



Commonwealth of Virginia
Virginia Information Technologies Agency

NEXT GENERATION SOFTWARE ANALYTICS

Optional Use Contract

Date: December 30, 2015

Contract #: VA-150915-EIS

Authorized User: Authorized User (AU): All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the *Code of Virginia*. Also includes private institutions of higher education chartered in Virginia and granted tax-exempt status under §501(c)(3) of the Internal Revenue Code. A list of the private institutions eligible to use this contract can be found at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>.

Contractor: Executive Information Systems LLC
6901 Rockledge Drive
Suite 600
Bethesda, MD 20817

FIN: 52-2198860

Contact Person: Pat Krause
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Pricing: Exhibit B

Term: September 15, 2015 – September 14, 2018

Payment: Net 30 days

For Additional Information, Please Contact:

Contract Information:

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Fax: 804-416-6361

NOTES: Individual Commonwealth of Virginia employees are not authorized to purchase equipment or services for their personal use from this Contract.

For updates, please visit our Website at <http://vita2.virginia.gov/procurement/contracts.cfm>

VIRGINIA INFORMATION TECHNOLOGIES AGENCY (VITA): Prior review and approval by VITA for purchases in excess of \$100,000.00 is required for State Agencies and Institutions only.



Information Technology Solution Contract

between

The Virginia Information Technologies Agency

on behalf of

The Commonwealth of Virginia

and

Executive Information Systems, LLC

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INFORMATION TECHNOLOGY SOLUTION CONTRACT

THIS INFORMATION TECHNOLOGY Solution CONTRACT (“Contract”) is entered into by and between the Virginia Information Technologies Agency (VITA) pursuant to §2.2-2012 of the Code of Virginia and on behalf of the Commonwealth of Virginia (hereinafter referred to as “VITA”), and Executive Information Systems, LLC (“Supplier”), a corporation headquartered at 901 Rockledge Drive, Suite 600, Bethesda, MD 20817 to be effective as of September 15, 2015 (“Effective Date”).

1. PURPOSE AND SCOPE

This Contract sets forth the terms and conditions under which Supplier shall provide Next generation software analytics to the Authorized Users. This includes next-generation analytics, supporting tools, the services needed to deploy and tune these tools, and training services. These tool sets include Business Intelligence (BI), predictive, prescriptive, statistical analytics, simulation, data visualization, data quality, data governance, unstructured data, Hadoop, MapReduce.

2. DEFINITIONS

A. Acceptance

Successful delivery and performance by the Supplier of its contractual commitments at the location(s) designated in the applicable Statement of Work or order, including completed and successful Acceptance testing in conformance with the Requirements as determined by the Authorized User in the applicable Statement of Work or order.

B. Agent

Any third party independent agent of any Authorized User.

C. Authorized Users

Except for telecommunications contracts, means all public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia. Authorized Users shall include private institutions of higher education that are listed at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>.

D. Business Day/Hour

Normal operating hours for the Commonwealth of Virginia: Monday-Friday, 8 a.m.-5 p.m. Eastern Standard/Daylight Time, unless otherwise specified on the applicable order or Statement of Work, excluding Commonwealth-designated holidays.

E. Component

Software or Deliverable delivered by Supplier under this Contract, including under all orders or Statements of Work.

F. Computer Virus

Any malicious code, program, or other internal component (e.g., computer virus, computer worm, computer time bomb, or similar component), which could damage, destroy, alter or disrupt any computer program, firmware, or hardware or which could, in any manner, reveal, damage, destroy, alter or disrupt any data or other information accessed through or processed by such software in any manner.

G. Confidential Information

Any confidential or proprietary information of a Party that is disclosed in any manner, including oral or written, graphic, machine readable or other tangible form, to any other Party in connection with or as a result of discussions related to this Contract or any order or SOW issued hereunder, and which at the time of disclosure either (i) is marked as being “Confidential” or “Proprietary”, (ii) is otherwise reasonably identifiable as the confidential or proprietary information of the disclosing Party, or (iii) under the circumstances of disclosure should reasonably be considered as confidential or proprietary information of the disclosing Party or (iv) is identifiable or should be reasonably considered as protected health information; (v) any personally identifiable information,

including information about VITA's employees, contractors, and customers, that is protected by statute or other applicable law.

H. Deliverable

The tangible embodiment of the work performed or Services, Maintenance Services, Licensed Services, Solution, Component, Software, plans, reports, data, Product, Supplier Product and Updates provided by the Supplier in fulfilling its obligations under the Contract or as identified in the applicable Statement of Work or order, including the development or creation of Work Product, if Work Product is authorized under the Contract.

I. (reserved)

J. Documentation

Those applicable materials (including user manuals, training materials, guides, product descriptions, technical manuals, product specifications, supporting materials and Updates) detailing the information and instructions needed in order to allow any Authorized User and its Agents or Application Users to make productive use of the Application, Software, Solution, Component, Product, Service, Licensed Services or Deliverable, and to implement and develop self-sufficiency with regard to the Application, Software, Solution, Component, Product, Service, Licensed Services or Deliverable, provided by Supplier in fulfilling its obligations under the Contract or as may be specified in any Statement of Work or order issued hereunder. Documentation for Software is that Documentation made generally available to Supplier's customers.

K. Electronic Self-Help

Any use of electronic means to exercise Supplier's license termination rights, if allowable pursuant to the Contract, upon breach or cancellation, termination or expiration of this Contract or any Statement of Work or order placed hereunder.

L. Reserved

M. (reserved)

N. Reserved

O. Maintenance Services (or "Maintenance" or "Software Maintenance")

Means Software technical support as defined in Section 11 below. If authorized by the Contract, means those services, preventive and remedial, provided or performed by Supplier under the Contract or for an Authorized User in order to ensure continued operation of the Software, including Software Updates.

P. Party

Supplier, VITA or any Authorized User.

Q. Reserved

R. Receipt

An Authorized User or its Agent has physically received or has unfettered access to any Deliverable at the correct "ship-to" location.

S. Requirements

The functional, performance, operational, compatibility, Acceptance testing criteria and other parameters and characteristics of the, Software, Solution, Component, Service(s), and Deliverables, as authorized by the Contract and/or as set forth in Exhibit A and/or the applicable Statement of Work or order and such other parameters, characteristics, or performance standards that may be agreed upon in writing by the Parties.

T. Services

Any work performed or service provided by Supplier in fulfilling its obligations under the Contract or, as applicable, any Statement of Work or order issued under the Contract, , including implementation, installation, maintenance, support, testing, training, or other provision to the Authorized User of any Deliverable described in the applicable Statement of Work or order, as authorized by the Contract scope. As permitted by the scope of the Contract, may include the discovery, creation, or development of Work Product, if any. If Work Product is authorized, refer to definition for Work Product.

U. Software

If Software is authorized under the Contract, as set forth in Exhibit B, means the Supplier's proprietary executable code provided by Supplier under the Contract or any order or SOW issued hereunder as a component(s) of any Deliverable or Component of any Solution, and any subsequent Updates, excluding Work Product.

V. Software Publisher

If Software is authorized under the Contract, means the licensor of the Software, other than Supplier, provided by Supplier under this Contract.

W. Solution

The Supplier's contractually committed technical approach for solving a technology business objective and associated Requirements as defined and authorized by the scope of the Contract or any order or Statement of Work issued under the Contract. Solution means all Supplier and Supplier's third-party providers' Components making up the Solution, including but not limited to Software, configuration design, implementation, Supplier-developed interfaces, Services and Work Product.

X. Statement of Work (SOW)

The document template attached as Exhibit D (describing the deliverables, due dates, assignment duration and payment obligations for a specific project, engagement, or assignment that Supplier commits to provide to an Authorized User), which, upon signing by both Parties, shall be deemed a part of the Contract.

Y. Supplier

Means the Supplier and any of its Affiliates (i.e., an entity that controls, is controlled by, or is under common control with Supplier).

Z. Update

As applicable, any update, modification or new release of the Software or Documentation that Supplier makes generally available to its customers at no additional cost. Software Updates include patches, fixes, upgrades, enhancements, improvements, or access mode, including without limitation additional capabilities to or otherwise improve the functionality, increase the speed, efficiency, or base operation of the Software.

AA. Work Product

Inventions, combinations, machines, methods, formulae, techniques, processes, improvements, software designs, computer programs, strategies, specific computer-related know-how, data and original works of authorship or other materials provided by Supplier as a result of performing Services (collectively, the "Work Product") discovered, created, or developed by Supplier, or jointly by Supplier and an Authorized User(s) in the performance of this Contract. Work Product shall not include configuration of software. Work Product does not include the Authorized User's data or any resulting analysis of such data.

3. TERM AND TERMINATION**A. Contract Term**

This Contract is effective and legally binding as of the Effective Date and, unless terminated as provided for in this section, shall continue to be effective and legally binding for a period of three (3) years. VITA, in its sole discretion, may extend this Contract for up to two (2) additional one (1) year periods after the expiration of the initial three (3) year period. VITA will issue a written

notification to the Supplier stating the extension period thirty (30) days prior to the expiration of any current term. In addition, performance of an order or SOW issued during the term of this Contract may survive the expiration of the term of this Contract, in which case all contractual terms and conditions required for the operation of such order or SOW shall remain in full force and effect until all of Supplier's obligations pursuant to such order or SOW have met the final Acceptance criteria of the applicable Authorized User.

B. Termination for Convenience

VITA may terminate this Contract, in whole or in part, or any order or SOW issued hereunder, in whole or in part, or an Authorized User may terminate an order or SOW, in whole or in part, upon not less than thirty (30) days prior written notice at any time for any reason.

C. Termination for Breach or Default

VITA shall have the right to terminate this Contract, in whole or in part, or any order or SOW issued hereunder, in whole or in part, or an Authorized User may terminate an order or SOW, in whole or in part, for breach and/or default of Supplier. Supplier shall be deemed in breach and/or default in the event that Supplier fails to meet any material obligation set forth in this Contract or in any order or SOW issued hereunder.

If VITA deems the Supplier to be in breach and/or default, VITA shall provide Supplier with notice of breach and/or default and allow Supplier thirty (30) days to cure the breach and/or default. If Supplier fails to cure the breach as noted, VITA may immediately terminate this Contract or any order or SOW issued hereunder, in whole or in part. If an Authorized User deems the Supplier to be in breach and/or default of an order or SOW, such Authorized User shall provide Supplier with notice of breach and/or default and allow Supplier thirty (30) days to cure the breach and/or default. If Supplier fails to cure the breach and/or default as noted, such Authorized User may immediately terminate its order or SOW, in whole or in part. Any such termination shall be deemed a Termination for Breach or Termination for Default. In addition, if Supplier is found by a court of competent jurisdiction to be in violation of or to have violated 31 USC 1352 or if Supplier becomes a party excluded from Federal Procurement and Nonprocurement Programs, VITA may immediately terminate this Contract, in whole or in part, for breach, and VITA shall provide written notice to Supplier of such termination. Supplier shall provide prompt written notice to VITA if Supplier is charged with violation of 31 USC 1352 or if federal debarment proceedings are instituted against Supplier.

D. Termination for Non-Appropriation of Funds

All payment obligations from public bodies under this Contract are subject to the availability of legislative appropriations at the federal, state, or local level, for this purpose. In the event of non-appropriation of funds, irrespective of the source of funds, for the items under this Contract, VITA may terminate this Contract, in whole or in part, or any order or SOW, in whole or in part, or an Authorized User may terminate an order or SOW, in whole or in part, for those goods or services for which funds have not been appropriated. Written notice will be provided to the Supplier as soon as possible after legislative action is completed.

E. Effect of Termination

Upon termination, neither the Commonwealth, nor VITA, nor any Authorized User shall have any future liability except for Deliverables accepted by the Authorized User or Services, including as applicable, Maintenance Services, rendered by Supplier and accepted by the Authorized User prior to the termination date.

In the event of a Termination for Breach or Termination for Default, Supplier shall accept return of any Deliverable that was not accepted by the Authorized User(s), and Supplier shall refund any monies paid by any Authorized User for such Deliverable, and all costs of de-installation and return of Deliverables shall be borne by Supplier.

F. Termination by Supplier

Termination by Supplier will not be considered.

G. Transition of Services

If set forth in an order or Statement of Work, prior to or upon expiration or termination of this Contract, Supplier shall provide all assistance as VITA or an Authorized User may reasonably require to transition the Supplier's contractual obligations, or any portion thereof, as requested by VITA or the Authorized User, to VITA or the Authorized User. This obligation may extend beyond expiration or termination of the Contract for a period not to exceed six (6) months. Supplier shall provide such assistance at the hourly rate or a charge agreed upon by Supplier and VITA or an Authorized User.

H. Contract Kick-Off Meeting

Within 30 days of Contract award, Supplier may be required to attend a contract orientation meeting, along with the VITA contract manager/administrator, the VITA and/or other agency project manager(s) or authorized representative(s), technical leads, VITA representatives for SWaM and Sales/IFA reporting, as applicable, and any other significant stakeholders who have a part in the successful performance of this Contract. The purpose of this meeting will be to review all contractual obligations for both parties, all administrative and reporting requirements, and to discuss any other relationship, responsibility, communication and performance criteria set forth in the Contract. The Supplier may be required to have its assigned account manager as specified in Section 6.0 and a representative from its contracts department in attendance. The time and location of this meeting will be coordinated with Supplier and other meeting participants by the VITA contract manager.

I. Contract Closeout

Prior to the contract's expiration date, Supplier may be provided contract close out documentation and shall complete, sign and return to VITA Supply Chain Management within 30 days of receipt. This documentation may include, but not be limited to: Patent/Royalty Certificate, Tangible Property/Asset Certificate, Escrow Certificate, SWaM Reports Completion Certificate, other required Small Business (SWaM) Procurement Plan compliance/variance and non-SWaM spend documentation as described in the Reporting section of this Contract, Sales Reports/IFA Payments Completion Certificate, and Final Payment Certificate. Supplier is required to process these as requested to ensure completion of close-out administration and to maintain a positive performance reputation with the Commonwealth of Virginia. Any closeout documentation not received within 30 days of Supplier's receipt of the Commonwealth's request will be documented in the contract file as Supplier non-compliance. Supplier's non-compliance may affect any pending payments due the Supplier, including final payment, until the documentation is returned.

4. SUPPLIER PERSONNEL**A. Selection and Management of Supplier Personnel**

Supplier shall take such steps as may be necessary to ensure that all Supplier personnel performing under this Contract are competent and knowledgeable of the contractual arrangements and the applicable order or SOW between Authorized User and Supplier. Supplier shall be solely responsible for the conduct of its employees, agents, and subcontractors, including all acts and omissions of such employees, agents, and subcontractors, and shall ensure that such employees and subcontractors comply with the appropriate Authorized User's site security, information security and personnel conduct rules, as well as applicable federal, state and local laws, including export regulations. Authorized User reserves the right to require the immediate removal from such Authorized User's premises of any employee, subcontractor or agent of Supplier whom such Authorized User believes has failed to comply with the above or whose conduct or behavior is unacceptable or unprofessional or results in a security or safety breach.

B. Supplier Personnel Supervision

Supplier acknowledges that Supplier or any of its agents, contractors, or subcontractors, is and shall be the employer of Supplier personnel, and shall have sole responsibility to supervise, counsel, discipline, review, evaluate, set the pay rates of, provide (to the extent required by law) health care and other benefits for, and terminate the employment of Supplier personnel. Neither VITA nor an Authorized User shall have any such responsibilities for Supplier or subcontractor personnel.

C. Key Personnel

An order or SOW may designate certain of Supplier's personnel as Key Personnel or Project Managers. Supplier's obligations with respect to Key Personnel and Project Managers shall be described in the applicable order or SOW. Failure of Supplier to perform in accordance with such obligations may be deemed a default of this Contract or of the applicable order or SOW.

D. Subcontractors

Supplier shall not use subcontractors to perform its contractual obligations under the Contract or any order or SOW issued thereunder unless specifically authorized in writing to do so by the Authorized User. If an order or SOW issued pursuant to this Contract is supported in whole or in part with federal funds, Supplier shall not subcontract to any subcontractor that is a party excluded from Federal Procurement and Nonprocurement Programs. In no event shall Supplier subcontract to any subcontractor which is debarred by the Commonwealth of Virginia or which owes back taxes to the Commonwealth and has not made arrangements with the Commonwealth for payment of such back taxes.. VITA authorizes Supplier to subcontract with SAS Institute Inc.in performing its obligations under this Contract or any order or SOW issued thereunder.

If Supplier subcontracts the provision of any performance obligation under this Contract to any other party, Supplier will (i) act as prime contractor and shall be the sole point of contact with regard to all obligations under this Contract, and (ii) hereby represents and warrants that any authorized subcontractors shall perform in accordance with the warranties set forth in this Contract.

5. NEW TECHNOLOGY**A. Access to New Technology**

Supplier will bring to VITA's attention any new products or services within the scope of the Contract that it believes will be of interest to VITA and will work to develop proposals for the provision of any such products or services as VITA requests.

B. New Service Offerings Not Available from Supplier

If new or replacement product or service offerings become available to VITA under the scope of the Contract, and cannot be competitively provided by the Supplier, VITA may purchase such new or replacement products or services from a third party. If set forth in the order or SOW, Supplier will reasonably assist VITA to migrate to such products or services at the rates set forth in the order or SOW, if VITA elects to use such new or replacement product or service offerings.

If VITA elects to acquire new products or services as described in the above paragraph and such services replace existing Supplier-provided services, discount tiers and any commitments (as applicable per the Contract) will be reduced to reflect reductions in purchases of the replaced products or services.

6. SOFTWARE LICENSE

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, the license shall be held by the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, the license shall be held by that public body. If Authorized User is a private institution of higher education which is listed at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>, the license shall be held by that private institution.

This Section 6 governs Authorized User's license of Software included in any order or SOW issued under this Contract and related Documentation made available with each license of Software. The specific Software offerings licensed to an applicable Authorized User are listed on the applicable order or SOW and must be one of the available Software offerings listed on Exhibit H hereto. Some Software offerings include multiple subcomponents. Only those subcomponents which require a choice by the Authorized User (for example, a choice of database access engines) or which are governed by a different Metric than the overall Software offering are listed on the applicable order. "Metric" means the Software usage right set forth under Section 6.B, as applicable to the Software as

listed in Exhibit H. The Authorized User may only use subcomponents as part of the specific Software offering, and not individually. For example, if a Software offering includes Base SAS, the Authorized User may not separately use Base SAS for any purpose other than as part of the Software offering with which it is licensed and packaged. One Authorized User may not access or use a different Authorized User's licensed Software.

A. License Grant

Supplier grants the applicable Authorized User a nonexclusive license to install and use the Software licensed via an order and its Software Documentation in the United States only for the benefit of the Authorized User's operations in the United States. Authorized User may install the Software only within the Authorized Hardware configuration described in the applicable order. Authorized User may use the Software Documentation solely in support of its authorized and licensed usage of the Software. Each license is an annual license renewed at the mutual agreement of the parties. Renewal is accomplished by Supplier sending an invoice for the applicable Software license renewal fees and Authorized User paying the invoice.

Processing Data Through the Software. Authorized User may process only the following types of data through the Software: (a) Authorized User's data derived from Authorized User's operations in the United States, and not an aggregation of data from other sources, including, but not limited to, other Authorized Users; (b) data purchased, licensed or leased from a third party by Authorized User; and (c) publicly available data (for example, national census data) (collectively, "Permitted Data"). Authorized User may not process any data, including Permitted Data, through the Software in a data service provider, application service provider, solution service provider or marketing service provider arrangement, nor in any similar arrangement for which Authorized User provides results derived from use of the Software to third parties nor may Authorized User use such results for the benefit of third parties (use to benefit Authorized User's constituent citizenry generally is not in violation of this provision).

Users. Only Authorized User's employees and contractors who are located in the United States and who are performing work solely for the benefit of Authorized User's operations in the United States (collectively, "Users") may access and use the Software and Documentation.

Authorized Hardware. "Authorized Hardware" is the computer hardware on which Authorized User is authorized to install and use the Software, as described in Exhibit H, which must be hardware for which the applicable Software is generally available. If the Authorized Hardware is mainframe or server hardware, the Authorized Hardware must be owned or leased by Authorized User and located on Authorized User's premises in the United States. If the Authorized Hardware is personal computer hardware, the Authorized Hardware must be owned or leased by Authorized User or Authorized User's employees in the United States. The term "personal computer" includes desktop computers, laptop computers, tablet computers, handheld computers, mobile devices and any other non-server and non-mainframe computers. Some Software is not available for use on all types of Authorized Hardware. Authorized User must notify Supplier of changes to any Authorized Hardware listed on an order. Authorized User may not share its usage of the Software by allowing other parties to time-share Authorized User's Authorized Hardware.

Installations. Unless otherwise set forth in an order, each Software license entitles Authorized User to a single configured installation of the Software. "Single configured installation" means installation of the Software on a single mainframe or a single server or on the number of personal computers listed on the applicable order.

Operating Systems. Authorized User may use the Software only with the operating system as listed on Exhibit H. Authorized User's selected operating system must be an operating system that Supplier generally supports for the applicable Software on the applicable Authorized Hardware.

Product Authorization Code. Authorized User may allow Users to access only Software licensed to Authorized User for which Authorized User receives a Product Authorization Code. Authorized User shall not allow Users to install or attempt to use other software contained on media

containing the Software. The "Product Authorization Code" is a component of the Software that enables the Software to operate for the applicable annual license period and is not considered Electronic Self-Help. At each new license period, or if required as a result of changes in Authorized Hardware or Software, Authorized User must apply a new Product Authorization Code to keep the Software operating. Supplier is not required to provide the Product Authorization Code if Authorized User is in breach of the Contract or has not paid any undisputed amounts due under the Contract. Supplier is not liable for damages caused by the resulting Software interruption. Authorized User may allow only Users to access the Product Authorization Code. Authorized User acknowledges and agrees that the Product Authorization Code is confidential and proprietary information of Supplier.

