Deep experience in Data Integration & Replication, High Availability (HA) & Maximum Availability Architecture (MAA) and Cloud Architectures, services and technologies.</p>
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		Education: Google Cloud Certified: <ul style="list-style-type: none"> ● Professional Cloud Architect ● Professional Data Engineer
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NAME: Al Mercado

JOB TITLE: Big Data Engineer

Big Data Engineer	Al Mercado	VITA Program Related Experience: Prior to joining Dito as a cloud engineer, Al Mercado was developing big data applications in industries that included e-commerce, consumer packaged goods, retail, and energy. Al has worked extensively with public cloud providers, including AWS, on-premises, and cloud enterprise services, such as the Cloudera Big Data Platform. He obtained certifications for specific Hadoop Tools. Now he develops data engineering and migration solutions from other cloud services to Google Cloud Platform.
Notable Achievements: Education: Certified Professional: <ul style="list-style-type: none"> ● Big Data Certified Professional ● Cloud Architect 		

10.0 ADDENDUM B - ANNUAL REPORTS

For questions related to the accounting of reported income to the IRS for FY2018 and FY2019, please contact Ginny Graef below from Keiter CPA. For more information about the company's significant financial borrowing strength and ability to quickly increase its Line of Credit to meet financial obligations of \$1 million or more, please contact Catherine Nichols below from Wells Fargo.

Ginny Graef, Tax Senior Manager
 Keiter CPA
 Innsbrook Corporate Center
 4401 Dominion Boulevard

Glen Allen, Virginia 23060
 Main Phone Number: 804.273.6200
 Email: ggraef@keitercpa.com

Catherine Nicholas, Managing Director —
 Investment Officer
 Wells Fargo Advisors
 Tel: (301) 961-0126

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FY2018: Sophinea was founded in November 2018 as an S-Corporation and for tax purposes reports income on a Cash Received Basis. A cash basis taxpayer is a taxpayer who reports income and deductions in the year that they are actually paid or received. Although income was generated during the last two months of approximately \$21,000 with the award of a subcontract from GDIT for the Department of State (DoS) WRAPS II Program, none of it was received prior to the FY close-out and the reported FY income for tax purposes was \$0.00

FY2019: During FY2019 Sophinea began to grow in revenue. In addition to the on-going effort under WRAPS, Sophinea was awarded a second Data Analytics subcontract from GDIT for another Department of State program called GSS 1.0. In addition, three training tasks were awarded to Sophinea for courses

at HHS/NIH and the US Army CIO/G6 by International Training Consortium, Inc. On a Cash Received Basis the company completed the year at \$270, 579 although it was annualizing at approximately \$350,000.

FY2020: With continued task wins in the federal government Data Analytics market, Sophinea is currently annualizing revenue at approximately \$500,000 and is projected conservatively to continue a steady, controlled growth throughout the year to over \$900,000.

Sophinea Corporation

BALANCE SHEET

As of December 31, 2019

	TOTAL
ASSETS	
Current Assets	
Bank Accounts	
Checking 4390 (4390)	168,459.60
Total Bank Accounts	\$168,459.60
Total Current Assets	\$168,459.60
TOTAL ASSETS	\$168,459.60
LIABILITIES AND EQUITY	
Liabilities	
Current Liabilities	
Other Current Liabilities	
Direct Deposit Payable	0.00
Payroll Liabilities	
Federal Taxes (941/944)	0.00
Federal Unemployment (940)	0.00
VA Income Tax	0.00
VA SUI Employer	0.00
Total Payroll Liabilities	0.00
Total Other Current Liabilities	\$0.00
Total Current Liabilities	\$0.00
Total Liabilities	\$0.00
Equity	
Owner's Investment	300,500.00
Retained Earnings	-21,657.61
Net Income	-110,382.79
Total Equity	\$168,459.60
TOTAL LIABILITIES AND EQUITY	\$168,459.60

Sophinea Corporation

PROFIT AND LOSS

January - December 2019

	TOTAL
Income	
Billable Expense Income	231,644.17
Sales	38,935.00
Unapplied Cash Payment Income	0.00
Total Income	\$270,579.17
GROSS PROFIT	\$270,579.17
Expenses	
500-000 500 - Direct Costs	52,659.37
500-001 Direct Labor-Client Site	13,783.99
500-002 Direct Labor-Company Site	1,200.04
500-008 Nonbillable ODCs	67,643.40
Total 500-000 500 - Direct Costs	67,643.40
600-000 Fringe Benefits	9,788.16
600-001 Vacation-120 hrs	5,347.73
600-002 Holiday-80 hrs	4,031.77
600-012 Workmen's Comp. Insurance	190.65
600-013 FICA/Medicare-employer paid	7,767.97
600-014 Taxes-Unemployment FUTA	171.00
600-015 Taxes-Unemployment SUTA	618.62
Total 600-000 Fringe Benefits	27,915.90
700-001 Overhead Pool 1-Client Site	100.00
745-001 OH Misc Expenses	100.00
Total 700-001 Overhead Pool 1-Client Site	100.00
750-001 OH Pool 2-Company-Provided Site	7,997.00
790-007 OH Recruitment Costs	7,997.00
Total 750-001 OH Pool 2-Company-Provided Site	7,997.00
800-000 G&A Cost Accounts	
800-001 G&A Labor	29,593.88
810-001 G&A Travel-Air/Rail	7,042.75
810-002 G&A Travel-Lodging	4,710.02
810-004 G&A Travel-Meals	653.66
810-005 G&A Travel-Other	1,676.56
815-001 G&A Prof Fees-Acct	4,025.00
815-002 G&A Prof Fees-Legal	828.95
835-001 G&A Rent	20,710.47
835-005 G&A Telephone	1,222.96
845-001 G&A Softwr/Hrdwr/Equip	36,703.27
845-002 G&A Postage	15.87
845-006 G&A Office Supplies	4,481.91
845-007 G&A Dues & Subscriptions	15,293.95
855-001 G&A Conferences	4,078.32
855-002 G&A Certifications	2,370.37
855-003 G&A Licenses & Permits	4,092.50

Sophinea Corporation

PROFIT AND LOSS

January - December 2019

	TOTAL
855-006 G&A Insurance	10,547.05
855-007 G&A Business Meals	174.52
855-009 G&A Taxes-State	517.09
Total 800-000 G&A Cost Accounts	148,739.10
900-000 Unallowable Costs	316.09
915-002 U/A Gifts	316.09
Total 900-000 Unallowable Costs	316.09
Payroll Expenses	
Taxes	9,378.51
Wages	118,871.96
Total Payroll Expenses	128,250.47
Total Expenses	\$380,961.96
NET OPERATING INCOME	\$ -110,382.79
NET INCOME	\$ -110,382.79



"BRINGING CLARITY TO YOUR DATA"