FOSS. The Software may be provided with certain free and open source software ("FOSS") identified in the Documentation. If Authorized User in its sole discretion decides to use such FOSS, then Authorized User's right to use such FOSS shall be governed by the applicable FOSS license agreement instead of the terms of the Contract. If Authorized User decides not to use the FOSS, then the FOSS license agreement is not applicable. The Software will perform in accordance with the Requirements without use of the FOSS.

Assignment of Licenses. License for Software issued hereunder may be assigned by the Authorized User to either (i) another Authorized User or (ii) a contractor to Authorized User that has entered into a written agreement with Authorized User to perform governmental services on behalf of Authorized User. In such event, the assignee must enter into an appropriate, written license assignment and assumption agreement that protects Supplier's interests in the Software and thereby agree in writing to be bound by all the terms and conditions of this Contract.

Nothing contained herein shall be construed to restrict or limit the rights of the Commonwealth or any Authorized User to use any technical data, which the Commonwealth or such Authorized User may already possess or acquire under proper authorization from other sources.

Compliance with the terms and conditions of any license granted pursuant to this Contract is solely the responsibility of the Authorized User which purchased such license or for which such license was purchased and not the responsibility of VITA, unless VITA purchased such license on its own behalf.

B. License Type

The following Metrics apply to the Software and any Software subcomponents licensed hereunder, as listed in Exhibit H. Prior to any license renewal period, Supplier may propose Metric changes.

- (i) PC Use - The Software license fee is based on the greater of either (i) the total number of Users (not concurrent) authorized to access the Software or (ii) the total number of personal computers on which the Software will be installed and available for processing on the designated operating system. Authorized User shall not exceed the licensed number of Users or installs.
- (ii) Processor Core Based - The Software license fee is based on the total number of processor cores contained within a single item of Authorized Hardware. Authorized User shall not exceed the licensed number of processor cores.
- (iii) Solution Test and Development - The license granted hereunder authorizes Authorized User to implement a single configured installation of the Software in one (1) production environment, one (1) test environment and one (1) development environment. Authorized User may use the Software installed in the production environment for Authorized User's internal production purposes ("Production Environment"). Authorized User may use the Software installed in the test environment solely for the purpose of testing the Software and Software applications and code prior to installation in Authorized User's Production Environment ("Test Environment"). Authorized User may use the Software installed in the development environment solely for the purposes of developing and creating applications and code with the Software for use in Authorized User's Production Environment ("Development Environment"). Authorized User must identify in writing the Authorized Hardware for the Production Environment, the Test Environment and the Development Environment. The operating system for the Test Environment and the Development

Environment must be the same as the operating system for the Production Environment. The Test Environment and Development Environment shall be used only for the test and development purposes described above and shall at no time be used for production purposes or as a fail-over system.

(iv) Reserved.

(v) Site License - Authorized User's use of the Software is dependent upon Authorized User's licensing, under the Contract, certain other SAS software ("Prerequisite Software"). Authorized User may install the Software on, and/or access the Software from, any Authorized Hardware included as part of a single configured installation of the Prerequisite Software.

(vi) Distributed Processor Cores - The Software license fee is based on the total number of processor cores included within the computer hardware architecture where distributed Software computation and processing occurs. Authorized User shall not exceed the licensed number of processor cores.

(vii) Installs - The Software license fee is based on the total number of physical computers and/or Virtual Machines on which the Software is installed during the applicable license period. A "Virtual Machine" is a single virtual computing environment created using commercially available virtualization software. Authorized User shall not exceed the licensed number of installs.

(viii) SAS Data Surveyor for SAP Usage Terms - Authorized User may use the SAS Data Surveyor for SAP software ("Data Surveyor"), including its subcomponents, solely to access SAP data in the licensed SAP database. Authorized User may not use or deploy any individual Data Surveyor subcomponent for any other purpose or as a replacement for any SAS software.

C. No Subsequent, Unilateral Modification of Terms by Supplier ("Shrink Wrap")

Notwithstanding any other provision or other unilateral license terms which may be issued by Supplier after the Effective Date of this Contract regarding Software, and irrespective of whether any such provisions have been proposed prior to or after the issuance of an order for a Solution, the components of which are licensed under this Contract, or the fact that such other agreement may be affixed to or accompany Software upon delivery ("shrink wrap"), the terms and conditions set forth herein shall supersede and govern licensing and delivery of all products and services hereunder.

- D. Title; Source Code.** Title to the Software and its Documentation remains with Supplier at all times. Copyright notices and other proprietary rights notices in the Software or Software Documentation shall not be deleted or modified. This Contract does not transfer any ownership rights. Source code from which the Software object code is derived ("Source Code") is not being provided and is a trade secret to which access is not authorized. Neither Authorized User nor any User shall reverse engineer, reverse assemble or decompile the Software or in any way attempt to recreate the Source Code, except and only to the extent applicable laws specifically prohibit such restriction.
- E. Authorized User Obligations.** Authorized User shall: (a) be responsible for verifying the accuracy of its data input and output while using the Software, (b) inform all parties authorized to use the Software of the relevant terms of the Contract and be responsible for their adherence to such terms, and (c) keep records of where the Software is installed and used and the extent of usage of the Software relative to the applicable Metrics and usage rights and provide a copy of such records to Supplier upon request.
- F.** Upon termination or non-renewal of each Software license hereunder, or when an User, or disaster recovery contractor is no longer authorized to access the Software, Authorized User agrees to reclaim, delete, and destroy the Software at issue, along with any related Software Documentation.

7. RIGHTS TO WORK PRODUCT

If Authorized User is a state agency, board, commission, or other quasi-political entity of the Commonwealth of Virginia or other body referenced in Title 2.2 of the Code of Virginia, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of the license to the Work Product shall vest with the Commonwealth. If Authorized User is a locality, municipality, school, school system, college, university, local board, local commission, or local quasi-political entity, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of the license to the Work Product shall vest with that public body. If Authorized User is a private institution of higher education which is listed at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>, any license to pre-existing work shall be held by, and all rights in, title to, and ownership of the license to the Work Product shall vest with that private institution.

A. Work Product

VITA and Supplier each acknowledge that performance of this Contract may result in Work Product. The Parties shall document all Work Product specifications and such specifications shall be set forth in the Statement of Work or order and made an incorporated exhibit to this Contract. Supplier agrees that it shall promptly and fully disclose to the Commonwealth or the Authorized User any and all Work Product generated, conceived, reduced to practice or learned by Supplier or any of its employees during the term or performance of this Contract, which in any way relates to the business of the Commonwealth, VITA or any Authorized User. Supplier further agrees that neither Supplier nor Supplier's employees, contractors, agents or subcontractors, nor any party claiming through Supplier or Supplier's employees, shall, other than in the performance of this Contract, make use of or disclose to others any VITA or Authorized User proprietary information relating to the Work Product. Supplier shall at no time deny access to the licensed Work Product, regardless of form, by the Commonwealth or the Authorized User.

B. Ownership

Supplier grants Authorized User a nonexclusive, nontransferable, non-assignable, royalty-free license to use the Work Product only with the Software with which the Work Product operates and only for as long as Authorized User maintains a license for such Software. Nothing in this Section shall be construed as granting Authorized User a license to any Software, which shall be licensed pursuant to Section 6 above. Supplier has no obligation to provide continued support or maintenance for any Work Product. Ownership of the Work Product, including any intellectual property embodied therein, and any techniques, skills, concepts or know-how that are utilized or developed while performing the Services remains with Supplier or its licensors.

C. Return of Materials

Upon termination of this Contract or in the event Authorized User terminates any order or SOW issued hereunder, Supplier shall promptly return to VITA or the appropriate Authorized User all copies, in whatever form, of any and all Confidential Information and other properties provided by VITA or such Authorized User, which are in Supplier's possession, custody or control.

8. GENERAL WARRANTY

Supplier warrants and represents to VITA that Supplier will fulfill its contractual obligations and meet all needed requirements as described in Exhibit A as follows:

A. Ownership

Supplier has the right to perform and provide all contractual obligations and provide all needed services and products without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party. The exclusive remedy for breach of this warranty is set forth in Section 22, Indemnification.

B. Limited Warranty

During the warranty period of ninety (90) days, or as specified in the applicable order or SOW, Supplier warrants that the Services, Solution, Components, Deliverables, Software, Updates, as authorized and provided by Supplier under this Contract, shall meet or exceed the Requirements. Supplier shall correct, at no additional cost to any Authorized User, all errors identified during the warranty period that result in supplier's failure to meet the Requirement or its contractual obligations. As the exclusive remedy for breach of this warranty, Supplier, at its option and at no additional cost to any Authorized User, shall: (a) repair the Services, Solution, Components, Deliverables, Software, Updates; (b) replace the Services, Solution, Components, Deliverables, Software, Updates; or, if options (a) and (b) are not commercially reasonable, (c) terminate the applicable order or SOW and refund the fees paid under such order or SOW.

C. Component Warranty

For any Software or Deliverable, the applicable warranty period shall be the period from written acceptance of the Software or Deliverable until final acceptance of the Solution, or as specified in the applicable order or SOW.

D. Interoperability Warranty

Supplier warrants that each Component, regardless of the origin of the Component, delivered under this Contract pursuant to an order or SOW shall be interoperable with other Components delivered pursuant to such same order or SOW (or an order or SOW that specifically references it is in relation to such existing order or SOW) so as to meet or exceed the performance specified in the Requirements and the applicable order or SOW. The exclusive remedy for breach of this warranty is refund of fees paid for the Software or Services at issue.

E. Performance Warranty

Supplier warrants and represents the following with respect to Performance of the Services:

- i. The Services shall be performed by qualified personnel with care, skill and diligence in a workmanlike manner and in accordance with the Requirements set forth in the SOW or order. The exclusive remedy for breach of this warranty is refund of fees paid for the Services at issue.

F. Reserved**G. Malicious Code**

Supplier has used its best efforts through quality assurance procedures to ensure that there are no Computer Viruses or undocumented features in any Solution, Component, or Deliverables or Software as obligated and provided by Supplier under the order or SOW, at the time of delivery to the Authorized User. The Solution, Components, Software and Deliverables as obligated and provided by Supplier under the order or SOW do not contain any embedded device or code (e.g., time bomb) that is intended to obstruct or prevent any Authorized User's use of the Solution, Components, Software or Deliverables.

Notwithstanding any rights granted under this Contract or at law, Supplier hereby waives under any and all circumstances any right it may have or may hereafter have to exercise Electronic Self-Help. Supplier agrees that an Authorized User may pursue all remedies provided under law in the event of a breach or threatened breach of this Section, including injunctive or other equitable relief. The parties agree that the Software Product Authorization Code is not a violation of this Section.

H. Open Source

Supplier will notify all Authorized Users if the Solution, Solution Components, Deliverables and Software as obligated and provided by Supplier, contains any FOSS code and identify the specific FOSS license that applies to any embedded code dependent on FOSS code, provided by Supplier under this Contract. With regard to Software, such notice is deemed to be the FOSS reference in the Software Documentation.

I. Supplier's Viability

Supplier warrants that it has the financial capacity to perform and continue to perform its obligations under this Contract; that Supplier has no constructive or actual knowledge of a potential legal proceeding being brought against Supplier that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction.

J. Supplier's Past Experience

Supplier warrants that it has met similar contractual obligations and fulfilled the Requirements as set forth in Exhibit A and in this Contract, in similar or greater complexity, to other customers without significant problems due to Supplier's performance and without causing a contractual breach or default claim by any customer.

K. THE OBLIGATIONS OF SUPPLIER UNDER THIS GENERAL WARRANTY SECTION ARE MATERIAL. SUPPLIER HEREBY DISCLAIMS ALL OTHER WARRANTIES AND MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY CONCERNING MERCHANTABILITY OR FITNESS FOR ANY OTHER PARTICULAR PURPOSE AND THOSE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM CUSTOM OR USAGE OR A COURSE OF DEALING. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, SUPPLIER DOES NOT WARRANT OR REPRESENT THAT AUTHORIZED USER'S USE OF THE SOFTWARE, WORK PRODUCT, DELIVERABLE, COMPONENT OR SOLUTION WILL RESULT IN AUTHORIZED USER'S COMPLIANCE, FULFILLMENT OR CONFORMITY WITH THE LAWS, RULES, REGULATIONS, REQUIREMENTS OR GUIDELINES OF ANY GOVERNMENTAL AGENCY.

I. Certain third party vendors (collectively, "Third Party Licensors") license components that are contained in certain Software. Third Party Licensors require the following additional terms be included herein:

- **THIRD PARTY LICENSORS DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING AS A RESULT OF CUSTOM**

OR USAGE IN THE TRADE OR BY COURSE OF DEALING. THIRD PARTY LICENSORS PROVIDE THEIR SOFTWARE "AS IS."

- THIRD PARTY LICENSORS ARE NOT LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL, PUNITIVE, OR RELIANCE DAMAGES (ARISING IN TORT, CONTRACT OR OTHERWISE), OR ANY CLAIM MADE AGAINST THE AUTHORIZED USER BY A THIRD PARTY EVEN IF THEY HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES.
- NOTHING IN THIS SECTION NULLIFIES SUPPLIER'S EXPRESS WARRANTIES OR LIABILITIES RELATING TO ALL SOFTWARE, INCLUDING COMPONENTS LICENSED BY THIRD PARTY LICENSORS, UNDER THE CONTRACT.

9. DELIVERY AND INSTALLATION

A. Scheduling

Supplier shall deliver the Solution, including any Component parts, and complete performance of Services according to the delivery dates set forth on the appropriate order or SOW.

Supplier shall make available all appropriate and/or related Documentation at the time of delivery of the relevant Component of the Solution. Any Solution Component delivered without the appropriate and required Documentation shall be considered "shipped short" until the applicable Documentation has been received.

B. Deployment of Solution

1. Supplier Deployment of Solution

If the Solution fee includes initial deployment of the complete Solution, Supplier is required to deploy the Solution in accordance with the deployment schedule set forth on the order or SOW. Deployment shall include the installation of any Software Component. Supplier shall conduct its standard appropriate diagnostic evaluation at the Authorized User's user site to determine that the Solution is properly deployed and fully ready for productive use, and shall supply such Authorized User with a copy of the results of the diagnostic evaluation promptly after completion of deployment.

2. Authorized User Installation of Software

If the Solution relates to Software which may be installed by an Authorized User and such Authorized User elects to install the Software itself, the Software shall be deemed to be installed when all programs, program libraries and user interfaces are copied to and initialized on the appropriate Authorized Hardware as executable by having the ordering Authorized User invoke the primary function of the Software or when Acceptance criteria as specified in the Authorized User's order or SOW have been met. Authorized User shall provide to Supplier written notice of Acceptance upon completion of installation and successful Acceptance testing. Supplier shall proceed with full deployment of the Solution concurrently with or after Authorized User's installation of the Software, as agreed between the Authorized User and Supplier in the order or SOW.

C. Documentation of Software Configuration

If the Solution includes configuration of Software by Supplier, Supplier shall, if set forth in the SOW or order as a Deliverable, provide to the appropriate Authorized User documentation containing a description of the configuration. The detail of such documentation will be mutually agreed upon by the parties and set forth in the SOW or order.

10. ACCEPTANCE

A. Solution, Software and Deliverable Acceptance Criteria

Software and Deliverables shall be deemed accepted when the Authorized User determines that such Software and Deliverables successfully operate in accordance with the Requirements and

applicable order or SOW. At a minimum, Acceptance Criteria for Software and Deliverables, and for the Solution as a whole, shall ensure that all of the applicable functionality described in the Requirements set forth in Exhibit A and required by the Authorized User in the applicable order or SOW has been delivered to the Authorized User. Acceptance of any one Deliverable shall not imply Authorized User's concurrence that the Deliverable will function properly with or within the Solution. Supplier shall be responsible for ensuring that all Deliverables function properly within the Solution. Prior to final acceptance of the Solution, should a previously accepted Deliverable require further modification in order to work properly with or within the Solution, Supplier shall be responsible for all costs associated with such modification. Such Authorized User agrees to commence Acceptance testing within five (5) business days, or within such other period as set forth in the applicable order or SOW, after receipt of the Solution, Software or Deliverable. Acceptance testing will be no longer than fifteen (15) business days, or such other period as may be agreed in writing between Authorized User and Supplier, for the first instance of each Solution, Software or Deliverable. Supplier agrees to provide to such Authorized User such assistance and advice as such Authorized User may reasonably require, at no additional cost, during such Acceptance testing, other than pre-approved travel expenses for time and materials type orders or SOWs or for fixed price type orders or SOWs in which travel expenses were expressly excluded from the total price of the order or SOW. Any such travel expenses must be pre-approved by the Authorized User and shall be reimbursable by such Authorized User at the then-current per diem amounts as published by the Virginia Department of Accounts (<http://www.doa.virginia.gov>), or a successor URL(s)). If Authorized User is a private institution of higher education which is listed at: <http://www.cicv.org/Our-Colleges/Profiles.aspx>, such private institution may have its own per diem amounts applicable to Supplier's pre-approved travel expenses. Authorized User shall provide to Supplier written notice of Acceptance upon completion of successful Acceptance testing. Failure to reject Software, a Deliverable or the Solution within this timeframe set forth above shall constitute acceptance of the Software, Deliverable or the Solution.

B. Solution, Software and Deliverable Cure Period

If the Solution, Software or Deliverable is not accepted for any reason, Authorized User shall notify Supplier in writing that shall include a reasonably detailed description of the reasons for rejection. Supplier shall correct any non-conformities identified during Acceptance testing and re-submit such non-conforming Solution, Software or Deliverable for re-testing within fifteen (15) days of receipt of the appropriate Authorized User's written notice of non-conformance, or as otherwise agreed between such Authorized User and Supplier in the applicable order or SOW. Should Supplier fail to cure the non-conformity or deliver a Solution, Software or a Deliverable which meets the Requirements, such Authorized User may, in its sole discretion: (i) reject the Solution, Software or Deliverable in its entirety and recover amounts previously paid for such Solution, Software or Deliverable hereunder; (ii) conditionally accept the applicable Solution, Software or Deliverable while reserving its right to revoke acceptance if timely correction is not forthcoming. If Authorized User elects option (ii) in the preceding sentence, Supplier shall have the right, at its option, to terminate the order applicable to such Solution, Software or Deliverable upon full refund of all fees paid by Authorized User for such Solution, Software or Deliverable. In any case, Authorized User's rejection of a Solution, Software or a Deliverable shall be based on the Solution, Software or Deliverable failing to meet, in all material respects, the Requirements of the applicable SOW or order. If, after the second set of acceptance tests, Authorized User does not fully accept the resubmitted Solution, Software or Deliverable the Authorized User shall terminate its order or SOW in whole and Supplier shall refund in full any amounts paid for such Solution, Software or Deliverable.

C. Reserved

D. Reserved

11. MAINTENANCE SERVICES

During the term of each applicable Software license, Supplier will use reasonable efforts, either by telephone or in writing, to help Authorized User solve specific problems with installation or use of the

Software within the United States. Authorized User may obtain on-site Software support from Supplier by executing an order for Services for such on-site work and paying applicable fees to Supplier. It may not be possible for Supplier to solve all problems or correct all errors in the Software. From time to time, Supplier may make available, and Authorized User agrees to use reasonable efforts to install, new releases, updates and corrective code. During ongoing Software development, Supplier may add, change or delete individual components or functionality in new releases. Such Software modifications shall be subject to the terms of this Contract. If Authorized User chooses not to install the most current release of the Software, the level of technical support may diminish over time. Supplier's obligations in this Section are subject to the following: Authorized User shall: (a) when requesting technical support, notify Supplier of any modifications to the Software not made by Supplier, or at the direction of Supplier; (b) establish technical contacts who will be qualified to provide Supplier with information necessary for Supplier to diagnose and remedy any problems with the Software; and (c) ensure that all data is adequately duplicated, documented, and protected.

12. FEES, ORDERING AND PAYMENT PROCEDURE

A. Fees and Charges

As consideration for the Supplier's performance obligations and any additional products and services provided hereunder to an Authorized User in accordance with the scope of this Contract and the Requirements, as authorized by Exhibit A, and per the Authorized User's order or SOW, an Authorized User shall pay Supplier the fee(s) set forth on Exhibit B, which lists any and all fees and charges. Exhibit B does not include applicable taxes, if any. Authorized User is responsible for applicable taxes on its orders hereunder. Upon Supplier's request, Authorized User will provide Supplier with applicable documentation establishing tax exempt status. The fees and any associated discounts shall be applicable throughout the term of this Contract; provided, however, that in the event the fees or discounts apply for any period less than the entire term, Supplier agrees that it shall not increase the fees more than once during any twelve (12) month period, commencing at the end of year one (1). No such increase shall exceed the lesser of three percent (3%) or the annual increase in the Consumer Price Index for All Urban Consumers (CPI-U), U.S. City Average, All Items, Not Seasonally Adjusted, as published by the Bureau of Labor Statistics of the Department of Labor (<http://www.bls.gov/cpi/home.htm>), for the effective date of the increase compared with the same index one (1) year prior. Any such change in price shall be submitted in writing to VITA and, if applicable, to the Authorized User if such change impacts any SOW or order and in accordance with the above and shall not become effective for sixty (60) days thereafter. Authorized User's payment obligations are net (30) days following acceptance of the applicable Software, Solution or Deliverable and receipt of proper invoice.

B. Ordering

Notwithstanding all Authorized User's rights to license or purchase Supplier's products or services under this Contract, an Authorized User is under no obligation to purchase or license from Supplier any of Supplier's products or services. This Contract is optional use and non-exclusive, and all Authorized Users may, at their sole discretion, purchase, license or otherwise receive benefits from third party suppliers of products and services similar to, or in competition with, the products and services provided by Supplier.

Supplier is required to accept orders placed by an Authorized User through the eVA electronic procurement website portal (<http://www.eva.virginia.gov/>). eVA is the Commonwealth of Virginia's e-procurement system. State agencies, as defined in §2.2-2006 of the Code of Virginia, shall order through eVA. All other Authorized Users are encouraged to order through eVA, but may order through the following means:

- i. Purchase Order (PO): An official PO form issued by an Authorized User.
- ii. Any other order/payment charge or credit card process, such as AMEX, MASTERCARD, or VISA under contract for use by an Authorized User.

This ordering authority is limited to issuing orders or SOWs for the contractual offerings and Requirements available under the scope of this Contract. Under no circumstances shall any Authorized User have the authority to modify this Contract. An order or SOW from an Authorized

User may contain additional terms and conditions; however, to the extent that the terms and conditions of the Authorized User's order or SOW are inconsistent with the terms and conditions of this Contract, the terms of this Contract shall supersede.

Authorized Users' orders or SOWs that include Software hereunder must contain (i) the name and address of the Authorized User, (ii) the name of the licensed Software and the number of licensed Processor Cores (or other applicable Metric as noted in Exhibit H hereto) from the list of available Software set forth in Exhibit B attached hereto, (iii) the Authorized Hardware and the location thereof, and (iv) the applicable operating system.

Notwithstanding the foregoing, Supplier shall not accept any order or SOW from an Authorized User if such order or SOW is to be funded, in whole or in part, by federal funds and if, at the time the order or SOW is placed, Supplier is not eligible to be the recipient of federal funds as may be noted on any of the Lists of Parties Excluded from Federal Procurement and Nonprocurement Programs.

ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH AN ORDER OR SOW PLACED BY ANY AUTHORIZED USER ARE THE SOLE OBLIGATION OF SUCH AUTHORIZED USER AND NOT THE RESPONSIBILITY OF VITA UNLESS SUCH AUTHORIZED USER IS VITA.

Authorized User shall notify Supplier by phone or in writing to change operating systems, Authorized Hardware or any factor affecting the applicable Metric set forth in Section 6 above or any applicable usage rights. These changes may result in additional license fees which are calculated as of the date of the change and invoiced upon receipt of notice from Authorized User.

C. Back Up Rights for Supplier-Provided Software

Authorized User may also install a single configured installation of the Software on back-up hardware that is inactive or dormant ("Back-up Hardware"). Authorized User may not implement a back-up system with Software that is operable or active. In the event the Software installed on the Authorized Hardware fails to operate due to unforeseen natural or human-induced events, Authorized User may activate the Back-up Hardware until the failure can be rectified. Authorized User must contact Supplier prior to activating the Back-up Hardware to request a Product Authorization Code that will enable the Software to operate on the Back-up Hardware.

Authorized User may copy the Software only for (a) disaster recovery and back-up purposes as permitted in this Section above, and (b) installation of personal computer Software authorized hereunder. All copies remain the property of Supplier's licensor. Authorized User may deliver a copy of the Software to a disaster recovery contractor to perform temporary disaster recovery work for Authorized User. Authorized User shall give Supplier the name and address of the disaster recovery contractor before delivery and be responsible for such contractor's use of the Software. The identical copyright notices and any other proprietary rights notices found on the original Software media must be reproduced on all copies of the Software.

D. Reimbursement of Expenses

If allowable pursuant to an Authorized User's Statement of Work, such Authorized User shall pay, or reimburse Supplier, for all reasonable and actual travel-related expenses for greater than thirty (30) miles from portal to portal incurred by Supplier during the relevant period; provided, however, that such Authorized User shall only be liable to pay for Supplier's travel-related expenses, including transportation, meals, lodging and incidental expenses, that have been authorized by such Authorized User in advance in the Statement of Work and which will be reimbursable by such Authorized User at the then-current per diem amounts as published by the Virginia Department of Accounts (<http://www.doa.virginia.gov/>, or a successor URL(s)). Authorized Users who are not public bodies may have their own per diem amounts applicable to Supplier's pre-approved travel expenses.

All reimbursed expenses will be billed to the Authorized User on a pass-through basis without any markup by Supplier. At Authorized User's request, Supplier shall provide copies of receipts for all travel expenses over US\$30.00.

E. Demonstration and/or Evaluation

If the Supplier's contractual obligations include the provision of a Solution, at the request of any Authorized User, Supplier shall perform a demonstration of its Solution, at such Authorized User's location and at no charge.

If the Supplier's contractual obligations include the provision of Software, the Supplier shall make available to any Authorized User the Software for evaluation purposes at no charge subject to the execution of a mutually agreeable evaluation license, to be reviewed and approved by VITA. The evaluation period will be determined by the complexity of testing but will be a period not less than thirty (30) days. Each new project is entitled to an evaluation copy regardless of whether an Authorized User has previously purchased the Software.

F. Statement of Work

An SOW, the template provided in Exhibit D, shall be required for any orders placed by an Authorized User pursuant to this Contract. Supplier shall perform any and all contractual obligations at the times and locations set forth in the applicable SOW and at the rates set forth in Exhibit B herein. Unless VITA issues a written authorization for a time and materials type SOW, any SOW shall be of a fixed price type but may, with the written approval of VITA, contain a cost-reimbursable line item(s) for pre-approved travel expenses. In furtherance of compliance, invoicing, and auditing requirements, for time and materials type SOWs, Supplier personnel shall maintain daily time records of hours and tasks performed, which shall be submitted or made available for inspection by the Authorized User upon reasonable advance written notice.

Any change to an SOW must be described in a written change request (template provided as Exhibit E). Either Party to an SOW may issue a change request that will be subject to written approval of the other Party before it becomes part of this Contract. In no event shall any SOW or any modification thereto require the Supplier to provide any products or services that are beyond the scope of this Contract as such scope is defined in Exhibit A hereto.

G. Supplier Quote and Request for Quote

Should an Authorized User determine that a competitive process is required to ensure it receives the best value for its needed solution, product and/or services under this contract, such Authorized User may, at its sole discretion, on a case-by-case basis and upon approval by VITA, use a Request for Quote (RFQ) process to obtain identical or similar solutions, products and/or services to those provided by Supplier pursuant to this Contract. The RFQ process is typically used when an Authorized User requires a complete solution that may be fulfilled by Deliverables and Services herein, but whose complexity or size may result in economies that could not be passed on to the Authorized User within the confines of the established contract catalog discount pricing. When an RFQ is used, the project timing and requirements will be clearly outlined in the RFQ document. In some situations, the Authorized User may not identify the exact specifications required. If that is the case, the RFQ respondents will be given the opportunity to identify and propose their recommended specifications.

Supplier may respond to the RFQ by providing a quote, which may include (a) a detailed description of each product or service proposed, including such product and services components, at the Exhibit B line item level, (b) the quantity of each such component, (c) the contract price, (d) any additional percentage discount offered, and (e) an extended price. If requested by the Authorized User, Supplier's quote shall also include a proposal describing the approach Supplier plans to take in developing, implementing, and maintaining its offering for the Authorized User.

H. Invoice Procedures

Supplier shall remit each invoice to the "bill-to" address provided with the order promptly after all Supplier's performance obligations have been accepted and in accordance with the milestone payment schedule, if any, in the applicable order or SOW. . No invoice shall include any costs

other than those identified in the executed order or SOW, which costs shall be in accordance with Exhibit B. Without limiting the foregoing, all shipping costs are the Supplier's responsibility except to the extent such charges are identified in Exhibit B, or as noted in any executed order or SOW referencing this Contract. Invoices issued by the Supplier shall identify at a minimum:

- i. Dates/periods that invoice covers, including any service or subscription periods, as applicable.
- ii. Line item description of the Deliverable(s), product(s), Software, Services, Solution and Solution Components, Maintenance Services, and/or licensed services, as applicable to this Contract, including components thereof or service type, and, if applicable, the project milestone.
- iii. Quantity, charge and extended pricing for each line item
- iv. Applicable order and/or SOW date
- v. This Contract number and the applicable order number and/or SOW number
- vi. Supplier's Federal Employer Identification Number (FEIN)
- vii. Applicable taxes

Any terms included on Supplier's invoice shall have no force or effect and will in no way bind VITA or any Authorized User.

I. Purchase Payment Terms

Supplier is responsible for the accuracy of its billing information. Supplier agrees not to issue invoices hereunder until the Solution, Software or Deliverables have been accepted and in accordance with the milestone payment schedule, if any, in the applicable order or SOW, or until after services have been rendered. Charges for Deliverables, components or services accepted more than one hundred twenty (120) days prior to receipt of a valid invoice may not be paid.

13. REPORTING

Supplier is required to submit to VITA the following monthly reports:

- i. Report of Sales; and
- ii. Small Business Procurement and Subcontracting Report

These reports must be submitted using the instructions and further detailed requirements and templates found at the following URL: <http://www.vita.virginia.gov/scm/default.aspx?id=97>

Suppliers are encouraged to review the site periodically for updates on Supplier reporting requirements and methods.

In conjunction with the requirements in the Invoice Procedures section of this Contract, Supplier shall provide to VITA within 30 days of the date of expiration of the contract an accompanying statement certifying that Supplier has fully complied with the Contract's Small Business (SWaM) Procurement Plan, and if Supplier has not fully complied, provide a written explanation of any variances between such Plan and the actual participation. The Supplier's compliance confirmation and/or written explanation of variance shall be maintained by VITA, in the contract file.

Failure by Supplier to comply with its contractually obligated Small Business (SWaM) Procurement Plan may prohibit or delay any renewals of the Contract. Also, Supplier's failure to comply with its Small Business (SWaM) Procurement Plan or to explain any variance between the proposed Plan and actual SWaM subcontracting spend may result in the withholding of any final payment due Supplier.

Failure to comply with all reporting requirements may result in default of the Contract.

14. STATUS MEETINGS

The account team will be prepared to conduct monthly stewardship meetings with VITA to provide a broad review of all services, projects and ongoing operations. Supplier should also be prepared to

conduct semi-annual meetings/presentations to discuss new products and services and their potential benefit to VITA.

15. STEERING COMMITTEE

In order to facilitate mutually beneficial contractual relationships with suppliers, VITA has procedures for establishing a steering committee (“Steering Committee”), consisting of senior management personnel, including personnel involved in the contractual relationship, from VITA and Supplier.

Roles of the Steering Committee include but are not be limited to a) identifying potential issues which may arise during the performance of a contract, b) discussing and assigning roles and responsibilities, c) establishing methods for quickly resolving potential disputes, d) setting rules for communication and decision making, e) monitoring and measuring the business relationship between the parties, and f) acting as a final decision board for escalated problems.

A meeting of the Steering Committee is intended to be a forum for brainstorming and sharing ideas, emphasizing respect, cooperation, and access, with the end goal of developing relationships to avoid conflict. A facilitator may, but is not required to, conduct a meeting of the Steering Committee.

A Steering Committee for this Contract will be formed at VITA’s option. Meetings may be held at any time during the Contract term, should VITA, at its sole discretion, determine that a meeting(s) would be beneficial to the contractual relationship, and Supplier agrees to participate in such meeting(s). In addition, Supplier may at any time submit a written request to VITA for a meeting of the Steering Committee, which VITA will not unreasonably deny.

Supplier shall ensure the availability of the appropriate personnel to meet with the VITA contract management team. Additional Steering Committee meetings involving representatives from VITA, the Supplier, and an Authorized User may be required prior to or during performance on any specific SOW issued pursuant to this Contract.

16. RESERVED

17. TRAINING AND DOCUMENTATION

A. Training

In addition to any online tutorial training Supplier may make available, Supplier’s fee, unless expressly excluded, includes all costs for any and all training as agreed upon for the training of one (1) Authorized User trainer per order or SOW on the use and operation of the Deliverable provided to Authorized User, to allow full benefit of the applicable Deliverable to Authorized User, including instruction in any necessary conversion, manipulation or movement of such Authorized User’s data. Supplier shall provide personnel sufficiently experienced and qualified to conduct such training at a time and location mutually agreeable to Supplier and Authorized User. Available additional and optional training, and applicable pricing and discounts, are described in Exhibit B.

B. Training

1. SCOPE

a. The Supplier shall provide training at the Supplier’s vendor facility and/or at Authorized User’s location, as agreed to by the Supplier and Authorized User.

b. As used herein the “SAS Training Services” shall mean SAS Training Points.

c. Purchased SAS Training Points do not expire.

2. ORDER

Orders shall be the basis for the purchase of training courses in accordance with the terms of this contract. SOWs for training points Orders shall include the student’s name, course title, course date and time, and contracted dollar amount of the course, except as follows:

For SAS Training Points this information will not be included on the order for the SAS Training Points but will be required at the time the training is scheduled by Authorized User.

3. TIME OF DELIVERY

The Supplier shall conduct training on the date (time, day, month, and year) agreed to by the Supplier and the Authorized User.

4. CANCELLATION AND RESCHEDULING

a. This paragraph only applies to SAS Public Training courses. Authorized User will notify the Supplier at least three (3) calendar days before the scheduled training date, if a student will be unable to attend. The Supplier will then permit Authorized User to either cancel the order or reschedule the training at no additional charge. In the event the training class is rescheduled, Authorized User will modify its original training order to specify the time and date of the rescheduled training class. The applicable fee for SAS Public Training that is cancelled on less than three (3) calendar days' notice by Authorized User shall not be waived or reduced and shall remain due and payable by Authorized User as ordered. However, substitutions (name changes) by Authorized User with respect to SAS Public Training are accepted at any time prior to the event as set forth in paragraph c below. In addition, the Supplier will permit or Authorized User to reschedule attendance of a student at a SAS Public Training course at no additional charge provided that notification of the rescheduling to a later availability date of the course is received at least twenty-four (24) hours prior to the start of the applicable SAS Public Training.

For cancellation and rescheduling with respect to SAS Training Points orders, the cancellation policy set forth in paragraphs n. and o. under the "Guidelines" below shall apply.

b. In the event Authorized User fails to cancel or reschedule a training course within the time frame specified in paragraph a, above, Authorized User will be liable for the contracted dollar amount of the training course or as stated in paragraph a. above. The Supplier agrees to permit Authorized User to reschedule a student who fails to attend a SAS Public Training class within ninety (90) days from the original course date, at no additional charge provided that twenty-four (24) hours' notice of rescheduling is provided as set forth in paragraph a. above, and subject to availability of the course within such ninety (90) day period.

c. For SAS Public Training, Authorized User reserves the right to substitute one student for another up to the first day of class.

d. In the event the Supplier is unable to conduct training on the date agreed to by the Supplier and Authorized User, the Supplier must notify Authorized User at least seventy-two (72) hours before the scheduled training date. The requirement for 72 hours' notice shall apply except where Supplier is unable to conduct training due to circumstances beyond Contractor's reasonable control, including any force majeure event; provided that in such cases Supplier shall provide Authorized User with notice of cancellation as soon as reasonably possible.

5. FOLLOW-UP SUPPORT

The Supplier agrees to provide each student with unlimited telephone support for a period of one (1) year from the completion of the training course. During this period, the student may contact the Supplier's vendor's instructors for refresher assistance and answers to related course curriculum questions.

6. PRICE FOR TRAINING

The price that Authorized User will be charged is set forth in Exhibit B.

7. RESERVED

8. FORMAT AND CONTENT OF TRAINING

a. The Supplier shall provide written materials (i.e., manuals, handbooks, texts, etc.) normally provided with course offerings. Such documentation will become the property of the student upon completion of the training class.

b. For hands-on training courses, there must be a one-to-one assignment of IT equipment to students, except that with respect to any SAS Onsite Training, due to the nature of Onsite Training, Authorized User is responsible for providing IT equipment to the students.

c. The Supplier shall provide each student with a Certificate of Training at the completion of each training course. With respect to SAS Training, Supplier will provide each student with a Certificate of Training provided that the Authorized User furnishes to the Supplier a roster of the students attending the SAS Onsite Training.

d. The Supplier shall provide the following information for each training course offered:

- (1) The course title and a brief description of the course content, to include the course format (e.g., lecture, discussion, hands-on training);
- (2) The length of the course;
- (3) Mandatory and desirable prerequisites for student enrollment;
- (4) The minimum and maximum number of students per class;
- (5) The locations where the course is offered;
- (6) Class schedules; and
- (7) Price (per student, per class (if applicable)).

The foregoing information is currently provided through the website referenced in subparagraph b of the first paragraph of Section 10 below.

e. For those courses conducted at Authorized User's location, the order or SOW will address travel and expenses.

9. SUPPLEMENTAL TERMS

With respect to SAS Training Services the following additional terms shall apply:

a) With respect to SAS Training Services identified as "SAS Onsite Training," the maximum number of students that may attend an Onsite training course shall be twenty (20) students. Additional charges shall apply for each additional student in excess of twenty (20) students attending any such on-site training course to be a maximum of five (5) additional students.

b) SAS Training Services do not include any customized content for any training. The fees for on-site training do not include fees for presenting an on-site course at a SAS training facility.

With respect to SAS Training Services identified as "SAS Training Points" the following additional terms shall apply:

Guidelines

The Authorized User must designate a representative to serve as the contact to register employees for public courses, on-site courses, Business Knowledge Series (BKS) courses, Live Web courses, Six Sigma courses, license fees for all e-Learning products, SAS Certification exam vouchers, training development, SAS training center rental fees, or selected conferences (collectively "SAS Training Points-Eligible Products and Services").

The SAS Training Points offer applies only to courses and events scheduled in the United States.

For students using SAS Training Points units to attend courses in certain states, an additional state tax may be applicable unless an exemption applies.

SAS Training Points units can be used to register for SAS Training Points-Eligible Products and Services. These events will have varying SAS Training Points assigned to them according to their registration or license fees or standard charges.

SAS Training Points units may not be used to satisfy partial billing for a registration.

Class and conference sizes are limited and space is not guaranteed. Onsite classes are limited to 20 students per class. An additional fee per student per day will be charged for each student over 20, not to exceed 25 students in total in the class.

SAS reserves the right to cancel or reschedule any and all SAS Training Points-Eligible Products and Services at its discretion. SAS is not responsible for airline penalties related to the cancellation of SAS courses or events. Please be aware of all airline restrictions regarding nonrefundable airline tickets when purchasing an airline ticket.

The SAS Training Points Administrator will issue an account number to the designated contact upon receipt of an SAS Training Points order. The contact may begin using its SAS Training Points units as soon as it receives an account number, but not before then.

No other discounts are applicable. SAS Training Points fees are non-refundable.

For on-site courses, travel expenses for Supplier's staff are additional. Expenses include roundtrip coach airfare; rental car, including gas or local transportation; taxes; hotel and per diem meal expenses.

CANCELLATION POLICY

SAS Training Points may be reinstated to the account if cancellations are received by phone, mail or e-mail at least 3 (three) calendar days prior to the scheduled start date of an event; after that (7 calendar days or less), SAS Training Points accounts will be charged and invoiced for the full number of corresponding SAS Training Points. Substitutions (name changes) are accepted at any time prior to the event. Transfers are accepted, but they must be received no later than 24 hours from the start date of the event.

18. THE AUTHORIZED USER MAY CANCEL ON-SITE COURSES WITHOUT CHARGE IF NOTIFICATION IS RECEIVED BY SUPPLIER'S VENDOR BY PHONE OR IN WRITING NO LATER THAN 21 DAYS PRIOR TO THE COURSE START DATE. RESCHEDULING A COURSE LESS THAN 21 CALENDAR DAYS PRIOR TO COURSE START DATE IS CONSIDERED A CANCELLATION, AND A CANCELLATION FEE OF \$500 WILL BE CHARGED AND INVOICED SEPARATELY. IN ADDITION, IF NON-REFUNDABLE AIRLINE TICKETS HAVE BEEN PURCHASED FOR SUPPLIER'S PERSONNEL WITH THE AUTHORIZED USER'S APPROVAL, AUTHORIZED USER WILL BE RESPONSIBLE FOR THE COST OF THESE TICKETS AND IF LESS THAN 21 CALENDAR DAYS' NOTICE IS PROVIDED. AUTHORIZED USER SELF-SUFFICIENCY

At any time during Supplier's performance of an order or SOW issued pursuant to this Contract, an Authorized User may, if set forth in the applicable order or SOW, require that Supplier provide to Authorized User a detailed plan to develop Authorized User self-sufficiency and to transition operation and management to Authorized User or VITA. . At Authorized User's request and pursuant to an

order or SOW for Supplier's Services issued hereunder, Supplier shall provide all assistance reasonably required and mutually agreed upon by both parties and set forth in the order or SOW.

19. RESERVED

20. ESCROW AGREEMENT

At Authorized User's option, for the fees set forth on Exhibit B hereto, Supplier shall make available to such Authorized User a Software source code escrow account with an escrow agent. If Authorized User elects such option, the Authorized User must enter into a Source Code Escrow Arrangement (for each applicable order for which Authorized User desires an escrow account) directly with Software Publisher in substantially the form attached hereto as Exhibit C (Escrow Agreement). Authorized Users must sign a separate Escrow Agreement and pay the applicable fees for each Software item escrowed in order to obtain the escrow rights as set forth herein. Note that Exhibit C is attached hereto for information purposes only and is not made a part of this Contract.

21. CONFIDENTIALITY

A. Treatment and Protection

Each Party shall (i) hold in confidence all Confidential Information of any other Party, (ii) use the Confidential Information solely to perform or to exercise its rights under this Contract, and (iii) not transfer, display, convey or otherwise disclose or make available all or any part of such Confidential Information to any third-party. However, an Authorized User may disclose the Confidential Information as delivered by Supplier to subcontractors, contractors or agents of such Authorized User that are bound by non-disclosure contracts with such Authorized User. Each Party shall take the same measures to protect against the disclosure or use of the Confidential Information as it takes to protect its own proprietary or confidential information (but in no event shall such measures be less than reasonable care).

B. Exclusions

The term "Confidential Information" shall not include information that is:

- i. in the public domain through no fault of the receiving Party or of any other person or entity that is similarly contractually or otherwise obligated;
- ii. obtained independently from a third-party without an obligation of confidentiality to the disclosing Party and without breach of this Contract;
- iii. developed independently by the receiving Party without reference to the Confidential Information of the other Party; or
- iv. required to be disclosed under The Virginia Freedom of Information Act (§§2.2-3700 et seq. of the Code of Virginia) or similar laws or pursuant to a court order.

C. Return or Destruction

Upon the termination or expiration of this Contract or upon the earlier request of the disclosing Authorized User, Supplier shall (i) at its own expense, (a) promptly return to the disclosing Authorized User all tangible Confidential Information (and all copies thereof except the record required by law) of the disclosing Authorized User, or (b) upon written request from the disclosing Authorized User, destroy such Confidential Information and provide the disclosing Authorized User with written certification of such destruction, and (ii) cease all further use of the Authorized User's Confidential Information, whether in tangible or intangible form. The intention of the parties is that Confidential Information will not be provided to the Supplier, except while Supplier is on the Authorized User's premise. Authorized User shall not send any such Confidential Information to Supplier. If Confidential Information is sent in violation of the preceding sentence, Supplier shall not be deemed to be in violation of this Contract and shall not be liable for damages associated with such transfer of Confidential Information. Supplier shall take reasonable efforts, if such transfer occurs, to comply with this Section 21.

VITA or the Authorized User shall retain and dispose of Supplier's Confidential Information in accordance with the Commonwealth of Virginia's records retention policies or, if Authorized User

is not subject to such policies, in accordance with such Authorized User's own records retention policies.

D. Confidentiality Statement

Supplier will inform its personnel, contractors, agents, and subcontractors performing Services pursuant to this Contract of its confidentiality obligations herein. Any violation of such statement or agreement shall be deemed a breach of this Contract and may result in termination of the Contract or any order or SOW issued hereunder.

E. Reserved

22. INDEMNIFICATION AND LIABILITY

A. Indemnification

Supplier agrees to indemnify, defend and hold harmless the Commonwealth, VITA, any Authorized User, their officers, directors, agents and employees (collectively, "Commonwealth's Indemnified Parties") from and against any and all losses, damages, claims, demands, proceedings, suits and actions, including any related liabilities, obligations, losses, damages, assessments, fines, penalties (whether criminal or civil), judgments, settlements, expenses (including attorneys' and accountants' fees and disbursements) and costs (each, a "Claim" and collectively, "Claims") that are finally awarded and arising from actions for which Supplier is legally responsible, incurred by, any of Commonwealth's Indemnified Parties to the extent such Claims in any way relate to, arise out of or result from: (i) any intentional or willful conduct of any employee, agent, or subcontractor of Supplier, (ii) bodily injury, death or damage to property, excluding damage to software or data, (iii) any actual infringement or misappropriation of any third party's intellectual property rights by any of the Supplier-provided services or by the Software. Regarding the foregoing, the Commonwealth agrees to promptly notify Supplier in writing of any such Claim made against the Commonwealth and except as set forth below in this Section, the Commonwealth further agrees to allow Supplier or its designee to participate in the litigation or settlement of any such Claim. Selection and approval of counsel and approval of any settlement shall be accomplished in accordance with all applicable laws, rules and regulations. For state agencies the applicable laws include §§ 2.2-510 and 2.2-514 of the Code of Virginia.

In the event that a Claim is commenced against any of Commonwealth's Indemnified Parties alleging that use of the Supplier-provided products or services, including any components thereof, or that the Supplier's performance or delivery of any product or service under this Contract infringes any third party's intellectual property rights and Supplier is of the opinion that the allegations in such Claim in whole or in part are not covered by this indemnification provision, Supplier shall promptly notify VITA and the affected Authorized User(s) in writing, via certified mail, specifying to what extent Supplier believes it is obligated to defend and indemnify under the terms and conditions of this Contract. Supplier shall in such event seek a continuance to permit VITA and the affected Authorized User(s) to appear and defend their interests in cooperation with Supplier as is appropriate, including any jurisdictional defenses VITA or the affected Authorized User(s) may have.

In the event of a Claim pursuant to any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Supplier-provided Software, Deliverables, Work Product Services, Solution, including Solution Components, Supplier shall at its option and expense, either (a) procure for all Authorized Users the right to continue use of such infringing Software, Deliverables, Work Product, Services, or Solution, including Solution Components, or (b) replace or modify such infringing Software, Deliverables, Work Product, Services, or Solution, including Solution Components, with non-infringing Software, Deliverables, Work Product, Services, Solution or Solution Component(s). If Supplier cannot accomplish the foregoing (a) or (b) within a reasonable time and at commercially reasonable rates, then Supplier shall accept the return of the infringing Software, Deliverables, Work Product, Services, Solution, or Solution Component, rendered unusable by any Authorized User as a result of the infringing component, terminate the license for said infringing Software, Deliverable, Work Product, Solution or Solution Component, and refund the price paid to Supplier for such components. This indemnification

obligation does not apply to the extent that: (i) the claim is based on the Commonwealth's Requirements, or (ii) the claim is based on the Commonwealth's combination of the Software, Deliverable, Solution, Solution Component or Work Product with other software, or modification to the Software, Deliverable, Solution, Solution Component or Work Product, if such claim would not have been made but for the combination or modification.

B. Liability

Except for liability with respect to property damage or personal injury, Supplier's total liability for any claims relating to this Contract arising out of each order or SOW shall be limited to two (2) times the value of the applicable order or SOW.

IN NO EVENT WILL ANY PARTY BE LIABLE TO ANY OTHER PARTY FOR ANY INDIRECT, SPECIAL, RELIANCE, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING (WITHOUT LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF, EXCEPT WHEN SUCH DAMAGES ARE CAUSED BY WILLFUL MISCONDUCT OF THE PARTY, ITS EMPLOYEES, AGENTS OR SUBCONTRACTORS.

For purposes of clarification, the parties acknowledge and agree that the liability limitations set forth in this Section apply with regard to intellectual property infringement and damage to information/data and software.

23. INSURANCE

In addition to the insurance coverage required by law as referenced in the Incorporated Contractual Provisions section of this Contract, Supplier shall carry:

Errors and omissions insurance coverage in the amount of \$2,000,000 per occurrence.

24. SECURITY COMPLIANCE

Supplier agrees to comply with all applicable provisions of the then-current Commonwealth of Virginia security procedures, published by the Virginia Information Technologies Agency (VITA) and which may be found at: (<http://www.vita.virginia.gov/library/default.aspx?id=537#securityPSGs>) or a successor URL(s), as are pertinent to Supplier's operation. Supplier further agrees to comply with all provisions of the relevant Authorized User's then-current security procedures as are pertinent to Supplier's operation and which have been supplied to Supplier by such Authorized User. Supplier shall also comply with all applicable federal, state and local laws and regulations. For any individual Authorized User location, security procedures may include but not be limited to: background checks, records verification, photographing, and fingerprinting of Supplier's employees or agents. Supplier may, at any time, be required to execute and complete, for each individual Supplier employee or agent, additional forms which may include non-disclosure agreements to be signed by Supplier's employees or agents acknowledging that all Authorized User information with which such employees and agents come into contact while at the Authorized User site is confidential and proprietary. Any unauthorized release of proprietary or Personal information by the Supplier or an employee or agent of Supplier shall constitute a breach of its obligations under this Section and the Contract. Supplier shall promptly notify VITA and Authorized User, if applicable, of any Breach of Unencrypted and Unredacted Personal Information, as those terms are defined in Virginia Code 18.2-186.6, and other personal identifying information, such as insurance data or date of birth, provided by VITA or Authorized User to Supplier. Supplier shall provide VITA the opportunity to participate in the investigation of the Breach and to exercise control over reporting the unauthorized disclosure, to the extent permitted by law. Supplier shall indemnify, defend, and hold the Commonwealth, VITA, the Authorized User, their officers, directors, employees and agents harmless from and against any and all fines, penalties (whether criminal or civil), judgments, damages and assessments, including reasonable expenses suffered by, accrued against, or charged to or recoverable from the Commonwealth, VITA, the Authorized User, their officers, directors, agents or employees, on account of the failure of Supplier to perform its obligations pursuant this Section.

25. IMPORT/EXPORT

In addition to compliance by Supplier with all export laws and regulations, VITA requires that any data deemed “restricted” or “sensitive” by either federal or state authorities, must only be collected, developed, analyzed, or otherwise used or obtained by persons or entities working within the boundaries of the United States.

26. BANKRUPTCY

If Supplier becomes insolvent, takes any step leading to its cessation as a going concern, fails to pay its debts as they become due, or ceases business operations continuously for longer than fifteen (15) business days, then VITA may immediately terminate this Contract, and an Authorized User may terminate an order or SOW, on notice to Supplier unless Supplier immediately gives VITA or such Authorized User adequate assurance of the future performance of this Contract or the applicable order or SOW. If bankruptcy proceedings are commenced with respect to Supplier, and if this Contract has not otherwise terminated, then VITA may suspend all further performance of this Contract until Supplier assumes this Contract and provides adequate assurance of performance thereof or rejects this Contract pursuant to Section 365 of the Bankruptcy Code or any similar or successor provision, it being agreed by VITA and Supplier that this is an executory contract. Any such suspension of further performance by VITA or Authorized User pending Supplier’s assumption or rejection shall not be a breach of this Contract, and shall not affect the rights of VITA or any Authorized User to pursue or enforce any of its rights under this Contract or otherwise.

27. GENERAL PROVISIONS**A. Relationship Between VITA and Authorized User and Supplier**

Supplier has no authority to contract for VITA or any Authorized User or in any way to bind, to commit VITA or any Authorized User to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of VITA or any Authorized User. Under no circumstances shall Supplier, or any of its employees, hold itself out as or be considered an agent or an employee of VITA or any Authorized User, and neither VITA nor any Authorized User shall have any duty to provide or maintain any insurance or other employee benefits on behalf of Supplier or its employees. Supplier represents and warrants that it is an independent contractor for purposes of federal, state and local employment taxes and agrees that neither VITA nor any Authorized User is responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to, income tax withholding and social security contributions, for Supplier. Any and all taxes, interest or penalties, (including, but not limited to, any federal, state or local withholding or employment taxes, and any penalties related to health care or employee benefits laws) that are imposed, assessed or levied as a result of this Contract or Services performed pursuant to this Contract shall be paid or withheld by Supplier or, if assessed against and paid by VITA or any Authorized User, shall be reimbursed by Supplier upon demand by VITA or such Authorized User.

B. Incorporated Contractual Provisions

The then-current contractual provisions at the following URL are mandatory contractual provisions, required by law or by VITA, and that are hereby incorporated by reference: http://www.vita.virginia.gov/uploadedfiles/VITA_Main_Public/scm/StatutorilyMandatedTsandCs.pdf

The contractual claims provision §2.2-4363 of the Code of Virginia and the required eVA provisions at http://www.vita.virginia.gov/uploadedfiles/VITA_Main_Public/scm/eVATsandCs.pdf are also incorporated by reference.

The then-current terms and conditions in documents posted to the aforereferenced URLs are subject to change pursuant to action by the legislature of the Commonwealth of Virginia, change in VITA policy, or the adoption of revised eVA business requirements; Provided that such changes shall only apply to valid orders and SOWs executed after the effective date noted in the document title. If a change is made to the terms and conditions, a new effective date will be noted in the document title. Supplier is advised to check the URLs periodically.

C. Compliance with the Federal Lobbying Act

Supplier's signed certification of compliance with 31 USC 1352 (entitled "Limitation on use of appropriated funds to influence certain Federal Contracting and financial transactions") or by the regulations issued from time to time thereunder (together, the "Lobbying Act") is incorporated as an exhibit to this Contract.

D. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia without regard to that body of law controlling choice of law. Any and all litigation shall be brought in the circuit courts of the Commonwealth of Virginia. The English language version of this Contract prevails when interpreting this Contract. The United Nations Convention on Contracts for the International Sale of Goods and all other laws and international treaties or conventions relating to the sale of goods are expressly disclaimed. UCITA shall apply to this Contract only to the extent required by §59.1-501.15 of the Code of Virginia.

E. Dispute Resolution

In accordance with §2.2-4363 of the Code of Virginia, Contractual claims, whether for money or other relief, shall be submitted in writing to the public body from whom the relief is sought no later than sixty (60) days after final payment; however, written notice of the Supplier's intention to file such claim must be given to such public body at the time of the occurrence or beginning of the work upon which the claim is based. Pendency of claims shall not delay payment of amounts agreed due in the final payment. The relevant public body shall render a final decision in writing within thirty (30) days after its receipt of the Supplier's written claim.

The Supplier may not invoke any available administrative procedure under §2.2-4365 of the Code of Virginia nor institute legal action prior to receipt of the decision of the relevant public body on the claim, unless that public body fails to render its decision within thirty (30) days. The decision of the relevant public body shall be final and conclusive unless the Supplier, within six (6) months of the date of the final decision on the claim, invokes appropriate action under §2.2-4364, Code of Virginia or the administrative procedure authorized by §2.2-4365, Code of Virginia.

Upon request from the public body from whom the relief is sought, Supplier agrees to submit any and all contractual disputes arising from this Contract to such public body's alternative dispute resolution (ADR) procedures, if any. Supplier may invoke such public body's ADR procedures, if any, at any time and concurrently with any other statutory remedies prescribed by the Code of Virginia.

In the event of any breach by a public body or a private institution, Supplier's remedies shall be limited to claims for damages and Prompt Payment Act interest and, if available and warranted, equitable relief, all such claims to be processed pursuant to this Section. In no event shall Supplier's remedies include the right to terminate any license or support services hereunder.

Breach of Supplier's intellectual property rights will lead to damages not adequately remedied by an award of money; therefore, Supplier may protect those intellectual property rights through temporary restraining orders or injunctions, without the obligation of posting bond.

F. Advertising and Use of Proprietary Marks

Supplier shall not use the name of VITA or any Authorized User or refer to VITA or any Authorized User, directly or indirectly, in any press release or formal advertisement without receiving prior written consent of VITA or such Authorized User. In no event may Supplier use a proprietary mark of VITA or an Authorized User without receiving the prior written consent of VITA or the Authorized User.

G. Notices

Any notice required or permitted to be given under this Contract shall be in writing and shall be deemed to have been sufficiently given if delivered in person, or if deposited in the U.S. mails, postage prepaid, for mailing by registered, certified mail, or overnight courier service addressed to:

i. To VITA and to Supplier, if Supplier is incorporated in the Commonwealth of Virginia, to the addresses shown on the signature page.

ii. To Supplier, if Supplier is incorporated outside the Commonwealth of Virginia, or to the Registered Agent registered with the Virginia State Corporation Commission.

Pursuant to Title 13.1 of the Code of Virginia, VITA or Supplier may change its address for notice purposes by giving the other notice of such change in accordance with this Section.

Administrative contract renewals, modifications or non-claim related notices are excluded from the above requirement. Such written and/or executed contract administration actions may be processed by the assigned VITA and Supplier points of contact for this Contract and may be given in person, via U.S. mail, courier service or electronically.

H. No Waiver

Any failure to enforce any terms of this Contract shall not constitute a waiver.

I. Assignment

This Contract shall be binding upon and shall inure to the benefit of the permitted successors and assigns of VITA and Supplier. Supplier may not assign, subcontract, delegate or otherwise convey this Contract or any of its rights and obligations hereunder, to any entity without the prior written consent of VITA, and any such attempted assignment or subcontracting without consent shall be void. VITA may only assign this Contract to any successor entity conducting the business of the Commonwealth, so long as the assignee agrees in writing to be bound by the all the terms and conditions of this Contract.

If any law limits the right of VITA or Supplier to prohibit assignment or nonconsensual assignments, the effective date of the assignment shall be thirty (30) days after the Supplier gives VITA prompt written notice of the assignment, signed by authorized representatives of both the Supplier and the assignee. Any payments made prior to receipt of such notification shall not be covered by this assignment.

J. Captions

The captions are for convenience and in no way define, limit or enlarge the scope of this Contract or any of its Sections.

K. Severability

Invalidity of any term of this Contract, in whole or in part, shall not affect the validity of any other term. VITA and Supplier further agree that in the event such provision is an essential part of this Contract, they shall immediately begin negotiations for a suitable replacement provision.

L. Survival

Any provisions of this Contract regarding Software License, Rights To Work Product, Warranty, Escrow, Confidentiality, and Security Compliance, Liability, Indemnification, and the General Provisions shall survive the expiration or termination of this Contract.

M. Force Majeure

No Party shall be responsible for failure to meet its obligations under this Contract if the failure arises from causes beyond the control and without the fault or negligence of the non-performing Party. If any performance date under this Contract is postponed or extended pursuant to this section for longer than thirty (30) calendar days, VITA, by written notice given during the postponement or extension, may terminate Supplier's right to render further performance after the effective date of termination without liability for that termination, and in addition an Authorized User may terminate any order or SOW affected by such postponement or delay.

N. Remedies

The remedies set forth in this Contract are intended to be cumulative. In addition to any specific remedy, VITA and all Authorized Users reserve any and all other remedies that may be available at law or in equity.

O. Right to Audit

VITA reserves the right to audit those Supplier contract and billing document records that relate to the Contract or any SOWs or orders issued there under. VITA's right to audit shall be limited as follows:

- i. Three (3) years from end date of the Contract;
- ii. Performed at Supplier's premises, during normal business hours at mutually agreed upon times;
- iii Supplier's receipt of fifteen (15) prior business days' notice;
- iv. VITA's compliance with Supplier's security policies and procedures in effect at the time of said audit; and
- v. Excludes access to Supplier cost information. Other than as set forth in this Section, in no event shall Supplier have the right to audit, or require to have audited, VITA or any Authorized User.

Upon fifteen (15) business days' notice to Authorized User, and no more than once annually, Supplier or its designee will have the right to conduct an audit during Authorized User's normal business hours to verify compliance with the terms and conditions of the Contract. Authorized User shall cooperate with Supplier or its designee by: (a) making applicable records available; and (b) providing copies of the records requested. Supplier shall bear the costs of such audit. If the audit reveals that Authorized User owes additional fees, Authorized User shall pay the amounts owed.

P. Offers of Employment

During the first twelve (12) months of the Contract, should Supplier hire an employee of any Authorized User who has substantially worked on any project covered by this Contract without prior written consent, the Supplier shall be billed for fifty percent (50%) of the employee's annual salary in effect at the time of termination.

Q. Contract Administration

Supplier agrees that at all times during the term of this Contract an account executive, at Supplier's senior management level, shall be assigned and available to VITA. Supplier reserves the right to change such account executive upon reasonable advance written notice to VITA.

R. Entire Contract

The following Exhibits, including all subparts thereof, are attached to this Contract and are made a part of this Contract for all purposes:

- Exhibit A - Requirements
- Exhibit B - Options List; Fees, Service Charges, and Payment Schedule
- Exhibit C - Escrow Agreement (for reference only)
- Exhibit D - Statement of Work (SOW) Template
- Exhibit E - Change Order Template
- Exhibit F - Reserved
- Exhibit G - Certification Regarding Lobbying
- Exhibit H – Available Software and Applicable Metrics

This Contract, its Exhibits, and any prior non-disclosure agreement constitute the entire agreement between VITA and Supplier and supersede any and all previous representations, understandings, discussions or agreements between VITA and Supplier as to the subject matter hereof. Any and all terms and conditions contained in, incorporated into, or referenced by the Supplier's Proposal shall be deemed invalid. The provisions of the Virginia Department of General Services, Division of Purchases and Supply Vendor's Manual shall not apply to this Contract or any order issued hereunder. This Contract may only be amended by an instrument in writing signed by VITA and Supplier. In the event of a conflict, the following order of precedence shall apply: this Contract document, Exhibit A, any individual SOW, Exhibit B.

An Authorized User and Supplier may enter into an ordering agreement pursuant to this Contract. To the extent that such ordering agreement, or any order or SOW issued hereunder, include any terms and conditions inconsistent with the terms and conditions of this Contract, such terms and conditions shall be of no force and effect.

VITA and Supplier each acknowledge that it has had the opportunity to review this Contract and to obtain appropriate legal review if it so chose.

Additional or different terms on VITA, Authorized User or third party purchasing documents are expressly objected to and rejected.

Executed as of the last date set forth below by the undersigned authorized representatives of VITA and Supplier.

Supplier

VITA

By: R. Patrick Krause
(Signature)

By: Nelson P. Moe
(Signature)

Name: R. PATRICK KRAUSE
(Print)

Name: Nelson P. Moe
(Print)

Title: VILE PRESIDENT

Title: CIO

Date: NOVEMBER 2, 2015

Date: 11-19-2015

Address for Notice:

Address for Notice:

EXECUTIVE INFORMATION SYSTEMS, LLC
6901 ROCKLEDGE DRIVE STE 600
BETHESDA, MD 20817

11751 Meadowville Lane
Chester, VA 23836

Attention: Contract Administrator

Attention: Contract Administrator



**EXHIBIT A REQUIREMENTS
 CONTRACT NUMBER VA-150915-EIS
 BETWEEN
 VIRGINIA INFORMATION TECHNOLOGIES AGENCY
 AND
 EXECUTIVE INFORMATION SYSTEMS, LLC**

Exhibit A is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Executive Information Systems, LLC (“Supplier”).

In the event of any discrepancy between this Exhibit A and the Contract, the provisions of the Contract shall control.

A. Product Specifications and Standards

Requirements		A	B
1	Does your solution comply with all current COV ITRM Policies and Standards, as applicable, found at: http://www.vita.virginia.gov/library/default.aspx?id=537 . If proposed solution does not, please provide details that specify the Standard/Policy and	Yes	SAS is committed to supporting industry standards and interfaces that benefit customers. Industry standards take two forms: Standards that are developed by independent groups to enable software and hardware to communicate Standards that are supported by vendors for their specific hardware or software applications We support standards and interfaces, particularly when they support SAS

	<p>how Supplier's solution does not comply.</p>	<p>software's portability across different operating environments. The company recognizes that many user benefits, including uniformity, conformity, and quality, are derived from supporting industry standards and interfaces. We constantly look to the foreseeable future and update our standards as technology evolves and customers' needs change.</p> <p>SAS supports industry standards through these activities and initiatives and through support of employee activities in these areas:</p> <ul style="list-style-type: none"> Monitoring external standards, process assessments, and industry requirements that SAS determines to be appropriate, such as ISO and IEEE standards, and the CMMI process assessment. SAS' internal quality processes have evolved based on the company's understanding and assessment of such external factors. Participating in various standards committees. Chairing the IEEE P730 working group on Software Quality Assurance Maintaining the compliance of SAS compilers with the ISO C standard. Maintaining in-house standards that build on the ISO C standard, in addition to in-house tools that enforce the in-house standard. Reviewing IEEE standards and applying those standards that are appropriate to SAS software. Playing a key role in many vendor-sponsored, independent software vendor councils so that SAS performs effectively on the latest versions of these vendors' operating environments. Supporting industry-sponsored interfaces. Monitoring de facto industry standards. Maintaining strategic and cooperative relationships with the leading hardware and software manufacturers. Supporting employee membership in professional organizations. Making industry information and issues available to employees on the company's internal website.
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<p>2</p>	<p>Do your proposed interfaces to Commonwealth systems comply with or have approved exceptions to all applicable Commonwealth Data Standards as found at http://www.vita.virginia.gov/oversight/default.aspx?id=10344</p> <p>If not, please explain.</p>	<p>Yes</p>	<p>Please see response to #1.</p>
<p>3</p>	<p>Does your 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>http://www.vita.virginia.gov/uploadedFiles/Library/AccessibilityStandard_GOV103-00_Eff_11-04-05.pdf</p> <p>(Refer to www.section508.gov and www.access-board.gov for further information)</p> <p>If yes, please describe how this functionality is achieved and include a completed Voluntary Product Accessibility Template (VPAT) with your proposal: <i>(The VPAT template is located in APPENDIX C of the Accessibility Standard (GOV103-00)).</i></p> <p>If no, does your solution provide alternate</p>	<p>Yes</p>	<p>Required VPATs are included in Appendix 18: VPATs.</p>

	accessibility functionality? Please describe.		
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B. General

Requirements		A	B
1	Selected vendors, if asked, will need to perform a selected vendor proposed pilot within one year of contract award. Does your Solution meet this requirement?	Yes	
2	There will be no cost to the Commonwealth or the participating agencies for the use of tools or Supplier resources utilized during this evaluation and pilot(s). Does your Solution meet this requirement?	Yes	
3	Vendors selected for pilots will need to work with any agency providing data to support that pilot to develop a mutually agreed upon document before a pilot can commence. That agreement needs to address exactly how the vendor intends to analyze any agency data and all of the controls and associated roles that will be applied to that data. Does your Solution meet this requirement?	Yes	
4	All applicable state and federal laws concerning the protection of this data must be complied with. Does your Solution meet this requirement?	Yes	

5	<p>All Commonwealth data utilized during pilots must remain at the hosting agency. No Commonwealth data is to be analyzed offsite, copied, transformed to obscure Commonwealth's ownership, or transmitted in any way without formal agency approval. Does your Solution meet this requirement?</p>	Yes	
6	<p>Pilots are to be performed on dedicated devices (laptops) supplied by VITA or on vendor supplied appliances. Vendor provided appliances will need an approved plan (by VITA & participating agencies) for protecting and deleting Commonwealth data. Does your Solution meet this requirement?</p>	Yes	
7	<ul style="list-style-type: none"> • VITA supplied laptops and vendor supplied appliances must be under full control of the pilot hosting agency for the duration of the pilot. Vendor will have no administrative rights to VITA supplied laptop. Agency or VITA staff will load any required software. • Pilot should be accomplished with the minimum amount of Commonwealth data as possible/practical • The agency may require that the analytic methods be demonstrated to agency staff by the vendor on agency provided test data and any analysis of actual agency data would only be performed by agency staff 	Yes	<p>We recommend assisting with software installation and configuration at the direction of the Commonwealth.</p>

	<ul style="list-style-type: none"> • Vendor access to agency data may require vendor staff to attend specific training provided by the agency. <p>Does your Solution meet these requirements?</p>		
8	Suppliers will provide subject matter experts as need to support the pilots. Does your Solution meet this requirement?	Yes	
9	Does your Solution safeguard sensitive data? If yes, explain how.	Yes	<p>When accessed via metadata, SAS provides an additive layer of security, giving a high degree of control over data security because SAS honors and augments the native security of your operating systems, networks and data sources. In addition, if used with Data Management Standard or Data Management Advanced solutions, SAS Federation Server provides data masking capabilities.</p> <p>The security features of the SAS solution offer the following benefits:</p> <ul style="list-style-type: none"> secure access to data and metadata role-based access to application features confidential transmission and storage of data logging and auditing of security events access control reporting
	Does your solution have mechanisms that will prevent one entity from viewing another entity's data if applicable if the toolset was deployed on a shared platform? If yes, explain how they work.	Yes	The SAS Management Console centrally manages permissions for users groups or individual users. As a best practice, SAS recommends that users be defined in the SAS metadata server to take advantage of metadata-based authorizations. The users can be loaded directly from Active Directory.
	Does your solution have the ability to extract data from multiple existing analytic tool sets (Cognos, SAS, Business Objects,	Yes	SAS is data agnostic and has the ability to import data from and export data to a variety of data sources. These include, but are not limited to, data sources that other analytic and reporting tools export or store data in. SAS can read

	<p>MicroStrategy, Microsoft Analytics, etc.)? If so, please list.</p>		<p>and write SAS data formats. Analytic or reporting applications like Cognos, Business Objects, Microstrategy, Microsoft Analysis Services and the like write out data to a database or data file that SAS can read from. SAS can also read data from MS Analysis Services cubes if so desired.</p> <p>SAS has the unique ability to access data natively.</p>
	<p>Supplier staff will submit to background checks conducted and paid for by the Commonwealth. Does your Solution meet this requirement?</p>		<p>Supplier's staff agrees to submit to background checks, if required.</p>
	<p>Agencies may need expertise/resources in utilizing these next-generation analytics tools to address business needs. Role examples include: Data Scientists, Data Analysts, Data Hygienists, Data Explorers, Data Visualizers, Does your Solution have the ability to provide these types of resources? If so, what roles can you provide?</p>	<p>Yes</p>	<p>In addition to the roles listed, SAS can provide:</p> <ul style="list-style-type: none"> Application Developers Business Analysts Compliance Specialists Data Architect—Data Modelers Data Integration Consultants Data Custodians Database Administrator Documentation Specialist Load Tester Quality Assurance Analyst Solution Architect System Administrator <p>SAS strives to hire and retain the best employees in the industry. Our consultants have bachelors, masters, and doctorate degrees in such areas as computer science, statistics, operations research, and business administration. They also are experienced in detailed consulting operations, applications</p>

			development, system analysis and design, and project management.
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C. Solution Information (by category)

1. *Business Intelligence – the set of techniques and tools for the transformation of raw data into meaningful and useful information for business analysis purposes. Common functions are querying, reporting, online analytical processing (OLAP), "alerts", dashboards, process mining, complex event processing, business performance management, benchmarking, data warehousing, data marts, etc.*

This also includes:

a. *Descriptive analytics - looks at past performance and understands that performance by mining historical data to look for the reasons behind past success or failure. Most management reporting - such as sales, marketing, operations, and finance - uses this type of post-mortem analysis.*

The SAS tools that would meet the requirements in 1. And 1.a. are:

- **SAS Visual Analytics** allows agencies to visually explore data quickly to:
 - See patterns and trends and identify opportunities for further analysis
 - Surface results to consumers – regardless of their analytic skills
- **SAS Visual Statistics** combines industry-leading analytics with a powerful in-memory engine, so agencies can build and refine predictive models faster than ever imagined. SAS Visual Statistics requires SAS Visual Analytics.
- **SAS Office Analytics** provides the power of SAS analytics from inside the Microsoft Office environment.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Visual Analytics and SAS Visual Statistics

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Visual Analytics ➤ SAS Visual Statistics

			Please see Appendix 2: Visual Analytics and Appendix 3: Visual Statistics for detailed information on the functionality of these tools.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both	n/a	Alabama Medicaid Agency. Using SAS Visual Analytics (VA), the agency can examine data on illnesses, treatments and costs, segmented by population and

<p>business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.</p>		<p>geography. “We had some ability, obviously, to find and utilize data,” agency Medical Director Dr. Robert Moon said. But the agency had difficulty turning that data into graphs, charts and dashboards for decision makers. “Sometimes with the audiences we interact with, a picture is worth a lot and really helps tell the story.” The tool from SAS lets users sift through any size data set to find patterns and show results in charts, graphs and animations.</p> <p>When Australian policy makers ask questions, the Australian Institute of Health and Welfare (AIHW) supplies the answers using SAS Visual Analytics As the country’s national agency for information and statistics about health and welfare, AIHW aims to improve the well-being of citizens through better use of information and statistics. Governments and community leaders use information from AIHW to discuss, debate and design policies for health, housing and community services.</p> <p>The Hong Kong Efficiency Unit is using SAS Visual Analytics and SAS Text Miner to analyze complaints data. By decoding the 'messages' through statistical and root-cause analyses of complaints data, the government can better understand the voice of the people, and help government departments improve service delivery, make informed decisions and develop smart strategies. This in turn helps boost public satisfaction with the government, and build a quality city.</p> <p>Please see Appendix 17 for more detail on these customer success stories.</p>
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SAS Office Analytics

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS Office Analytics</p> <p>Please see Appendix 4: Office Analytics for detailed information on the functionality of this tool.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	<p>SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.</p>

3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>The Drug & Alcohol Action Team (DAAT) in the London Borough of Croydon has deployed SAS Analytics to automate statutory reporting, using the time saved for value-added analysis to improve joined-up working at a local level. SAS helps the team to monitor agency performance, perform the annual Needs Assessment, budget more effectively and target resources to have the biggest impact. The DAAT has also started to carry out analysis across quarterly Green Reports to identify trends, predict future behaviors and so enable more effective preventative action.</p> <p>Croydon's Drug & Alcohol Action Team (DAAT) uses SAS to help plan treatment modernization services that deliver effective treatment structures for substance misuse; this helps to ensure the work of local agencies and cross-agency projects comes together</p>

		successfully while saving a huge amount of time in statutory reporting. Please see Appendix 17 for more detail on this customer success story.
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2. Predictive and Prescriptive analytics

- a. Predictive analytics - the three basic cornerstones of predictive analytics are: Predictive modeling; Decision analysis and Optimization; Transaction profiling. Predictive analytics answers the question what will happen. This is when historical performance data is combined with rules, algorithms, and occasionally external data to determine the probable future outcome of an event or the likelihood of a situation occurring.*
- b. Prescriptive analytics - ingests hybrid data, a combination of structured (numbers, categories) and unstructured data (videos, images, sounds, texts), and business rules to predict what lies ahead and to prescribe how to take advantage of this predicted future without compromising other priorities.*

The SAS tools that would meet the requirements in 2, 2.a, and 2.b. are:

- **SAS Enterprise Miner** offers a wide variety of predictive modeling and machine learning algorithms. A drag-and-drop interface and self-documenting process flow enable users to quickly develop and deploy models. Both analytical professionals and business analysts have access to a common, easy-to-interpret visual view of the analytic results.
- **SAS Visual Analytics** allows agencies to visually explore data quickly to:
 - See patterns and trends and identify opportunities for further analysis
 - Surface results to consumers – regardless of their analytic skills
- **SAS Visual Statistics** combines industry-leading analytics with a powerful in-memory engine, so you can build and refine predictive models faster than you ever imagined. SAS Visual Statistics requires SAS Visual Analytics.
- **SAS Forecast Server** provides easy and automatic large-scale forecasting, which enables organizations to commit fewer resources to the process, reduce human touch interaction and minimize the biases that contaminate forecasts. Results can also be improved by incorporating factors that impact customer behavior such as market conditions and demographics. Offers a broad array of econometric, time series and forecasting techniques to model, forecast and simulate business processes on observational data for improved strategic and tactical planning.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Enterprise Miner

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Enterprise Miner Please see Appendix 5: Enterprise Miner for detailed information on the functionality of this tool.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.

8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	USDA’s National Agricultural Statistics Service relies on SAS to aggregate and analyze the nation’s data on crops and livestock. This agency within the US Department of Agriculture – effectively the conductor of dozens of “agricultural surveys” annually– uses SAS to capture/collect, edit, and summarize/report data for hundreds of data series about crops and livestock across the nation. SAS also helps NASS detect anomalies lurking within the data. With SAS, NASS can more easily aggregate, analyze and review vast volumes of sensitive and critically important data that forms the basis of economic forecasts and far-reaching business and government decisions. Please see Appendix 17 for more detail on this customer success story.
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SAS Visual Analytics and SAS Visual Statistics

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Visual Analytics ➤ SAS Visual Statistics Please see Appendix 1: Visual Analytics and Appendix 2: Visual Statistics for detailed information on the functionality of these tools.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable

			such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>Alabama Medicaid Agency. Using SAS Visual Analytics (VA), the agency can examine data on illnesses, treatments and costs, segmented by population and geography. “We had some ability, obviously, to find and utilize data,” agency Medical Director Dr. Robert Moon said. But the agency had difficulty turning that data into graphs, charts and dashboards for decision makers. “Sometimes with the audiences we interact with, a picture is worth a lot and really helps tell the story.” The tool from SAS lets users sift through any size data set to find patterns and show results in charts, graphs and animations.</p> <p>When Australian policy makers ask questions, the Australian Institute of Health and Welfare (AIHW) supplies the answers using SAS Visual Analytics As the country’s national agency for information and statistics about health and welfare, AIHW aims to improve the well-being of citizens through better use of information and statistics. Governments and community leaders use information from AIHW to discuss, debate and design policies for health, housing and community services.</p> <p>The Hong Kong Efficiency Unit is using SAS Visual Analytics and SAS Text Miner to analyze complaints data. By decoding the 'messages' through statistical and root-cause analyses of complaints data, the government can</p>

			<p>better understand the voice of the people, and help government departments improve service delivery, make informed decisions and develop smart strategies. This in turn helps boost public satisfaction with the government, and build a quality city.</p> <p>Please see Appendix 17 for more detail on these customer success stories.</p>
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SAS Forecast Server

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS Forecast Server</p> <p>Please see Appendix 6: Forecast Server for detailed information on the functionality of this tool.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.

	components above?		
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>North Carolina Department of Transportation. How do you build a road faster, at less cost and with minimal disruption to the environment? In North Carolina you do it by first building computer models using advanced data sources that help narrow the choices of possible road corridors without resorting to costly land surveys. The process can save as much as \$500,000 per road project and shave up to 20 percent off the time it takes to select and plan for a road. SAS Analytics provide the engine for this innovative project that is gaining national attention and won the state an Environmental Excellence Award from the Federal Highway Administration.</p> <p>Ontario’s Workplace Safety and Insurance Board (WSIB) is undergoing a transformation into a modern, responsive and fiscally sustainable system as it enters its second century of service to Ontarians. Using predictive analytical tools from SAS, the WSIB was able to identify, verify and quantify key drivers for claims related to benefit duration and cost. The WSIB also developed forecasting models for key business indicators, for example, incoming claim volume and their duration of staying on benefits, using time series procedures of SAS. The WSIB can now forecast these key indicators each month for the following 12 months. Convinced by its high precision in back-testing, the operation teams are using these forecasts in business planning and resource allocation.</p> <p>Please see Appendix 17 for more detail on this customer success story.</p>

3. Statistical analysis and Simulation

- a. Statistical programming - traditional analysis of variance and linear regression to exact methods and statistical visualization techniques, statistical programming is essential for making data-based decisions in every field*
- b. Econometrics - modeling, forecasting and simulating business processes for improved strategic and tactical planning. This method applies statistics to economics to forecast future trends*
- c. Operations research - identifies the actions that will produce the best results - based on many possible options and outcomes. Scheduling, simulation, and related modeling processes are used to optimize business processes and management challenges*
- d. Matrix programming - powerful computer techniques for implementing your own statistical methods and exploratory data analysis using row operation algorithms*
- e. Statistical visualization - fast, interactive statistical analysis and exploratory capabilities in a visual interface can be used to understand data and build models*
- f. Statistical quality improvement - mathematical approach to reviewing the quality and safety characteristics for all aspects of production.*
- g. High-performance statistics - in-memory infrastructures and parallel processing can fit predictive models faster, perform more modeling iterations and use complex techniques for faster results*
- h. Simulation - tools that allow users to simulate and observe an operation without actually performing that operation*

The SAS tools that would meet the requirements in 3, 3.a, 3.b., 3.c., 3.d., 3.e., 3.f., 3.g., 3.h. are:

- **SAS Enterprise Miner** offers a wide variety of predictive modeling and machine learning algorithms. A drag-and-drop interface and self-documenting process flow enable users to quickly develop and deploy models. Both analytical professionals and business analysts have access to a common, easy-to-interpret visual view of the analytic results.
- **SAS Visual Analytics** allows agencies to visually explore data quickly to:
 - See patterns and trends and identify opportunities for further analysis
 - Surface results to consumers – regardless of their analytic skills
- **SAS Visual Statistics** combines industry-leading analytics with a powerful in-memory engine, so you can build and refine predictive models faster than you ever imagined. SAS Visual Statistics requires SAS Visual Analytics.

- **SAS Forecast Server** provides easy and automatic large-scale forecasting, which enables organizations to commit fewer resources to the process, reduce human touch interaction and minimize the biases that contaminate forecasts. Results can also be improved by incorporating factors that impact customer behavior such as market conditions and demographics. Offers a broad array of econometric, time series and forecasting techniques to model, forecast and simulate business processes on observational data for improved strategic and tactical planning.
- **SAS/OR** offers the broadest available spectrum of optimization, project scheduling and simulation software for identifying the best responses to complex planning problems.
- **SAS/IML** provides a powerful and flexible matrix programming language that provides interactive programming and exploratory data analysis.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Enterprise Miner

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Enterprise Miner Please see Appendix 5: Enterprise Miner for detailed information on the functionality of this tool.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.

5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	USDA’s National Agricultural Statistics Service relies on SAS to aggregate and analyze the nation’s data on crops and livestock. This agency within the US Department of Agriculture – effectively the conductor of dozens of “agricultural surveys” annually– uses SAS to capture/collect, edit, and summarize/report data for hundreds of data series about crops and livestock across the nation. SAS also helps NASS detect anomalies lurking within the data. With SAS, NASS can more easily aggregate, analyze and review vast volumes of sensitive and critically important data that forms the basis of economic forecasts and far-reaching business and government decisions. Please see Appendix 17 for more detail on this customer success story.

SAS Visual Analytics and SAS Visual Statistics

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Visual Analytics ➤ SAS Visual Statistics Please see Appendix 2: Visual Analytics and Appendix 3: Visual Statistics for detailed information on the functionality of these tools.

2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related	n/a	Alabama Medicaid Agency. Using SAS Visual Analytics (VA), the agency can examine data on illnesses, treatments and costs, segmented by population and geography. "We had some ability, obviously, to find and utilize data," agency Medical Director Dr. Robert Moon said. But the agency had difficulty turning that data into graphs, charts and dashboards for decision makers. "Sometimes with the audiences we interact with, a picture is worth a lot and really helps tell the story."

<p>examples.</p>		<p>The tool from SAS lets users sift through any size data set to find patterns and show results in charts, graphs and animations.</p> <p>When Australian policy makers ask questions, the Australian Institute of Health and Welfare (AIHW) supplies the answers using SAS Visual Analytics. As the country's national agency for information and statistics about health and welfare, AIHW aims to improve the well-being of citizens through better use of information and statistics. Governments and community leaders use information from AIHW to discuss, debate and design policies for health, housing and community services.</p> <p>The Hong Kong Efficiency Unit is using SAS Visual Analytics and SAS Text Miner to analyze complaints data. By decoding the 'messages' through statistical and root-cause analyses of complaints data, the government can better understand the voice of the people, and help government departments improve service delivery, make informed decisions and develop smart strategies. This in turn helps boost public satisfaction with the government, and build a quality city.</p> <p>Please see Appendix 17 for more detail on these customer success stories.</p>
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SAS Forecast Server

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS Forecast Server</p> <p>Please see Appendix 6: SAS Forecast Server for detailed information on the functionality of this tool.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	<p>SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.</p>

3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>North Carolina Department of Transportation. How do you build a road faster, at less cost and with minimal disruption to the environment? In North Carolina you do it by first building computer models using advanced data sources that help narrow the choices of possible road corridors without resorting to costly land surveys. The process can save as much as \$500,000 per road project and shave up to 20 percent off the time it takes to select and plan for a road. SAS Analytics provide the engine for this innovative project that is gaining national attention and won the state an Environmental Excellence Award from the Federal Highway Administration.</p> <p>Ontario's Workplace Safety and Insurance Board (WSIB) is undergoing a transformation into a modern, responsive and fiscally sustainable system as it</p>

			<p>enters its second century of service to Ontarians. Using predictive analytical tools from SAS, the WSIB was able to identify, verify and quantify key drivers for claims related to benefit duration and cost. The WSIB also developed forecasting models for key business indicators, for example, incoming claim volume and their duration of staying on benefits, using time series procedures of SAS. The WSIB can now forecast these key indicators each month for the following 12 months. Convinced by its high precision in back-testing, the operation teams are using these forecasts in business planning and resource allocation. Please see Appendix 17 for more detail on this customer success story.</p>
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SAS/OR

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS /OR</p> <p>Please see Appendix 7: SAS/OR for detailed information on the functionality of this tool.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	<p>SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.</p>
3	Explain licensing options for the tools you have included in this category	n/a	<p>Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.</p>
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain	Yes	<p>SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.</p>

	how.		
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>NC Sentencing Commission</p> <p>The majority of the states in the USA have a process to project prison populations for the purpose of planning adequate capacity. Typical time series methods are ineffective because they do not take into account factors like sentence length, prior criminal history, revocations of community supervision, and legislative changes. Discrete event simulation has proven to be a viable alternative. The North Carolina Sentencing and Policy Advisory Commission collaborated with SAS to build a model in SAS Simulation Studio that projects the number of prison beds needed for the next ten years. The model uses current prison population data, recent court convictions, revocations of community supervision, and estimates of growth to play out the admissions and releases of inmates over the time horizon of the model. The prison projections are updated by the Sentencing Commission on an annual basis. For more information, please see D. Pilot.</p>

SAS/IML

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS/IML</p> <p>Please see Appendix 8: SAS/IML for detailed information on the functionality of this tool.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on

	components? (working with an agency to deploy a solution based on these tools to meet a business need)		complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	New Zealand’s Ministry of Health sought to more accurately understand the percentage of its population that suffers from diabetes. With the help of SAS’ data analysis capabilities including SAS/IML, the ministry created a register to accurately predict the prevalence of the condition and help design effective public health policies to support quality clinical improvements. For more information on this success story, please see Appendix 17 .

4. Data Visualization - pictorial representation of data that may take the form of an animation, a cloud, a map, a chart, or a simple picture. This also includes: infographics, dials and gauges, geographic maps, sparklines, heat maps, and detailed bar, pie and fever charts. The images may include interactive capabilities, enabling users to manipulate them or drill into the data for querying and analysis.

SAS Visual Analytics and SAS Visual Statistics meets the requirements of #4.

- **SAS Visual Analytics** allows agencies to visually explore data quickly to:
 - See patterns and trends and identify opportunities for further analysis
 - Surface results to consumers – regardless of their analytic skills
- **SAS Visual Statistics** combines industry-leading analytics with a powerful in-memory engine, so you can build and refine predictive models faster than you ever imagined. SAS Visual Statistics requires SAS Visual Analytics.

Detailed technical functionality for this tool is included as an Appendix.

SAS Visual Analytics and SAS Visual Statistics

Requirements	A	B
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1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Visual Analytics ➤ SAS Visual Statistics <p>Please see Appendix 2: Visual Analytics and Appendix 3: Visual Statistics for detailed information on the functionality of these tools.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.

	agency to deploy a solution based on these tools to meet a business need)		
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>Alabama Medicaid Agency. Using SAS Visual Analytics (VA), the agency can examine data on illnesses, treatments and costs, segmented by population and geography. “We had some ability, obviously, to find and utilize data,” agency Medical Director Dr. Robert Moon said. But the agency had difficulty turning that data into graphs, charts and dashboards for decision makers. “Sometimes with the audiences we interact with, a picture is worth a lot and really helps tell the story.” The tool from SAS lets users sift through any size data set to find patterns and show results in charts, graphs and animations.</p> <p>When Australian policy makers ask questions, the Australian Institute of Health and Welfare (AIHW) supplies the answers using SAS Visual Analytics As the country’s national agency for information and statistics about health and welfare, AIHW aims to improve the well-being of citizens through better use of information and statistics. Governments and community leaders use information from AIHW to discuss, debate and design policies for health, housing and community services.</p> <p>The Hong Kong Efficiency Unit is using SAS Visual Analytics and SAS Text Miner to analyze complaints data. By decoding the 'messages' through statistical and root-cause analyses of complaints data, the government can better understand the voice of the people, and help government departments improve service delivery, make informed decisions and develop smart strategies. This in turn helps boost public satisfaction with the government, and build a quality city.</p> <p>Please see Appendix 17 for more detail on these customer success stories.</p>

5. Data quality:

- a. Parsing and standardization — Decomposition of text fields into component parts and formatting of values into consistent layouts based on industry standards, local standards (for example, postal authority standards for address data), user-defined business rules, and knowledge bases of values and patterns*
- b. Generalized “cleansing” — Modification of data values to meet domain restrictions, integrity constraints or other business rules that define sufficient data quality for the organization*
- c. Matching — Identification, linking or merging related entries within or across sets of data. This includes technologies that enable analysis of diverse depersonalized data sets (example: anonymization and resolution and the functions that support this type of technology: standardization, masking/hashing, encryption, linkage of records, etc.)*
- d. Profiling — Analysis of data to capture statistics (metadata) that provide insight into the quality of the data and aid in the identification of data quality issues*
- e. Monitoring — Deployment of controls to ensure ongoing conformance of data to business rules that define data quality for the organization*
- f. Enrichment — Enhancing the value of internally held data by appending related attributes from external sources (for example, consumer demographic attributes or geographic descriptors)*

The SAS tools that would meet the requirements in 5, 5.a, 5.b., 5.c., 5.d., 5.e., 5.f. are:

- **SAS Data Quality Standard.** With SAS Data Quality, you can manage the entire data quality life cycle: profiling, standardizing, matching and monitoring – as well as establish business rules to make sure that good data stays that way. Data quality can be applied to the traditional IT infrastructure as well as Hadoop environments.
- **SAS Data Quality Advanced** provides a unified solution for both business and IT users to plan, implement and monitor critical information. It helps establish and maintain a single, consistent set of data policies and processes for all organizational data.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Data Quality Standard and SAS Data Quality Advanced

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Data Quality Standard ➤ SAS Data Quality Advanced Please see Appendix 9: SAS Data Quality for detailed information on the functionality of these tools.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.

7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>After the merging of the various local public agencies and organizations' data bases, an anonymous government customer faced the need to cleanse, re-organize and integrate all the information in one data system through the Data Quality project.</p> <p>In order to provide better and more efficient services customer needed to achieve higher data quality thus improving system integration and data sharing.</p> <p>Data Quality has been implemented in order to integrate 7 different local data bases plus 13 data bases connected to the agencies operating in the City. Data are constantly cleansed thus correcting or eliminating all records' original problems and information are integrated. Porting is also performed.</p> <p>Customer achieved fast data cleansing and value and improved monitoring procedures. Data migration from different platforms has also been made possible. Overall data quality highly improved and data consolidation has been planned too. Data quality also enabled enhanced company governance.</p>

6. Data Governance - a quality control discipline for assessing, managing, using, improving, monitoring, maintaining, and protecting information. It is a system of decision rights and accountabilities for information-related processes, executed according to agreed-upon models which describe who can take what actions with what information, and when, under what circumstances, using what methods. This also includes:

a. Metadata management - the end-to-end process and governance framework for creating, controlling, enhancing, attributing, defining and managing a metadata schema, model or other structured aggregation system, either independently or within a repository and the associated supporting processes (often to enable the management of content).

The SAS tools that would meet the requirements in 6 and 6.a are:

- **SAS Master Data Management** provides a phased approach to delivering a trusted and consistent single view of a citizen across all sources and touch-points.
- **SAS Data Management Standard** allows you to join, transform, cleanse and govern your data for the purposes of creating reports, populating a Data Warehouse via ETL, modernizing legacy applications and databases, or performing analytics.
- **SAS Data Management Advanced** is a powerful, configurable and comprehensive solution designed to meet your complete data management needs. It fulfills a wide range of data integration requirements, from small tactical projects to strategic business initiatives enabling you to:
 - Access virtually all data sources.
 - Extract, cleanse, transform, conform, aggregate, load and manage data.
 - Support data warehousing, migration, synchronization, federation and provisioning initiatives.
 - Support batch-oriented and real-time master data management solutions.
 - Create real-time, reusable data integration services in support of service-oriented architectures and data governance.
 - Create and monitor a user-friendly semantic reference data layer.
- **SAS Federation Server** makes it easier for business users to access secure data for reporting and analysis. It provides a virtual layer or view, giving users the appropriate level of control without physically moving data. This frees up IT staff to focus on other tasks by giving them a simple method of sharing data using a centralized, governed security layer.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Master Data Management

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	➤ SAS Master Data Management Please see Appendix 10: SAS Master Data Management for detailed information on the functionality of this tool.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems

			management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If	n/a	An anonymous Medicare and Medicaid contractor processes payments and related information for services received from the entire spectrum of health care facilities, including hospitals, skilled nursing facilities, physicians, laboratories and suppliers. This company has been administering Medicare contracts in multiple US states since the

<p>possible, use government related examples.</p>	<p>program began in the 1960s.</p> <p>Please see Appendix 17 for more detail on this customer success story.</p>
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SAS Data Management Advanced and SAS Data Management Standard

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Data Management Advanced ➤ SAS Data Management Standard <p>Please see Appendix 11: Data Management for detailed information on the functionality of these tools.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.

7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>Kansas Department of Parks and Wildlife needed a solution to integrate multiple databases to generate hundreds of progress reports and optimize financial and federal aid analysis and reports, while increasing annual hunting and angling license revenue. With SAS, KDPW:</p> <ul style="list-style-type: none"> Reduced reporting time by two-thirds. Grew licensed anglers by 3,000. Increased revenue by \$3.8 million over three years. Increased federal aid by 10%, while ensuring proper allocation of grant funding. <p>Please see Appendix 17 for more detail on this customer success story.</p>

SAS Federation Server

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS Federation Server</p> <p>Please see Appendix 11: SAS Federation Server for detailed information on the functionality of this tool.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.

4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>An anonymous financial institution needed to manage financial crime risk globally and holistically across customer data and transactional data to avoid regulatory fines and detect previously unknown risks. With SAS Federation Server and SAS Data Loader for Hadoop, it can share data across existing siloed point detection solutions. The SAS solution provides improved governance by delivering a virtual business view of customer and transactional data from both Hadoop and traditional data sources across the globe. The solution allows control and auditing of data access to reduce financial crime risk. Benefits include:</p> <ul style="list-style-type: none"> Provide centralized access to >100m customer profiles and upwards of 30B transactions. Integrate directly with regional Hadoop clusters across the globe Ensure data protection laws are adhered to, with governance and auditing of user activity down to row/column level

7. Hadoop, MapReduce etc. - tools that address the analysis of collections of data sets that are so large and/or complex that it is difficult/expensive to process using traditional data management tools or approaches. This includes the ability to address, Volume, Velocity, Variety, Veracity and Value.

SAS provides several options and solutions for clients that want to work with Hadoop.

- SAS software can access data from a Hadoop environment and process it within SAS.
- **SAS Data Loader for Hadoop** allows you to load data as well as process and manage it within your Hadoop environment.
- SAS also provides the ability to do advanced analytics on Hadoop using **SAS Visual Analytics** and **SAS Visual Statistics**.
- **SAS In-Memory Statistics** provides a data scientist the ability to run the entire analytical life cycle from a single interactive environment, which covers manipulating and preparing data, exploration, building models and deploying them.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Data Loader for Hadoop

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Data Loader for Hadoop Please see Appendix 13: Data Loader for Hadoop for detailed information on the functionality of this tool.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but

	support shared use among Commonwealth agencies? Explain how.		would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>An anonymous financial institution needed to manage financial crime risk globally and holistically across customer data and transactional data to avoid regulatory fines and detect previously unknown risks. With SAS Federation Server and SAS Data Loader for Hadoop, it can share data across existing siloed point detection solutions. The SAS solution provides improved governance by delivering a virtual business view of customer and transactional data from both Hadoop and traditional data sources across the globe. The solution allows control and auditing of data access to reduce financial crime risk. Benefits include:</p> <ul style="list-style-type: none"> Provide centralized access to >100m customer profiles and upwards of 30B transactions. Integrate directly with regional Hadoop clusters across the globe Ensure data protection laws are adhered to, with governance and auditing of user activity down to row/column level

SAS Visual Analytics and SAS Visual Statistics

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Visual Analytics ➤ SAS Visual Statistics <p>Please see Appendix 2: Visual Analytics and Appendix 3: Visual Statistics for detailed information on the functionality of these tools.</p>
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.

	agency to deploy a solution based on these tools to meet a business need)		
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related examples.	n/a	<p>Alabama Medicaid Agency. Using SAS Visual Analytics (VA), the agency can examine data on illnesses, treatments and costs, segmented by population and geography. “We had some ability, obviously, to find and utilize data,” agency Medical Director Dr. Robert Moon said. But the agency had difficulty turning that data into graphs, charts and dashboards for decision makers. “Sometimes with the audiences we interact with, a picture is worth a lot and really helps tell the story.” The tool from SAS lets users sift through any size data set to find patterns and show results in charts, graphs and animations.</p> <p>When Australian policy makers ask questions, the Australian Institute of Health and Welfare (AIHW) supplies the answers using SAS Visual Analytics As the country’s national agency for information and statistics about health and welfare, AIHW aims to improve the well-being of citizens through better use of information and statistics. Governments and community leaders use information from AIHW to discuss, debate and design policies for health, housing and community services.</p> <p>The Hong Kong Efficiency Unit is using SAS Visual Analytics and SAS Text Miner to analyze complaints data. By decoding the 'messages' through statistical and root-cause analyses of complaints data, the government can better understand the voice of the people, and help government departments improve service delivery, make informed decisions and develop smart strategies. This in turn helps boost public satisfaction with the government, and build a quality city.</p> <p>Please see Appendix 17 for more detail on these customer success stories.</p>

SAS In-Memory Statistics

Requirements		A	B
1	Identify the components of your	n/a	➤ SAS In-Memory Statistics

	analytics tool set that fit this category		Please see Appendix 14: SAS In-Memory Statistics for detailed information on the functionality of this tool.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of	n/a	Customer examples are pending for this next generation analytical tool.

<p>training and skill required by each. Include what entity used the tools. If possible, use government related examples.</p>		
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a. Unstructured data analysis – the ability to analyze/process information that either does not have a pre-defined data model or is not organized in a pre-defined manner. Unstructured information is typically text-heavy, but may contain data such as dates, numbers, and facts as well. This results in irregularities and ambiguities that make it difficult to understand using traditional computer programs as compared to data stored in fielded form in databases or annotated (semantically tagged) in documents.

There are two primary SAS Text Analytics offerings: **SAS Text Miner** and **SAS Contextual Analysis**. Both technologies extract key terms and concepts using Natural Language Processing and provides key insights from the unstructured text, however both serve a difference purpose. SAS Text Miner is used for gaining insights from text so they can be combined with structured data to augment predictive models if so desired. SAS Contextual Analysis allow you set up categorization models so text can be automatically categorized. We are also providing pricing for SAS Concept Creation for SAS Text Miner, an add-on module that directly integrates with SAS Text Miner to provide customers with the ability to create custom entities and facts. The ability to extract standard entities, such as names, phone numbers, social security numbers, dates, location, etc. is natively built into SAS Text Miner. SAS Concept Creation provides users the flexibility to define expressions and rules for custom concept extraction.

Both tools are typically used by analysts and subject matter experts who understand the data and can interpret the results. The results of the analysis are typically exported as data so the business users can look at some of the same insights to make decisions using reports and dashboards.

Detailed technical functionality for these tools is included as an Appendix. As required by the Q&A, we have included a table for each tool.

SAS Text Miner and SAS Concept Creation for Text Miner

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<ul style="list-style-type: none"> ➤ SAS Text Miner ➤ SAS Concept Creation for Text Miner (SAS Text Miner required) <p>Please see Appendix 15: Text Miner for detailed information on the functionality of this</p>

			tool.
2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each.	n/a	Government of Alberta, Alberta Parks. Alberta Parks manages about 250 campgrounds and 14,000 campsites that receive more than 1.8 million overnight visitors every year. The department received 15,000 survey camper satisfaction survey replies. Text analysis of visitor surveys allows Alberta Parks to respond to

<p>Include what entity used the tools. If possible, use government related examples.</p>	<p>customer concerns during the season, instead of waiting for next year. Alberta Parks is now using SAS Text Miner, which applies information retrieval and data mining techniques across a variety of feedback channels – phone calls, email, surveys and social media – with both structured and unstructured data. Instead of waiting for an end-of-season slide show, Alberta Parks’ regional and district management get weekly feedback based on those text comments. That feedback leads to midstream operational changes with an immediate impact on the customer experience and that’s helped drive extraordinary customer satisfaction numbers.</p> <p>The Hong Kong Efficiency Unit is using SAS Visual Analytics and SAS Text Miner to analyze complaints data. By decoding the ‘messages’ through statistical and root-cause analyses of complaints data, the government can better understand the voice of the people, and help government departments improve service delivery, make informed decisions and develop smart strategies. This in turn helps boost public satisfaction with the government, and build a quality city.</p> <p>A National taxation office streamlines processing with SAS Text Miner. Automate cumbersome, time consuming process of manually processing tax forms flagged for review. Resolution times improved by 30 percent, employees are more productive and satisfied, public confidence maintained.</p> <p>Please see Appendix 17 for more detail on these customer success stories.</p>
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SAS Contextual Analysis

Requirements		A	B
1	Identify the components of your analytics tool set that fit this category	n/a	<p>➤ SAS Contextual Analysis</p> <p>Please see Appendix 16: Contextual Analysis for detailed information on the functionality of this tool.</p>

2	Identify platforms for deployment (cloud, Intel, appliance, OSs, database versions etc.) for the tools you have included in this category	n/a	SAS is a multi-vendor, multi-platform solution provider. SAS supports specific multiple versions of operating systems, internet browsers, etc. Cloud/hosted solutions are available for agencies to help alleviate the burden of hardware and systems management for VITA. Most SAS client applications require Windows workstations.
3	Explain licensing options for the tools you have included in this category	n/a	Our standard software licensing model is defined by the installed server environment, its size, and the defined agency that is benefitting from the software.
4	Does your Solution allow for your tool sets to be deployed in order to support shared use among Commonwealth agencies? Explain how.	Yes	SAS solutions are easily deployed across any architectural environment. SAS would be open to a non-standard license where multiple agencies utilize and share software, but would need to better understand the usage and environment in order to enable such a license.
5	Do you provide training on your solution? If yes, please explain the options.	Yes	Online training, classroom training, and self-paced instruction are all available options for solution training.
6	Do you provide installation (including configuration) services for these tool components above?	Yes	Remote or on-site installation services can be provided. Installation services costs will vary by type of installation.
7	Do you provide implementation services for the above tool components? (working with an agency to deploy a solution based on these tools to meet a business need)	Yes	Consulting services can be provided at an additional cost. Costs will vary depending on complexity and requirements of deployment.
8	For your Solution, provide examples of how the tools were used by both business and IT users and the level of training and skill required by each. Include what entity used the tools. If possible, use government related	n/a	Customer examples are pending for this next generation analytical tool.

examples.		
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D. Pilot

Pilot 1: Cost Savings and Revenue Enhancement

	Requirements	A	B
1	Describe your suggested approach (include Supplier resources necessary to complete the pilot and their general qualifications)	n/a	<p>SAS offers a comprehensive, end-to-end enterprise fraud solution that is capable of addressing a variety of fraud, waste and abuse detection areas. The proposed pilot would demonstrate the value and approach for fraud detection analysis related to personal income tax. To ensure timely pilot results and to minimize impact on the Commonwealth's agency resources, we recommend focusing the pilot efforts on the Quick Hit Analysis phase of our fraud approach. This will provide the Commonwealth with an analysis of individual returns and point out a variety of scenarios that are issues for the Department. Findings could identify issues such as multiple filings from same address/IP Port/name, anomalies in current returns versus historical behavior patterns (e.g., change in timing of returns, significant change in volume of deductions), suspect return content from common preparers, and others.</p> <p>The largest economic crime committed in the world today is tax evasion. Using Virginia's FY2013 financials, with over \$11B in collections and an estimated 15% fraud rate, the potential losses are in the \$1.7B range. Any detected anomalies or identified abuse offers potentially huge returns.</p> <p>SAS has a great deal of experience doing this for federal and state customers and can extend this knowledge, domain experience and solution set to address this enormous problem for the Commonwealth.</p>
2	What next-generation analytics tool set components would be utilized to perform the	n/a	SAS' enterprise fraud solution is typically used for full fraud, waste and abuse reporting, analysis, and alert investigation and dispositioning. For

	pilot?		the purposes of this pilot and to provide quick returns in a short amount of time, we will utilize a few of the tools/solutions identified within this response to provide the Quick Hit Analysis. Specifically the pilot will use SAS Visual Analytics, SAS Data Management Advanced and SAS Enterprise Miner.
3	What platform would be used?	n/a	Windows
4	Where have you done something similar before? Please provide references that may be contacted concerning this use.	n/a	<p>Commonwealth of Kentucky Department of Revenue Melody Tudor, Revenue Tax Policy Research Consultant 501 High Street, 2nd Floor Frankfort, KY 40601-2103 502.564.5720 melody.tudor@ky.gov</p> <p>Kentucky licensed a SAS-hosted enterprise fraud solution to address tax evasion and fraud, with a specific focus on individual income and sales taxes. SAS will be used to detect and prevent tax evasion and non-compliance across government programs by modeling “normal” behavior patterns and detecting abnormal or suspicious activities that deviate from the norm.</p> <p>This project was recently highlighted by Paula Henderson, Vice President for SAS State and Local Government. Content from her blog is included verbatim after this table.</p>
5	How long would the pilot take?	n/a	Generally speaking and dependent upon the final details mutually agreed upon by SAS and the Commonwealth, the analysis portion for this pilot is anticipated to take between 4 and 6 weeks to complete from receipt of data. The goal is to provide results to the Commonwealth quickly.

<p>6</p>	<p>Given a go-ahead, how long would it take to start the pilot?</p>	<p>n/a</p>	<p>The pilot can begin quickly. To facilitate an efficient and timely pilot, the following steps are required.</p> <p>As the pilot work is to be completed on customer site, the order (including signing an evaluation license agreement) and installation of SAS software on customer premise will need to occur before any further work can take place.</p> <p>Identifying the proper data sources and getting access is also a critical step. The data needs to be analytic ready and free of data quality or other cleanliness issues. While the pilot can use data that is not clean and ready, activities to clean and standardize data can add additional time to the pilot process.</p> <p>Once the environment and data are available, actual analysis can begin and results delivered in the specified time frame.</p> <p>Generally this pilot preparation can take between 2 and 4 weeks depending on the above points.</p>
<p>7</p>	<p>Which agencies or types of businesses would need to participate and what is the projected agency commitment (what kind of resources and for how long)?</p>	<p>n/a</p>	<p>For the Individual Tax Return Quick Hit Analysis, the Commonwealth's Department of Revenue would need to participate. At a minimum, the pilot would need two to three years of tax return data for analysis. The pilot will also require the commitment of subject matter expertise from the department to understand the data source(s) and nuances contained therein.</p> <p>The typical resource commitment would include a data steward of the tax system and an analyst or business user with extensive insight of how the data and system(s) work. The pilot analysis will leverage SAS' experience and knowledge of personal income tax and will strive to minimize the department's time. The resources would need to commit 2-</p>

			4 hours per week.
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From the [blog](#) of Paula Henderson, Vice President for SAS State and Local Government:

According to a 2012 report, it was estimated that over the next five years the US Internal Revenue Service (IRS) will issue more than \$20 billion in potentially fraudulent tax refunds. Figures like this do little to boost taxpayers' confidence in our nation's tax system.

And tax fraud is not just an IRS issue. States coast to coast are facing similar circumstances. Plagued with identity theft, shrinking budgets and heightened pressure to pay returns quickly, states are having a difficult time cracking down on tax fraud offenders.

Kentucky is stepping up efforts to improve detection of individual income tax compliance issues and save taxpayers' money, with help from SAS.

"Our job is not just to collect taxes, but to get taxpayers the money they are owed as quickly as possible. The increasing amount of fraud and abuse puts an even greater responsibility on us to be diligent in our efforts. Analytics helps with that," said Mack Gillim, Executive Director of the Office of Processing and Enforcement for the Kentucky Department of Revenue.

Tax returns that come into the Commonwealth are scored on a nightly basis and any potential issues are flagged for examiners to review the following day. This quick turnaround process is key to the Commonwealth team as they try to get refund checks out to their taxpayers within 14 days.

The department is committed to serving citizens promptly, but that expedience makes it even more critical to be able to quickly spot suspicious returns. Diligent examiners come in first thing in the morning, assess the flagged returns and immediately start investigations.

Using SAS hosted fraud-fighting technology, the Commonwealth's Department of Revenue has uncovered several fraud schemes. It's a constant battle for government agencies to keep up with the evolving schemes of dedicated fraudsters. I can't share all the red flags and anomalies KY DoR looks for as it could help fraudsters adjust their schemes. I can, however, tell you that the metrics have been invaluable in identifying trends that otherwise may have gone unnoticed for a much longer period of time.

As responsible stewards of taxpayer money, the Kentucky Department of Revenue's use of analytics is making a difference in their vigilant stand against fraud.

Pilot 3: Predictive Analytics

	Requirements	A	B
1	Describe your suggested approach (include Supplier resources necessary to complete the pilot and their general qualifications)	n/a	<p>Government correction programs strive to balance a commitment to public safety and the concerns of victims with the objective of offender rehabilitation. With increasing prison populations and rising correction costs, the need to understand the efficacy, impact and potential outcomes of prison and community programs is a key focus.</p> <p>SAS recommends a pilot to analyze recidivism within the Commonwealth. Recidivism represents a drain on corrections resources due to the increasing number of offenders who are processed/reprocessed every year. The pilot would provide:</p> <ul style="list-style-type: none"> ○ Insight into how corrections and courts data can be used to effectively understand the recidivism trends and factors present within probation/parole violations or revocations and new offenses and re-arrest rates. ○ Insight into the programs and services that are working and how they may be utilized to better serve the offender populations to reduce recidivism. ○ Insight into population, offenses and sentencing data to forecast optimal outcomes ○ Insight into recidivism data to support evidence based sentencing policy
2	What next-generation analytics tool set components would be utilized to perform the pilot?	n/a	SAS will utilize several solutions for this pilot project, including Data Management Advanced and Visual Analytics.
3	What platform would be used?	n/a	Windows

4	Where have you done something similar before? Please provide references that may be contacted concerning this use.	n/a	<p>NC Sentencing Commission Susan Katzenelson Executive Director or Ginny Hevener Associate Director for Research Susan.C.Katzenelson@nccourts.org ginny.m.hevener@nccourts.org 919.890.1470</p> <p>The majority of the states in the USA have a process to project prison populations for the purpose of planning adequate capacity. Typical time series methods are ineffective because they do not take into account factors like sentence length, prior criminal history, revocations of community supervision, and legislative changes. Discrete event simulation has proven to be a viable alternative. The North Carolina Sentencing and Policy Advisory Commission collaborated with SAS to build a model in SAS Simulation Studio that projects the number of prison beds needed for the next ten years. The model uses current prison population data, recent court convictions, revocations of community supervision, and estimates of growth to play out the admissions and releases of inmates over the time horizon of the model. The prison projections are updated by the Sentencing Commission on an annual basis. For more information, please see the detailed blog that follows this table.</p>
5	How long would the pilot take?	n/a	<p>Generally speaking and dependent upon the final details mutually agreed upon by SAS and the Commonwealth, the analysis portion for this pilot is anticipated to take between 8 and 12 weeks to complete upon receipt of data. The goal is to provide results to the Commonwealth quickly.</p>
6	Given a go-ahead, how long would it take to start the pilot?	n/a	<p>The pilot can begin quickly. To facilitate an efficient and timely pilot, the following steps are required.</p> <p>As the pilot work is to be completed on customer site, the order</p>

			<p>(including signing an evaluation license agreement) and installation of SAS software on customer premise will need to occur before any further work can take place.</p> <p>Identifying the proper data sources and getting access is also a critical step. The data needs to be analytic ready and free of data quality or other cleanliness issues. While the pilot can use data that is not clean and ready, activities to clean and standardize data can add additional time to the pilot process.</p> <p>Once the environment and data are available, actual analysis can begin and results delivered in the specified time frame.</p> <p>Generally this pilot preparation can take between 2 and 4 weeks depending on the above points.</p>
7	Which agencies or types of businesses would need to participate and what is the projected agency commitment (what kind of resources and for how long)?	n/a	<p>A recidivism pilot would require data from both Department of Corrections and the Courts. These two sources provide offender incarceration information as well as criminal offense and conviction information that when analyzed together and provides the types of insight into recidivism rates and trends. The pilot will also require the commitment of subject matter expertise from both Corrections and the Courts to understand the data source(s) and nuances contained therein</p> <p>The typical resource commitment would include a data steward of both systems (Courts and Corrections) and access to an analyst or business user with an analyst or business user with extensive insight of how the data and system(s) work. The pilot analysis will leverage SAS' experience and knowledge of correction and court data and will strive to minimize the department's time. The resources would need to commit 2-4 hours per week.</p>

From [State and Local Connection blog](#):

In 1990, the North Carolina General Assembly created the Sentencing and Policy Advisory Commission to evaluate sentencing laws and policies and recommend any modifications necessary to achieve policy goals. As part of the mandate, the General Assembly required the Sentencing Commission to develop a correctional population simulation model. The model would be used to analyze any proposed change in the sentencing laws to estimate the impact on the inmate population.

Previously, the state enacted changes to sentencing laws without hard data about what correctional resources would be necessary to support those changes. Without enough resources to support the policies, prisons became overcrowded, offenders were released after serving only a fraction of their sentences and the public lost confidence in the criminal justice system. Lesson learned.

At the General Assembly's behest, the Sentencing Commission began employing a model that used empirical information (conviction and sentence data) from the previous year to project future resource needs. The model could be used to project the overall prison population and the impact of proposed policy changes on that population. These projections became the guideposts for correctional funding and resources.

When the General Assembly or Secretary of the Department of Public Safety considers changes to the sentencing laws and policies, the Sentencing Commission is responsible for projecting the impact of the proposals. The Commission is required to apply the model to every bill and resolution introduced that propose any change in criminal law. For instance, changes to laws that increase penalties for violating existing laws or criminalize additional behaviors can lead to a net increase in the number of persons incarcerated and the duration of their incarcerations. Every legislative session, the Commission produces numerous impact projections. The General Assembly uses these projections to determine whether to pass a bill and appropriate more funds for prison resources or to make adjustments to the bill.

The Sentencing Commission also uses the correctional population simulation model to provide prison population projections. These projections, updated annually, give the General Assembly and the Department of Public Safety an estimate of what the prison population will be for the next ten years assuming there are no policy changes. This allows the State to plan for future criminal justice needs.

In 2011, the General Assembly passed the Justice Reinvestment Act, which made a number of substantive changes to the sentencing laws in North Carolina. It made the process more complex by adding some new sentencing options and changing the way the courts used some existing options. The Sentencing Commission needed a model that was more transparent, and would allow staff to make adjustments to take into account the variety and complexity of the changes.

The Commission, already using SAS for managing and analyzing data, turned to SAS for help with designing a new correctional population simulation model. The SAS Advanced Analytics Lab and SAS Operations Research Center of Excellence adapted the software for the new model. The programming was visible, allowing Commission staff to make adjustments as needed, aided by SAS' ongoing support.

To date, the Commission has used the SAS model to produce two sets of prison population projections, which were published in February 2013 and February 2014. Initial results indicate that the projections are within the Commission's historical accuracy range of 2%. Not only are the projections reliable, SAS has automated much of the process. In the future, the Commission hopes to adapt the model to project resource needs for other justice populations, particularly juvenile justice resources.

The work of the Sentencing Commission reinforces the importance of making decisions based on data. Reliable projections help policymakers understand the resource demands associated with their proposals. Having adequate resource needs to support criminal justice policies and to maintain public safety are key to bolstering the public's confidence in the criminal justice system.

EXHIBIT B PRICING

CONTRACT NUMBER VA-150915-EIS

BETWEEN

VIRGINIA INFORMATION TECHNOLOGIES AGENCY

AND

EXECUTIVE INFORMATION SYSTEMS, LLC

Exhibit B is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Executive Information Systems, LLC (“Supplier”).

In the event of any discrepancy between this Exhibit B and the Contract, the provisions of the Contract shall

All software licensing options in this Exhibit B are for solutions hosted at the Authorized User’s location.

all control.



**EXHIBIT C ESCROW
CONTRACT NUMBER VA-150915-EIS
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
EXECUTIVE INFORMATION SYSTEMS, LLC**

Exhibit C is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Executive Information Systems, LLC (“Supplier”).

In the event of any discrepancy between this Exhibit C and the Contract, the provisions of the Contract shall control.



Software Escrow
Arrangement for VIT



**EXHIBIT D SOW TEMPLATE
CONTRACT NUMBER VA-150915-EIS
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
EXECUTIVE INFORMATION SYSTEMS, LLC**

Exhibit D is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Executive Information Systems, LLC (“Supplier”). In the event of any discrepancy between this Exhibit D and the Contract, the provisions of the Contract shall control.

**EXHIBIT D-~~X~~ STATEMENT OF WORK (SOW) TEMPLATE
BETWEEN (NAME OF AUTHORIZED USER) AND EXECUTIVE INFORMATION SYSTEMS, LLC**

**ISSUED UNDER
CONTRACT NUMBER VA-150915-EIS
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
EXECUTIVE INFORMATION SYSTEMS, LLC**

Exhibit D-~~X~~, between (Name of Agency/Institution) and Executive Information Systems, LLC (“Supplier”) is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA”) on behalf of the Commonwealth of Virginia and Supplier.

In the event of any discrepancy between this Exhibit D-~~X~~ and the Contract, the provisions of the Contract shall control.

Any Service, Licensed Services, Solution or Software provided under this SOW must comply with all COVA Security and Enterprise Architecture ITRM policies, standards and guidelines located at: <http://www.vita.virginia.gov/library/default.aspx?id=537> and all COVA Enterprise Architecture Data Standards and requirements located at: <http://www.vita.virginia.gov/oversight/default.aspx?id=10344>.

If Authorized User is a State Agency and determines any area of non-compliance with the ITRM PSGs at the above links in the Service, Licensed Services, Solution or Software to be provided by Supplier under this SOW, such Authorized User’s Project Manager must obtain written waiver from VITA in accordance

with the waiver process prior to placing any related order or authorizing Supplier to commence any work. Agency should collaborate with their designated Customer Account Manager to obtain such waiver.

*[Note to Template Users: Instructions for using this template to draft a Statement of Work are in gray highlight and **italics**. These instructions should be deleted after the appropriate text has been added to the Statement of Work. Contractual language is **not italicized** and should remain in the document. Text that is highlighted in **blue** is variable based on the nature of the project.]*

STATEMENT OF WORK

This Statement of Work (SOW) is issued by the **(Name of Agency/Institution)**, hereinafter referred to as "Authorized User" under the provisions of the Contract. The objective of the project described in this SOW is for the Supplier to provide the Authorized User with **a Solution ("Solution") or Services ("Services") or Software ("Software") or Hardware and Maintenance or Licensed Application Services** for **Authorized User Project Name**. *(Customize the last sentence to state what you are getting from the Supplier, based on the VITA Contract language, and with your project name.)*

1. PERIOD OF PERFORMANCE

The work authorized in this SOW will occur within **XX (XX) months** of execution of this Statement of Work. This includes **delivery, installation, implementation, integration, testing and acceptance all of products and services** necessary to implement the Authorized User's **Solution, training, and any support, other than on-going maintenance services**. The period of performance for **maintenance services shall be one (1) year after implementation or end of Warranty Period and may be extended for additional one (1) year periods**, pursuant to and unless otherwise specified in the Contract. *(Customize this section to match what you are getting from the Supplier, based on the allowable scope of the VITA Contract and your project's specific needs within that allowable scope.)*

2. PLACE OF PERFORMANCE

(Assign performance locations to major milestones or any other project granularity, depending on your transparency and governance needs, if needed.)

Tasks associated with this project will be performed at **the Authorized User's location(s) in City/State, at Supplier's location(s) in City/State**, or other locations as required by the effort.

3. PROJECT DEFINITIONS

Provide project unique definitions so that all stakeholders have the same understanding. Ensure these do not conflict with the Contract definition.)

All definitions of the Contract shall apply to and take precedence over this SOW. Authorized User's specific project definitions are listed below:

4. PROJECT SCOPE

(Provide a description of the scope of your project and carve out what is NOT in the scope of your project. Remember that it must fit within the VITA Contract scope.)

A. General Description of the Project Scope

B. Project Boundaries

5. AUTHORIZED USER'S SPECIFIC REQUIREMENTS

(Provide information about your project's and your agency's specific requirements for this particular project including, but not limited to the following subsections):

- A. Authorized User-Specific Requirements
- B. Special Considerations for Implementing Technology at Authorized User's Location(s)
- C. Other Project Characteristics to Insure Success

6. CURRENT SITUATION

(Provide enough background information to clearly state the current situation to Supplier so that Supplier cannot come back during performance claiming any unknowns or surprises. Some example subsections are provided below. You may collapse/expand as you feel is necessary to provide adequate information and detail.)

- A. Background of Authorized User's Business Situation
- B. Current Architecture and Operating System
- C. Current Work Flow/Business Flow and Processes
- D. Current Legacy Systems
- E. Current System Dependencies
- F. Current Infrastructure (Limitations, Restrictions)
- G. Usage/Audience Information

7. PRODUCTS AND SERVICES TO SUPPORT THE PROJECT REQUIREMENTS (AND/OR SOLUTION)

A. Required Products (or Solution Components)

(List the products, or if your project is for a Solution, the Solution components, (hardware, software, etc.) provided by Supplier that will be used to support your project requirements. Identify any special configuration requirements, and describe the system infrastructure to be provided by the Authorized User. Provide an overview that reflects how the system will be deployed within the Authorized User's environment. You are urged to refer to the VITA Contract for allowable scope and other guidance in drafting language for this section.)

B. Required Services

(List the services (e.g., requirements development, Solution design, configuration, interface design, data conversion, installation, implementation, testing, training, risk assessment, performance assessment, support and maintenance) that will be provided by Supplier in the performance of your project. You are urged to refer to the VITA Contract for the definition of Services and for the allowable scope in drafting language for this section. You will notice subsections "C" and "D" below offer areas for expanded detail on training, support and maintenance services. You may add other subsections in which you wish to expand the information/details/requirements for other service areas as well. It is likely some of this detail will be a combination of your known needs and the Supplier's proposal. In all cases the provisions should include all negotiated commitments by both parties, even if you reference by incorporation the Supplier's proposal in any subsection.)

C. Training Requirements and/or Authorized User Self-Sufficiency/Knowledge Transfer

(Provide an overview and details of training services to be provided for your project and any special requirements for specific knowledge transfer to support successful implementation of the Solution. If the intent is for the Authorized User to become self-sufficient in operating or maintaining the Solution, determine the type of training necessary, and develop a training plan, for such user self-sufficiency. Describe how the Supplier will complete knowledge transfer in the event this Statement of Work is not completed due to actions of Supplier or the non-appropriation of funds for completion affecting the Authorized User. You may refer to the VITA Contract for guidance on the allowable scope for this.

D. Support and Maintenance Requirements

(Document the level of support, as available under the Contract, required by your project to operate and maintain the Solution. This may include conversion support, legacy system integration, transition

assistance, Solution maintenance (including maintenance level), or other specialized consulting to facilitate delivery or use of the Solution.

E. Personnel Requirements

(Provide any supplier personnel qualifications, requirements, licenses, certifications or restrictions including project manager, key personnel, subcontractors, etc., but ensure they do not conflict with the VITA Contract terms.)

F. Transition Phase-In/Phase-Out Requirements

(Describe any specific requirements for orientation or phasing in and/or phasing out of the project with the Supplier. Be specific on what the project needs and expected results are, the duration and other pertinent detail, but ensure they do not conflict with the VITA Contract provision(s) regarding Transition of Services or with any other training requirements in the SOW.)

8. TOTAL PROJECT PRICE

The total Fixed Price for this Project shall not exceed \$US XXX.

Supplier's invoices shall show retainage of [redacted]. Following completion of Solution implementation, Supplier shall submit a final invoice to the Authorized User, for the final milestone payment amount shown in the table in section 9 below, plus the total amount retained by the Authorized User. If travel expenses are not included in the fixed price of the Solution, such expenses shall be reimbursed in accordance with Commonwealth of Virginia travel policies as published by the Virginia Department of Accounts (<http://www.doa.virginia.gov>). In order to be reimbursed for travel expenses, Supplier must submit an estimate of such expenses to Authorized User for approval prior to incurring such expenses.

(Sections 9 through 11 should be used or deleted depending on the project's complexity, risk and need for governance. For a simple project you may only need the section 10 table, but for a more complex project, or a major IT project, you may need a combination of or all of the tables for check and balance and redundancy.)

9. PROJECT DELIVERABLES

(Provide a list of Supplier's deliverable expectations. The table is to be customized for the Authorized User's project. You may want to categorize deliverables for each phase or major milestone of the project and then categorize other interim deliverables and/or performance and status reports under one of them or under an Administrative or Project Management section.)

The following deliverables are to be provided by Supplier under this SOW. Subsequent sections may include further detail on the content requirements for some deliverables.

No.	Title	Due Date	Format Required (i.e., electronic/hard copy/CD/DVD)	Distribution Recipients	Review Complete Due Date	Final Due Date
	Project Plan					
	Design Plan					
	Implementation Plan					
	Data Conversion Plan					
	Risk Assessment Plan					
	Test Plan					

Training Plan					
Performance Plan					
Contingency Plan					
Disaster Recovery Plan					
Cutover Plan					
Change Management Plan					
Transition Plan					
Monthly Status Reports					
Quarterly Performance /SLA Reports					
Training Manual					
Final Solution Submission Letter					
Final Acceptance Letter					

10. MILESTONES, DELIVERABLES, PAYMENT SCHEDULE, AND HOLDBACKS

(This table should include the project’s milestone events, associated deliverables, when due, milestone payments, any retainage amount to be held until final acceptance and the net payment you promise to pay for each completed and accepted milestone event. This table includes sample data only and must be customized for your project needs.)

The following table identifies milestone events and deliverables, the associated schedule, any associated payments, any retainage amounts, and net payments.

Milestone Event	Associated Milestone Deliverable(s)	Schedule	Payment	Retainage	Net Payment
Project kick-off meeting	---	-----	---	---	---
-----	-----	-----	---	---	---
-----	-----	-----	-----	-----	-----
-----	-----	-----			
-----		-----			
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-----	-----	-----	-----	-----	-----
-----	-----	-----	-----	--	-----
Final Acceptance		-----	--	--	-----

11. EVENTS AND TASKS FOR EACH MILESTONE

(If needed, provide a table of detailed project events and tasks to be accomplished to deliver the required milestones and deliverables for the complete Solution. Reference each with the relevant milestone. A Work Breakdown Structure can be used as shown in the table below or at the very least a Project Plan should have this granularity. The Supplier's proposal should be tailored to the level of detail desired by the Authorized User's business owner/project manager for project governance.)

The following table identifies project milestone events and deliverables in a Work Breakdown Structure format.

WBS No.	Milestone	Milestone Event	Milestone Task	Interim Task Deliverables	Duration
1.0					
1.1					
1.1.1					
1.1.2					
1.2					

12. ACCEPTANCE CRITERIA

(This section should reflect the mutually agreed upon UAT and Acceptance Criteria specific to this engagement. Please read the VITA contract definitions for the definitions or Requirements and Acceptance. Ensure the language in this section does not conflict with the VITA Contract language.)

Acceptance Criteria for this Solution will be based on a User Acceptance Test (UAT) designed by Supplier and accepted by the Authorized User. The UAT will ensure that all of the requirements and functionality required for the Solution have been successfully delivered. Supplier will provide the Authorized User with a detailed test plan and acceptance check list based on the mutually agreed upon UAT Plan. This UAT Plan check-list is incorporated into this SOW in Exhibit B-X.

Each deliverable created under this Statement of Work will be delivered to the Authorized User with a Deliverable Acceptance Receipt. This receipt will describe the deliverable and provide the Authorized User's Project Manager with space to indicate if the deliverable is accepted, rejected, or conditionally accepted. Conditionally Accepted deliverables will contain a list of deficiencies that need to be corrected in order for the deliverable to be accepted by the Project Manager. The Project Manager will have ten (10) days from receipt of the deliverable to provide Supplier with the signed Acceptance Receipt unless an alternative schedule is mutually agreed to between Supplier and the Authorized User in advance.

13. PROJECT ASSUMPTIONS AND PROJECT ROLES AND RESPONSIBILITIES

(This section contains areas to address project assumptions by both the Supplier and the Authorized User and to assign project-specific roles and responsibilities between the parties. Make sure that all assumptions are included to alleviate surprises during the project. Ensure that all primary and secondary (as needed) roles and responsibilities are included. You will tailor the Responsibility Matrix table below to fit your project's needs.)

A. Project Assumptions

The following assumptions are specific to this project:

B. Project Roles and Responsibilities

The following roles and responsibilities have been defined for this project:

(Sample Responsibility Matrix)

Responsibility Matrix	Supplier	Authorized User
Infrastructure – Preparing the system infrastructure that meets the		√

recommended configuration defined in Section 2B herein		
Server Hardware		√
Server Operating		√
Server Network Connectivity		√
Relational Database Management Software (Installation and Implementation)		√
Server Modules – Installation and Implementation	√	
PC Workstations – Hardware, Operating System, Network Connectivity		√
PC Workstations – Client Software		√
Application Installation on PC Workstations	√	
Wireless Network Access Points	√	
Cabling, Electric and User Network Connectivity from Access Points		√
Wireless Mobile Computing Products – Scanners, printers	√	
Project Planning and Management	√	√
Requirements Analysis	√	√
Application Design and Implementation	√	
Product Installation, Implementation and Testing	√	
Conversion Support	√	
Conversion Support -- Subject Matter Expertise		√
Documentation	√	
Training	√	
Product Maintenance and Support	√	
Problem Tracking	√	√
Troubleshooting – IT Infrastructure		√
Troubleshooting – Solution	√	

14. COMMONWEALTH AND SUPPLIER-FURNISHED MATERIALS, EQUIPMENT, FACILITIES AND PROPERTY

(In this section, provide details of any materials, equipment, facilities and property to be provided by your Agency or the Supplier in performance of this project. If none, so state so that the requirements are clear. If delivery of any of these is critical to the schedule, you may want to identify such delivery with hard due dates tied to “business days after project start” or “days after [event/milestone](#).” Be sure to specify the delivery and point of contact information.)

A. PROVIDED BY THE COMMONWEALTH

B. PROVIDED BY THE SUPPLIER

15. SECURITY REQUIREMENTS

(Provide (or reference as an Attachment) Authorized User’s security requirements.)

For any individual Authorized User location, security procedures may include but not be limited to: background checks, records verification, photographing, and fingerprinting of Supplier’s employees or agents. Supplier may, at any time, be required to execute and complete, for each individual Supplier employee or agent, additional forms which may include non-disclosure agreements to be signed by Supplier’s employees or agents acknowledging that all Authorized User information with which such employees and agents come into contact while at the Authorized User site is confidential and proprietary. Any unauthorized release of proprietary information by the Supplier or an employee or agent of Supplier shall constitute a breach of the Contract.

Supplier shall comply with all requirements in the Security Compliance section of the Contract

16. REQUIRED STANDARDS, CERTIFICATIONS AND SPECIFICATIONS

In addition to any standards and specifications included in the Contract, Supplier shall follow the standards and specifications listed below during performance of this effort.

(List any specific Commonwealth, VITA, Federal, engineering, trade/industry or professional standards, certifications and specifications that Supplier is required to follow or possess in performing this work. The first bullet includes a link to COVA-required standards for all Commonwealth technology projects. The rest are examples only and highlighted to reflect this. If you need an exception of any COVA-required standard, please follow the process located at this link: <http://www.vita.virginia.gov/oversight/default.aspx?id=10344> and select the Data Standards Guidance bulleted link. Your AITR can assist you.)

- COV ITRM Policies and Standards: <http://www.vita.virginia.gov/library/default.aspx?id=537>
- IEEE 802®
- HIPAA
- SAS 70 Type II

17. U.S. ENVIRONMENTAL PROTECTION AGENCY'S AND DEPARTMENT OF ENERGY'S ENERGY STAR GUIDELINES RISK MANAGEMENT

(Risk is a function of the probability of an event occurring and the impact of the negative effects if it does occur. Negative effects include schedule delay, increased costs, failure of dependent legacy system interoperability, other project dependencies that don't align with this project's schedule, and poor quality of deliverables. Depending on the level of risk of this project, as assessed by your Project Manager and/or Steering Committee, this section may contain any or all of the following components, at a level of detail commensurate with the level of risk. Remember to add them to the Deliverables table.)

C. Initial Risk Assessment

Authorized User and Supplier shall each provide an initial assessment from their point of view.

D. Risk Management Strategy

(The list below is taken from VITA PMD template discussing what should go into a Risk Management Strategy. Don't forget to consider and plan for any budget contingencies to accommodate potential risks that are identified.)

1. **Risk Identification Process:** The processes for risk identification.
2. **Risk Evaluation and Prioritization:** How risks are evaluated and prioritized.
3. **Risk Mitigation Options:** Describe the risk mitigation options. They must be realistic and available to the project team.
4. **Risk Plan Maintenance:** Describe how the risk plan is maintained during the project lifecycle.
5. **Risk Management Responsibilities:** Identify all project team members with specific risk management responsibilities. (e.g., an individual responsible for updating the plan or an individual assigned as a manager).

E. Risk Management Plan

(Include a description of frequency and form of reviews, project team responsibilities, steering and oversight committee responsibilities and documentation. Be sure to add all deliverables associated with risk strategizing and planning to the list of Deliverables.)

18. DISASTER RECOVERY

Planning for disaster recovery for your project is paramount to ensure continuity of service. The criticalness and complexity of your project, including its workflow into other dependent systems of the Commonwealth or federal systems, will help you determine if you require a simple contingency plan or a full-blow contingency plan that follows the Commonwealth’s ITRM Guideline SEC508-00 found at this link:

http://www.vita.virginia.gov/uploadedFiles/Library/ContingencyPlanningGuideline04_18_2007.pdf

It is advisable that you visit the link before making your decision on how you need to address contingency planning and related deliverables in this SOW; as well as, how this will impact your planned budget. A likely deliverable for this section would be a Continuity of Operations Plan. You may choose to include the above link in your final SOW to describe what the Plan will entail. The same link includes the following processes, which you may choose to list in your final requirements for this section, to be performed by your team, the Supplier or both and/or a steering committee if your project warrants such oversight and approval:

- Development of the IT components of the Continuity of Operations Plan (COOP)
- Development and exercise of the IT Disaster Recovery Plan (IT DRP) within the COOP
- Development and exercise of the IT System Backup and Restoration Plan

19. PERFORMANCE BOND

(If your project is sizeable, complex and/or critical, and the VITA Contract does not already provide for a performance bond, you may want the Supplier to provide one. The VITA Contract may include an Errors and Omissions insurance requirement, which would cover the Supplier’s liability for any breach of the Contract or this SOW. Be sure to read the Contract for this information. However, if you feel that this project warrants further performance incentive due to the project or the Supplier’s viability, you may include the following language in this section.)

[Redacted]

20. OTHER TECHNICAL/FUNCTIONAL REQUIREMENTS

(Provide any other unique project technical and functional requirements and expectations in sufficient detail in this section. Ensure they do not conflict with existing requirements in the VITA Contract. Several examples are listed.)

F. [Redacted]

G. [Redacted]

H. [Redacted]

I. [Redacted]

21. REPORTING

(The following are examples of reporting requirements which may be included in your SOW depending on the project’s need for governance. In an effort to help VITA monitor Supplier performance, it is strongly recommended that the SOW include “Supplier Performance Assessments”. These assessments may be performed at the Project Manager’s discretion and are not mandated by VITA.)

A. Weekly/Bi-weekly Status Update.

The weekly/bi-weekly status report, to be submitted by Supplier to the Authorized User, should include: accomplishments to date as compared to the project plan; any changes in tasks, resources or schedule with new target dates, if necessary; all open issues or questions regarding the project; action plan for addressing open issues or questions and potential impacts on the project; risk management reporting.

B. Supplier Performance Self-Assessment.

Within thirty (30) days of execution of the project start, the Supplier and the Authorized User will agree on Supplier performance self-assessment criteria. Supplier shall prepare a monthly self-assessment to report on such criteria. Supplier shall submit its self-assessment to the Authorized User who will have five (5) days to respond to Supplier with any comments. If the Authorized User agrees with Supplier's self-assessment, such Authorized User will sign the self-assessment and submit a copy to the VITA Supplier Relationship Manager.

C. Performance Auditing

(If you have included service level requirements in the above section entitled, Other Technical/Functional Requirements, you will want to include a requirement here for your ability to audit the results of the Supplier's fulfillment of all requirements, Likewise, you may want to include your validation audit of the Supplier's performance reporting under this Reporting section. It is important, however, that you read the VITA contract prior to developing this section's content so that conflicts are avoided. Suggested language is provided below, but must be customized for your project.)

_____ (If none, you may add your escalation procedure in this section.)

D. Supplier Performance Assessments

(You may want to develop assessments of the Supplier's performance and disseminate such assessments to other Authorized Users of the VITA Contract. Prior to dissemination of such assessments, Supplier will have an opportunity to respond to the assessments, and independent verification of the assessment may be utilized in the case of disagreement.)

22. CHANGE MANAGEMENT

(Changes to the baseline SOW must be documented for proper project oversight. Depending on your project, you may need to manage and capture changes to configuration, incidents, deliverables, schedule, price or other factors your team designates as critical. Any price changes must be done in compliance with the Code of Virginia, § 2.2-4309. Modification of the contract, found at this link: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+coh+2.2-4309+500825>. Changes to the scope of this SOW must stay within the boundaries of the scope of the VITA Contract.

For complex and/or major projects, it is recommended that you use the VITA PMD processes and templates located at: <http://www.vita.virginia.gov/oversight/projects/default.aspx?id=567>. Administrative or non-technical/functional changes (deliverables, schedule, point of contact, reporting, etc.) should extrapolate the affected sections of this SOW in a "from/to" format and be placed in a numbered modification letter referencing this SOW and date, with a new effective date. The VITA Contract may include a template for your use or you may obtain one from the VITA Contract's Point of Contact. It is very important that changes do not conflict with, but do comply with, the VITA Contract, which takes precedence. The following language may be included in this section, but additional language is needed to list any technical/functional change management areas specific to this SOW; i.e., configuration, incident, work flow, or any others of a technical/functional nature.)

All changes to this SOW must comply with the Contract. Price changes must comply with the Code of Virginia, § 2.2-4309. Modification of the contract, found at this link: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+coh+2.2-4309+500825>

All changes to this SOW shall be in written form and fully executed between the Authorized User's and the Supplier's authorized representatives. For administrative changes, the parties agree to use the change template, attached to this SOW. For technical/functional change management requirements, listed below, the parties agree to follow the processes and use the templates provided at this link: <http://www.vita.virginia.gov/oversight/projects/default.aspx?id=567>

23. POINT OF CONTACT

For the duration of this project, the following project managers shall serve as the points of contact for day-to-day communication:

Authorized User: _____

Supplier: _____

By signing below, both parties agree to the terms of this Exhibit.

Supplier:

Authorized User:

(Name of Supplier)

(Name of Agency/Institution)

By: _____

By: _____

(Signature)

(Signature)

Name: _____

Name: _____

(Print)

(Print)

Title: _____

Title: _____

Date: _____

Date: _____



**EXHIBIT E CHANGE ORDER TEMPLATE
CONTRACT NUMBER VA-150915-EIS
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
EXECUTIVE INFORMATION SYSTEMS, LLC**

Exhibit E is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Executive Information Systems, LLC (“Supplier”).

In the event of any discrepancy between this Exhibit E and the Contract, the provisions of the Contract shall control.

This Change Order No. **XXX** hereby modifies and is made an integral part of Statement of Work **D-X** (“SOW”), between **NAME OF AGENCY/INSTITUTION** (“Authorized User”) and Executive Information Systems, LLC (“Supplier”), which was issued under Contract Number VA-150915-EIC (“Contract”) between the Virginia Information Technologies Agency (“VITA”) and Supplier, on behalf of the Commonwealth of Virginia and its Authorized Users.

[Note: Instructions for using this template to draft a Change Order are in gray. These instructions should be deleted after the appropriate text has been added to the Change Order. Contractual language is not in gray and should remain in the document. Text that is highlighted in blue is contractual language that is variable based on the nature of the project and in final form should not be highlighted. Agency/Institution should remove the first two lines of the heading, which pertain to this template as an Exhibit to the VITA Contract and remove the Exhibit reference from the header.]

CHANGE ORDER

This is Change Order No. **XXX** to a SOW issued by **Authorized User** to Supplier under which Supplier is to provide the Authorized User with a **Authorized User Project Name Solution (“Solution”)**.

The following item(s) is/are hereby modified as follows: *[Note: Include only the sections of the SOW that are being changed. Do not include sections not being modified. Changes should be clearly identified as “From” (copy/paste from current SOW section) and “To” (fully describe the change(s) to the referenced section). Here is an example, using SOW section 1.]*

1. PERIOD OF PERFORMANCE

[Redacted]

This Change Order No. **XXX** is issued pursuant to and, upon execution, shall become incorporated in the SOW, which is incorporated in the Contract. In the event of conflict, the following order of precedence shall apply:

- i). The Contract
- ii). Statement of Work E-X, as amended by this and previous Change Orders, with the more current Change Orders superseding older Change Orders.

The foregoing is the complete and final expression of the agreement between the parties to modify the SOW and cannot be modified, except by a writing signed by duly authorized representatives of both parties hereto.

ALL OTHER TERMS AND CONDITIONS OF THE REFERENCED SOW REMAIN UNCHANGED.

By signing below, the authorized parties agree to the terms of this Change Order No. XXX, effective (INSERT EFFECTIVE DATE).

Supplier

By: _____

(Signature)

Name: _____

(Print)

Title: _____

Date: _____

Authorized User

By: _____

(Signature)

Name: _____

(Print)

Title: _____

Date: _____



**EXHIBIT G LOBBYING CERTIFICATION
CONTRACT NUMBER VA-150915-EIS
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
EXECUTIVE INFORMATION SYSTEMS, LLC**

Exhibit G is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS ("Contract") between the Virginia Information Technologies Agency ("VITA" or "Commonwealth" or "State") and Executive Information Systems, LLC ("Supplier").

In the event of any discrepancy between this Exhibit G and the Contract, the provisions of the Contract shall control.

CERTIFICATION REGARDING LOBBYING

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

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.

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.

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 Section 1352, title 31, U.S. Code. 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:

R. Patrick Krause

Printed Name: R. PATRICK KRAUSE

Organization: EXECUTIVE INFORMATION SYSTEMS, LLC

Date: NOV 2, 2015



EXHIBIT H AVAILABLE SOFTWARE AND APPLICABLE METRICS
CONTRACT NUMBER VA-150915-EIS
BETWEEN
VIRGINIA INFORMATION TECHNOLOGIES AGENCY
AND
EXECUTIVE INFORMATION SYSTEMS, LLC

Exhibit H is hereby incorporated into and made an integral part of Contract Number VA-150915-EIS (“Contract”) between the Virginia Information Technologies Agency (“VITA” or “Commonwealth” or “State”) and Executive Information Systems, LLC (“Supplier”).

In the event of any discrepancy between this Exhibit H and the Contract, the provisions of the Contract shall control.

Software and Subcomponents ¹		Applicable Metric, Number of Authorized Units ²	Operating System ³	Authorized Hardware (CPU/Server Manufacturer, Model type/Serial No.) ³
Software:	SAS Office Analytics	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Aster	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing

Software:	SAS/ACCESS Interface to Vertica	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to DB2	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to GreenPlum	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Hadoop	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Impala	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Informix	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to MySQL	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Netezza	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to ODBC	Processor Core Based ()	To be defined by Customer	To be defined by Customer in writing

			in writing	
Software:	SAS/ACCESS Interface to OLE DB	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Oracle	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to PC File Formats	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to PostgreSQL	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to SAP HANA	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Sybase	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Sybase IQ	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ACCESS Interface to Teradata	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing

Software:	SAS/ACCESS Interface to PI System	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/IML	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/ETS	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/QC	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS/OR	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Federation Server	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Federation Server Driver for GreenPlum	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Federation Server Driver for Netezza	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Federation Server Driver for SAP	Processor Core Based ()	To be defined by Customer	To be defined by Customer in writing

			in writing	
Software:	SAS Federation Server Driver for SAP HANA	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Federation Server Driver for Teradata	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Forecast Server	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Data Quality Standard	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS Data Quality Standard Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Data Management Contextual Extraction LanguagePack for English	Site License	To be defined by Customer in writing	
	SAS Data Management Quality Knowledge Base Locale for English	Site License	To be defined by Customer in writing	
Software:	SAS Visual Statistics – Non-Distributed	Processor Core Based ()	To be defined by Customer	To be defined by Customer in writing

	Mode		in writing	
Software:	SAS Data Quality Advanced	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS Data Quality Advanced Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Data Management Contextual Extraction Language Pack for English	Site License	To be defined by Customer in writing	
	SAS Data Management Quality Knowledge Base Locale for English	Site License	To be defined by Customer in writing	
Software:	SAS MDM Advanced – Distributed Mode	Processor Core Based () Solution Test and Development	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	
	SAS MDM Advanced Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS MDM Advanced	PC Use (1)	WX6 – Microsoft Windows	

	Administrator		for x64 Workstation	
	SAS MDM Advanced Server	Installs (2)	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Data Management Contextual Extraction Language Pack for English	Site License	To be defined by Customer in writing	
	SAS Data Management Quality Knowledge Base Locale for English	Site License	To be defined by Customer in writing	
Software:	SAS MDM Standard	Processor Core Based () Solution Test and Development	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS MDM Standard Server	Installs (2)	To be defined by Customer in writing	To be defined by Customer in writing
	SAS MDM Standard Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS MDM Standard Administrator	PC Use (1)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Data Management	Site License	To be defined	

	Contextual Extraction Language Pack for English		by Customer in writing	
	SAS Data Management Quality Knowledge Base Locale for English	Site License	To be defined by Customer in writing	
Software:	SAS Data Management Advanced - Distributed Mode	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Metadata Bridge for [selection of 3 to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Data Management Advanced Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Data Management Contextual Extraction Language Pack for English	Site License	To be defined by Customer in writing	

	SAS Data Management Quality Knowledge Base Locale for English	Site License	To be defined by Customer in writing	
Software:	SAS Data Management Advanced – Non-Distributed Mode	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Metadata Bridge for [selection of 3 to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Data Management Advanced Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Data Management Contextual Extraction Language Pack for English	Site License	To be defined by Customer in writing	
	SAS Data Management Quality Knowledge Base Locale for	Site License	To be defined by Customer in writing	

		English			
Software:	SAS Visual Analytics Distributed Mode		Distributed Processor Cores ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents: [selection of either an ACCESS engine or Data Surveyor for SAP]	SAS/ACCESS Interface to [to be determined]		Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Data Surveyor for SAP		SAS Data Surveyor for SAP Usage Terms	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Visual Analytics – Non-Distributed Mode		Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents: [selection of either an ACCESS engine or Data Surveyor for SAP]	SAS/ACCESS Interface to [to be determined]		Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Data Surveyor for SAP		SAS Data Surveyor for SAP Usage Terms	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Visual Statistics – Distributed Mode		Distributed Processor Cores ()	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS Data Management Standard		Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS/ACCESS		Not	To be defined	To be defined by Customer in

VA-150915-EIS, Exhibit H

	Interface to [to be determined]	Applicable	by Customer in writing	writing
	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Metadata Bridge for [selection of 3 to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Data Management Standard Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstati on	
	SAS Data Management Contextual Extraction Language Pack for English	Site License	To be defined by Customer in writing	
	SAS Data Management Quality Knowledge Base Locale for English	Site License	To be defined by Customer in writing	
Software:	SAS Enterprise Miner	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS Enterprise Miner Personal Client	PC Use (5)	WX6 – Microsoft Windows for x64 Workstati on	

Software:	SAS Text Miner	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS Text Miner Personal Client	PC Use (5)	WNDW	
	SAS Text Analytics Language Support for English	Not Applicable	Not Applicable	To be defined by Customer in writing
Software:	SAS Concept Creation for SAS Text Miner	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	
Software:	SAS Contextual Analysis	Processor Core Based ()	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS Enterprise Content Categorization Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Text Data Language Pack for English	Site License	To be defined by Customer in writing	
Software:	SAS In-Memory Statistics	Distributed Processor Cores ()	To be defined by Customer	To be defined by Customer in writing

			in writing	
Subcomponents:	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
Software:	SAS MDM Advanced – Non-Distributed Mode	Processor Core Based () Solution Test and Development	To be defined by Customer in writing	To be defined by Customer in writing
Subcomponents:	SAS/ACCESS Interface to [to be determined]	Not Applicable	To be defined by Customer in writing	To be defined by Customer in writing
	SAS MDM Advanced Server	Installs (2)	To be defined by Customer in writing	
	SAS MDM Advanced Studio	PC Use (5)	WX6 – Microsoft Windows for x64 Workstation	
	SAS MDM Advanced Administrator	PC Use (1)	WX6 – Microsoft Windows for x64 Workstation	
	SAS Data Management Contextual Extraction Language Pack for English	Site License	To be defined by Customer in writing	
	SAS Data Management Quality Knowledge	Site License	To be defined by Customer	

	Base Locale for English		in writing	
Software:	SAS Analytics Pro	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS Enterprise Miner for Desktop	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Aster	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Vertica	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to DB2	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Greenplum	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Hadoop	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A

Software	SAS/ACCESS Interface to Impala	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Informix	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to MySQL	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Netezza	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to ODBC	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to OLE DB	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Oracle	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to PC File	PC Use ()	WX6 – Microsoft	N/A

	Formats		Windows for x64 Workstation	
Software	SAS/ACCESS Interface to PostgreSQL	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to SAP Hanna	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Sybase	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Sybase IQ	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to Teradata	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to PI System	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ACCESS Interface to HAWQ	PC Use ()	WX6 – Microsoft Windows for x64	N/A

			Workstation	
Software	SAS/ACCESS Interface to R/3	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/OR	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/ETS	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/IML	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS/QC	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS Data Quality Desktop	Bundle PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Subcomponents:	SAS Data Management Contextual Extraction Language Pack for English	Site License	WX6 – Microsoft Windows for x64 Workstation	N/A

	SAS Data Management Quality Knowledge Base Locale for English	Site License	WX6 – Microsoft Windows for x64 Workstation	N/A
Software	SAS Text Miner for Desktop	PC Use ()	WX6 – Microsoft Windows for x64 Workstation	N/A
Subcomponent:	SAS Text Analytics Language Support for English	Not Applicable	WX6 – Microsoft Windows for x64 Workstation	N/A

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2. The metric is used to derive license fees; for example, but without limitation, Capacity Based, Total Users, PC Use, etc. as described in the Metrics section of this Supplement. Certain metrics contain additional terms that pertain to Customer’s use of the Software.
3. Customer must provide Operating System and Authorized Hardware information to SAS prior to shipment of Software. Operating System and Authorized Hardware must be of a type for which SAS Institute Inc. makes the Software generally available.